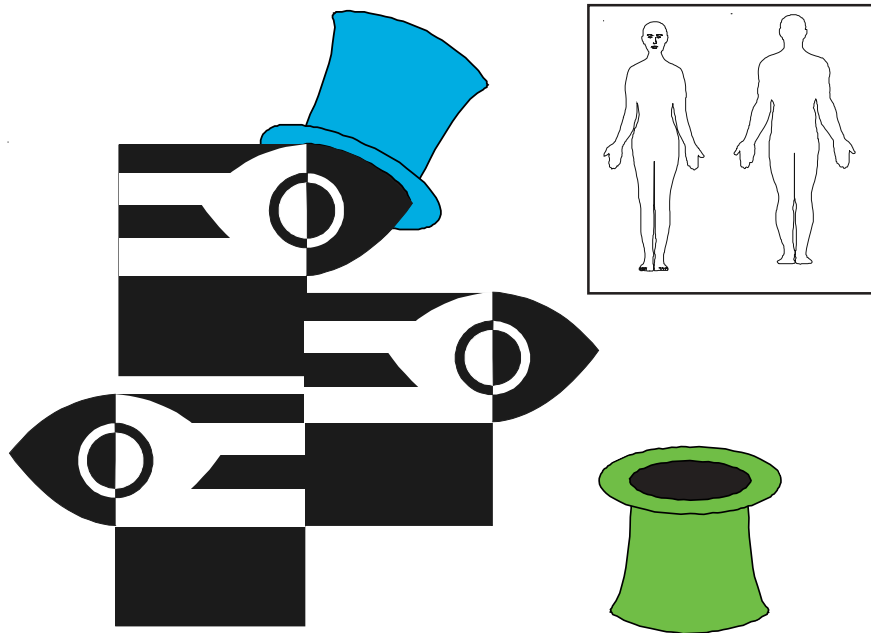


# Seeing the Workplace with New Eyes



A self-help guide for  
workplace safety & health committees  
and  
workplace safety & health representatives





## Acknowledgements

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The three organizations where we worked with safety and health committees also provided invaluable assistance. We thank them for their time, energy, commitment, input, feedback and support. We also are grateful to the individuals who reviewed the draft version of the manual for us. Your feedback helped to make it a better document.

## Disclaimer

This manual is designed to assist workplace safety and health committees and representatives. It does not replace Manitoba's health and safety laws, set out in the *Workplace Safety and Health Act* and its regulations. Use this manual in conjunction with those laws.

This manual was printed in early 2008. The law is changed from time to time. If you are in doubt about a legal issue, or want to check for the most recent versions of the law, consult the official versions of the *Act* and regulations. They are available at <http://www.gov.mb.ca/labour/safety/actregnew.html> or from a Manitoba Workplace Safety and Health Division office.

## Making copies, etc.

We want this manual to be used. Do make photocopies of sections, tools or the whole thing. Just give credit to the New Eyes project and SAFE Work Manitoba. Our logos are reminders about this.

You also can find copies of this manual on the internet. Sites to check out include SAFE Work Manitoba ([www.safeworkmanitoba.ca](http://www.safeworkmanitoba.ca)), MGEU ([www.mgeu.mb.ca](http://www.mgeu.mb.ca)) and CEP ([www.cep.ca/reg\\_western/western\\_e.html](http://www.cep.ca/reg_western/western_e.html)).

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## **Part A. Introduction - Using this manual**

### **A. 1 Who is this self-help manual for?**

This manual is intended for all new or established workplace safety and health committees and worker safety and health representatives in Manitoba.

It can be used as an effective orientation tool for new committee members to learn their responsibilities. It also can help an established committee evaluate what you do well and assess what can be improved to make your committee more effective.

However, you will still need training about topics covered here - your responsibilities, health and safety principles, specific topics and activities, etc.

### **A. 2 Please read the rest of this introduction first**

It explains how the manual is laid out for your ease of use and why it is designed the way it is. It will help you make sense of the rest of the document. The Table of Contents also is a useful guide.

Knowing health and safety is one thing. It's another to be an effective safety and health committee member or representative. That's why we recommend you read all of Part B next. You'll use many of the processes explained there as you go through the health and safety content of the manual.

Next, it's time for Part C. Again, please read the whole thing before moving on. The principles and key concepts are important to know about, before going on to the five steps to a healthy and safe workplace.



**Really important -  
read all of this!!**

The manual is based on a 5-step process that safety and health representatives and committees can use to carry out their responsibilities. The steps are identified in Part C, and explained in a tool numbered SH.1 in the Safety and Health Toolbox:

- Step 1: Where does it hurt? (symptoms)
- Step 2: What makes it hurt? (hazards)
- Step 3: How do you find symptoms and hazards? (surveillance “detective” work, reporting, maps)
- Step 4: What fixes the hazards? (prevention and other changes)
- Step 5: How do we get the fixes we need? (making the “case”)

We also recommend that you work through each step in what is a problem-solving cycle designed specifically for workplace safety and health committees and representatives. The “method to the madness” will become apparent as you do this.

### A. 3 How is this manual organized?

The first three Parts provide a grounding for the five steps. The steps are covered in Part D.

Each part is organized the same way:

#### Key vocabulary

The first time a key word or phrase is used, it’s highlighted in bold in the text. The words or phrases are defined on the right-hand side of the first page or pages, so you know how they are being used in this manual. A glossary at the end of the manual lists and explains all the terminology and acronyms used.

#### What’s this part all about?

Explains what the basic concepts and how they can be used. Sometimes there’s a “*Did you know?*” box at the side. This provides a reminder, more information or other useful ideas.



### Why is this step important?

Reminders about why this step is important for your goal of a healthy and safe workplace and/or effective committees or representatives.

### What tools can we use to learn more about this step?

The tools are at the back of the manual in three toolboxes: Committee Process (CP.1 - 21), Safety and Health (SH.1 - 14) and Using the Law (L.1 - 4). Each toolbox has a list of the contents.

When the tool is mentioned in the text of “What’s this part all about?”, there is a “screen shot” on the side. This is a small picture of the tool, so you know what to look for in the toolboxes.

Committee Activity boxes on the side of the page also give you a chance to use the tools.

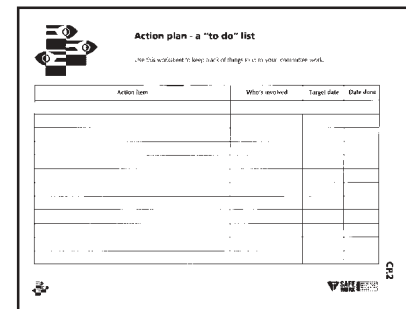
### Next steps


This is usually a list about what you can do to find out more about the topic, ideas about how to use the tools or a reminder about the *Resource Guide* that is at the back of the manual. The *Guide* provides information about organizations and resources that will help you. It is organized so you can start with local organizations, and spread out to ones in Canada and elsewhere. There are also resources by topic, particularly the six hazard categories.

### What’s the law say about this step? Who’s supposed to do what?

These tables summarize the law that applies to the step. Also see the Using the Law Toolbox for a complete list of committee responsibilities (L.3).

When we use the word “law” in this manual, we mean *The Workplace Safety and Health Act*, the *Workplace Safety and Health Regulation* and other regulations and the codes of practice that go with the regulations. Rather than use the proper names all the time, we usually use WSH Act or the Act and WSH reg.



**COMMITTEE  
ACTIVITY**

**Action plans**

We strongly encourage you to start with the Action Plan - a “to do” list (CP.1) in the Committee Process Toolbox. As you go through the manual, use it to list what you need to do or want to follow up on. This will help you as a committee member, and your committee, keep on track.



## Part B. Effective committees and representatives

For a list of the 10 ingredients of effective workplace safety and health committees, see CP. 20 in the Committee Process Toolbox. This is based on lessons learned from the New Eyes Project.

### B.1 What helps groups to work?

Effectiveness is the combination of quality (how well) and quantity (how much). Effective committees do their work in the time allowed, fulfil all their responsibilities and keep track of their progress. Individual members also need the time required to prepare for meetings and to do other aspects of their “job” as a **committee member** or **rep**.

To ensure that **process** is valued and followed during meetings and conversations, an effective committee needs some help or building blocks. To start, review the discussion of:

- stages of group development;
- roles within groups; and
- facilitation skills.

#### Stages of group development

Consider how your committee is developing as a **group**. Any group goes through a process as the individuals involved learn to work together. The stages of group development are:

- Forming - why are we here?
- Storming - how do we work through our differences?
- Norming - what’s our regular process or way of doing things?
- Performing - how well do we perform according to our agreements?


Groups go through these stages repeatedly. They can go through several in one meeting or over a period of time. Groups also can get stuck (e.g. at storming) until verbal and nonverbal agreements are reached, about how the committee functions.

**Committee member** - workplace safety and health committee member.

**Group** - two or more people. A group becomes a committee when its purpose is clearly defined.

**Process** - how things are done.

**Rep** - a worker safety and health representative, designated in workplaces where a committee is not required but there are 10 - 19 workers.

	<b>COMMITTEE ACTIVITY</b>
	List examples of behaviour at each stage of your group’s development.
	<i>What do you notice in the current meeting?</i>
	<i>What helps you move from one stage to another?</i>
	Use these questions in a discussion at the end of a committee meeting to evaluate your stage of group development. Come back to them regularly.


## Roles

Whatever stage you're at, people play various roles in groups, not just the ones they are assigned. Other roles people may play are listed in the table:

Role	Behaviour
Active listener	supportive, nonverbal behaviour
Central negative	constantly challenges leader, starts disagreements, can be effective in evaluating ideas
Information provider	has information or research to share
Questioner	seeks clarification, asks probing questions
Recorder	structured, needs to be rotated
Self-centred follower	works in own interest
Silent observer	doesn't say much, needs asking
Social-emotional leader	handles interpersonal situations well, looks after the "heartbeat" of the group
Task leader	expert, well-educated, good at problem solving
Tension releaser	uses humour to diffuse a situation

Individuals play several roles, depending on what's needed for the task. Core roles for each committee member and rep are:

- active listener
- information provider
- questioner
- task leader, when the expertise is needed.

	<b>COMMITTEE ACTIVITY</b>
<p>Answer these questions on your own at first. Then discuss them at a committee meeting.</p> <p><i>At your committee meetings, what roles do you and others play?</i></p> <p><i>Do you or others switch roles as needed?</i></p> <p><i>How do the different roles help or hinder the committee's discussions?</i></p>	

## Facilitation

Facilitation helps to keep a group on task, on time and focused on the desired outcomes. Everyone can be a facilitator.

Good facilitation skills are based on these principles:

- a co-operative attitude
- listen
- ask good questions
- suggest alternatives
- challenge behaviour
- paraphrase what the group is saying
- summarize what has been said
- name the different perspectives in the room
- equalize participation
- give and take feedback
- clarify meaning
- focus discussion
- work with resistance
- protect others from interruption
- constantly evaluate how the group is doing

These facilitation skills will help the committee do its job well. The more committee members with facilitation skills, the more easily the meeting will flow. When others use facilitation skills, it can effectively support the chairperson, whose job it is to keep on task and on time.

Combined with an understanding of roles and the stages of group development, facilitation skills will help your committee be more effective. However, you still need some practical tools to manage the committee and its activities.

## B. 2 Committee basics

Before you start solving problems, the question is:

*How do we manage ourselves as a committee so we can deal with a problem when it comes up?*

At this point we will focus on meetings, the place where issues are discussed and recommendations made. Committee members do things outside meetings, such as inspections and investigations; these are covered in more detail elsewhere in the manual. Committees, and their members, need:

- ground rules
  - terms of reference
- (cont'd)



### COMMITTEE ACTIVITY

At a meeting, assign one or two people who don't expect to participate much to be observers. Their task is to keep track of how the chair and others facilitate discussions and decision-making.

Allow about 15 minutes at the end of the meeting to talk about what they saw and heard. Try using these questions to guide the evaluation:

*What worked well? Why?*

*What needs to improve? How can we do that?*

*What is one thing each committee member will do at the next meeting to help facilitate?*

At the next meeting, review how things go. Repeat the process as needed, at least once a year.

- orientation of new members
- effective chairing
- focused agendas
- time to prepare for meetings

## Ground rules

Ground rules are a list that guides how a committee works together. Everyone in the group needs to agree to play by these rules. Ground rules can be changed by consensus, if need be. They could include:

- ✓ arrive and end on time
- ✓ everyone has an opportunity to participate
- ✓ avoid side conversations
- ✓ listen to each other with respect
- ✓ criticize/argue about ideas, not people
- ✓ vibrate your cell phone if it must be left on
- ✓ “confidential” means confidential always!

See the *Ground Rules for Committees* in the Committee Process Toolbox (CP.8).

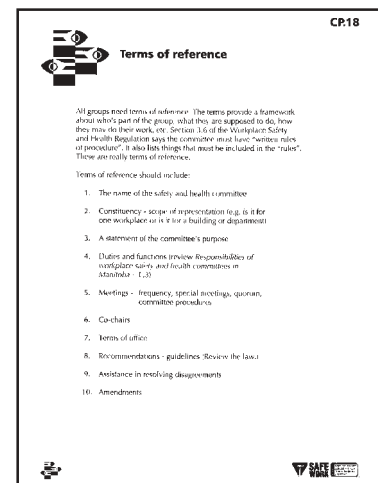
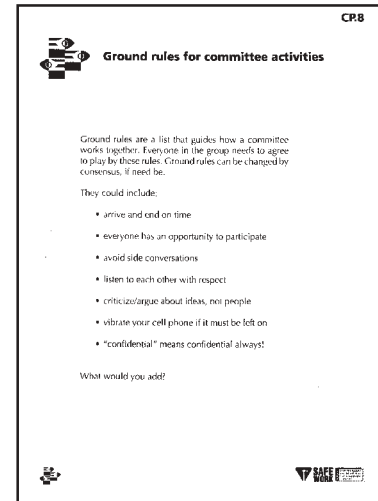
## Terms of reference

Before a committee begins its work, set a “terms of reference”. They should include:

- ✓ ground rules
- ✓ expectations about attendance
- ✓ frequency of meetings a year (regular dates help)
- ✓ who’s on the committee (who’s responsible for naming representatives, etc.)
- ✓ term of office (how long are people on the committee?)
- ✓ what committee members do (including having time for these activities), etc.

It is important to do this before you get into conflict. Groups rarely have the skills to agree in stressful situations, unless the ground rules are set already.

There’s a copy of this list in the Committee Process Toolbox (CP.18).





## Orientation

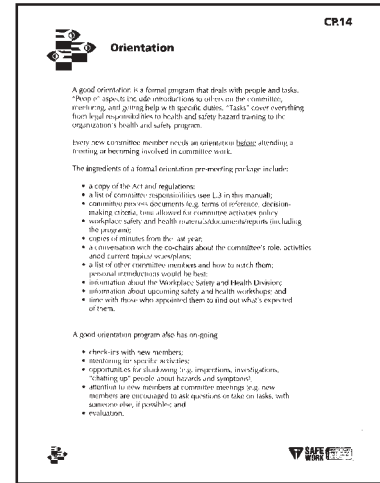
New safety and health committee members may not know much about health and safety, the law or effective committees. As a new member, there is a steep learning curve to becoming an effective part of the committee.

To assist the new member and help the committee during the transition, an orientation for new committee members just makes sense. It's respectful and practical. It improves committee effectiveness and overall functioning. When committee activities are taken seriously, all new members get an orientation that prepares them to make informed decisions and take appropriate actions. They are not left to figure things out on their own.

A good orientation is a formal program that deals with people and tasks. "People" aspects include introductions to others on the committee, mentoring, and getting help with specific duties. "Tasks" cover everything from legal responsibilities to health and safety hazard training to the organization's health and safety program.

Every new committee member needs an orientation before attending a meeting or becoming involved in committee work. The ingredients of a pre-meeting package should include:

- ✓ a copy of the Act and regulations;
- ✓ a list of committee responsibilities (see L.3 in this Manual);
- ✓ committee process documents (e.g. terms of reference, decision-making criteria, time allowed for committee activities policy);
- ✓ workplace health and safety materials/documents/reports (including the program);
- ✓ copies of minutes from the last year;
- ✓ a conversation with the co-chairs about the committee's role, activities and current topics/issues/plans;
- ✓ a list of other committee members and how to reach them; (personal introductions would be best);
- ✓ information about the Workplace Safety and Health Division;
- ✓ information about upcoming health and safety workshops; and
- ✓ time with those who appointed them to find out what is expected of them.



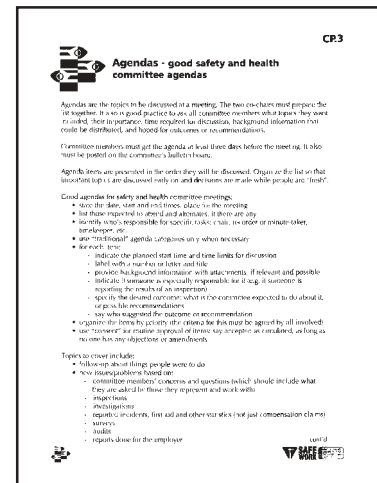


## Agendas

Agendas are a list of topics that tell members what to expect at the next meeting. The law requires committee co-chairs to draft agendas. In practice, they also review previous minutes and ask other committee members what they want to put on the list.

The agenda must be distributed at least three days before a meeting; any materials to be discussed at the meeting should be attached or sent to committee members at the same time.

See *Agendas - good safety and health committee agendas* (CP.3) in the Committee Process Toolbox.




## Preparation time

Committee members need to prepare for meetings. This time is well worth the investment; it leads to effective committees and effective, focused meetings.

Reading agendas and documents to be discussed at the meeting is essential. Preparation also includes:

- ✓ meeting with people in the workplace who have concerns or questions;
- ✓ subcommittee meetings (prepare a survey, review report, discuss and make recommendations on a specific topic);
- ✓ inspections and investigations;
- ✓ finding information about problems found during inspections or brought up by workers (some call this research), including possible solutions;
- ✓ meeting with other committee members to set priorities about topics to bring up, prepare information to present and develop ideas for solutions;
- ✓ reporting: worker reps to workers represented or union, employer reps to management; and
- ✓ following up about recommendations and discussions at committee meetings (plus commitments to do certain things).

(cont'd)



### Did you know?

- ✓ Members must be paid while carrying out committee duties. [Act, section 40(11)]
- ✓ Failure to pay wages or benefits is discriminatory action. [Act, section 42(2)]
- ✓ There is more to discriminatory action [Act, sections 42(1) to 42.1(5), and definition in section 1].

The authors' wording presented above does not replace the Province of Manitoba's legislated Act and Regulations. The official versions can be found on-line at <http://www.gov.mb.ca/labour/safety/actregnew.html> or by contacting the Manitoba Workplace Safety and Health Division office.

It's often difficult for worker representatives to get this included in their work time. However, the law says that all committee members must be paid for the time they put in for committee work. It's discriminatory if they are not paid. Therefore, the committee's terms of reference should be clear that this is a legitimate request.

## Minutes

Minutes are a record of what happens at a meeting, and the main points made during a discussion. For each item listed, there should be significant information about the topic, key discussion points, the follow-up action required, if any, and by whom and what date. Recommendations should be clearly stated. Sometimes separate forms are useful, especially if there are detailed reasons behind it. For more about recommendations, see Part H and CP.15.

After an item is discussed and resolved (e.g. at the next meeting), the same issue should not be discussed again, unless it relates to a new item, or new information is available.

The Workplace Safety and Health Division has a prescribed form for minutes. They will accept other formats if the required information is included. See the *Minute Form* (CP.13B).

Committee Minute Form		PAGE ____ OF ____		Manitoba	
<p>See instructions www.manitoba.ca Phone (204) 945-5446 Fax (204) 945-5279</p> <p>Labour and Immigration Workplace Safety &amp; Health Division 401 York Avenue, Winnipeg, Manitoba R2C 0P8 T 204-945-5446 F 204-945-5279</p>					
<p>Complete Name and Address of Worksite</p> <p>Phone:</p> <p>Fax:</p> <p>Work Committee (if more than one):</p> <p>Meeting Date:</p> <p>Date of next meeting:</p> <p>Number of employees at the worksite:</p>		<p>Employee Members (if all)</p> <p>Worker Members (if all)</p> <p>Others (if any):</p>		<p>Occupation:</p> <p>Present:</p> <p>Absent:</p>	
Date of Origin	Complaint or Problem (the more for committee action)		Recommendations or Action To Be Taken		Action By (who & when)
<p>Other Business:</p> <p>Co-Chairperson's Signature: Please indicate by (X) in the brackets below who chaired this meeting.</p> <p>Both management and worker co-chairs ( ) ( ) of the minutes when they agree that the minutes are complete and accurate.</p> <p>If one, or both co-chairs ( ) ( ) agree with the minutes read, please attach comments on a separate page.</p> <p>In my opinion, the above is an accurate record of this meeting.</p> <p>( ) First Name of Employee Co-Chair ( ) First Name of Worker Co-Chair</p> <p>Signature: _____ Signature: _____</p> <p>COMMITTEE MINUTE FORM PAGE ____ OF ____</p>					

## B. 3 Communication skills

Two communication skills are essential for each committee member:

- active listening; and
- asking open questions.

### Active listening

Active listening requires effort and keeping your ideas to yourself, for the moment. It's about focusing on the speaker and shutting off your immediate responses to what is being said.

"Active" implies doing something; in this case, it means just listening. This can be difficult. It helps to

## COMMITTEE ACTIVITY

At each of your next few meetings, have two members assigned to paraphrase what they hear others say about one topic. Take turns until everyone has had practice.

Then use the blank *Active listening - 10 Tips to help us* to make yourself a list of what helps you listen. It's CP.2 in the Committee Process Toolbox.

write down questions or ideas as someone speaks. This will allow you to let go of your own thoughts and focus on the underlying meaning of what is being said.

When the person has finished speaking, check to see if you actually heard what they meant to say. A useful method is to paraphrase what you heard, asking the speaker if you understood or heard them correctly. If the speaker says “yes”, you likely got it right. If you didn’t quite “get” something, the person has a chance to re-state their point and avoid misunderstandings.

One point: what someone says, and what you believe or know, may be two different things. What’s important is being clear about what individuals mean — what they are trying to say. After that, we can agree to disagree or discuss the accuracy of what’s said.


## Asking open questions

Asking questions is a key skill for everyday life. We ask them to learn something new, find out what a person means (i.e. to clarify), or figure out “why?”.

In many cases, a “yes” or “no” answer doesn’t help. They give only two options when there may be others. They also cut off further conversation. That’s what you get from a “closed questions”.

Open questions lead to dialogue, understanding and increased chances of getting agreement. They also help in active listening. These “open questions” start with the five “W’s” and their friend “H”: who, what, where, why, when and how.

Interviews and informal conversations are other places where you can ask open questions. “What happened?” gets the whole story. “Did you...?” leads to a “Yes” or “No” response. It also may make people defensive. There are *Interviews and conversations* (CP.12A) for health and safety committee members and *Interviews and conversations - practice instructions* (CP.12B) in the Committee Process Toolbox part of this manual.



## COMMITTEE ACTIVITY

Review *Interviews and conversations* (CP.12A). Divide the committee into groups of three or four. Use the *Interviews and conversations - practice instructions* (CP.12B). Discuss the questions at the end, in the whole committee.

Then talk about:

*When could we use these skills?*

*What forms or other help do we need to have useful conversations about health and safety?*

CP.12A

**Interviews and conversations**  
Key tips for safety and health committee members\*

Interviews are a way to collect information about people's knowledge, opinions, ideas, fears and experiences. Interviews can be formal or informal conversations. The information you get can be used to plan or to be combined with information from surveys, monitoring results, inspection reports, etc.

These tips will help you, as well training and practice. See CP.12B for one way to practice "listening people up".

**Starting out**

- find a quiet and private place to talk
- give people enough time to make them feel comfortable
- use a friendly tone of voice
- explain what you're doing
- introduce yourself if the person doesn't know you
- whether or not you know the person, tell them why you're there
- give a short summary of the purpose of the interview, question, etc. ... that is the reason you're talking to them
- reassure the person that what they say will be treated confidentially
- explain what you'll do with the information: afterwards if appropriate, tell the person when they can find out more or get a copy of written reports
- tell the person how long you expect the conversation to take
- ask if the person minds your taking notes (and don't if they say "yes") - just explain why it helps you "get the story straight"

**Things to ask about during the interview**

- the routine, job, etc.
- the situation they are dealing with (the facts, as best as possible)
- the people who are involved (names)
- the background or context (facts and understanding) (situation)
- their ideas for changes, if appropriate
- asking "why" is a good way to understand the reason something happened or was done
- a particular way that doesn't sound like you're asking the person of something or think they're crazy

**Things to do during the interview**

- be respectful and sensitive to the person and what they say
- listen actively - comment yourself on business issues as closely as you can to the facts and opinions
- learn without interrupting or giving your opinions, even if you disagree strongly with something
- don't be disappointed or impatient when you hear a particular body language like sitting slumped or slumped

CP.12B

**Interviews and conversations - practice instructions**

Interviews are a way to collect information about people's knowledge, opinions, ideas, fears and experiences. Interviews can be formal or informal conversations. The information you get can be used to plan or to be combined with information from surveys, monitoring results, inspection reports, etc.

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## Did you know?

Open questions use the 5 “W’s” and their friend “H”. Use them to ask open questions

- Who uses this chemical?
- What hazards do you have to deal with when working alone?
- Where are your aches and pains?
- Why is it difficult to wear a respirator when you do that job?
- When did you first have those aches and pains?
- How do we find “green” products?

## B. 4 Working towards agreement

Effective committees and reps reach agreement about recommendations, amongst other things. It's an essential part of their work.

Reaching agreement means we see the same picture and are looking for the same results. But sometimes getting there is difficult. To make it easier, we can:

- use brainstorming and the *Six thinking hats* to develop ideas
- do a force field analysis to analyze situations
- recognize and deal with conflict
- use consensus to get agreement.

### Brainstorming and the *Six thinking hats*

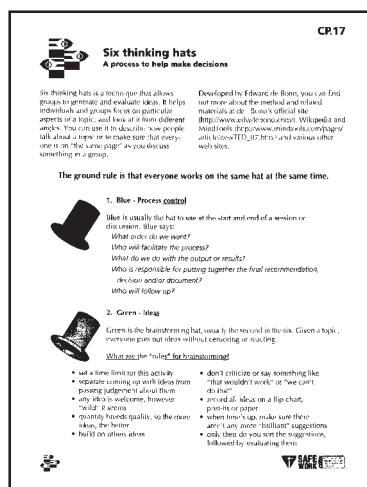
When a problem or situation comes up, a familiar reaction is that people jump to a solution that appears obvious or has been used in the past. In other situations, people may assume nothing can be done, or they censor themselves because of the workplace culture or past experience.

How can we interrupt these habits? What makes it easier to see the possibilities for change or options?

Brainstorming is one tool that helps groups be creative and imagine as many solutions as the members can dream of. The results can be very innovative and productive.

Like other processes, brainstorming works best by following some guidelines:

- set a time limit for this activity
- separate coming up with ideas from passing judgement about them
- any idea is welcome, however "wild" it seems
- quantity breeds quality, so the more ideas, the better
- build on others' ideas
- don't criticize or say something like "that wouldn't work" or "we can't do that"
- record all ideas on a flip chart or post-its or paper



### Did you know?

Find out more about the Six Thinking Hats method and related materials at various web sites including Edward de Bono's official site (<http://www.edwdebono.com/>) and Wikipedia and MindTools ([http://www.mindtools.com/pages/article/newTED\\_07.htm](http://www.mindtools.com/pages/article/newTED_07.htm)).





- when time's up, make sure there aren't any more "brilliant" suggestions
- only then do you sort the suggestions, followed by evaluating them

Brainstorming is a key part of the *Six thinking hats* process. See CP.17 in the Committee Process Toolbox for details.

A technique developed by Edward de Bono, the Six thinking hats method allows groups to generate and evaluate ideas. It helps individuals and groups focus on particular aspects of a topic, and look at it from different angles. You can use it to describe how people talk about a topic or to make sure that everyone is on "the same page" as you discuss something in a group.

The process has only one rule: Everyone is wearing the same hat at the same time. In brainstorming, this prevents having ideas shot down or too quickly evaluated.

Anyone can facilitate the brainstorming process. Try it the next time you need to identify possible solutions or strategies.

### Force field analysis

Force field analysis is a useful framework with which to analyze situations, particularly ones we want to change. You'll find a copy of the tool (CP.7) in the Committee Process Toolbox along with the instructions.

Developed by Kurt Lewin, this method helps us see the big picture, considering all the factors that are influencing a situation - forces. They either drive or restrain the situation. Driving and restraining forces go against each other, creating a dynamic status quo.

Change comes when the driving force or the restraining force increase or decrease, which leads to a new status quo. If the driving force increases, then the status quo will shift to the right on the sheet; it will shift left if the restraining forces are stronger.



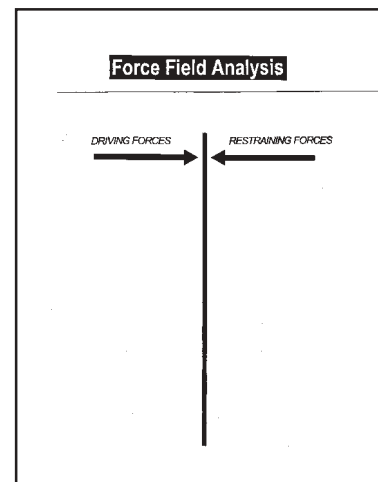
### COMMITTEE ACTIVITY

Have a copy of the *Six thinking hats* tool (CP.17) handy.

Brainstorm answers to the question below, allowing each committee member to throw out as many ideas as possible:

*How can we make our committee (more) effective?*

Keep a list of all answers. Then use the tool to evaluate the ideas on the list, using each of the RED, YELLOW, BLACK and WHITE hats. Revisit BLUE to agree on what to do next.



### COMMITTEE ACTIVITY

Use the *Force field analysis* tool (CP.7). Brainstorm the factors that affect the effectiveness of the safety and health committee. See if you can come up with four or five factors that drive or restrain the effectiveness.

Then pick one driving force. Brainstorm ways to strengthen it.

For example, all committee members need time for their duties. Promoting these committee needs to management may lead to agreement about scheduling meetings a year in advance, and more general support for the committee. It also may lessen the impact of a restraining force. For example, hourly workers could have a few hours of preparation time scheduled to go with each meeting.

## Criteria for decision-making

Criteria let committees and representatives compare options, especially for solutions to health and safety problems.

Committees and representatives need to set criteria before dealing with a situation. These “rules” provide the principles and framework for making decisions, whether it’s which hazard to tackle first, how to use surveillance information or what to include in a recommendation.

The sample criteria on the following page walk you through questions to answer to decide how to choose from the various options you generate. Not all solutions are equal. Once you’ve answered the questions, the solution that best meets the criteria will arise.

For example, the six hazard categories remind us about the need to inspect for all types of hazards. If a lot of workplace incidents fit in “ergonomic design”, that’s where the committee should focus its efforts. It doesn’t make sense to keep inspecting only for physical or safety hazards. Once the committee inspects for ergonomic design hazards, their recommendations will include this hazard category. The members also will become more comfortable suggesting solutions that are effective and practical.

Criteria are particularly useful when it comes to getting hazards fixed. How do you decide which problem to tackle first? How do you decide what options are best? What will help you make a case for the best solution?

**Criteria for setting priorities about hazards**

Criteria	Hazard # 1	Hazard # 2	Hazard # 3	Hazard # 4	Hazard # 5
How serious a hazard/issue is it?					
How many people are or could be affected?					
How severe are the (potential) consequences (injury and chronic effects)?					
How often is the problem likely to occur (frequency)?					
How much does the problem (hazard) cost?					
What's the law say about this?					
(If applicable, what does the collective agreement say about this?)					
Could the problem be fixed easily and quickly?					
How important is it to the people involved?					

CP.6A



## COMMITTEE ACTIVITY

Review the questions in the first (left-hand) column of our *Criteria for decision-making* form (CP.6A). If your choices are among hazards, the next form may be more appropriate. Use the blank version to list the ones that are important to your committee. Besides the ones in our form, consider:

*What other questions do we want to ask?*

*What questions does the committee not want to ask? Why?*

*What else would help us make decisions?*

Then look at the second column. The committee needs to agree on the questions and the measures.

*How will you measure success?*

Finally, look at the criteria and measures together. Ask:

*How do the criteria relate to one another?*

*Are some criteria more important than others?*

Rank the criteria in the order that is important to your committee.





The *Criteria for decision-making*, shown below and in the Committee Process Toolbox (CP.6), sets out key criteria about how to choose priorities and recommendation(s) for solutions. Use it to make your list, before developing solutions for health and safety hazards or problems.

Since there usually is not a “yes” or “no” answer to the criteria questions, there are related ones to consider. The answers to the other two sets of questions will help you apply each criterion. The form also lets you rank each item on the list for their importance to the committee or representative. Add others if they are more appropriate for your workplace.

## Criteria for decision-making (sample)

	What's important? (Our criteria)	How do we measure success?	Do our recommended solutions match the criteria?
1	How do we (each of us) feel about the solution(s)?	What evidence supports our feeling?	In the absence of evidence, how do we proceed?
2	How many people are affected by the problem? the solution(s)?	Should we set a minimum or maximum?	If one person is affected severely by a hazard, how do we rate its importance?
3	How severe are the consequences of the problem?	What are the acute and chronic effects? How serious are they?	If the consequences are only short-term or only long-term, how appropriate is our solution?
4	How much does the <u>problem</u> cost?	Does the solution cost less, the same or more than the problem? How much?	How are costs considered, compared to severity and consequences?
5	What does the law say about this topic? What is “reasonably practicable” to do in terms of time, effort and money?	What absolute requirements must the employer follow? How does this account for “reasonably practicable”?	Is management informed and clear about the health and safety law?
6	What do workplace documents say about this situation?	What guidelines do we already have to help us? What's in our health and safety program? union contract (if there is one)? other policies?	In the absence of policy, do we develop one? If this situation is not covered in our programme, what needs to be added?
7	Can the problem be fixed easily and quickly?	What is the effect of fixing something right away?	How do we still go after long-term solutions?
8	How important is the problem to the people involved, especially those affected?	If the committee identifies a hazard that others don't “see”, how do we measure its impact?	If the potential consequences are severe, does the committee go ahead when the problem is not apparent? How do we use the prevention principles (including substitution and precaution)?
9	At what level does the solution fit on the prevention triangle? (See page C-5.)	How close are we to the root cause or source of the problem?	If the fix fits in Level 2 or 3, what should we do to find out more about a Level 1 solution?

## Recognizing and dealing with conflict

Conflict is an inherent dynamic of all groups. No two people are alike, so why would we see things the same way?

Within workplace safety and health committees, conflict likely is structural too. Management and worker representatives come from different positions in the organization. Their health and safety experiences and goals are often different.

For example, management representatives may be more concerned about the costs of solutions or activities than worker representatives are. Both may agree there is a problem, but disagree about possible solutions. Workers may want to get rid of a hazard while management representatives argue it costs too much to do that, and personal protective equipment will be sufficient.

In other situations, information is an important commodity. When some members have enough information to discuss an issue, and others don't, there is a power imbalance within the committee. Information needs to be shared or there may be conflict.

Although it's difficult to deal with, studies tell us that conflict produces better decisions - because all perspectives have to be considered.

Like other groups, committees must recognize and deal with conflict to reach agreement. The solution is to have healthy conflict - learn to deal with disagreements, figure out what you can agree about, and be clear about where the differences are and why. See CP.9 - *Ground rules for healthy conflict* - and the side boxes on this page.



### COMMITTEE ACTIVITY

Review the *Ground rules for healthy conflict* (CP.9). Also see "Did you know?" box below. Have a discussion about how the committee could include some of these "rules" in your terms of reference and committee ground rules. Try to reach agreement about one thing.

Then discuss:

*What would help us, as a committee, to use these ground rules?*



### Did you know?

#### Ground rules for healthy conflict

Committee members should:

- criticize ideas, not individuals
- treat people's concerns seriously
- listen to what is said, not what you think is said (active listening)
- allow everyone to have a say
- clarify facts and agree about getting more information if needed
- find out what you can agree on
- clarify any disagreement before trying to develop a solution
- try to understand the reasons for the differences
- see if people will agree to try something before actually disagreeing about its use
- summarize where you're at, after everyone's had a say, and avoid repeating the same argument
- take a break and caucus where necessary, returning with one suggestion about how to proceed

There's a copy of this in the Committee Process Toolbox (CP.9).



## Consensus

A key role for committees and reps is to recommend solutions for health and safety problems or actions to prevent them. That means the committee must agree about what to recommend.

Consensus is our preferred form of reaching agreement. It is an agreement with which everyone can live. It may not be your solution or my solution, but it is a solution we agree will work.

Given the committee structure, people should and will come in with different perspectives and experiences. Dialogue about a problem, its cause(s), possible solutions and the impact of those solutions helps a committee reach consensus about a recommendation. Since dialogue takes time, the agenda needs to allow for this.

For long-term effectiveness, committees need to have these important struggles (“storming”) to reach an effective solution (“performing”).

Here is one method to develop consensus:

### A method for developing consensus

1. Start with a proposal.
2. Clarify what the proposal means.
3. Check for immediate consensus.
4. List concerns (brainstorm without judgement).
5. Resolve concerns or look for a “third solution”:
  - revisit the purpose
  - examine who benefits from the solution
  - do a “go-around”, allowing each member to have a quick say
  - ask for a “stand aside” if there is a conflict of interest or if a member cannot support, but will not stop, the proposal.
6. Continue until consensus is reached.
7. If consensus cannot be reached, refer to a third party (e.g. Workplace Safety & Health Division).



### ***Did you know?***

If the committee chooses to use “majority rule” instead of consensus to make decisions, those with differing opinions may be disenfranchised, feel silenced or left out of the process. When this happens, the committee may have difficulties fulfilling its collective responsibilities.



## B.5 Racism and discrimination

Why is racism and discrimination an issue for safety and health committees and reps?

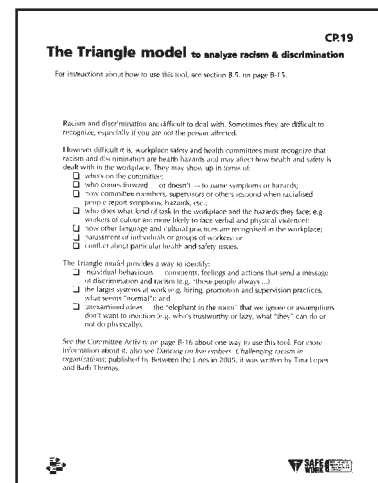
One reason is that racism, discrimination and other forms of harassment on the job are work-related stressors. They are hazards that may affect people's health or be some of the root causes of incidents, injuries and illnesses.

This makes committees and reps responsible for dealing with racism, discrimination and other forms of harassment that lead to, or are, health and safety symptoms or hazards.

The connection is reinforced by requirements in the 2007 composite *Workplace Safety and Health Regulation*. Employers must prepare a written harassment prevention policy (Part 10 of the *Regulation*) and consult committees and reps about its development. Like other health and safety issues, committees and reps should be evaluating the policy, dealing with complaints that are covered by it, and developing and promoting related education and information programs. It is management's responsibility to deal with specific issues.

These topics aren't easy ones to deal with, or to recognize. The *Triangle model* (CP.19) provides a way to identify individual behaviours, systems and unexamined ideas. (We've adapted it from *Dancing on live embers. Challenging racism in organizations*, by Tina Lopes and Barb Thomas.)

Individual behaviours are comments, feelings and actions that send a message of discrimination. However well-intentioned, their impact is still racist or discriminatory. Systems, or the way things work, includes hiring, promotion and wage practices - what seems to be "normal". Powerful unexamined ideas are assumptions at work beneath the surface (e.g. what women can or can't do physically, who's trustworthy or lazy, etc.)



[illegible]

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## Part C. Principles of health and safety at work

### C.1 Why are goals, principles and key concepts important?

Goals help you figure out where the committee is heading, whether it's next week, next month or next year, or the really long-term.

Principles help you reach those goals. They provide a framework and common ground for committee discussions, activities and decisions. The “objects and purposes” of *The Workplace Safety and Health Act* are one set of principles.

Effective committees will regularly use key ideas and tools over and over again in their activities. These ideas include approaches that are based on principles, and the health and safety law.

### C.2 The law: goals and principles

The Act sets out the goals, names the players, provides the framework and basic “rules” about who must or can do what.

Regulations explain how to deal with specific hazards or situations, based on the framework and goals of the *Act*.

Codes of practice go with specific parts of the *Workplace Safety & Health Regulation*; they now cover working alone/in isolation, powered lift trucks, using explosives and confined space entry.

The Workplace Safety and Health Division also issues guidelines that provide more detailed information to employers, committees and reps about what's expected when dealing with specific hazards, situations and procedures.

**The law** - in this manual, it refers to all of the legislation in Manitoba about workplace safety and health and includes the Act, regulations and codes of practice.

## **“Health”, “safety” and “welfare”**

These important terms are defined in section 1 of *The Workplace Safety and Health Act*. Every time they are used in the law, the definition applies.

## **The goals of Manitoba’s safety and health law**

The general objects and purposes of *The Workplace Safety and Health Act* are to:

- *secure workers and self-employed persons from risks to their safety, health and welfare arising out of, or in connection with, activities in their workplaces; and*
- *protect other persons from risks to their safety and health arising out of, or in connection with, activities in workplaces. [Act, section 2(1)]*

In addition, there are specific goals:

- *the promotion and maintenance of the highest degree of physical, mental and social well-being of workers;*
- *the prevention among workers of ill-health caused by their working conditions;*
- *the protection of workers in their employment from factors promoting ill health;*
- *the placing and maintenance of workers in an occupational environment adapted to their physiological and psychological condition.*

[Act, section 2(2)]



### **Did you know?**

**Definitions** for key words are found in section 1 of the Act. In the regulations, definitions are sometimes listed at the beginning of a specific part.

**Health** means the *condition of being sound in mind, body and spirit and must be used according to the objects and purposes of this Act.*

**Safety** means the *prevention of physical injury to workers and other persons who may be affected by activities in the workplace.*

**Welfare** means the *conditions or facilities, in or near a workplace, provided for the feeding, rest, hygiene or sanitary requirements of a worker.*



### **COMMITTEE ACTIVITY**

Practice plain language translation of these goals.

“Translate” each part of the objects and purposes into plain language. Pay careful attention to where you see “health” and “safety”. See one “translation” in the *Using the law* Toolbox L.1.



### C. 3 What is a safe and healthy workplace?

Here are some important ingredients for a safe and healthy workplace:

- healthy and well-adjusted workers
- management is committed to safety and health, with evidence of it in daily activities
- few, if any hazards - especially serious ones
- health and safety is included in major planning discussions and decisions
- an overall program that names the safety and health goals and has ways to reach them
- policies and procedures for all parts of the workplace safety and health program
- competent supervisors
- an effective committee or representative
- promotion of health and safety in general, and specific efforts in particular (e.g. posters, regular surveys, topic is on agenda at staff meetings, posted statements about respect at work)

There's a detailed version of this list in the Committee Process Toolbox (CP.20). Use it to compare to the one you develop in the Committee Activity.

### C. 4 Key principles and concepts to get to a healthy and safe workplace

These key principles and concepts include:

- hazard categories
- the principles of prevention
- five steps to a healthy and safe workplace
- workers' rights
- legal responsibilities

#### What are hazards? The six categories we need to "see"

Hazards are things or conditions that are or could be dangerous. They might hurt us, make us ill or kill us.

(Some people use the word **risk** when they mean hazard. The words have different meanings. We use "hazard" to avoid confusion.)

We put hazards into six categories that committees and reps need to "see". The *Hazards - the problems behind*



#### COMMITTEE ACTIVITY

What would a safe and healthy workplace look like?

Divide the committee into two groups if there are more than five or six members. Do the activity using option A or B.

Option A - Each group works together to brainstorm their answers to the question. Use the *Six Thinking Hats* process to help do this (CP.17). Have a member record the answers. After 15 minutes, share the results, one group at a time.

Option B - Using a large piece of paper and coloured markers/pencils/crayons, each group draws a picture of their answers to the question. After 15 minutes, share the results, one group at a time.

Discussing the results, make sure it's clear what the different words or phrases or images mean. Also try answering these questions:

*What do you see?*

*What is there in common?*

*What are the differences?*

*How important are the differences?*

*What would help us discuss these differences?*

Finish the activity by making a new list or a new drawing that includes the goals on which all agree.

Keep all materials and results from this activity for future reference.

**Risk** - is the chance (probability) of a worker's safety and health being affected by a hazard; or of property and/or equipment loss. We use the term "hazard" to avoid confusion.

our symptoms tool is explained in more detail in Part E. There's a copy in the Safety and Health Toolbox (SH.2).

Safety/Mechanical hazards - include incidents involving vehicles, trips or falls, housekeeping, moving machinery parts or equipment that is broken or not working properly.

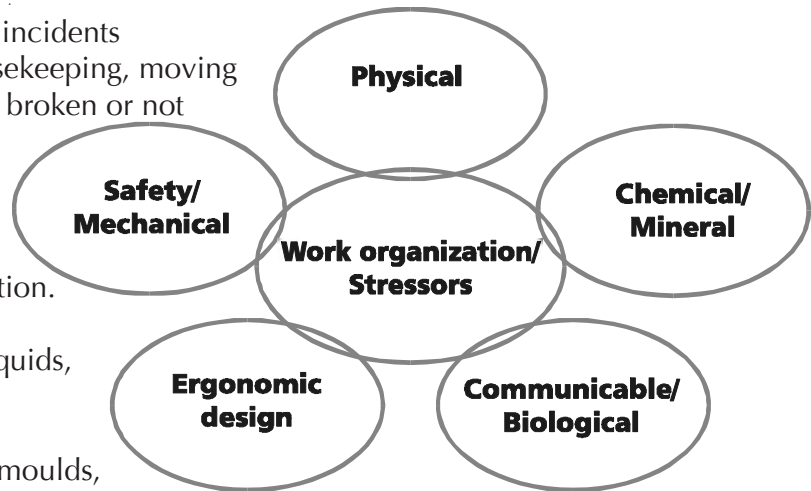
Physical hazards - from energy sources, such as noise, temperature, humidity, electricity, vibration, radiation.

Chemical/Mineral hazards - gases, liquids, solids, dust, fumes, vapours.

Communicable/Biological hazards - moulds, bacteria, viruses, blood-borne pathogens, needle sticks.

Ergonomic design hazards - including repetition, force, awkward and static posture, and the work environment (which includes the physical hazards above).

Work organization hazards/stressors - how work is designed and organized, including workload or other demands, control/say, support, respect, possibilities for violence and the flexibility for dealing with non-work responsibilities.



**Controls** - solutions that don't get rid of a hazard. Sometimes used for all types of solutions.

**Fix** - another word for "solution".

**Solution** - a method or action to prevent or reduce the effects of a hazard. Sometimes called "fix", control or "intervention". Three basic categories of solutions are explained in the *Prevention triangle* (SH.8).

## The principles of prevention

The best prevention is getting rid of hazards. This kind of **solution** is often a long-term goal with several steps along the way. Sometimes, we can't get rid of the hazard and other kinds of solutions must be used to reduce the seriousness of a hazard and/or limit its effects. These **controls** don't get rid of the hazard because it is still there and able to affect people.

Two important principles of prevention are:

Substitution - get rid of toxic substances or processes whenever a healthier and/or safer one is available. Replacements are non-toxic or much less hazardous materials. Substitution also describes changes about how things are done, using a different technology or reorganizing the task to reduce or get rid of hazards.

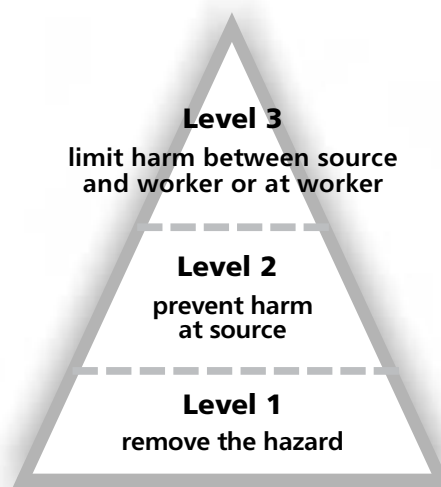
The precautionary principle - It's "better safe than sorry". Basically, there must be proof that something is not harmful before it is used, rather than having workers or the community **exposed** and taking action only when problems appear.

The *Prevention triangle* describes three levels or categories of prevention. It is consistent with the goals of the health and safety law and legal "rules" about how to **fix** hazards. The triangle is also an important tool for recommending solutions. For more details see Part G. The tool is in the Safety and Health Toolbox (SH.13) .

- Level 1 prevention
  - get rid of or eliminate hazards
  - find alternatives using substitution and the precautionary principle
  - often takes more time and effort;
- Level 2 prevention
  - limit the hazard's spread at the source
  - also known as engineering controls
  - usually are medium or short-term solutions;
- Level 3 prevention:
  - limit the harm and reduce hazard by putting something between worker and the hazard
  - controls between hazard and workers ("along the path")
  - controls at the worker - procedures and personal protective equipment
  - other reasons for Level 3 prevention
    - emergencies
    - exposure is very limited or rare
    - waiting for completion of Level 1 or 2 prevention solutions
    - when nothing else is possible.

When developing solutions, it's important to try and get as close as possible to the source of the problem - the hazard.

**Exposed** - a person is exposed to a hazard when it can come in contact with, or get into their body or mind and have an effect.



**The Prevention triangle**



#### **Did you know?**

These prevention principles are set out in section 6.1(1) of the *Workplace Safety and Health Regulation*.



#### **COMMITTEE ACTIVITY**

In your committee, use the *Prevention triangle* to discuss:

*For each level of prevention, what are examples of these kinds solutions in your workplace?*

Sometimes the context affects where a solution fits.

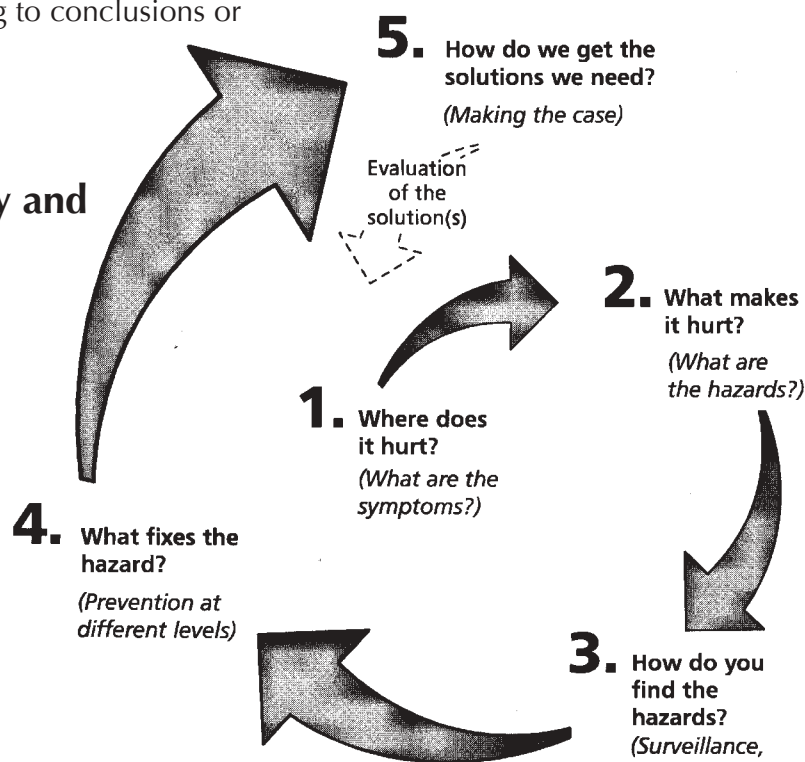
*Why does the solution fit where we put it?*

## Five steps to a healthy and safe workplace

How do you get from where you are now to where you want to be - a healthy and safe workplace? And how do you know when you've achieved any of your goals?

This manual uses a five-step approach that is easy to follow, logical and practical. It's important to do each step to avoid confusion, jumping to conclusions or overlooking key information.

### Five steps to a healthy and safe workplace



The *Five steps to a healthy and safe workplace* (SH.3) is a problem-solving cycle. It starts with people's experiences. How are workers affected by their jobs? What are their symptoms? The first step is **Where does it hurt?** in Part D; it describes different types of symptoms and important concepts related to them.

What's behind the symptoms - those aches, pains, cuts, rashes, injuries, illnesses and diseases? Job-related hazards cause workplace health and safety symptoms. Step 2 - **What makes it hurt?** in Part E identifies hazards found in workplaces and goes into more details about the six categories.

Step 3 - **How do you find symptoms and hazards?** Part F explains the detective work or surveillance needed. There is a variety of useful tools and materials to do the surveillance at your workplace to link symptoms and

**Symptom(s)** - the injuries, illnesses, diseases or deaths that are caused by hazards at work. Different types of symptoms may be linked to different kinds of hazards.

hazards. Since the goal is to prevent symptoms and hazards, we emphasize getting the full picture, looking for the root cause(s), and practical approaches to dealing with them.

Once the hazards are identified, the law expects committees to make recommendations to their employers about preventing or dealing with the problems. Step four - ***What fixes the hazards?*** is in Part G. What principles should guide the committee, and your employer? This part explains these ideas and presents more details about the prevention triangle.

Knowing the solution isn't enough for committees or others in your workplace. Step 5 - ***How do you get the "fixes" you need?*** is found in Part H. It is all about making the case for short and long-term solutions. Part B will get you started, while Part H provides some details about what helps committees be effective, make decisions and recommendations and carry out their responsibilities.

## Workers' rights

Like other places in Canada, Manitoba workers have the right to a healthy and safe workplace in general, and four more specific rights. They are:

- **the right to know** about hazards and how to deal with them
- **the right to participate**, usually through a workplace safety and health committee or as a representative
- **the right to refuse** work the person thinks is unhealthy or unsafe for him or her or another person
- **the right of no discrimination** for health and safety activities or asking questions or complaining about a health and safety issue.

The Using the law Toolbox has a chart, *Worker rights - Employer duties* (L.1). It connects employers' duties and workers' rights, based on the Act. (Remember that most supervisors are also workers.) The regulations have more specific details.



### COMMITTEE ACTIVITY

Use the *Five steps to a healthy and safe workplace* (SH.1). Brainstorm all the activities in which committee members are involved.

*Where do they fit in the Five steps?*

For more detailed evaluations, see the committee effectiveness checklists in CP.21 A and B.



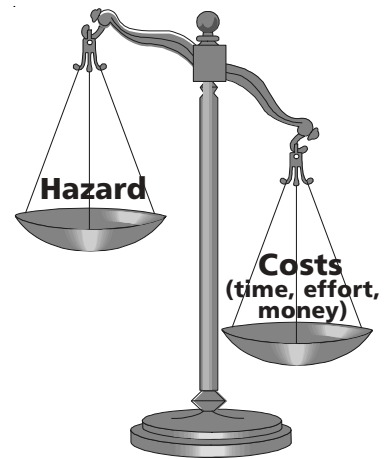
## **Legal responsibilities**

The tables on the next pages list some of the legal requirements for employers, workers, supervisors and other players in workplace safety and health. They are basic overviews. For the complete version, consult the original documents, available on-line at <http://www.gov.mb.ca/labour/safety/actregnew.html> or contact the Workplace Safety and Health Division office nearest you. (The *Resource Guide* has details.)

One concept in our safety and health law includes the term ***reasonably practicable***.

This term means that the employer must weigh the costs in time, money and effort of fixing or preventing problems and the effects of doing little or nothing. It's **not** an even balancing of costs and hazards. Hazards must be fixed or dealt with, unless there is "a gross disproportion" (i.e. a great imbalance) between the cost of solutions and doing nothing about the hazard. The more serious the hazard, the more that it is "reasonably practicable" to fix it.

This term has not been included in the lists to keep the tables short and concise.



## Summary of the law about responsibilities

Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Employer</b>	<p>ensure the health, safety &amp; welfare of all their workers</p> <p>maintain the workplace, equipment, system &amp; tools so they are not hazardous</p> <p>provide information, instruction, training, and supervision</p>	<p>4(1)</p> <p>4(2)(a)</p> <p>4(2)(b)</p>	
<b>Supervisor</b>	<p>protect the safety &amp; health of those they supervise</p> <p>ensure workers do their job according to the law</p>	<p>4.1(a)(i)</p> <p>4.1(a)(ii)</p>	
<b>Worker</b>	<p>protect themselves &amp; others</p> <p>use/wear protective equipment provided or required</p>	<p>5(a)</p> <p>5(b)</p>	
<b>Workplace safety &amp; health committee/ Representative</b>	<p>deal with safety &amp; health concerns/complaints</p> <p>participate in identifying hazards</p> <p>develop measures to protect safety, health &amp; welfare</p> <p>co-operate with workplace occupational health service</p> <p>develop/promote education &amp; information programs</p> <p>make recommendations to employer about health &amp; safety</p> <p>inspect the workplace regularly</p> <p>investigate workplace injuries &amp; dangerous occurrences</p> <p>keep records about concerns/complaints &amp; other matters</p>	<p>40(10)(a)</p> <p>40(10)(b)</p> <p>40(10)(c)</p> <p>40(10)(d)</p> <p>40(10)(f)</p> <p>40(10)(g)</p> <p>40(10)(h)</p> <p>40(10)(i)</p> <p>40(10)(j)</p>	

The authors' wording presented above does not replace the Province of Manitoba's legislated Act and Regulations. The official versions can be found on-line at <http://www.gov.mb.ca/labour/safety/actregnew.html> or by contacting the Manitoba Workplace Safety and Health Division office.

Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Safety &amp; health officer/Inspector</b>	<p>can enter any workplace</p> <p>determine the cause of injuries and ill health</p> <p>measure, photograph, test, record, sample, and seize articles or substances</p> <p>examine documents, books, records on safety &amp; health</p>	<p>24(1)(a) &amp; (b)</p> <p>24(1)(d)</p> <p>24(1)(e) - (h)</p> <p>24(1)(i)</p>	
<b>Unions</b>	choose workers for the committee or representatives	41(2)	

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## Part D. Step 1 - *Where does it hurt?*

### D.1 What's this part about?

The **symptoms** of health and safety problems - where people are "hurting" - are good places to start figuring out what's happening in your workplace.

Workplace safety and health committees need to pay attention to all kinds of symptoms, including "**stress**" and "**strain**". That's because of the way "health" is defined in the *Workplace Safety and Health Act*. (See Part C.)

Our "hurts" show up in different ways, some more visible than others. Injuries like a broken bone, cuts and burns are pretty obvious; **aches and pains** can't be "seen" quite so easily. Some symptoms of "job strain" are changes to behaviour and emotions, while **stressors** and some chemicals affect our cardiovascular and central nervous systems.

One way to get a handle on symptoms or effects is to put them into categories. This helps when making a body map (see Part F). To start with, consider these:

Aches and pains or MSIs - the most common kinds of symptoms in most workplaces. Specific aches and pains or musculoskeletal injuries (MSIs) include:

- arthritis
- back injuries and diseases
- bursitis
- carpal tunnel syndrome (CTS)
- epicondylitis (a.k.a. tennis or golfer's elbow)
- tendonitis (inflammation of a tendon)

The chart *Ergonomic hazards - examples of musculoskeletal injuries* (SH.7) lists the names of specific MSIs, their symptoms and what may cause them. The causes are linked to ergonomic hazards (see Part E).

Stress and strain/toxic stress are common symptoms in all kinds of workplaces. See *Workplace stressors have toxic effects* (SH.14) in the Safety and Health Toolbox for examples of common stress and strain/toxic stress symptoms.

**Aches and pains** - words we may use in general conversation. In the Manitoba law, work-related aches and pains are called musculo-skeletal injuries (MSIs).

**Acute effects or symptoms** - seen right away, direct results; often from a short-term exposure to a lot of something; relatively-easy to connect to the hazard/source.

**Body map** - a drawing showing the outline of the front and back of a body. Body mapping is an effective way to find out about many kinds of symptoms in groups of workers or entire workplaces. Can be used to record answers to surveys and make presentations about what's happening to employees in a workplace.

**Chronic effects or symptoms** - show up a long time after the exposure started or happened; occur often or continue for a long time; can be from repeated exposures to small amounts of something; often have a **latency period**; can be difficult to link to the hazard/source.

**Latency period** - the time between between the exposure and first signs of the disease; cancer can be 10 to 20 years; mesothelioma - the asbestos cancer - can be 40.

**Local effects** - occur where a hazardous substance contacts the body; tend to be easy to see.

Depending on the workplace, we may have other kinds of injuries and illnesses. Other symptoms of work-related hazards include:

- headaches
- broken bones (fractures)
- cuts
- rashes
- burns, scalds
- hearing loss
- allergies
- breathing problems (short and long-term)
- long-term diseases or illnesses (e.g. cancer, high blood pressure, other cardiovascular problems, and central nervous system effects)
- reproductive problems (including the ability to have children or healthy children)

Whatever the symptom, it may be an **acute** or **chronic** effect. Acute effects or symptoms include:

- burns, cuts, scrapes, bruises
- broken bones
- some allergic reactions (some skin rashes)

Chronic symptoms include:

- many aches and pains or MSIs (e.g. back problems, carpal tunnel syndrome)
- cancer
- respiratory problems (including allergic reactions)
- reproductive effects (including the ability to have children or healthy children)
- effects to the nervous system, heart, kidneys, liver and other organs
- long-term toxic stress or strain

Symptoms also have **local** or **systemic** effects. Local effects include a skin rash from using a harsh chemical, a broken bone or a strained ligament. Systemic effects include headaches, fatigue, anything affecting an organ in the body or poisoning.

We won't have symptoms or effects unless we are exposed to some hazard. It must be present and able to reach, affect or come in contact with our bodies or minds.

### **Musculoskeletal injuries (MSIs)** -

injuries to muscles and/or bones and the tissues related to them; are also called:

- cumulative trauma disorders (CTDs)
- musculoskeletal disorders (MSDs)
- overuse injuries
- repetitive strain injuries (RSIs)

**Strain or toxic stress** - the long-term effects of exposure to stressors; when it's work-related, may be called job strain. Can have physical effects on the body or cause changes to behaviour, emotions or other non-physical effects. The Manitoba Workers' Compensation Board does not accept claims for stress-related effects, unless it is from a single, very traumatic event.

**Stress** - the short-term effects of hazards called stressors or work organization issues. These hazards to the "mind" can become hazards to the body. The Manitoba Workers Compensation Board does not accept claims for stress-related effects, unless it is from a single, very traumatic event.

**Stressors** - also called work organization hazards. Causes the short-term effects called "stress", and the long-term symptoms called "strain" or "toxic stress".

**Symptoms** - what people feel or experience, especially when uncomfortable or in pain. This is different from what a nurse or doctor finds when they look at you. At work, they are the effects of health and safety problems or hazards.

Chemical and biological health hazards have four main routes of entry into the body. They can get into your body by:

- inhalation (breathing through the nose/mouth)
- ingestion (eating something directly/indirectly)
- injection (through the skin, usually with a sharp object)
- absorption (through the skin, the rate for which depends on the part of the body)

For exposure to other kinds of hazards, see Part E.

## Reporting injuries, illnesses and diseases

In Canada, most health and safety statistics come from workers' compensation boards. To be counted, workers or their survivors must make claims for injuries, illnesses, diseases and deaths, and boards must accept the claims.

If a claim is not made or is not accepted, it won't be counted. Each year a number of injuries, illnesses or deaths don't get into "the system". This under-reporting means we don't have a full or accurate picture of what's happening in our workplaces.

The employer's safety and health program should have a method for reporting and recording injuries and illnesses that happen at the workplace. This is particularly important when identifying incidents involving first-aid-only injuries and near-misses.

## What information can we get about symptoms?

Get the lost-time injury and illness information and the first-aid only reports to find out what your workplace's experience is. Compare in-house data with previous months and years. Make outside "checks" with similar workplaces or sectors within the province, or possibly nationally or internationally.

Compare your workplace data to the rest of the sector in the province. The Manitoba Workers Compensation Board (WCB) publishes annual reports and month-to-month statistics in electronic format:

**Systemic effects or symptoms** - are found at a different place than where the hazardous substance entered the body; may start with local effects; often harder to find and connect with the hazardous substance.



### Did you know?

Workers say they don't report injuries, illnesses and diseases to worker compensation boards because:

- people don't know their rights or the reporting process
- English as an additional language (EAL)/plain language barriers
- "comp" pays less than wages
- fear of reprisals, harassment
- hard to make connection between the effect/symptom and job
- care providers may not want to deal with the workers' compensation system;
- "too much hassle" to report
- the injury/illness is just "part of the job"
- "I can't afford to take time off"
- others have tried and not had claims accepted
- it's easier to use sick days or private insurance
- worker is discouraged by co-workers/family from making a claim
- surviving families don't report deaths that may be work-related (e.g. cancer or heart problems)

[http://www.wcb.mb.ca/publications/injury\\_stats.html](http://www.wcb.mb.ca/publications/injury_stats.html)  
<http://www.wcb.mb.ca/publications/current.html>.  
For paper versions, call 954-4321 or 800-362-3340.

The Association of Workers' Compensation Boards of Canada (AWCBC) publishes information from boards across the country. They include:

- Key statistical measures:  
[http://www.awcbc.org/english/board\\_data-key.asp](http://www.awcbc.org/english/board_data-key.asp)
- National Work Injuries Statistics Program (NWISP):  
[http://www.awcbc.org/english/NWISP\\_Stats.asp](http://www.awcbc.org/english/NWISP_Stats.asp)
- Sector specific information is available at:  
[http://www.awcbc.org/english/Industry\\_Specific\\_Info.asp](http://www.awcbc.org/english/Industry_Specific_Info.asp)

## D. 2 Why is it important to pay attention to symptoms?

Symptoms are a key part of workers' experiences of health and safety.

It's especially important for young workers, women and workers of colour who are often exposed to different hazards than white men. As a result, their symptoms will be different and may not come out unless the right questions are asked or conversations started. All workers' experiences are important sources of information to committee members.

Symptoms provide clues about health and safety hazards. They are logical starting points or triggers that lead to hazards and making changes to prevent injuries, illnesses and deaths. Symptoms also can be used to calculate the cost of health and safety problems as opposed to the costs of fixing them.

Sometimes, a lot of people must be affected for you to "see" these links. At other times, there are "classic" symptoms even if only a few workers are involved. Maybe it's one person or a small group who have symptoms and questions about them. Don't dismiss the concerns. You may be seeing the "canaries" that warn of what may happen to others. (See "Did you know?" box at side.)

Keeping track of symptoms is one way to figure out how effective the employer and the committee are.



### Did you know?

Other sources of information for safety and health statistics and reports:

#### Statistics Canada

<http://www.statcan.ca/english/pub/index.htm>.

#### Health Canada

<http://www.hc-sc.gc.ca>

#### Centre for the Study of Living Standards

<http://www.csls.ca/reports/csls2006-04.pdf>



### Did you know?

Coal miners carried **canaries** in cages to warn if methane gas was present. People called "canaries" are the "early warning signs" of problems.



### COMMITTEE ACTIVITY

In your committee, discuss:

*How many workers are hurt doing a certain job?*

*Are "our" numbers higher or lower than what happens elsewhere?*

*Why are our numbers higher? lower?*

*Is the trend going up or down?*



### D. 3 What tools will help us learn more about symptoms?

- ✓ Body maps
- ✓ Workplace maps
- ✓ Surveys
- ✓ Interviews and informal conversations

### D. 4 Next steps

If you know about the symptoms in a workplace, you can:

- make a body map using the instructions in the committee activity box on the next page
- use the hazard categories from page C-4 (and SH.2) to make a **workplace map** (see instructions in Part F and SH.12), and analyze it using the same questions as you used for the body map(s)
- put together a list of symptoms by work area/ job or other worker-related categories that may help you analyze them (e.g. age, sex, job) and see what patterns turn up
- calculate the numbers affected and compare that to what you'd expect or what studies say are "normal"
- find out what workers think cause the hazards behind them (see Parts E and F)
- for MSI symptoms or aches and pains, use the SOBANE approach to take preventive action (see Part F)
- research or ask questions of health and safety specialists to find out what kinds of hazards might cause them (see Parts D and E and the *Resource Guide*)
- work with people who can help you make sense of the information (see *Resource Guide*)



#### **Did you know?**

It's important to look for the patterns of symptoms inside and outside of a workplace. Patterns help us analyze what's happening in our workplace and make us more aware of what symptoms and/or hazards we need to look for.

**Workplace map** - drawing of the physical layout of a workplace or work area, with information about the people and hazards in the space.



## COMMITTEE ACTIVITY

### 1. What's happening to us?

Start by looking at what's happening to people on the committee or with workers from one department or work area. If there are not very many employees, include all.

Use the body map in the Safety and Health Toolbox (SH.12) or draw one showing the front and back of a body.

Have each person answer these 3 questions. Record answers to each question with a different colour or symbol on the body map.

- *Where are your aches and pains?*
- *Where does "stress" show up in your body?*
- *Where do you have other symptoms?*

Each person should have one mark for each spot where they have a symptom. If three people have an ache and pain in their left shoulder, there will be three marks in that area.

When all the results are recorded, discuss them:

- *What do you see?*
- *How does this compare with the workers compensation claims filed?*
- *Who has reported their marks on the map to WCB? If not, why not? If yes, what happened?*

### 2. What's happening to others in our workplace?

Repeat the first committee activity with others in the workplace. Discuss it using the same questions.

### 3. What's happening with WCB claims or other reported symptoms?

Get copies of WCB claims made in the last year or more. Include first aid only records and other information about people taking time off (e.g. absenteeism, long term disability). Assign each category a colour/symbol and record on the body map.

Compare the body map with the others you have made. Analyze what's going on:

- *What do you see?*
- *What kinds of symptoms are reported?*
- *What do we know about where they come from? (department/ work area, job)*
- *Which ones are not getting into "the system"?*
- *What do we know about where these symptoms come from? (department/work area, job)*

### 4. In general, consider these questions:

- *What kinds of MSIs are common in our workplace?*
- *What kinds of stress and strain are common in our workplace?*
- *What other symptoms are common in our workplace?*
- *Which kinds of symptoms are acute effects and which are chronic effects?*
- *What routes of entry are common?*
- *What do we know about who's reporting and not reporting symptoms or making claims? (e.g. age, sex, heritage, language, department, job)*



## D.5 What's the law say about symptoms? Who has to do what?

Section 8 of *The Workplace Safety and Health Act*, states there is no connection between it and *The Workers' Compensation Act*.

*The Workplace Safety and Health Act* applies to Manitoba workplaces and their "players", regardless of what happens in terms of workers' compensation. As well, workers can file compensation claims whether or not the health and safety law was followed.

Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Employer</b>	<p>send <i>Employer's Report of Injury</i> form to WCB (on-line/call)</p> <p>let committee/rep look at any log book, assessment, report, record that employer must keep</p> <p>give information about lost-time injuries to committee/rep</p> <p>give copy of report on hearing tests &amp; noise levels to committee/rep</p>		<p>3.12</p> <p>3.13</p> <p>12.6(3)(b)</p>
<b>Worker</b>	<p>send <i>Worker Incident Report</i> to WCB (call in)</p> <p>workers who become ill/ injured must report to first aid room/ area</p>		5.3
<b>Workplace safety &amp; health committee/ Representative</b>	must not disclose worker's personal health information		3.14
<b>Physician/other qualified persons</b>	<p>chief occupational medical officer (COMO) can do health surveillance of workers</p> <p>others must give COMO reports about persons made ill or injured at work</p>	<p>50(1)</p> <p>51(1)</p>	

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## Part E. Step 2 - What makes it hurt?

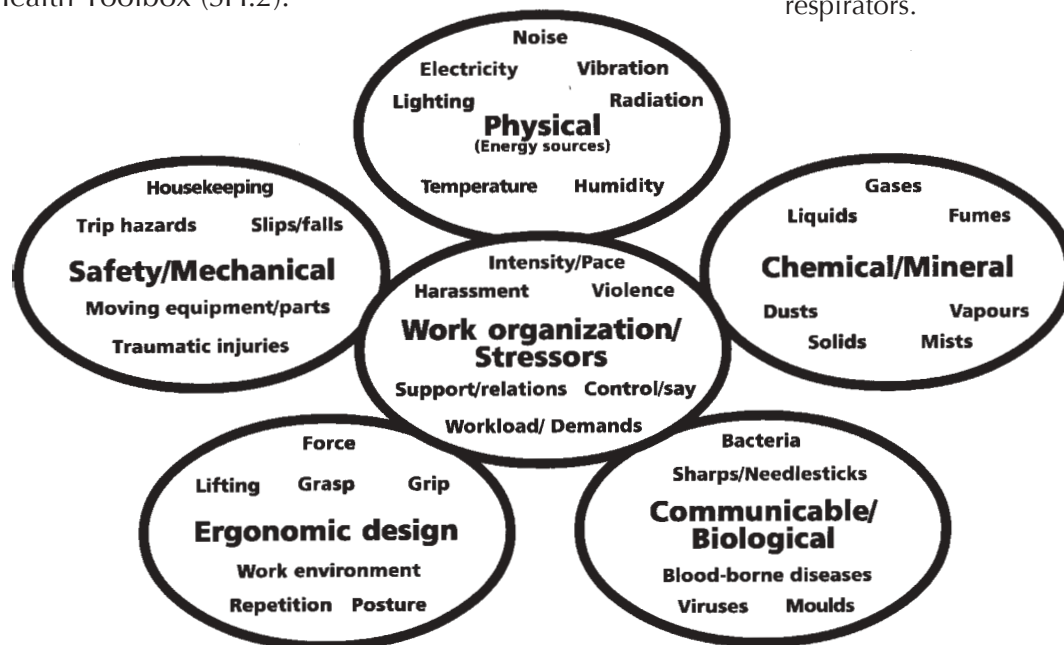
### E.1 What's it all about?

Work-related symptoms are the result of exposure to workplace hazards. For health symptoms, hazards are the “factors promoting ill health” named in the goals of the *Workplace Safety and Health Act*.

We put safety and health hazards into six categories. The categories overlap because of context, how people experience the problem or the fact that some specific hazards fit in more than one category. See *Hazards - the problems behind our symptoms* in the Safety and Health Toolbox (SH.2).

**Chemical/mineral hazards** - includes the basic forms of matter and what they can become - solid, liquid, gas, vapour, fume, dust, mist

Note - vapours are the gas form of liquids; a fume is very small airborne particles that have cooled from a very hot vapour (usually from metal). You need to know the difference between a vapour and a fume when designing ventilation systems or selecting respirators.



**Safety/mechanical hazards** are not physical hazards. They tend to be very obvious, and to have acute effects. The traumatic injuries caused by these hazards range from minor cuts to death. Examples include:

- slippery floors
- uneven surfaces
- poor or no machine guards
- being unable to see where you're going
- poorly-maintained equipment or tools
- twisting roads or foggy areas (leading to vehicle collisions)

**Communicable/biological hazards** - are the “bugs” from contact with other people (viruses and bacteria), moulds, sharps and needle sticks, blood-borne diseases (e.g. hepatitis, HIV).

**Ergonomics** can be defined as the “law of work”, where the goal is to fit the job to the worker, not the other way around.

**Physical hazards** come from energy sources. They also fit into the work environment sub-category of ergonomic design hazards. The effects of many physical hazards tend to be acute, ranging from sweating in humid, hot environments to death by electrocution. They also have long-term effects. Noise can cause deafness and cardiovascular or blood pressure problems. X-rays can cause cancers while ultraviolet radiation causes sunburns and is also linked to skin cancer.

Other physical hazards include

- some indoor air quality (IAQ) problems
- temperature or humidity problems
- vibration (“white hand” or “Reynaud’s”)
- accessible “live” wires
- working in cold or hot conditions
- microwave towers

**Chemical and mineral hazards** have both acute and chronic effects. The symptoms from exposure depend on the substance. Some symptoms are not easy to “see” or connect to the hazard.

Others affect several systems or parts of the body. For example, lead can cause stomach pain, high blood pressure, problems having healthy kids, and a wide range of central nervous system effects (e.g. headaches, irritability, moodiness, concentration problems). Other chemicals cause allergies (e.g. latex, isocyanates) so that people exposed to them always have a reaction, whatever the level in the environment.

Chemicals and minerals come in a variety of forms. They include materials such as ammonia, asbestos, carbon monoxide, nickel, organic solvents (e.g. toluene, ketones) and welding fumes.

Consult specific material safety data sheets (MSDSs) or the *Resource Guide* to find out specific symptoms linked to the chemicals and minerals used in your workplace.

**Communicable or biological hazards** aren’t just linked to health care jobs. What about our co-workers? Anyone dealing with the public also is exposed to this hazard group. It includes viruses and bacteria, contaminated sharps and needles, mould, fungus, or allergies to biological substances.

**Ergonomic design hazards** - caused by the design and organization of the job, tools, equipment and workplace. Sub-categories include force, posture, repetition, work environment and stressors/work organization hazards. Other issues include the design of signals, gauges and switches, use of colour, design of monitors, other screens and controls.

**Force** - the amount of pressure a worker uses for a task. It includes pushing, pulling, lifting, vibration and contact stress.

**Material safety data sheets (MSDSs)** - information sheets about product ingredients, their hazards and symptoms, and ways to avoid exposure. Required for “controlled products” under the Workplace Hazardous Materials Information System (WHMIS). MSDSs must be provided before controlled products are used/stored in a workplace.

**Physical hazards** - are from energy sources, including electricity, humidity, lighting, noise, radiation, temperature, vibration, pressure.

**Posture** - positions in which people work. Awkward and static positions can lead to aches and pain.

**Repetition** - doing the same motion over and over, without adequate rest, especially mini-breaks.

**Safety/mechanical hazards** - includes issues such as slip, trip and fall types of problems, machinery with moving parts and housekeeping problems.

**Work environment ergonomic hazards** - part of the general work environment, sometimes also considered as physical hazards.

These hazards can have both acute and chronic/long-term effects, depending on the substance. To find out about specific ones, see the *Resource Guide*.

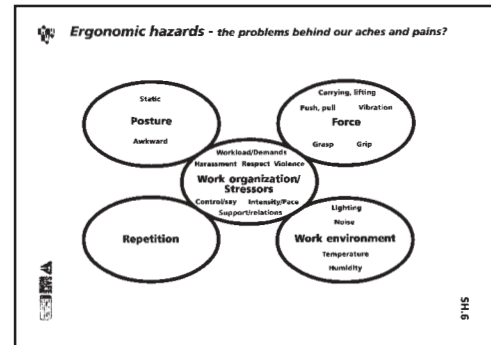
**Ergonomic design hazards** usually are linked to MSIs. The effects can be short-term but many take time to develop and heal, especially if the exposure continues because the hazard is not fixed. The damage can be permanent. There are five sub-categories of ergonomic hazards [see *Ergonomic hazards - the problems behind our aches and pains* chart (SH.6) in the Safety and Health Toolbox.]

The strain of **force** can cause damage to body parts or tissues. Contact stress occurs when a tool handle or edge digs into the soft tissue of the palm of the hand, the hand is used as a hammer, or someone works on their knees. The contact concentrates force on a small area, putting pressure on those tissues, sometimes injuring them.

Vibration is a force found in some tools and equipment. It affects the hands and arms by damaging the nerves and/or blood vessels so that hands/fingertips go numb and cannot be used easily (sometimes called white hand or Reynaud's). Whole body vibration (e.g. from driving a truck) is linked to back disease. Other force hazards include lifting heavy boxes or objects, moving people (especially without mechanical help) pinch grips and pulling or pushing heavy objects.

There are two kinds of **posture** hazards. Awkward posture is working in positions that feel uncomfortable. It could be using your arms over your head, twisting, bending or reaching, or working with a bent back, bent wrist, etc. This can stretch a person's physical limits, compress nerves and irritate tendons.

Working with your body or (part of) a limb in one position without a break is a static posture. Constant standing or sitting, or holding your arm, neck or shoulder in one position, can restrict blood flow and damage muscles. Other unhealthy postures include working with arms above your head, working with bent joints, standing or kneeling for a while, or working with your neck cricked to see the computer screen.



**Repetition** overuses the muscles, tendons, and other soft tissues used for the motion. It can irritate tendons and increase pressure on nerves and may cause permanent damage. Examples of repetition hazards include traditional assembly line work, data entry, piecework sewing, using a hammer continuously etc.

**Work environment hazards** are part of the general work environment or may be physical hazards on their own. Working in cold temperatures can cause stiff joints, loss of dexterity and make you more likely to drop things. Noise interferes with concentration and the ability to hear and understand people's words and other sounds. Poor lighting can lead to poor posture as you try to read material on a computer screen (e.g. because of glare).

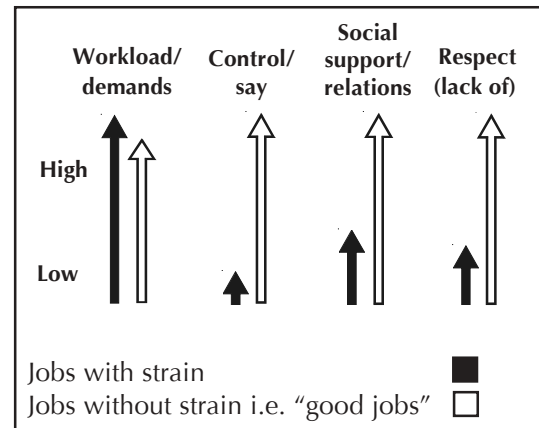
**Work organization hazards/stressors** are linked to MSIs, and can set us up for these kind of injuries in the neck, shoulders and lower back. The links include the presence of stressors or work organization issues in general, "flexible" work arrangements (just-in-time production and "quality circles"), low satisfaction with the physical work station setup, muscle tension from stressors, and lack of rest (including breaks).

These hazards are at the centre of the hazards chart because they often are the reason behind many other hazards. (See *Root cause analysis and the 5 Whys*, CP.16 in the Committee Process Toolbox, and in Part F.) For example, if the speed of a job is increased to maximize production, workers likely have to do more work - more repetitive motions, perhaps in more static postures, using more force, etc. In other situations, deadlines or production quotas can cause muscles to tense up, adding to wear and tear on soft tissues and increasing the chances of getting MSIs.

The general category of work organization hazards/stressors are linked to the symptoms of stress and job strain/toxic stress. There are four sub-categories:

- workload/demands (especially too much)
- control/say about your job and activities
- support/social relations at work
- respect (lack of).

The graphic at the right shows how these four categories work together to cause toxic stress.



**Job strain or toxic stress** - The dark arrows in the diagram show the combination of factors that are generally accepted to cause job strain. Some people call the main part of this "model" the Demand-Control-Support approach to work-related toxic stress. Studies show that people with job strain have higher blood pressure, more cardiovascular diseases (i.e. of the heart and blood systems) and are more likely to have heart attacks or *karoshi* (a specific kind of stroke linked to very long hours of work and/or very high workload).

The "model" also shows a way forward. Good jobs are those with:

- plenty of work or demands, but not too much;
- lots of control or say about what they do, how they use their skills, etc.;
- support from all levels of the organization; and
- respect from all those they deal with at work.

For more information about this topic, see the "Stressors, work organization hazards" section in the *Resource Guide*. For some recent Canadian studies, see Statistics Canada's 2007 report about work-related stress and strain at <http://www.statcan.ca/english/freepub/75-001-XIE/2007112/articles/10466-en.htm>, and a 2006 study in which lack of respect was an important reason for nurses' ill health (<http://www.statcan.ca/Daily/English/061211/d061211b.htm>).

Examples of work organization hazards/stressors include:

- deadlines, especially when there are a lot and/or they are unrealistic
- not enough staff for particular jobs
- poor labour relations
- too much or too little work
- no say about what you do or how you do it
- racism or other kinds of discrimination and harassment
- violence and potential for it
- no flexibility for non-work responsibilities (e.g. to care for children or seniors)
- working alone or in isolation.

## E. 2 Why is this step important?

Legally, committees, reps and their employers must deal with all six hazard categories. In practical terms, symptoms and hazards are connected. With information about the links, committee members and their employers know that they are dealing with - or getting closer to - the root cause of a problem. (See root cause analysis in Part E.)

Prevention measures usually require knowing the hazard(s). However, the precautionary and substitution principles from the *Prevention triangle* give us grounds to rely on symptoms alone, if need be. They also remind us that it doesn't make sense to measure "how much" of a hazard exists if we can do something to reduce or get rid of the problem.

## E. 3 What tools can we use to learn more about hazards in our workplace?

- ✓ Hazard categories chart (SH.2)
- ✓ Ergonomic hazards categories chart (SH.6)
- ✓ Inspections (SH.3, 4 & 5)
- ✓ Workplace maps (SH.12)
- ✓ Surveys
- ✓ Interviews and conversations (CP.12 A & B)
- ✓ SOBANE screening tool for ergonomic hazards (SH.9)
- ✓ Root cause analysis and the 5 whys (CP.16)



### COMMITTEE ACTIVITY

#### Hazard categories

1. Start by brainstorming a list of hazards in the workplace. Have one or two people keep track of the list on post-its or cards. Each hazard should go on one post-it or card. Get a list of about 20.
2. Divide the committee into groups of three or four. Give each group up to five hazards each. They also need a copy of SH.2, *Hazards – the problems behind our symptoms*.
3. Each group has about five minutes to name the category in which their hazards "fit", and be prepared to explain why. If the group cannot agree quickly, name the categories where the hazard might go.
4. When time's up, each group reports their "results" and explains why they put the hazard in its category. They also ask if the rest of the committee agrees with their categories. Discuss as need be to get consensus. Use SH.2 and the text in this Part to help decide.
5. Group all the hazards by category. Discuss what you see.



For more ideas about how to find hazards, see the committee activity and Part F.

## E. 4 Next steps

To find out more about hazards, committee members or reps can:

- do employee surveys about symptoms and what workers think cause them
- analyze all sources of information about symptoms and research possible causes
- brainstorm lists of hazards by category, area, or job, within the committee and/or with groups of employees
- do workplace inspections by category, area, or job
- use the inspection sheets (SH.5) during inspections, to keep track of the results and to start making a case for “fixing” the hazards
- look for hazards during investigations and keep track of them by category
- review MSDSs and put substances into priority categories
- look for “really nasty” chemical, biological and physical hazards, based on their effects (e.g. the ability to cause cancer, affect reproductive systems, affect pregnant or nursing workers, cause allergies and allergic reactions, cause gene mutations)
- classify hazards by their ability to explode, catch fire or have environmental effects, and then try to eliminate them or reduce the amounts used or stored
- make workplace maps - within the committee or with groups of employees
- keep an inventory of hazards they find in their workplace and share it with the employer.

For details about these activities, see Part F and/or the *Resource Guide*.



### COMMITTEE ACTIVITY

Connect symptoms and hazards using your body map. (See the committee activity in Part D).

Print off a copy of the *Hazards - the problems behind our symptoms* (SH.2) and *Ergonomic hazards - the problems behind our aches and pains* (SH.6).

For each spot on the body map, determine the hazard causing it. Match the causes behind each spot with a hazard category. Brainstorm all possible causes, being as specific as possible.

For example, workers with shoulder or neck problems may say their symptoms come from working with their arms above their shoulders or using a computer monitor. These answers fit in the ergonomic design circle. Symptoms like a stuffed-up nose and runny eyes might be caused by low humidity - a physical hazard - or ammonia, which is a chemical hazard.

## E. 5 What's the law say about hazards? Who has to do what?

Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Employer</b>	provide & maintain safe & healthy workplace	4(2)(a)	
	tell pregnant/ nursing workers of hazards that may affect them or unborn/nursing child		2.5
	tell workers/supervisors about safety & health hazards in workplace	4(2)(c)	
	have program with procedures to protect safety & health	7.4(5)	
	work with the committee/rep to identify hazards	40(10)(b)	
	give medical professionals information on "controlled products" in an emergency		35.19
	tell workers/supervisors about:		
	- musculoskeletal injuries (MSIs)		8.2
	- if violence may occur at work		11.2(2)
	- noise between 80 & 85 dBA		12.3(a)
	- if noise not below 85 dBA from machines or tools		12.4(2)(a) 16.3(a)
	- radiation, but not devices covered by <i>Nuclear Safety &amp; Control Act</i> or given to medical/dental patients		18.4
	- the "rated load" for scaffolds and suspended platforms		28.13(1)(b)(i) 28.28(b)

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Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Supervisor</b>	tell workers about all hazards in area where work is done	4.1(b)	
<b>Workplace safety &amp; health committee/ representative</b>	deal with safety and health concerns/complaints	40(10)(a)	
	identify safety & health hazards	40(10)(b)	
	inspect the workplace regularly	40(10)(h)	
	work with the employer to develop an overall program	40(10)(c)	
	review chemical or biological substances information		36.2(1)
	can request & must receive reports on tests, inspections, investigations, measurements	41.2	
	examine log book, inspection report or other documents employers must keep		3.12
	have access to MSDSs		35.12,
	must not disclose worker's personal health information		35.21(2) 3.14

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## Part F. Step 3 - *How do you find symptoms and hazards?*

### F.1 What's this part all about?

Surveillance is the detective work committees, reps and their employers are expected to do — looking for job related symptoms and the hazards behind them.

**Health surveillance** is looking for “sick” workers. The search for symptoms is important, but it’s after the fact. People already are showing the effects of something that’s going on in the workplace. The injuries, illnesses or diseases may be linked to an **incident** or show up when groups of workers use the first aid station.

Examples of health surveillance include getting information from people using:

- body maps
- formal and informal conversations or interviews
- surveys and questionnaires
- group discussions (focus groups)
- meetings
- reviewing written records in the workplace such as workers compensation claims, first aid reports, sick time information, absenteeism information, insurance claims

**Hazard surveillance** is more prevention-oriented than looking for symptoms. It involves looking for the “sick” parts of a workplace, hopefully before they affect anyone. However, hazards also may be found after an incident, during an **inspection** or **investigation**, or by analyzing symptoms.

Examples of hazard surveillance include getting information from people using:

- body and workplace maps
- formal and informal conversations or interviews
- surveys and questionnaires
- group discussions (focus groups)
- meetings (e.g. “brown bag” lunches)
- reviewing written records in the workplace

**Accident** - an unplanned event for which there is no apparent cause. The preferred term is “**incident**” that leads us to analyze the causes of events, injuries, illnesses, etc.

**Chief Occupational Medical Officer** - a doctor working for the Workplace Safety and Health Division, who specializes in occupational medicine.

**Hazard surveillance** - looking for hazards in a workplace or “sick” parts of a workplace, before they affect workers or others.

**Health surveillance** - looking for symptoms (e.g. musculoskeletal injuries, burns, cuts, breathing problems) amongst those affected by workplace activities.

**Incident** - an event that causes or could have caused someone to get hurt, ill or die, or property damage. Includes a “near-miss”.

**Inspections** - organized tours of a workplace, or part of one, to find hazards. Inspections also offer the opportunity to talk with workers to find out about their symptoms, how well prevention measures are working, etc.

**Investigations** - a specialized type of inspection, done after an incident. Investigation reports try to name the causes of an incident and make recommendations about ways to prevent future events.

- “looking around” - observations of people at work, inspections, investigations
- research about what’s happening elsewhere, what “the studies” say, etc.

Inspections and investigations are essential tools to prevent injuries, illnesses and diseases. That's why they should include all six hazard categories and be done in an organized way. Part of health and safety **programs**, they also are a key responsibility and activity for committees and representatives.

Ask “What the **HEC** is going on?” It can help you organize this detective work and make sense of what you find. There are three questions in this approach:

- is there a **Hazard**?
  - look at the workplace for hazards by category
- is there an **Exposure**?
  - are workers affected by the hazard, can a substance get into the body, what is supposed to prevent/reduce the exposure and how well is it working?
- what are the **Consequences** of exposure?
  - who could be exposed? how often? for how long? how much are they exposed to? what effects are possible both acute and chronic?

*Inspections - what the HEC is going on?* sheets (SH.5) can be prepared for each new hazard category. See the sample sheet in the Safety and Health Toolbox.

**Medical workplaces** - workplaces where physical or mental health treatment or care is provided, including ambulances, CancerCare Manitoba, a community health centre, dentist's office (if required in a regulation), doctor's office, hospital, medical clinic or laboratory, personal care home, psychiatric facility.

**Monitoring** - in a health and safety context, usually means measurements. May be done for chemical or biological substances in the air, noise, lighting or radiation levels, or posture angles, amongst other things. Also means to evaluate, as in monitoring how effective prevention measures or solutions are.

**Program** - documents explaining the organized approach to health and safety to be used in the workplace. Required by law, they must include such things as policies, who's responsible for what and ways to deal with specific hazards. (Also see Part G.)

**Root cause analysis** - a problem-solving and questioning method used to figure out the main reason(s) why something happened. In occupational health and safety, it's often used to analyze hazards and incidents. The *Root cause analysis and the 5 whys* (CP. 16) tool is one method.

**Surveillance** - looking for hazards and symptoms, being a “detective”.

[illegible]

Another method to help committees/representatives figure out what's happening in their workplaces is called **SOBANE**. It stands for:

Screening,  
**OB**serva**ti**on,  
**AN**alysis and  
Expertise.

A four-stage process, the principles are like those in our law and this manual:

- prevention is the objective
- workers have the most knowledge about their jobs and so are key actors in prevention activities to improve workers' well-being
- use a preventive instead of a legalistic approach (don't argue about whether or not people are exposed to "too much" of a hazard; fix hazards that you find)
- deal with hazards rather than measuring them
- look for quick "fixes" wherever possible

The SOBANE authors have important advice for committee members and reps. Use measurements and "experts" only when needed, because proper **monitoring** is often a very complicated and expensive procedure.

Measurements and arguments about the numbers divert the focus of safety and health activities from prevention and fixing hazards. They are part of a legalistic approach that doesn't achieve well-being and can delay solutions.

Use measurements only after problems have been assessed in detail, so you know what the question really is (at the analysis or expertise stages). Using outside expertise or specialists only when necessary saves money, time, etc. and builds internal resources.



## COMMITTEE ACTIVITY

1. Brainstorm about all the possible sources of information for symptoms and hazards in your workplace. Decide which ones you will start with and assign responsibilities for collecting the information to individual members. Set aside time at the next meeting to discuss at least one kind of information.
2. Take information that's easy to get, like WCB claims, and make body and workplace maps for your "first cut" at what's going on. If a subcommittee does this before a meeting, use the time at the meeting to analyze the map. Use *Root cause analysis and the 5 whys* (CP.16) for at least one symptom and one hazard.
3. Inspect the workplace before a meeting. At the meeting, make a workplace map or series of maps of the area(s) inspected (SH. 12). Discuss what you "see", what else needs to be done and what other information you need. Assign responsibilities for follow-up before the next meeting.
4. Build an inventory of hazards in the workplace. Keep track of them by category, as well as department, floor, or another kind of area. Use the inventory for inspections, priority setting, programs, reports to workers and management, etc.




The SOBANE approach is summarized below:

Issue	Stage 1 Screening	Stage 2 Observation	Stage 3 Analysis	Stage 4 Expertise
<b>When?</b>	All cases	If problem	Difficult cases	Complex cases
<b>How?</b>	Simple observation	Qualitative observation	Qualitative observation	Specialized techniques or measurements
<b>Cost?</b>	Very low 10 minutes	Low 2 hours	Average 2 days	High 2 weeks
<b>By whom?</b>	Workers and others in the workplace	Workers and others in the workplace	Workers, others in workplace + occ. health specialists	Workers, others in workplace + occ. health specialists + experts
<b>Expertise: about the work about hazard</b>	Very high Low	High Average	Average High	Low Very High

This chart is based on a document called *General strategy of risk management SOBANE. Method for the participatory screening of the risks* Dèparis, [www.sobane.be/langues/eng/booklet\\_sobane\\_deparis\\_27\\_03\\_03.pdf](http://www.sobane.be/langues/eng/booklet_sobane_deparis_27_03_03.pdf).  
The main SOBANE website is <http://www.sobane.be/>.

In this manual, we use the SOBANE screening approach for general inspections of all hazards and for the screening and observation stages for ergonomic hazards. See the Next Steps and *Resource Guide* for more about this method. The *Inspections - looking for all hazards - the SOBANE screening approach* (SH.4) is in the Safety and Health Toolbox.

	<b>COMMITTEE ACTIVITY</b>
<ol style="list-style-type: none"> <li>1. At a meeting, have committee members pair up. Practice using the <i>Ergonomic hazards: Step 1 - looking for symptoms</i> (SH.9) checklist for ergonomic hazards and musculo-skeletal injuries. Afterwards, talk about how you could use it in your workplace.</li> <li>2. Before a meeting, have pairs of committee members use some of the <i>Ergonomic hazards: Step 2 - looking for hazards</i> sheets (SH.10 series) for their own jobs. At the meeting, discuss what people found, what would help committee members use the sheets for inspections and where to start using the sheets.</li> </ol>	

## How do you make sense of your “results”?

Whatever the kind of surveillance, the information needs to be analyzed and put together in a way that is easy for everyone on the committee to understand. Visual methods can be very useful. See the mapping instructions (SH.12) in the Safety and Health Toolbox.

It may be hard for the committee or individual members to analyse results when numbers are involved. Maps will help for some things. They summarize information that can be related to an area in the workplace or part of the body.

However, you may need to find someone (within or outside the organization) who knows how to “make sense” of the information you collected. If you do that, be sure you know what questions you want answered. Assign one or two people to work with that person.

Whatever you do, start by asking:

- *What do you see?*
- *What are the patterns?*
  - by work area, equipment used, job, group(s) of workers, shifts, etc.
- *Why are the symptoms or hazards there?*
- *What information is missing?*
- *What are our questions?*

To find out what’s really going on, the committee needs to know the root cause(s) of a problem. **Root cause analysis** provides a more complete picture about a situation. Done properly, it helps to discover most, or all, of the reasons behind a symptom or hazard, and recommend appropriate solutions. There are instructions for doing *Root cause analysis and the 5 whys* (CP.16) in the Committee Process Toolbox.

## How do you keep track of what you find?

The employer is supposed to provide committees and representatives with resources to help them do this kind of work. [See the WSH regulation, section 3.3(4).] You’ll need secure places to keep confidential information and space in general to

store materials, resources and the work that you do. Set up computerized and paper filing systems for the information - whether it's inventories, MSDSs, inspections, investigations or reports from outsiders.

## F. 2 Why is this step important?

This step gets to the heart of a committee's or representative's work - finding symptoms and hazards and trying to make sense of and analyze what we find.

The committee has to understand what's happening in the workplace before it can recommend changes. It also need records of the surveillance activities for the next steps, especially to make a case for change(s).

To find symptoms or hazards in our workplaces, we must look for them. Some things may be obvious. But when we're dealing with long-term effects and more "invisible" hazards, it takes an organized approach to find them. That's what inspections, surveys and other tools provide. Remember to look for all six hazard categories, not just the safety or physical types on most inspection sheets.

It is also important to pay attention to what's happening around us. We may hear people's questions and complaints informally - over coffee, at breaks, in general conversation. During inspections, talk to and ask workers questions to find out about concerns, symptoms and hazards.

Observing people "on the job" also provides information about hazards. It brings in an outside set of "eyes", especially if the task is new to the observer. Tools such as the SOBANE observation tools for ergonomic hazards provide an organized method to do this; see SH.9 and SH.10.

Whatever surveillance is done, it's important to spend time on these activities before developing solutions and the strategies to implement them. It's easy to leap to conclusions about "the problem" sometimes. However, committees and

SH.10

**9. Posture - other positions/postures** Posture - other positions/postures

What do you see in terms of: Note: for background information, see other tabs.

- \* twisted posture/position?
- \* prolonged posture/position?
- \* other posture/position: kneeling, squatting, lying down?

In conclusion, the current situation: ☐ is acceptable ☐ needs improvement

What specific improvements can be made?

Should we analyze the situation or the proposed solutions in more detail? ☐ no ☐ yes - more detail on other tabs

**SAFE WORK**



representatives need to dig beneath the surface to put together the most complete picture possible about a situation. The closer you are to the **root causes** of a problem, the easier it is to find short-term and long-term answers that will lead to a healthy and safe workplace.


### F. 3 What tools can we use to find symptoms and hazards in our workplace?

These tools deal with different types of detective work. They are designed for general situations, except for the survey and inspection tools for ergonomic design hazards and musculoskeletal injuries.

There are references to using these tools in this Part of the manual and elsewhere in the manual.

- interviews/talking with people
  - do them (CP.12A)
  - practice (CP.12B)
- surveys and questionnaires  
(For information about how to do them, see pages 13 - 23 of *Barefoot Research*. The section includes case studies. The book, which is available on-line, is listed in the *Resource Guide*.)
- ergonomic screening (SH.9)
- mapping (SH.12)
  - body
  - workplace
- inspections
  - inspection guidelines (SH.3)
  - inspecting for hazards/SOBANE (SH.4)
  - SOBANE observation list for ergonomic hazards (SH.9, SH.10)
  - HEC sheets for recording what you find and/or summarizing the hazards found, by category investigations (SH.5)

For other tools, for other specific situations [e.g. indoor air quality (IAQ), noise, heat stress] see the Next Steps and *Resource Guide*.

	<b>COMMITTEE ACTIVITY</b>
<b>Starting being a “detective”</b>	
<p>Set aside 15 minutes at one meeting, before inspections are assigned. Use a flip chart or black/white board, divided into four columns.</p>	
<p>In the first column, list at least one hazard in each category.</p>	
<p>In the second column, list how the committee inspects for each hazard <u>now</u>. In the third one, list what is done to find symptoms related to the hazard, by whom and how often.</p>	
<p>For the last column, brainstorm other ways that could be used to look for the hazard and its symptoms. (If it’s hard to do, start with the ideas listed in F.3.) Decide which methods you will use in the next few months. Assign responsibilities and set time lines in which to do this. Put the report-back on the agenda for next meeting(s).</p>	

## F. 4 Next steps

1. Once you have a list or inventory of hazards in your workplace, go through the law to find out what information the employer is supposed to provide about them. For example, Part 12 in the *Workplace Safety and Health Regulation* covers the rules about noise. If you have electronic versions of the law, do this by using the “find” tool; e.g. you could search for “factor”, “hazard” or “risk” (because the law uses all these words) for general information and “noise” if that is the hazard.
2. You may need help to make sense of what you find - the “results” of your detective work. To learn more about the symptoms and hazards, look for outside information about what to expect and what your “results” mean. Sources that might help are:
  - ✓ health and safety staff for the organization
  - ✓ books, reports or studies about specific jobs or kinds of workplaces (e.g. MFL Occupational Health Centre library)
  - ✓ others doing the same or similar work in the province or further afield
  - ✓ government health and safety departments
  - ✓ universities, research organizations or others doing health and safety work (e.g. Institute for Work & Health)

Check the *Resource Guide* for information about specific organizations and their websites.

3. Other things to try include:
  - Use the results of the Ergonomic hazards: *Step 1 - looking for symptoms* (SH.9) to make a large body map so you have a group picture, rather than individual ones
  - If you do a survey, transfer the results about symptoms to a body map that can be used at committee meetings, shared with others in the workplace and used in presentations



- Put the body and workplace maps up where people in the workplace can see and comment on them - in cafeterias, meeting rooms, coffee rooms
- Collect feedback by having committee members “hang out” around the maps at specific times, setting up ways for people to make notes, etc.
- Ask workers to add things to the workplace maps and review the new information
- Use the maps to prepare presentations for more in-depth discussions about symptoms and hazards
- Set up “inspection teams” with at least two sets of “eyes” each
- Divide the workplace into areas for inspections and have committee members or the inspection teams take turns inspecting each one for all six hazard categories
- Alternate that with the “inspection teams” each looking for one hazard category in the whole workplace or smaller parts of it
- Map what’s happened in the last five years in terms of symptoms and/or hazards: use one sheet of acetate or another clear material for each year, to build up a layered body and/or workplace map that lets you see trends from year to year

## F. 5 What's the law say about finding symptoms and hazards? Who is supposed to do what?

Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Employer</b>	an inspection schedule for the workplace	7.4(5)(e)	3.3(4)
	procedures to investigate incidents and refusals	7.4(5)(i)	
	procedures to include workers in inspections & investigations of incidents and refusals	7.4(5)(j)	
	let committee members/ reps go with SHOs on inspections or investigations, if asked	41.3(2)	
	investigate and report on every needlestick injury (in <b>medical workplaces</b> )	45.1(4)	
	provide committees/ reps with appropriate resources to do their work		
	may not discriminate against: <ul style="list-style-type: none"> <li>- workers for providing information to employers, inspectors, committee/ reps, unions</li> <li>- workers trying to have the law enforced or doing their duty</li> <li>- committee members/ reps who are doing their "job"</li> </ul>	42(1)(c) 42(1)(h) 42(1)(d)	
	consult and co-operate with the committee/ rep	4(2)(e) & (f)	
<b>Worker</b>	report health and safety hazards (part of taking reasonable care)	5(a)	
	consult & co-operate with the committee or rep	5(c) & (d)	

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Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Workplace safety &amp; health committee/ Representative</b>	<p>must inspect the workplace regularly</p> <p>participate in investigations of incidents</p> <p>if SHO asks, go with the inspector on investigations/ inspections</p> <p>if they ask for it, the employer must give:</p> <ul style="list-style-type: none"> <li>- information about tests of equipment, products or substances used in the workplace</li> <li>- inspection and investigation reports</li> <li>- reports of health and safety audits or measurements</li> </ul> <p>receive and deal with health &amp; safety concerns/complaints</p> <p>keep records about what they do, including how they get and deal with concerns &amp; complaints</p>	<p>40(10)(h)</p> <p>40(10)(i)</p> <p>41.3(1)</p> <p>41.2(a)</p> <p>41.2(b)</p> <p>41.2(c)</p> <p>40(10)(a)</p> <p>40(10)(j)</p>	
<b>Safety &amp; health officers (SHOs)/ Inspectors</b>	<p>find out if the law is being complied with/obeyed</p> <p>investigate situations to find the cause &amp; prevention of incident, injury and "ill health"</p> <p>must investigate a work refusal and decide if there is a danger in the work</p>	<p>23(a)</p> <p>24(1)(d)</p> <p>43.1(2)</p>	

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Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Unions</b>	may not discriminate against: <ul style="list-style-type: none"> <li>- workers for providing information to employers, inspectors, committee/ reps, unions</li> <li>- workers trying to have the law enforced or doing their duty</li> <li>- committee members/ reps who are doing their "job"</li> </ul>	42(1)(c)  42(1)(h)  42(1)(d)	

### Other "players"

The **Chief Occupational Medical Officer** (COMO) may require that medical tests and other kinds of health surveillance be done for current or former workers (with their consent) [Act, section 50].

Doctors or other health care providers may treat someone who is ill or injured at work or examine a worker in a "health surveillance" situation (see section 50). If they do this, they must give the Chief Occupational Medical Officer reports about their examinations, if the COMO requests it. If the worker is, or has been, a patient in a hospital, the COMO can ask for, and get, copies of relevant reports [Act, sections 51(1) and (2)].

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## Part G Step 4 - *What fixes the hazards?*

### G.1 What's this part all about?

The committee has gone through three steps to identify symptoms and hazards and learned new ways to see them. The next step is to recommend changes to prevent or reduce the hazards.

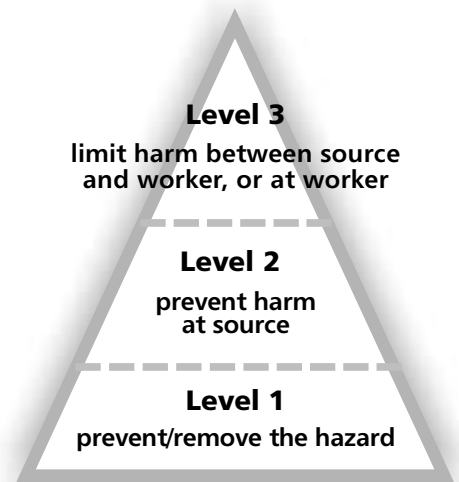
The best prevention is getting rid of hazards. This kind of solution, remedy or “fix” is often a long-term goal with several stops along the way. Sometimes the hazard can't be removed entirely, but the committee/rep can go a long way when making recommendations about how to reduce the hazard and better protect workers' safety and health.

The *Prevention triangle* (SH.13) summarizes the principles of prevention and the different types of changes that are possible. It is consistent with the goals of the health and safety law and its requirements about how hazards should be fixed [e.g. section 6.1(1) of the *Workplace Safety and Health Regulation*].

Level 1 solutions are best because they remove the hazard. Solutions relying on Level 3 prevention often require a fair bit of effort and resources to implement and maintain, but are more likely to give inconsistent protection.

#### Level 1 prevention

- get rid of/eliminate hazards
- may involve new equipment, tools or setups but also can be done by engineering
- find alternatives using the substitution and the precautionary principles
- often take more time and effort but may cost less in the long run



**The Prevention triangle**



#### ***Did you know?***

##### **Examples of Level 1 prevention ("Remove the hazard")**

- set noise limits on orders for new equipment and tools
- develop and use a “green” purchasing policy
- set guidelines for ergonomic tools, equipment, work stations, etc.; ensure purchasing “rules” include them

### Level 2 prevention

- limit the hazard's spread at the source
- also known as engineering controls or controls at the source
- usually are medium or short-term solutions because of the time and effort involved

### Level 3 prevention

- limit or reduce hazard by putting something between the worker and the hazard
- often the least effective solutions
- includes "controls along the path" - between the hazard and workers - and "controls at the worker" - requires the worker to do and/or wear something
- other uses of Level 3 prevention:
  - for emergencies
  - exposure is very limited/rare
  - while waiting for Level 1 or 2 solutions, or to back them up
  - when nothing else is possible
- may seem to be less expensive and take less time and effort but often are not really

Here's an example of how the *Prevention triangle* works.

You have a noise problem. It could be a hospital kitchen dishwasher, an office printer or a factory machine.

A Level 1 solution is to replace the piece of equipment with one that is much quieter. The purchase requisition could state noise levels must be less than a certain level (go for at least 65 dBA, or less). This may not be done today or tomorrow, but can be made a priority in the capital budget.

The goal is to get rid of hazardous noise levels. Noise does more than cause deafness. At much lower levels, it also interferes with your ability to hear conversations and affects the cardiovascular - heart and blood vessels - system. So if these are the issues, you'll need equipment that is pretty quiet.

While you're waiting for the quieter piece of equipment, a Level 2 solution would enclose the dishwasher, printer or machine so that little noise gets out. This prevents exposure to the hazard at the source. It does not get rid of the hazard.



#### **Did you know?**

##### **Examples of Level 2 prevention ("Controls at the source")**

- ventilation systems that enclose the hazard and remove all airborne hazards from the work environment
- enclosures to reduce noise levels
- isolate the hazard or the workers exposed to it
- wet cutting to reduce dust



#### **Did you know?**

##### **Examples of Level 3 prevention ("Controls along the path")**

- local ventilation that does not enclose the hazard
- general ventilation
- mechanical guards/devices
- some administrative controls (e.g. work breaks)



#### **Did you know?**

##### **Examples of Level 3 prevention ("Controls at the worker")**

- personal protective equipment
- administrative activities - e.g. rotating workers
- work procedures
- training
- supervision
- emergency plans
- housekeeping
- repair and maintenance programs
- hygiene practices/facilities - e.g. eye wash stations, wash-up areas



To protect those who use the equipment, you'll need other solutions too. Level 3 solutions come in two forms. Prevention or controls along the path would involve having baffles and other sound-absorbing materials in appropriate spots. This would decrease the amount of noise that people hear, unless they are standing directly beside the piece of equipment or noise source.

Prevention or controls at the worker include proper, fitted ear plugs (muffs if the noise frequency is quite low), spending as little time as possible right at the machine and good maintenance schedules.

## G.2 Why is this step important?


Eliminating hazards and reducing exposure to them is a key part of our goals for a healthy and safe workplace. Committee members and worker reps need to keep these goals in mind as they do their work. It's particularly important when it comes time to make recommendations for changes in the workplace.

This doesn't mean that you'll always recommend Level 1 prevention solutions - at least right away. What's important is to know the principles. Use them to get as close as possible to the source of the hazard for the short- and long-term.

It's also important to remember the difference between a solution and how you get it - the strategy.

## G.3 What tools can we use to learn more about prevention in our workplace?

- ✓ Prevention triangle (SH. 13)
- ✓ Root cause analysis and the 5 whys (CP. 16)
- ✓ Six Thinking Hats (CP. 17)
- ✓ Experience elsewhere - check the *Resource Guide* and Part C of this manual

	<b>COMMITTEE ACTIVITY</b>
<p style="text-align: center;"><b>Levels of prevention</b></p> <ol style="list-style-type: none"> <li>1. Choose a priority hazard from your workplace. Decide in what hazard category it fits. Brainstorm possible changes for each level of the prevention triangle. [Use the <i>Six Thinking Hats</i> tool (CP.18) for brainstorming.]</li> <li>2. Then choose one hazard from each other category. For each one, brainstorm possible changes for each level of the prevention triangle. Keep track of your answers.</li> <li>3. Decide what follow-up and recommendations you need to do.</li> </ol>	

## G. 4 What is the next step?

- Use the triangle
  - as a reminder of the principles of prevention
  - to figure out how close recommended changes are to the source of the problem or hazard (with root cause analysis in Part F)
  - in training
  - during discussions about specific situations
- start making lists about short- and long-term solutions for different kinds of hazards
- set priorities about which kinds of hazards you want to deal with first [see *Criteria for decision-making* (CP.6) in the Committee Process Toolbox]
- do some research to find out about best practices and innovative solutions for specific hazards by:
  - talking to people within your workplace - the workers and supervisors in the area affected, maintenance workers, engineers, health and safety staff
  - checking with local industry associations to which the employer belongs
  - if you're in a union, asking your union staff person or unions representing workers in similar workplaces
  - finding local sources of information through your networks and the *Resource Guide*
  - looking for other sources of information (start with the *Resource Guide*)
  - look for "green" solutions whenever possible (see the *Resource Guide* for places to start)
  - make lists about the solutions that are in place and use the lists to evaluate the effectiveness of different "fixes"



### COMMITTEE ACTIVITY

Take the list of hazards found during inspections or from your maps. For each one, review Using the Law Toolbox in this manual to make a list of "the rules" in the law about fixing hazards in general and your list in particular.

Examples:

- If you have lighting or noise problems, look at Part 12 and section 14.4 of the *Workplace Safety and Health Regulation*, as well as the general duties in the *Act*.
- If musculoskeletal injuries or ergonomic hazards are present, how can you use Part 8 of the *Workplace Safety and Health Regulation*?
- For work organization hazards (stressors), how can you use the definition of "health" to deal with those hazards?



## G. 5 What is the law say about fixing hazards? Who has to do what?

Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Employer</b>	fix/remedy hazards using principles of the prevention triangle		6.1
	include in their safety and health program:	7.4(5)	
	- a policy about protecting workers' safety & health	7.4(5)(a)	
	- procedures to protect health & safety when outside contractors/self-employed work on site	7.4(5)(g)	
	- how hazards will be fixed, & emergency procedures	7.4(5)(b)	
	- prevention measures for chemical & biological substances specifically	7.4(5)(f)	
	prevent or reduce exposure to specific hazards:		
	- ergonomic ones that may/ do cause musculoskeletal injuries		8.1(1)(b), 8.1(2) & 8.1(3)(b) 39.5 & 39.10
	- patient handling & using mechanical lifts		
	- working alone/in isolation		9.2(2) & 9.3 10.2(1) 11.1(4) 14.17
	- harassment		
	- violence		
	- falling while getting onto a vehicle or load		
	- confined spaces		15.3 36.7
	- chemical & biological substances with Threshold Limit Values (TLVs)		
	- airborne chemical & biological substances without TLVs		36.5(1)(c)
	- infectious substances in health care facilities		39.3
	- needlestick injuries in health care facilities & use of "safety-engineered" needles	45.1(1)	39.8
	- controlling dust levels on construction sites		2.15

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Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Employer</b>	<ul style="list-style-type: none"> <li>- exposure to noise levels above 85 dB(A)</li> <li>- robots</li> <li>- radiation levels</li> <li>- working in traffic</li> <li>- asbestos and preventing it getting in the air</li> </ul>		Part 12  16.32 & 33 18.2 & 3 20.5 - 20.8 37.5 - 37.9
	maintain a safe and healthy workplace	4(2)(a)	
	inspect tools and equipment regularly		16.4(3)
	prepare "safe work procedures" for specific workplace hazards		2.1
	use lock-out and energy isolation procedures to de-energize machinery		16.14 - 16.18
	provide protective equipment & devices with training and instruction	4(2)(c)	
	provide information/training about safety & health hazards	4(2)(b)	
	have WHMIS program - MSDSs, labels & training for "controlled products"		Part 35
	training before starting job or new task or different location	4(4)	
	provide competent supervisors who are familiar with health & safety issues and the law	4(2)(h)	
<b>Worker</b>	report hazards and do other things to take care of their own health & safety & that of others	5(a)	
	wear and use tools & protective equipment they are given	5(b)	
	may refuse to do tasks they think are dangerous to themselves or others	43(1)	

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Who?	What are they supposed to do?	WSH Act	WSH Regulation
<b>Supervisor</b>	<p>protect the safety &amp; health of those they supervise</p> <p>ensure workers work according to the law</p> <p>ensure workers use all protective devices/equipment</p> <p>tell workers about all hazards in the work area</p>	<p>4.1(a)(i)</p> <p>4.1(a)(ii)</p> <p>4.1(a)(iii)</p> <p>4.1(b)</p>	
<b>Workplace safety &amp; health committee/ Representative</b>	<p>deal with safety &amp; health concerns/complaints</p> <p>participate in identifying hazards</p> <p>develop &amp; evaluate measures to protect safety, health &amp; welfare</p> <p>co-operate with workplace occupational health service</p> <p>develop/promote education &amp; information programs</p> <p>make recommendations to employer about health &amp; safety</p> <p>inspect the workplace regularly</p> <p>investigate workplace injuries &amp; dangerous occurrences</p> <p>keep records about concerns/complaints &amp; other matters</p> <p>be part of developing "safe work procedures"</p>	<p>40(10)(a)</p> <p>40(10)(b)</p> <p>40(10)(c)</p> <p>40(10)(d)</p> <p>40(10)(f)</p> <p>40(10)(g)</p> <p>40(10)(h)</p> <p>40(10)(i)</p> <p>40(10)(j)</p>	2.2

There are other players in the picture too. See the next page.

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## Other “players”

Owners must keep land or buildings in a condition so as not to create safety and health hazards there [Act, section 7.2(a)].

Suppliers must provide tools, equipment, machines, devices or chemical or biological substances that are “safe” when used according to instructions provided [Act, section 7.3].

Self-employed people must do their work so that they don’t expose themselves or anyone else to hazards from or related to the job, as far as reasonably practicable [Act, section 6].

## Part H Step 5 - *How do we get the solutions we need?*

It's one thing to know the solution, but it's another to get it!

### H.1 What's this part all about?

Naming the **problem** is the key first step in the problem-solving cycle. The problem is NOT a symptom; it is the reason for the symptom. It's one thing to know how to deal with a health or safety hazard. It's another to get the solution for the problem or issue. This is the last step in our five-step process. (With evaluation of implemented solutions, you may be starting the five steps all over again.)

It is important to name the right or "real" problem if it's to be fixed. If the wrong problem is identified, the solution will not work or it won't work well. That's a reason to go through the five steps in order.

#### Example

A worker is injured working on a machine. When the committee investigates, you find out that there wasn't a guard on the machine. The problem is not the injury, but the missing safety device.

Besides doing a root cause analysis, your surveillance "detective work" turns up some other facts. Four workers were injured on the machine without a guard in the last 12 months. Amongst other things, this added up to 14 days of lost time, three workers' compensation claims and two injured workers who had to change jobs. It also took time and effort to find and train new workers, deal with the paper work and inspector, get the guard installed properly, etc.

This is the kind of information the committee needs when estimating how much the problem costs. These facts make it easier for the employer to see the value of installing and maintaining the machine guard. Other parts of the case include the duty to provide a safe and healthy workplace and complying with the law.

It's all part of making the case for your **solution** or fixes. To do this, you need to:

- have criteria for setting priorities and getting agreement about solutions
- review your goals for a healthy and safe workplace

**Criteria** - important benchmarks or priorities. In general, they represent people, effect, time involved and cost - in terms of money, people and materials and equipment.

**Problem** - the hazard(s) or situation(s) that need to be addressed; it's not the symptom such as an injury or illness.

**Root cause** - see Part E.

**Solution** - the answer or answers to a problem. The goals may be short-term, long-term or in between. They may involve several steps. Avoid confusing with strategy.

**Strategies** - how you get the solution(s); avoid confusing with solution.

- brainstorm ideas about possible solutions
- analyze solutions and related **strategies**
- reach agreement about short- and long-term solutions and strategies to go with them
- make the case for the solutions

## Criteria

Sometimes the solutions aren't quite so obvious, or there may be several choices. **Criteria** allow committees and representatives to compare options, especially for solutions to health and safety problems.

You developed criteria in Part B. Also see the *Criteria for decision making form* (CP.6) in the Committee Process Toolbox.

What are our goals?

Once you've identified the problem and its root causes or the part of the problem that can be tackled, the committee or rep is expected to recommend a solution or "fixes" to the employer.

Your focus now is on prevention. What will prevent or reduce injuries, illnesses and diseases? What will get rid of the root cause of a hazard? What will solve the problem?

These questions may remind you about the goals you set in Part C for a healthy and safe workplace (and CP.20). Before you go any further, ground your discussion by reviewing those goals. (It might help to bring out your drawing or list.)

What are possible solutions?

To make sure you have all possible solutions - short-, medium- and long-term - spend a bit of time to brainstorm about this within the committee.

Brainstorming is a great way to generate new thinking about possible solutions, especially for long-standing problems. It allows you to separate



## COMMITTEE ACTIVITY

Take the *Criteria for decision making form* you developed in the Committee Activity in Part B.

Name one problem on your agenda at the moment. Taking the problem as an example, practice using your criteria. When you're done, talk about:

*How did the form help us to make decisions?*

*What would make it easier to answer the questions?*

*How can we follow up on these ideas?*



solutions from strategies, to apply your prevention principles and “blue sky” innovative ideas. See the *Six Thinking Hats* tool for guidelines (CP.17).

Although prevention is the goal of health and safety, sometimes your fix is a long-term solution that will take time to implement or needs to be put in a budget for capital expenses.

Therefore, after you have at least two options for solutions, test them against your criteria. If one seems to be too expensive or another will take two years to implement, they might fail — as short-term solutions. However, either one may be realistic long-term fixes.

Depending on the urgency of the problem, an immediate, short-term solution may be necessary. You can recommend one, knowing that it is not dealing with the root cause. Then take the time needed to brainstorm and research a long-term fix that is closer to Level 1 on the prevention triangle.

To get agreement about possible solutions, use the relevant tools in Part B. Consider using force field analysis (CP.7) if it is difficult to reach consensus on the possible solutions.

Analyze the solutions, develop strategies

Your solutions may need some explanations, if you want to persuade your employer to accept them.

Avoid rejecting a solution just because someone says it will be too expensive. Instead, use the *Incident Cost Calculator* (CP.11).

It is a tool to help anyone involved with health and safety issues think through the cost of solutions and problems. The *Incident Cost Calculator* can help committee members and representatives think through possible solutions, and consider costs. It also focuses the committee on answering questions that decision-makers will likely ask before implementing a solution.

The Incident Cost Calculator is a structured form for calculating the costs of workplace incidents. It includes the following sections:

- Incident Details:** Fields for Date and time of incident, Name of person involved, and Name of person reporting.
- Immediate Costs:** A table for recording costs incurred immediately after the incident, including items like First aid, Lost time, and Property damage.
- Long-term Costs:** A table for recording costs incurred over a longer period, including items like Lost production, Lost business, and Lost reputation.
- Final Total:** A section for calculating the total cost of the incident.

The form is designed to be used by a committee or group of people, with columns for 'Item', 'Cost', and 'Total'.

Looking at all the costs makes it more likely that the employer will accept a recommendation and implement the solutions. One tip: practice with past situations. The retrospective look may provide other alternatives but it also will be good practice for the committee/rep before using it for a current problem.

You may need to get some answers about costs from the employer. An accounting person or someone else who deals with expenses in the workplace may be quite helpful. (And they'll learn more about health and safety in the process.)

Solutions don't fall from the sky. They often require strategies if they are to be implemented. Some of the tools in Part B will help you develop strategies. For each solution:


- use *Force field analysis* (CP.7) to determine the forces that will drive or restrain its implementation
- based on the analysis, brainstorm strategies for each one (CP.18)
- compare the solution to your goals
- decide which strategies are best to use in the circumstances
- assign responsibilities accordingly
- set follow-up deadlines, etc.
- evaluate its effectiveness at several points after it's implemented

Like the solutions, you'll need agreement about the strategies. Use the Part B tools that help you do this.

Making the case

"Making the case" is a summary of all the committee's work involving a recommendation - the solutions, the rationale for them and the strategies that will help get them.

Two forms will help you do this. The *Recommendation form* (CP.15) is what you submit to the employer. The information of the form is based on your input on the *Healthy solutions for workplace hazards* (CP.10).



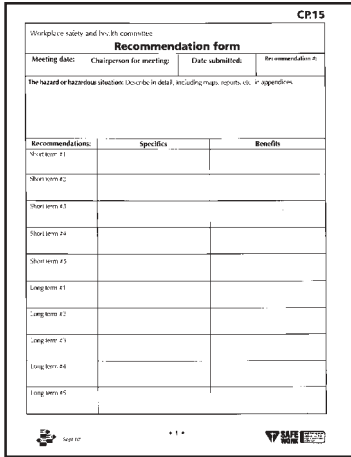
## COMMITTEE ACTIVITY

Take one example of a problem, for which you have short- and long-term solutions. Use it to practice the steps listed in the discussion about analysing solutions and setting strategies. When you're done, discuss:

*How well did these steps work for us?*

*What do we need to add?*

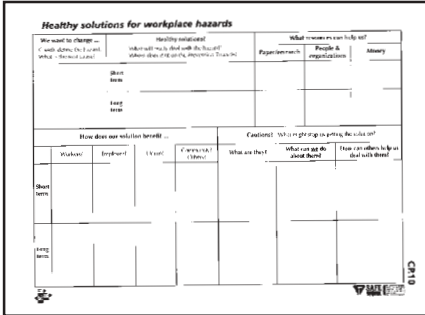
*How will we do that?*



CP15  
Workplace safety and health committee  
**Recommendation form**

Meeting date:	Chairperson for meeting:	Date submitted:	Recommendation #:
The hazard or hazardous situation (Describe in detail, including maps, reports, etc. if appropriate)			
Recommendations:	Specifics	Benefits	
Short term #1			
Short term #2			
Short term #3			
Short term #4			
Short term #5			
Long term #1			
Long term #2			
Long term #3			
Long term #4			
Long term #5			

11 •



CP10  
**Healthy solutions for workplace hazards**

We need to change... I want others to know... What do I need to do?		Meeting information: When will we meet with the group? Where will we meet? (Date, time, place)		What resources can help us?	
				People & organizations	
				Money	
How does our solution benefit...?					
Workers	Employer	Community	What are they?	What can we do about them?	How can others help us deal with them?



The healthy solutions chart (CP.10) is a tool to record your short-term and long-term solutions and strategies for a particular problem. It lets you track the analysis you have done for solutions to a health and safety problem. Fill it in as you make decisions about each heading.

Making a case often requires other materials to explain the facts, figures and reasons. For example, to emphasize the benefits of a long-term solution that seems expensive, you might use an *Incident Cost Calculator* sheet (CP.11) as an appendix.

With simple or short-term problems, the committee or rep will not take a lot of time to make the case for change. For more complicated situations, it will help to get through what may seem to be a confusing and time-consuming process.


## H. 2 Why is this step important?

Committees and representatives accomplish many of their goals by making recommendations to their employer about changes that are needed in the workplace. Follow up afterwards also is essential.

That's why getting the "fixes" you need is the last part of the five-step problem-solving cycle. While it's useful to know what **solution** is best for a hazard, getting it, or a shorter term "fix", may be a different story. That takes a **strategy** or several tactics.

The problem-solving cycle occurs over and over again in a committee's or representative's work. At first, it may seem slow to go through each step in the process, but this is how a committee or representative gets better at problem-solving.

One of the "next steps" in this part of the manual is also important. Once a year, committees and reps should evaluate their work using the detailed *Workplace safety and health committee self-evaluation checklist* (CP.21B). This lets you pinpoint where you're doing well and what needs improvement. Comparing one year's results to the next year's will show trends.



### COMMITTEE ACTIVITIES

1. Before a meeting, use the *Healthy solutions for workplace hazards* chart (CP.10) to list your ideas about solutions for a particular problem and strategies to implement them. Do this individually or in caucuses that meet to prepare for meetings.
  

At the meeting, use the Chart as a reminder about ideas for each heading.

  
2. As the committee discusses solutions and strategies for a problem, use the Chart to guide your discussion and record agreements.

Before you complete plans for making your case, including the recommendations, check to see what is not filled in. Decide who needs to do what to get the information you need.

Use the Chart to prepare your "case" and a recommendation using the form. Make sure that individuals know what's expected of them, especially for the strategies.

**CP.21B**

**Workplace safety and health committee self-evaluation checklist - How effective are we?**

Use this checklist to help you evaluate your joint health and safety committee's operations. Fill in a check or an "X" for "yes" or "no" for each item. Check boxes for "yes" or "no" for each item. If you need to, add a note or comment in the space provided.

Structure	Item	Yes	No	DK	N/A	Notes to follow up on items discussed
1.	Does the committee have agreed terms of reference?					
2.	Are committee rules and responsibilities clearly defined?					
3.	Is the committee's role clear?					
4.	Are there at least 3 members representing all departments or divisions?					
5.	Does the committee have a representative from each department or division?					
6.	Are all relevant departments and divisions represented on the committee?					
7.	Does the committee always use a chairperson?					
8.	Is the committee's role clearly defined in the company's health and safety policy?					
9.	Is the committee's role clearly defined in the company's health and safety policy?					
10.	Does the committee have a representative from each department or division?					
11.	Does the committee have a representative from each department or division?					
12.	Does the committee have a representative from each department or division?					
13.	Does the committee have a representative from each department or division?					
14.	Does the committee have a representative from each department or division?					
15.	Does the committee have a representative from each department or division?					
16.	Does the committee have a representative from each department or division?					
17.	Does the committee have a representative from each department or division?					
18.	Does the committee have a representative from each department or division?					
19.	Does the committee have a representative from each department or division?					
20.	Does the committee have a representative from each department or division?					

### H.3 What tools will help us learn more about getting solutions?

- ✓ *Active listening - 10 tips to help us do it* (CP. 2)
- ✓ *Six thinking hats* (CP. 17)
- ✓ *Workplace safety and health committee effectiveness* (CP. 21A & B)
- ✓ *Incident Cost Calculator* (CP. 11)
- ✓ *Criteria for decision-making* (CP. 6A & B)
- ✓ *Force field analysis* (CP.7)
- ✓ *Healthy solutions for workplace hazards* (CP. 10)
- ✓ *Consensus - a key process* (CP. 5)
- ✓ *Recommendation form* (CP. 15)
- ✓ *Prevention triangle* (SH. 13)

### H.4 What is the next step?

Follow-up and evaluation are key parts of any problem-solving cycle. Committee members and reps need to follow-up on:

- recommendations
- minutes, especially unresolved issues
- the responsibilities they are assigned

Evaluation is a feedback process that lets us know what we're doing well and what needs improvement. Legally, committee members and reps are supposed to evaluate a variety of their activities (see the checklist called *Responsibilities of workplace safety and health committees in Manitoba - L.3*). But it is also important to assess how committees do their job, how effective they are.

The *Workplace safety and health committee effectiveness checklist* (CP. 21 B) is a detailed evaluation form. Use it once a year to check how you're doing. Compare the results with those from your quick version, done in Part B of this manual. Also compare the results with your goals, described in Part C.

## H.5 What's the law say about getting solutions?

The legal responsibilities for getting fixes are basically the same as those for fixing hazards, in Part G - Step 4.

The only addition is a practical one. Committees and reps need to follow up on what happens to recommendations.

Employer responses to committee recommendations are due in 30 days, if the "fix" is not made before then. If committee meetings are held every month, the responses should be on the agenda of the next meeting. If the committee meets less often, someone should be assigned responsibility for finding out what's happening with a response and letting others on the committee know about it.



### COMMITTEE ACTIVITY

Have each committee member answer the *Workplace safety and health committee effectiveness self-evaluation - a quick check* (CP. 21A) on their own. Compare the results amongst yourselves, with your goals and with the short self-evaluation from Part B, page B-17. Set aside at least an hour to discuss:

*What are we doing well?*

*What have we achieved in the last year?*

*What do we need to improve?*

*What are our priorities for improvement?*

*How will we work towards them?*

*What is one thing we can do differently in the next month or two?*

Use brainstorming and other tools for reaching agreement in the process.



# Glossary

**Accident** - an unplanned event for which there is no apparent cause. The preferred term is “incident” that leads us to analyse the causes of events, injuries, illnesses, etc.

**Aches and pains** - words we may use in general conversation. In the Manitoba law, work-related aches and pains are called musculoskeletal injuries (MSIs).

**Acute effects or symptoms** - seen right away; direct results; often from a short-term exposure to a lot of something; relatively-easy to connect to the hazard/source

**Body map** - the drawing showing the outline of the front and back of a body. Body mapping is an effective way to find out about many kinds of symptoms in groups of workers or entire workplaces. Can be used to record answers to surveys and make presentations about what’s happening to employees in a workplace.

**Chemical/Mineral hazards** - includes the basic forms of matter and what they can become - solid, liquid, gas, vapour, fume, dust, mist. Note: vapours are the gas form of liquids; a fume is very small airborne particles that have cooled from a very hot vapour (usually from metal). The difference between a vapour and a fume matters when designing ventilation systems or selecting respirators.

**Chief Occupational Medical Officer** - a doctor working for the Workplace Safety and Health Division, who specializes in occupational medicine.

**Chronic effects or symptoms** - show up a long time after the exposure started or happened; occur often or continue for a long time; can be from repeated exposures to small amounts of something; often have a latency period; can be difficult to link to the hazard/source.

**Committee member** - workplace safety and health committee member.

**Communicable/Biological hazards** - are the “bugs” from contact with other people (e.g. viruses and bacteria), moulds, sharps and needle sticks, blood-borne diseases (e.g. hepatitis, HIV).

**Controls** - solutions that don’t get rid of a hazard. Sometimes the word is used for all types of solutions.

**Criteria** - important benchmarks or priorities. In general, they represent people, effect, time involved and cost in terms of money, people and materials and equipment.

**dB(A)** - a decibel, how loud something is, the noise level. Technically, it is a sound pressure level measured with the “A” scale on a sound level or noise meter.

**Duty** - responsibility, something the person must do.

**Ergonomics** can be defined as the “law of work”, where the goal is to fit the job to the worker, not the other way around.

**Ergonomic design hazards** - caused by the design and organisation of the job, tools, equipment and workplace. Sub-categories include force, posture, repetition, work environment and stressors/work organization hazards. Other issues include the design of signals, gauges and switches, use of colour, design of monitors, other screens and controls. Usually linked to aches and pains or musculoskeletal injuries.

**Exposed** - a person is exposed to a hazard when it can come in contact with or get into the body or mind and have an effect.

**Fix** - another word for “solution”.

**Force** - the amount of pressure a worker uses for a task. It includes pushing, pulling, lifting, vibration, grip, grasp and contact stress.

**Group** - two or more people. A group becomes a committee when its purpose is clearly defined.

**Hazard surveillance** - looking for hazards in a workplace or “sick” parts of a workplace, before they affect workers or others.

**Health** - the law defines it as the *condition of being sound in mind, body and spirit and must be used according to the objects and purposes of the Act*.

**Health surveillance** - looking for symptoms (e.g. musculoskeletal injuries, burns, cuts, breathing problems) amongst those affected by workplace activities.

**Incident** - an event that causes, or could have caused, someone to get hurt, ill or die or property damage. Includes a “near-miss”.

**Inspections** - organised tours of a workplace or part of one, to find hazards. Inspections also offer the opportunity to talk with workers to find out about their symptoms, how well prevention measures are working, etc.

**Inspector** - the common word used for an official from the Manitoba government’s Workplace Safety and Health Division in the Department of Labour & Immigration. Formally known as a safety and health officer or SHO. This person is the “cop” for workplace safety and health, the only one who can enforce the law.

**Investigations** - a specialized type of inspection, done after an incident. Investigation reports try to name the causes of an incident and make recommendations about ways to prevent future events.

**Latency period** - the time between exposure and first signs of the disease; cancer can be 10 to 20 years; for mesothelioma, the asbestos cancer, can take 40 years to show up.

**Law** - in this manual, the law refers to all of the legislation in Manitoba about workplace safety and health and includes the *Workplace Safety and Health Act*, the *Workplace Safety and Health Regulation*, other regulations made under the *Act* and codes of practice.

**Local effects** - occur where a hazardous substance contacts the body. They tend to be easy to see.

**Material safety data sheets (MSDSs)** - information sheets about product ingredients, their hazards and symptoms, and ways to avoid exposure. Required for “controlled products” under the Workplace Hazardous Materials Information System (WHMIS). The WHMIS rules are found in the *Workplace Safety and Health Regulation*. MSDSs must be provided before “controlled products” are used/stored in a workplace.

**Medical workplaces** - workplaces where physical or mental health treatment or care is provided, including ambulances, CancerCare Manitoba, a community health centre, dentist’s office (if required in a regulation), doctor’s office, hospital, medical clinic or laboratory, personal care home, psychiatric facility.

**Monitoring** - in a health and safety context, usually means measurements. May be done for chemical or biological substances in the air, noise, lighting or radiation levels, or posture angles, amongst other things. Also means to evaluate, as in monitoring how effective prevention measures or solutions are.

**Musculoskeletal injuries (MSIs)** - injuries to muscles and/or bones and the tissues related to them; are also called cumulative trauma disorders (CTDs), musculoskeletal disorders (MSDs), overuse injuries and repetitive strain injuries (RSIs).

**Physical hazards** - are from energy sources, including electricity, humidity, lighting, noise, radiation, temperature, vibration.

**Posture** - positions in which people work. Awkward and static positions can lead to aches and pains.

**Power** - a responsibility that someone may use. Usually applies only to safety and health officers.

**Prevention** - of work-related illnesses, injuries and deaths, by getting rid of the source of the problem — the hazard. This public health approach to occupational health and safety is the best way to deal with hazards. When this is not possible, other levels of prevention will reduce the amount of the hazard or limit the harm caused.

**Problem** - the hazard(s) or situation(s) that need to be addressed; it is not the symptom such as an injury or illness.

**Process** - how things are done.

**Program** - documents explaining the organised approach to health and safety to be used in the workplace. Required by law, it must include such things as policies, listings for responsibilities and ways to deal with specific hazards.

**Reasonably practicable** - This legal term means that the employer must weigh the costs in time, money and effort of fixing or preventing problems and the effects of doing

little or nothing. It's **not** an even balancing of costs and hazards. Hazards must be fixed or dealt with unless there is "a gross disproportion" (i.e. a great imbalance) between the cost of solutions and doing nothing about the hazard. The more serious the hazard, the more that it is "reasonably practicable" to fix it. (The meaning comes from a court case known as *Edwards vs. National Coal Board*, in 1949 in Great Britain.)

**Rep** - another name for a representative, the person who functions like a committee in a workplace with 10 - 19 workers.

**Repetition** - doing the same motion over and over, without adequate rest, especially mini-breaks.

**Representative** - a worker safety and health representative, designated in workplaces where a committee is not required but there are more than 10 workers. Also known as a rep or worker rep. Has the same duties or responsibilities as a committee.

**Risk** - is the chance (probability) of a worker's safety and health being affected, or of property and/or equipment loss. We use the term "hazard" to avoid confusion.

**Root cause** - the real problem or hazard, not always obvious.

**Root cause analysis** - a problem-solving and questioning method used to figure out the main reason(s) why something happened. In occupational health and safety, it's often used to analyse hazards and incidents. The 5 Whys tool is one method.

**Safety** - the prevention of injury to the physical bodies of workers and other persons who may be affected by activities in the workplace.



**Safety and health officer (SHO)** - an official from the Manitoba government's Workplace Safety and Health Division in the Department of Labour & Immigration. Often called an inspector, this person is the "cop" for workplace safety and health — the only one who can enforce the law.

**Safety/Mechanical hazards** - includes issues such as slip, trip and fall types of problems, machinery with moving parts and housekeeping problems.

**Solution** - a method or action to prevent or reduce the effects of a hazard. Sometimes called "fix" or "intervention". Three categories of solutions are explained in the Prevention triangle. Also the answer or answers to a problem. The goals may be short-term, long-term or in between. They may involve several steps. Avoid confusing with strategy.

**Strain or toxic stress** - the long-term effects of exposure to stressors. When it's work-related, may be called job strain. Can have physical effects on the body or changes to behaviour, emotions or other non-physical effects. The Manitoba Workers' Compensation Board does not accept claims for stress-related effects, unless it is from a single, very traumatic event.

**Strategy** - how you get the solution(s) for a hazard or problem. Avoid confusing with solution.

**Stress** - the short-term effects of hazards called stressors or work organisation issues. These "hazards to the mind" can become hazards to the body. The Manitoba Workers Compensation Board does not accept claims for stress-related effects, unless it is from a single, very traumatic event.

**Stressors** - also called work organization hazards. Causes the short-term effects called "stress", and the long-term symptoms called "strain" or "toxic stress".

**Surveillance** - looking for hazards and symptoms, being a "detective".

**Symptom(s)** - the injuries, illnesses, diseases or deaths that are caused by hazards at work. Different types of symptoms may be linked to different kinds of hazards. Also describe what people feel or experience, especially when uncomfortable or in pain. This is different from what a nurse or doctor finds when they look at you. At work, they are the effects of health and safety problems or hazards.

**Systemic effects or symptoms** - are found at a different place than where the hazardous substance entered the body; may start with local effects; often harder to find and connect with the hazardous substance.

**Welfare** - in the Manitoba health and safety law, *the conditions or facilities, in or near a workplace, provided for the feeding, rest, hygiene or sanitary requirements of a worker.*

**Work environment ergonomic hazards** - part of the general work environment, sometimes also considered as physical hazards.

**Workplace map** - drawing of the physical layout of a workplace or work area, with information about the people and hazards in the space.

**Workplace safety and health committee** - the joint labour/worker and management committee that must be set up in all Manitoba workplaces with 20 or more regular workers. Also called the safety committee, health and safety committee, joint safety and health or JOSH committee, etc. Worker representatives must be appointed by their union or democratically elected by workers. There can be up to 12 people on a committee. At least half the members must be workers.





# Committee Process Toolbox

- CP.1 Action plan - a "to do" list
- CP.2 Active listening - 10 tips to help us do it
- CP.3 Agendas - good safety and health committee agendas
- CP.4 Chairing a meeting - tips for effective groups
- CP.5 Consensus - a key process
- CP.6A Criteria for decision-making
- CP.6B Criteria for decision-making - setting priorities about hazards to tackle
- CP.7 Force field analysis
- CP.8 Ground rules for committee activities
- CP.9 Ground rules for healthy conflict
- CP.10 Healthy solutions for workplace hazards
- CP.11 Incident cost calculator
- CP.12A Interviews and conversations
- CP.12B Interviews and conversations - practice instructions
- CP.13A Minutes
- CP.13B Minute form
- CP.14 Orientation
- CP.15A Recommendations
- CP.15B Recommendation form
- CP.16 Root cause analysis and the 5 whys
- CP.17 Six thinking hats
- CP.18 Terms of reference
- CP.19 Triangle model (to analyze racism and discrimination)
- CP.20 Visions of a safe and healthy workplace - what would it look like?
- CP.21A Workplace safety and health committee self-evaluation - a quick check
- CP.21B Workplace safety and health committee self-evaluation checklist





# Action plan - a "to do" list

Use this worksheet to keep track of things to in to your committee work.

Action item	Who's involved	Target date	Date done





## Active Listening - 10 tips to help us do it

Active listening is about listening and avoiding misunderstandings. It requires us to focus on the speaker. At the same time, we must stop thinking about immediate responses to what is said. It's really about letting go of our own thoughts and paying attention to what is said. Follow this up to make sure you understood what the person meant to say. Paraphrase what you thought you heard, asking if you are correct.

What else would help you and others on the committee with active listening?

The idea	What might help me do this?







## Agendas - good safety and health committee agendas

Agendas are the topics to be discussed at a meeting. The two co-chairs must prepare the list together. It also is good practice to ask all committee members what topics they want included, their importance, time required for discussion, background information that could be distributed, and hoped-for outcomes or recommendations.

Committee members must get the agenda at least three days before the meeting. It also must be posted on the committee's bulletin board.

Agenda items are presented in the order they will be discussed. Organize the list so that important topics are discussed early on and decisions are made while people are "fresh".

Good agendas for safety and health committee meetings:

- state the date, start and end times, place for the meeting
- list those expected to attend and alternates, if there are any
- identify who's responsible for specific tasks: chair, recorder or minute-taker, timekeeper, etc.
- use "traditional" agenda categories only when necessary
- for each item:
  - indicate the planned start time and time limits for discussion
  - label with a number or letter and title
  - provide background information with attachments, if relevant and possible
  - indicate if someone is especially responsible for it (e.g. if someone is reporting the results of an inspection)
  - specify the desired outcome: what is the committee expected to do about it, or possible recommendations
  - say who suggested the outcome or recommendation
- organize the items by priority (the criteria for this must be agreed by all involved)
- use "consent" for routine approval of items: say accepted as circulated, as long as no one has any objections or amendments

Topics to cover include:

- follow-up about things people were to do
- new issues/problems based on:
  - committee members' concerns and questions (which should include what they are asked by those they represent and work with)
  - inspections
  - investigations
  - reported incidents, first aid and other statistics (not just compensation claims)
  - surveys
  - audits
  - reports done for the employer

(cont'd)



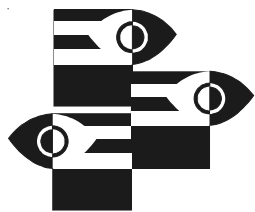
- training topics (e.g. doing inspections, indoor air quality, lock-out procedures, processes such as force field analysis)
- outstanding items - where are they at?
- process issues — how are we doing our work, what do we need to practice, learn more about, etc.
- evaluation of committee activities (e.g. meeting processes, doing inspections, etc.)

Here's a sample agenda:

<b>Item</b>	<b>Who's responsible</b>	<b>Time</b>	<b>Background information</b>
1. Approval of agenda (including new topics added at meeting)	Chairperson	5 minutes	Distributed (date), adjust as needed and get final approval
2. Approval of last meetings' minutes	Chairperson	5 minutes	As distributed, with minutes. Amend as need be.
3. Follow-up to minutes	Chairperson or designate	15 minutes	Depends on the number of items left unresolved at the last meeting.
4. Other topics (see list above for suggestions)	Person bringing up the item	Set for each topic	These are items put onto the agenda before the meeting. Try to start with a go-round to find out about issues that individual members want to bring up. Then go to specific topics.
5. New topics (added at start of meeting)	Person bringing up the item	Agree before discussing	Ask for purpose, background information (on paper, if possible)
6. Next meeting	Chairperson	5 minutes	Agree on time, place and date before committee adjourns.







## Chairing a meeting - tips for effective chairing

### General concepts and principles

Manitoba workplace safety and health committees have two co-chairs - one from the employer's representatives and one from the workers' representatives. They must take turns chairing meetings - i.e. they must share power and responsibilities.

The co-chairs need to know and understand the committee's procedural rules and use them impartially. But there's more to running meetings than knowing those rules.

Effective chairs are mostly facilitators. At the same time, it's often assumed that the co-chairs have more authority than others on the committee. What they say may be given more weight than other people's voices. However, when chairs interject too much or express personal views, they often make it difficult for

others to participate (e.g. it's intimidating) and reduce the committee's effectiveness.

As a facilitating chair, you can:

- ✓ acknowledge the strength of group interaction and collective contributions (e.g. participatory activities);
- ✓ encourage participation and contributions with techniques such as brainstorming and open questions (see the *Six thinking hats* in CP. 17 and the text about open questions in Part B);
- ✓ share power and promote facilitation and leadership by others; and
- ✓ work to get group ownership of recommendations and decisions.

See Parts B and H of this manual for more details about tools for effective committees.

### Before the meeting

1. Work with the other co-chair to prepare the agenda. Review past agendas and minutes, request input from other committee members and check correspondence received since the last meeting. Ask for background information about topics to be discussed.
2. Organize the agenda (for more about this, see CP.3), including background information that is available. Distribute the agenda and relevant documents a week or more before the meeting. (The law requires that it be posted on the committee's bulletin board before the meeting and that committee members receive it at least three days before-hand.) Ask people to RSVP.
3. Encourage members to prepare a case about items they put on the agenda. (When contentious items get on the agenda without notice and members are not prepared for discussion, conflict is more likely.)
4. Encourage committee members to discuss agenda items with others (on and off the committee) so they are prepared to represent views and present relevant information.
5. Remind those who have responsibilities from previous meetings about what they were to do and ask that they be prepared to report their progress or actions.



## At the meeting

In general, the chair is responsible for promoting participation, sticking to the agenda, focusing committee members on the topic at hand, and ensuring decisions are made and recorded.

To promote participation:

- ✓ keep track of who is participating, and a speakers' list;
- ✓ use the ground rules (see CP.8) to remind committee members about things like interruptions and encourage others to do the same;
- ✓ use methods such as the *Six Hats*, brainstorming (CP.17), open questions, force field analysis (CP.7) and small group discussions;
- ✓ try to get everyone to contribute without singling them out in an embarrassing way;
- ✓ pay attention to body language (e.g. sitting back, people shaking their head);
- ✓ consider a "go-round" to promote contribution and let people "pass";
- ✓ ask strategic questions (e.g. "What would it take for us to move from situation A to situation B?", "What are the benefits of doing this?");
- ✓ don't get involved in the discussion except to facilitate moving forward;
- ✓ if you want to participate, hand over the chairing to the co-chair or someone else while you do that;
- ✓ deal with conflict as it arises (see CP.9 for some "ground rules"); and
- ✓ have regular evaluations about how the committee is doing things, at meetings and in other activities.

To help the committee stick to the agenda and focus on each topic:

- ✓ review the agenda at the start of the meeting to make sure that important decisions are made early on, while people are "fresh";
- ✓ check with the committee about the time for individual topics before the discussion starts;
- ✓ at the start of each topic, state what outcome is expected (e.g. review a report, make a recommendation) ;
- ✓ manage the time for each item and the meeting in general;
- ✓ encourage long-winded speakers to sum up or focus on key points;
- ✓ when someone strays from the agenda, quickly ask if others want to pursue that topic now or later, and sort out how to do that (e.g. "table" the discussion until later in the meeting, set up a committee to deal with it and report back at the next meeting);
- ✓ use your power and control sensibly to keep participants focused on the issue while allowing reasonable "room" to let people to explore the issue; and
- ✓ keep notes about the arguments and evidence in discussions so that you can summarize and paraphrase positions when the group seems to be stuck or is going around in circles.

To help ensure decisions and recommendations are made:

- ✓ make sure that decisions or recommendations are made;
- ✓ be prepared to summarise discussions and agreements that seem to be there;
- ✓ aim for consensus (i.e. what people can live with);
- ✓ if need be, ask for a motion (i.e. have someone propose the recommendation or agreement as a “mover”, and get someone else to “second” their proposal);
- ✓ try to write the agreement or recommendation on a flip chart or project it from a computer, so everyone can see it before giving approval;
- ✓ ensure recommendations and decisions are clear, name who will do what and set time lines;
- ✓ if taking a vote, be sure that those forced to vote ‘no’ have not been disempowered (e.g. have not been able to have their “say”);
- ✓ consider the consequences of using your power to break a tie;
- ✓ if there is a tie or no consensus, ask those concerned to bring more information to the next meeting, see if changing the proposal makes it more acceptable to everyone, consider setting up a subcommittees to report back ASAP, or allow more discussion (see CP.5 for other ideas);

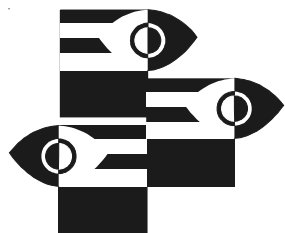
Finally, the chair needs to pay attention to the person taking minutes. Make sure the note-taker has time to record important points of discussions and proposed agreements, decisions or recommendations.

For more information about chairing meetings, these resources will help:

1. “Skills, strategies and tools, Some specific activities” (Kit 3) in *The Kit: A guide to the advocacy we choose to do. A resource kit for consumers of mental health services and family carers*. Prepared by SPICE Consulting for the Australian Commonwealth Department of Health and Family Services. Available on the web at: <http://www.mhca.org.au/Resources/CommunityDevelopment/index.html#TheKit>.
2. *Facilitator’s Guide to Participatory Decision-Making* (2nd Edition), by Sam Kaner, Lenny Lind, Catherine Toldi, Sarah Fisk, Duane Berger. The paperback version is 368 pages and is published by Jossey-Bass. It can be bought at bookstores or borrowed from libraries; it also is available as an “E-book” and can be downloaded (for a price) at <http://www.josseybass.com/WileyCDA/WileyTitle/productCd-0787996416.html>.







## Consensus - a key process

There likely will be differences within the committee about any topic. However, majority consensus can be reached through discussion, paying attention to feedback, action plans and respect for diverse experiences and ideas.

Consensus is the preferred method for reaching agreement – about a decision, a recommendation, etc. It is an agreement that everyone on the committee can support, at least at the moment. It's what everyone can live with, even if it isn't their desired solution. Getting consensus will be easy on some things and very difficult on others.

Here are some guidelines that will help. Also see *Ground rules for committee activities* (CP.8) and *Ground rules for healthy conflict* (CP.9).

But how do you reach this agreement?

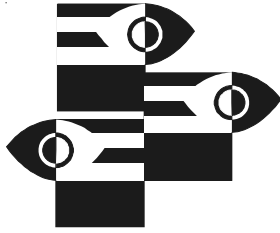
1. Start the process with a proposal (tentative decision or recommendation).
2. Clarify the proposal.
3. Check for immediate consensus. Adopt the proposal if it is immediately acceptable to all committee members. If not ...
4. List concerns. Group them, if appropriate.
5. Resolve concerns. Go through each individual or group of concerns, one at a time. Try to reduce the number.
6. If concerns remain unresolved:
  - seek a "third party" solution (modify proposal, if appropriate)
  - re-visit committee purpose and values
  - examine individual motives
  - conduct a "go-round"
  - request a "stand-aside"
7. Continue until consensus is reached.
8. If consensus is not possible:
  - refer to a third party
  - apply legitimate authority (co-chairs)

For more, see resources such as:

"Skills, strategies and tools, Some specific activities" (Kit 3) in *The Kit: A guide to the advocacy we choose to do. A resource kit for consumers of mental health services and family carers*. Prepared by SPICE Consulting for the Australian Commonwealth Department of Health and Family Services. Available on the web at: <http://www.mhca.org.au/Resources/CommunityDevelopment/index.html#TheKit>.



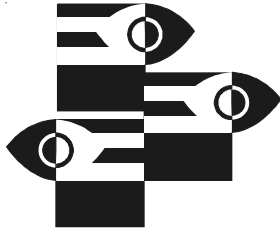




## Criteria for decision-making (sample)

	What's important? (Our criteria)	How do we measure success?	Do our recommended solu- tions match the criteria?
1	How do we (each of us) feel about the solution(s)?	What evidence supports our feeling?	In the absence of evidence, how do we proceed?
2	How many people are affected by the problem? the solution(s)?	Should we set a minimum or maximum?	If one person is affected severely by a hazard, how do we rate its importance?
3	How severe are the consequences of the problem?	What are the acute and chronic effects? How serious are they?	If the consequences are only short-term or only long-term, how appropriate is our solution?
4	How much does the <u>problem</u> cost?	Does the solution cost less, the same or more than the problem? How much?	How are costs considered, compared to severity and consequences?
5	What does the law about this topic? What is "reasonably practicable" to do in terms of time, effort and money?	What absolute requirements must the employer follow? How does this account for "reasonably practicable"?	Is management informed and clear about the health and safety law?
6	What do workplace documents say about this situation?	What guidelines do we already have to help us? What's in our health and safety program? union contract (if there is one)? other policies?	In the absence of policy, do we develop one? If this situation is not covered in our program, what needs to be added?
7	Can the problem be fixed easily and quickly?	What is the effect of fixing something right away?	How do we still go after long-term solutions?
8	How important is the problem to the people involved, especially those affected?	If the committee identifies a hazard that others don't "see", how do we measure its impact?	If the potential consequences are severe, does the committee go ahead when the problem is not apparent? How do we use the prevention principles (including substitution and precaution)?
9	Where does the solution fit on the prevention triangle?	How close are we to the root cause or source of the problem?	If the fix fits in Level 2 or 3, what should we do to find out more about a Level 1 solution?





## Criteria for decision-making

	What's important? (Our criteria)	How do we measure success?	Do our recommended solu- tions match the criteria?
1			
2			
3			
4			
5			
6			
7			
8			
9			







## Criteria for decision-making - setting priorities about hazards to tackle

Criteria	Hazard # 1	Hazard # 2	Hazard # 3	Hazard # 4	Hazard # 5
How serious a hazard/issue is it?					
How many people are or could be affected?					
How severe are the (potential) consequences (acute and chronic effects)?					
How often is the problem likely to occur (frequency)?					
How much does the problem (hazard) cost?					
What's the law say about this?					
If applicable, what does the collective agreement say about this?					
Could the problem be fixed easily and quickly?					
How important is it to the people involved?					

CP.6B



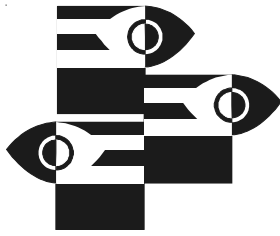


### To complete the chart:

Write the names of five hazards in the empty second row of the chart. If you've got more than five, make a copy of the chart and put everything down.

You can do the questions (in at least) two ways. Whichever way you do it, use a pencil. This way, you can make changes as you go.

1. Write down an answer that will help you evaluate the hazard's priority.
2. Use check marks or Xs where appropriate. If you think it'll help, use several to indicate the seriousness of that particular hazard.
3. If you don't know the answer, put in a question mark and assign someone to do the research.
4. When you're done, look at the results and start to decide which hazards are more important to tackle than others.



# Force field analysis

Force field analysis is a method developed by Kurt Lewin in the 1950s. It is a simple but very useful way to analyse situations where you want to change something. Lewin said that there are forces helping change (helping or driving forces) or blocking it (hindering or restraining forces). The tool brings new eyes to weighing pros and cons of a solution or goal.

Driving and restraining forces go against each other, creating a dynamic status quo. Change comes because increasing the driving force or decreasing the restraining force leads to a new status quo. Reducing the restraining or hindering factors works best.

To use the form, decide what health and safety situation or hazard you want to change. Develop a clear statement about the goal. For example:

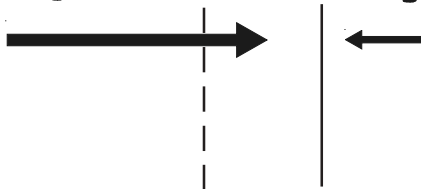
We want to get proper ergonomic equipment or furniture for X department in our workplace. Write the question at the top of the page. Then brainstorm about what would help or drive getting the solution. Keep track of each idea; some will be on both sides.

When you think you're done, the facilitator or chairperson should ask:

- What do you see?
- What's missing? (and add the points made)
- What will support our goal? What opportunities can we use?
- What are the key restraining forces? What can we do about each one?

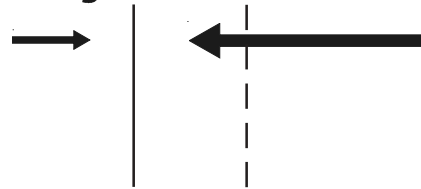
There are a lot of useful references about this tool For a starting point, see [http://en.wikipedia.org/wiki/Force\\_field\\_analysis](http://en.wikipedia.org/wiki/Force_field_analysis).

## Driving forces      Restraining forces



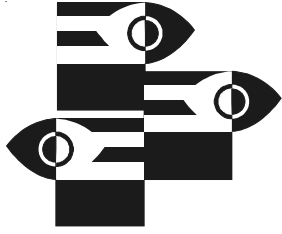
Increased driving force moves middle line (status quo) to right

## Driving forces      Restraining forces



Increased restraining force moves middle line (status quo) to left





## Force field analysis

***Driving forces***



**Restraining forces**





## **Ground rules for committee activities**

Ground rules are a list that guides how a committee works together. Everyone in the group needs to agree to play by these rules. Ground rules can be changed by consensus, if need be.

They could include:

- arrive and end on time
- everyone has an opportunity to participate
- avoid side conversations
- listen to each other with respect
- criticize/argue about ideas, not people
- vibrate your cell phone if it must be left on
- “confidential” means confidential always!

What would you add?







## Ground rules for healthy conflict

Conflict is bound to show up in any group. Within workplace safety and health committees, it likely is structural too. Management and worker representatives come from different positions in the organization. Their health and safety experiences and goals are often different.

about..." or "Who are you to be suggesting..." are strong indicators of conflict between people rather than between issues. Conflict also may occur at meetings when contentious items get onto the agenda without notice and members are not properly prepared to discuss the topic.

Conflict becomes a problem when people personalize it. Personal attacks and statements such as "You don't know what you are talking

Although it's difficult to deal with, studies tell us that conflict produces better decisions because all perspectives must be considered.

Healthy conflict is possible. Workplace safety and healthy committee members should:

- criticize ideas, not individuals
- treat people's concerns seriously
- listen to what is said, not what you think is said (active listening)
- allow everyone to have a say
- clarify facts and agree about getting more information if needed
- find out what you can agree on
- clarify any disagreement before trying to develop a solution
- try to understand the reasons for the differences
- see if people will agree to try something before actually disagreeing about its use
- summarize where you're at, after everyone's had a say, and avoid repeating the same argument
- take a break and caucus where necessary, returning with one suggestion about how to proceed

For more ideas, see a reference such as:

"Skills, strategies and tools, Some specific activities" (Kit 3) in *The Kit: A guide to the advocacy we choose to do. A resource kit for consumers of mental health services and family carers.* Prepared by SPICE Consulting for the Australian Commonwealth Department of Health and Family Services. Available on the web at: <http://www.mhca.org.au/Resources/CommunityDevelopment/index.html#TheKit>.







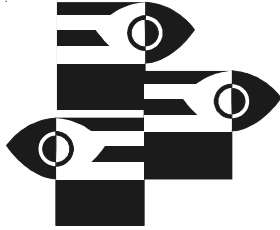


## Healthy solutions for workplace hazards

We want to change ... Clearly define the hazard. What is the root cause?		Healthy solutions? What will really deal with the hazard? Where does it fit on the <i>Prevention triangle</i> ?		What resources can help us?		
				Paper/research	People & organizations	Money (from? amount?)
Short term						
		Long term				
How does our solution benefit ...		Cautions? What might stop us getting the solution?				
Workers?	Employer?	Union?	Community? Others?	What are they?	What can <u>we</u> do about them?	How can others help us deal with them?
Short term						
Long term						



Strategies to get our healthy solutions					We also need to think about ...  Review the criteria for decision-making chart ( CP.6)
How do we get the solution? What needs to be done to reach the goal? Who's involved?					
	I/we will ...	We'd like these other people or organizations to ...			



## Incident cost calculator

**A tool for making the case for health and safety changes**

The *Incident cost calculator* is a form designed by the UK's Health and Safety Executive to help track and assess costs of health and safety incidents at work. One version can be printed and completed by hand. It's on the next page. A second interactive version with help and indicative cost values is available on line.

The website has information and forms about calculating costs in general, injuries and ill health, along with case studies and references. You can find all these things at [http://www.hse.gov.uk/costs/costs\\_overview/costs\\_overview.asp](http://www.hse.gov.uk/costs/costs_overview/costs_overview.asp).

### How to complete the Incident Cost Calculator form

For each cost, consider whether it is relevant. If not, ignore it. If it is relevant, you can do one of two things:

- you can enter the total amount for this cost directly onto the form; or
- if you do not know the total cost, but you do know how much time was involved, you can record this instead.

Some times should be recorded in hours, while others should be in days. The form indicates which type to use.

If you record the time spent, you also need to record the hourly or daily rate for the cost. Some of the costs allow you to use an average value from a reference table for these, otherwise you have to put in your own numbers.

In the on-line version, the costs with reference data are shown by View Average values icon on the right hand side of the costs column. Click on the View Average values icon on the form to display the table. You also can preview a copy of the report before printing it.



# The Incident Cost Calculator

Date and time of incident . . . . .

Description of incident . . . . .

Name of person involved . . . . .

## Dealing with incident (immediate action)

Examples	Time spent	Cost (£)
First-aid treatment . . . . .		
Taking injured person to hospital/home . . . . .		
Making the area safe . . . . .		
Putting out fires . . . . .		
Immediate staff downtime (eg work activity stopped) . . . . .		
Other . . . . .		

## Investigation of incident

Examples	Time spent	Cost (£)
Staff time to report and investigate incident . . . . .		
Meetings to discuss incident etc . . . . .		
Time spent with HSE/local authority inspector . . . . .		
Consultant's fees to assist company in investigation . . . . .		
Other . . . . .		

## Getting back to business

Examples	Time spent	Cost (£)
Assessing/freshcheduling work activities . . . . .		
Recovering work/production (including staff costs) . . . . .		
Cleaning up site and disposal of waste, equipment, products etc . . . . .		
Bringing work up to standard (eg product reworking time/costs) . . . . .		
Repairing any damage/faults . . . . .		
Hiring or purchasing tools, equipment, plant, services etc . . . . .		
Other . . . . .		

## Business costs

Examples	Time spent	Cost (£)
Salary costs of injured person while off work . . . . .		
Salary costs of replacement workers . . . . .		
Lost work time (people waiting to resume work, delays, reduced productivity, effects on other people's productivity etc) . . . . .		
Overtime costs . . . . .		
Recruitment costs for new staff . . . . .		
Contract penalties . . . . .		
Cancelled and/or lost orders . . . . .		
Other . . . . .		

## Action to safeguard future business

Examples	Time spent	Cost (£)
Reassuring customers . . . . .		
Providing alternative sources of supply for customers . . . . .		
Other . . . . .		

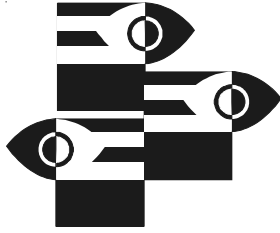
## Sanctions and penalties

Examples	Time spent	Cost (£)
Compensation claim payments . . . . .		
Solicitor's fees and legal expenses . . . . .		
Staff time dealing with legal cases . . . . .		
Fines and costs imposed due to criminal proceedings . . . . .		
Increase in insurance premiums . . . . .		
Other . . . . .		

## Other

Examples	Time spent	Cost (£)
. . . . .		
. . . . .		
. . . . .		
. . . . .		
. . . . .		
<b>Total</b> . . . . .		





## Interviews and conversations

Key tips for safety and health committee members\*

Interviews are a way to collect information about people's knowledge, opinions, ideas, fears and experiences. Interviews can be formal or informal conversations. The information you get can be used on its own, or be combined with information from surveys, monitoring results, inspection reports, etc.

These tips will help you, as will training and practice. See CP.12B for one way to practice "chatting people up".

### Starting out

- find a quiet and private place to talk
- greet people warmly, to make them feel comfortable
- use a friendly tone of voice
- explain what you're doing:
  - introduce yourself if the person doesn't know you
  - whether or not you know the person, tell them which "hat" you're wearing for the interview
  - provide a short summary of the project, question, etc., that is the reason you're talking to them
- reassure the person that what they say will be treated confidentially
- explain what you'll do with the information afterwards; if appropriate, tell the person where they can find out more or get a copy of written reports
- tell the person how long you expect the conversation to take
- ask if the person minds you taking notes (and don't if they say "yes", but explain why it helps you "get the story straight")

### Things to ask about during the interview

- their name, job, etc.
- the situation they are dealing with (the facts, as best as possible)
- the people who are involved (who?)
- the background or context (facts and understandings/opinions/etc.)
- their ideas for changes, if appropriate
- asking "why" is a good way to understand the reason something happened or was done a particular way (but don't sound like you're accusing the person of some thing or think they're "crazy")

### Things to do during the interview

- be respectful and sensitive to the person and what they say
- listen actively - commit yourself to hearing/receiving accurately the person's ideas, facts and opinions
- listen without interrupting or giving your opinions, even if you disagree strongly with something
- don't let disapproval or impatience show
- use positive body language like sitting forward or upright



## Clarifying, understanding, etc.

- closed questions (e.g. Were you trained about using that product?) get mostly “yes” or “no” answers
- open questions give people a chance to tell their story (e.g. What kind of training did you have about using that product? Tell me more about how you use that product.)
- if someone’s very talkative, keep them on track by saying “thanks for the very complete answer” and move on to the next question
- if someone doesn’t answer the question, try asking it another way
- ask the person to clarify anything you don’t understand or think may be a different interpretation of particular words or phrases than you intended
- “What are your questions?” is a useful way to wrap up interviews

## At the end of the interview...

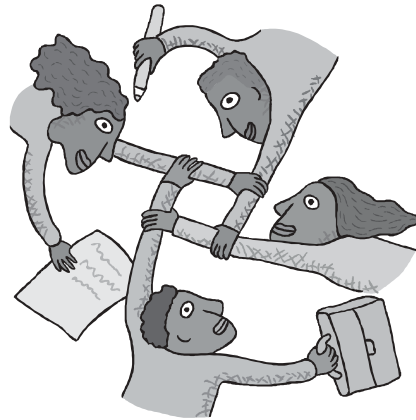
- check the main points said with the person:
  - use people’s own words as best as possible to report what was said
  - when you use your own interpretation, make it clear you want to be sure you understood (e.g. “I thought I could pick it up” could mean someone told the person they should be able to pick it up or that, given their experience, they expected they could pick up the object)
- thank the person warmly
- remind them about where they can find out more or get a copy of your report
- give them your name again and a way to reach you, in case they remember anything else they want to tell you
- ask the person if there is anything they want or need to know

\*First prepared for the Winnipeg Regional Health Authority’s joint health and safety committee training, 2003, during a project funded by the WCB’s Community Initiatives and Research Program. Adapted from the ILO’s book, *Barefoot research*, written by Margaret Keith, James Brophy, Peter Kirby and Elen Rosskam in 2002; available on line at: <http://www.ilo.org/public/english/protection/ses/info/publ/2barefoot.htm>





## Interviews and conversations - practice instructions



1. There are three roles here in this 'fish bowl' practice for interviewing:
  - a. interviewee
  - b. interviewer
  - c. observer(s)
  
2. One person volunteers to be interviewed about one health and safety issue or concern. It could be a hazard, symptoms you're having, a situation, etc. Here are the ground rules for the **interviewee**:
  - decide what the issue is that you're concerned about
  - be as open as you are comfortable being
  - treat this like a regular conversation, so try not to talk more or less than usual and let the interviewer know when they're pushing your personal limits
  - don't deliberately mislead the interviewer
  
3. One person volunteers to be the **interviewer**. Here are the ground rules for that person:
  - treat this like a regular conversation (try to talk in your usual tone and use your normal vocabulary)
  - respect personal limits
  - your goal is to find out:
    - what is the person's concern?
    - why?
    - is this a problem for others?
    - what information does the person have?
    - where else could you get information?
  - you also need to decide if this is likely a work-related concern
  - try using the five w's and their friend "h"



The **observer(s)** do/es two things:

- watch and listen to the conversation for a few minutes, looking for:
  - body language
  - how things are said
  - opportunities taken or missed for getting information
  - other things that are important for an effective interview
- “jump in” to take the place of one of the two people in the interview by saying “stop” and rolling the conversation back to the point where you would start to do or say something differently
- go as far as you need to make your point and then step out



4. Once you decide who has which role, the interviewer and interviewee sit or stand near one another and start the conversation. Have an observer keep track of time; the activity should take about 10 minutes.
5. When the “fish bowl” is done, discuss these questions:

*What worked/made it easy?*

*What was difficult?*

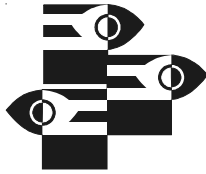
*What information do you still need?*

*How might you get it?*

*What would help you take notes when you talk to someone?*







## Minutes - taking notes and preparing minutes\*

### 1. What are minutes?

Minutes are a summary of the following facts:

- time and date of a meeting and where it is held
- names and affiliation (i.e. employer or worker representative, alternate) of everyone present, and apologies for those who are not able to be there
- all items discussed, whether on the agenda or not
- all actions agreed upon, and the names of the people responsible for doing them
- all recommendations, and
- date for completion of tasks and actions.

### 2. Taking notes at a meeting - some starting points

This is a very useful skill that can be used in many activities, including committee meetings. But how do you take good notes that can be turned into minutes?

Basically, intense listening is often better than furious note-taking, which can result in:

- not being able to read the notes (the writing is illegible)
- not being able to understand the notes (you got everything the speaker said, but don't know what it means)
- failure to see the speaker's body language
- ignoring the voice inflections used to emphasize points, and
- not getting the deep meaning of what is said.

To overcome these problems:

- use active listening - focus on what the speaker is really trying to say
- ask the person to clarify what you don't quite understand
- look at the speaker to observe his/her body language
- take notes about key concepts and ideas
- note names of people to whom the speaker often refers
- make notes about the inflections used at certain points
- take notes in a way that makes sense to you - it doesn't have to make sense to anyone else - and develop your own style
- some people find diagrams are easier to use than words and use word pictures as memory aids, and
- don't be concerned if you miss something you think is important as you can ask the speaker for clarification later, if need be.

A good way to learn to take minutes is to be mentored. Talk with the person who usually takes minutes now. If need be, find someone else in the organisation who does it for other groups. Sit next to the minute-taker at several meetings, so you can observe what they do and work with them. Gradually take over the role as you gain skills and confidence.

If you are asked to take minutes when you don't feel ready, be assertive. Say you are prepared to take notes, but only after you have learned the skills required.



**3. Taking notes - before the meeting**

- if taking notes by hand, make sure that you have plenty of paper or a notepad, along with two or three pens
- if using a laptop computer, make sure it's fully charged and that you have an electrical adaptor and extension cord, in case of emergency
- set up your paper or computer file with headings for the basic information you need to record: who's attending, agenda items, next meeting, times for starting and ending the meeting, etc.
- get to the site early so you can sit where you are able to hear everybody clearly, but are not 'in the middle of it all'
- as committee members arrive, record their names under the heading you have for those attending the meeting, and
- discuss with the chairperson the need for her/him to summarise things for you (and other committee members), and give you time to write.

**4. Taking notes - during the meeting**

- don't try to write a verbatim (word-for-word) record of what people say, as you won't be able to keep up
- focus on writing the **facts or ideas** so that you understand what is said
- don't get involved with the discussion but if you have to say something, be sure someone else is taking notes while you speak
- if you can't hear or understand someone, ask the person to repeat or clarify what they said
- read out decisions and recommendations so that there can be no disagreement later about the accuracy
- if somebody asks that their minority view or concerns be "noted in the minutes", take notes about what they say and read it aloud so that all present can agree that it is what the person is saying
- make sure that anything to be done before the next meeting has deadlines, and that there is no confusion about what is to be done, by whom, and by when, and
- record:
  - the names of everyone at the meeting
  - late arrivals and early departures
  - the names of those proposing and seconding formal motions
  - too much rather than too little
  - what happens, even if it is not in the order listed on the agenda, and
  - record the time the meeting begins and ends (and breaks, if that's relevant).

(continued)



**5. Taking notes - after the meeting**

- as soon as possible after the meeting, start to write up the minutes
- use the Committee Minute Form (CP. 13-B) or the template your committee has for submitting minutes to the Workplace Safety and Health Division
- fill it in as best you can from your notes
- write up recommendations using the Recommendation Form (CP.15)
- follow-up with those who were to prepare or supply a cover letter and/or background information to support individual recommendations
- get clarification from individuals if necessary
- present the draft minutes and recommendations to the co-chairs
- ask them to review the documents and get back to you within a short agreed-upon time
- make appropriate changes based on the feedback, and get the co-chairs to sign the relevant documents
- if you're responsible for sending out minutes, get a copy to the WSHD and all committee members in no later than 7 days, and post a copy on the committee bulletin board, and
- if someone else is responsible to do this, send them the documents.

\* Adapted from *The Kit: A guide to the advocacy we choose to do. A resource kit for consumers of mental health services and family carers*. Prepared by SPICE Consulting for the Australian Commonwealth Department of Health and Family Services. Available on the web at: <http://www.mhca.org.au/Resources/CommunityDevelopment/index.html#TheKit>.





**COMMITTEE MINUTE FORM**

PAGE \_\_\_\_ OF \_\_\_\_

See instructions

Complete all sections - type or print clearly

Phone (204) 945-3446

FAX (204) 948-2209

Manitoba  
Labour and  
Immigration  
Workplace Safety  
and Health Division

**CP.13B**

<b>Complete Name and Address of Workplace</b>  <b>Phone:</b>  <b>Fax:</b>  <b>Which Committee</b> ( if more than one ):  <b>Meeting date:</b>  <b>Date of next meeting:</b>  <b>Number of employees</b> <b>at the workplace:</b>	<b>Employer Members</b> (list all)	<b>Occupation</b>	<b>Present</b>	<b>Absent</b>
	<b>Worker Members</b> (list all)			
	<b>Guests</b> (list any)			

Date of Origin	Concern or Problem (See reverse for completion instructions)	Recommendation or Action To Be Taken	Action By (who & when)

Other Business:

Co-Chairpersons' Signatures Please indicate by (X) in the brackets below who chaired this meeting.BOTH management and worker co-chairs must sign each page of the minutes when they agree that the minutes are complete and accurate.If one, or both co-chairs do not agree with the minute record, please attach concerns on a separate page.

In my opinion, the above is an accurate record of this meeting.

( ) Print name of Employer Co-Chair \_\_\_\_\_ ( ) Print Name of Worker Co-Chair \_\_\_\_\_

Signature \_\_\_\_\_ Signature \_\_\_\_\_

Within 7 days, copy to: ● Committee members; ● Committee files; ● Workplace Safety and Health; ● Post on S&amp;H Bulletin Board



**COMMITTEE MINUTE FORM**

PAGE \_\_\_\_ OF \_\_\_\_

See instructions

Complete all sections - type or print clearly

Phone (204) 945-3446

FAX (204) 948-2209

Date of Origin	Concern or Problem (See reverse for completion instructions)	Recommendation or Action To Be Taken	Action By (who & when)

Other Business:



## SAFETY AND HEALTH COMMITTEE MINUTES

Manitoba  
Labour and  
Immigration  
Workplace Safety  
and Health Division



200-401 York Avenue  
Winnipeg, Manitoba R3C 0P8  
Home page: <http://www.gov.mb.ca/labour/safety> Click on Committee Minutes to enter your minutes interactively.  
Phone: 1-800-282-8069 ext. 3446  
FAX: (204) 945-4556  
**FAX for Committee Minutes: (204) 948-2209**

Your committee must meet four or more times per year. Minutes of each meeting of the safety and health committee at your workplace must be faxed, mailed, e-mailed to [cominutes@gov.mb.ca](mailto:cominutes@gov.mb.ca), or if you use the interactive form, once you have entered all the information, press "Send Committee Minutes" and they will be sent automatically to the Workplace Safety and Health Division. You can use the Workplace Safety and Health Committee Minute Form or set up your own format containing all the information in our form.

The minute form is intended for your use to record briefly and clearly the safety and health concerns at your workplace and steps taken by the committee or others to resolve them. They are designed to provide everyone at your workplace and the Workplace Safety and Health Division with information on your committee's activities and progress to date.

If you are unable to resolve an issue yourselves, phone or write your Safety and Health Officer for assistance in finding a solution. If you would like assistance with making your committee more effective, call the Safety and Health Committee Coordinator at 945-5718 or 1-800-282-8069 extension 5718.

### Instructions For Completion Of Minute Forms

#### ❶ **You must complete all information in top boxes:**

**Full Name & Full Address of Workplace** - must include Department & Branch, where applicable.

**Which Committee** - needs to be completed only if you have more than one committee at the same address.

**Number of Employees at the Workplace** - the number at the workplace, not the number on the committee.

- ❷ In the first column "**Origin**" indicate the date an issue is first raised at a safety and health committee meeting. Continue to note this date in future minutes until the committee agrees the issue is resolved.
- ❸ In the second column "**Concern or Problem**" list the details of items discussed. Draw a line across the page to separate each issue.
- ❹ In the third column "**Recommendation or Action Taken**" indicate what has been done or the steps being taken or the committee's recommendation as to what should be done to resolve the issue.
- ❺ In the last column "**Action By**" fill in who will be responsible for carrying out each interim step or action and the date it will be completed or, if the issue is resolved, fill in the date it was resolved.
- ❻ In the bottom section "**Other Business**" record any points not covered such as upcoming elections or date of next meeting.
- ❼ **Both** management and worker co-chairs must sign each page of the minutes when they are satisfied that the record is complete and accurate. Please indicate by an (X) in the brackets who chaired that particular meeting.
- ❽ Distribution of copies must be done within one week following the committee meeting:
  - a) Distribute copies to committee members, alternates, and relevant managers.
  - b) Keep one copy for permanent committee files.
  - c) Send one copy to Workplace Safety and Health Division - by mail to the address above, fax minutes to (204) 948-2209, e-mail to the above address **or** electronically.
  - d) Post one copy on the safety and health committee bulletin board(s).

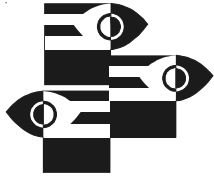
Revised March 27, 2001

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## Orientation

A good orientation is a formal program that deals with people and tasks. “People” aspects include introductions to others on the committee, mentoring, and getting help with specific duties. “Tasks” cover everything from legal responsibilities to health and safety hazard training to the organization’s health and safety program.

Every new committee member needs an orientation before attending a meeting or becoming involved in committee work.

The ingredients of a formal orientation pre-meeting package include:

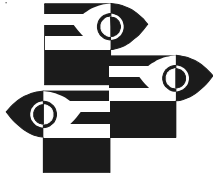
- a copy of the Act and regulations
- a list of committee responsibilities (see L.3 in this manual)
- committee process documents (e.g. terms of reference, decision-making criteria, time allowed for committee activities policy)
- workplace safety and health materials/documents/reports (including the program)
- copies of minutes from the last year
- a conversation with the co-chairs about the committee’s role, activities and current topics/issues/plans
- a list of other committee members and how to reach them (personal introductions would be best)
- information about the Workplace Safety and Health Division
- information about upcoming safety and health workshops, and
- time with those who appointed them to find out what’s expected of them.

A good orientation program also has ongoing

- check-ins with new members
- mentoring for specific activities
- opportunities for shadowing (e.g. inspections, investigations, “chatting up” people about hazards and symptoms)
- attention to new members at committee meetings (e.g. new members are encouraged to ask questions or take on tasks, with someone else, if possible), and
- evaluation.







## Recommendations

Workplace safety and health committees are expected to make recommendations to the employer about changes needed to improve safety and health conditions in the workplace.

When the committee writes a recommendation, it should be clear, logical, straightforward and use action language (not the passive tense).

Recommendations should:

- identify the problem or hazard (e.g. ergonomic hazard of lifting or keyboards that cannot be adjusted for individual needs)
- describe it - where it occurs, how often, who's affected, the effects, etc.
- provide evidence or estimates about what the problem or hazard costs (e.g. training replacements for injured staff)
- provide specific short-term and long-term solutions
- name the benefits, with some cost estimates if possible
- provide background information or leads to other resources
- name someone from the committee who is taking the lead in the committee's activities about the hazard

See the next page (CP.15) for a sample recommendation form.





Workplace safety and health committee

## Recommendation form

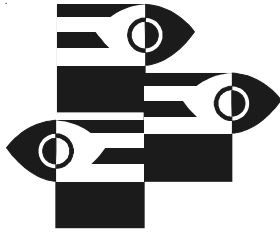
<b>Meeting date:</b>	<b>Chairperson for meeting:</b>	<b>Date submitted:</b>	<b>Recommendation #:</b>
<b>The hazard or hazardous situation:</b> Describe in detail, including maps, reports, etc. in appendices.			
<b>Recommendations:</b>	<b>Specifics</b>	<b>Benefits</b>	
Short term #1			
Short term #2			
Short term #3			
Short term #4			
Short term #5			
Long term #1			
Long term #2			
Long term #3			
Long term #4			
Long term #5			



**Other information or resources to consider:**

<hr/> <b>Employer co-chair</b>	<hr/> <b>Worker co-chair</b>
<b>Date:</b>	<b>Date:</b>
<b>Copy posted on committee bulletin board(s):      Yes      No</b>	
<b>Follow-up by:</b>	<b>Date:</b>





## Root cause analysis and the 5 whys

As a health and safety “detective”, you may be trying to connect a symptom to a hazard. Or you may be asking if you have the “real problem” when you see a hazard. For prevention to be effective, the question really is:

“What problem is the committee trying to solve or address?”

**Root cause analysis** is one way to “get to the bottom” of an issue.

To find the **root cause(s)**, the 5 whys is an important tool. The technique came from the Japanese “total quality management” approach. Others talk about using “But why?”.

Here’s how it works. Start with a symptom or hazard. Ask why it occurs; then take the answer and ask why that occurs. Do it up to five times;

you may even end up back at the original symptom or hazard. Then you likely have the reasons behind the symptom or hazard - and the problem(s) that the committee needs to tackle. In some cases, the causes may be not all be health and safety issues. If that happens, clearly define the health and safety problem in front of you and figure out how to pass along the cause(s) that someone else needs to address.

For example, more incidents may be reported on the evening shift than on days. That is your symptom or starting point. The chart below shows how asking “Why?” helps get to the root cause or causes. Each “because ..” answer becomes the problem” for the next “Why?”.

The steps	The “problem”	Why (is this happening)?
Starting point - the symptom or hazard	More incidents occur between 7 and 11 p.m. on the evening shift.	Because ... the shift changes at 3:30 and employees from the day shift train new workers from 4 to 7 p.m.
#2	The shift changes at 3:30 and employees from the day shift train new workers from 4 to 7 p.m.	Because ... the more experienced employees work the day shift, and they do the training.
#3	The more experienced employees work the day shift, and they do the training.	Because ... new workers are hired onto the evening shift.
#4	New workers are hired onto the evening shift.	Because ... workers with more seniority are promoted to day shift.
#5	Workers with more seniority are promoted to day shift.	Because ... there are few experienced employees on the evening shift.

There’s a blank form on the next page to use for your own analysis. Print off as many copies as you need.

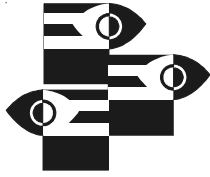


## Root cause analysis and the 5 whys

The steps	The “problem”	Why (is this happening)?
Starting point - the symptom or hazard		Because ...
#2		Because ...
#3		Because ...
#4		Because ...
#5		Because ...







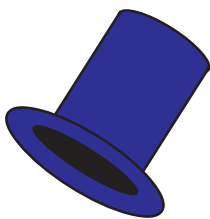
## Six thinking hats

### A process to help make decisions

Six thinking hats is a technique that allows groups to generate and evaluate ideas. It helps individuals and groups focus on particular aspects of a topic, and look at it from different angles. You can use it to describe how people talk about a topic or to make sure that everyone is on “the same page” as you discuss something in a group.

Developed by Edward de Bono, you can find out more about the method and related materials at de Bono’s official site (<http://www.edwdebono.com/>), Wikipedia and MindTools ([http://www.mindtools.com/pages/article/newTED\\_07.htm](http://www.mindtools.com/pages/article/newTED_07.htm).) and various other web sites.

**The ground rule is that everyone works on the same hat at the same time.**



#### 1. Blue - Process control

Blue is usually the hat to use at the start and end of a session or discussion. Blue says:

*What order do we want?*

*Who will facilitate the process?*

*What do we do with the output or results?*

*Who is responsible for putting together the final recommendation, decision and/or document?*

*Who will follow up?*



#### 2. Green - Ideas

Green is the brainstorming hat, usually the second in the six. Given a topic, everyone puts out ideas without censoring or reacting.

What are the “rules” for brainstorming?

- set a time limit for this activity
- separate coming up with ideas from passing judgement about them
- any idea is welcome, however “wild” it seems
- quantity breeds quality, so the more ideas, the better
- build on others ideas
- don’t criticize or say something like “that wouldn’t work” or “we can’t do that”
- record all ideas on a flip chart, post-its or paper
- when time’s up, make sure there aren’t any more “brilliant” suggestions
- only then do you sort the suggestions, followed by evaluating them



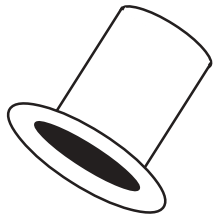
Whatever you decide to do, don't throw out the suggestions. You may be able to use them in another situation or decide to come back to them later. Record each idea so it can be reviewed later. One option (for time and process) is to evaluate similar ideas together.

### **3. Use the rest of the hats to discuss each idea in different ways**

The group then walks through each idea with each of the remaining hats, one at a time, ending with Blue. This keeps the group focused on the task and prevents cross talk.

Usually, general agreement comes out. Depending on the group's purpose (consultative, advisory, decision- making), the results can be for immediate or later use.

The remaining four hats can be used in any order. (The group should decide the order under the first Blue hat.)



#### **3.1 White - Information**

What information does the group need to evaluate the idea? If the information is not "in the room", where can it be found? Who will look for it and bring it back to a later discussion?



#### **3.2 Yellow - Benefits**

Review each idea for its benefits. This lets the idea becomes detached from any one person. The only requirement is to brainstorm the advantages and positive aspects of each idea.



#### **3.3 Black - Cautions**

Repeat the review process for each idea. Group members can now talk about their concerns about each idea. The emphasis should not be saying the idea "will never work", but on specific cautions, concerns or possible barriers.





### 3.4 Red - Feelings

The group talks about their “gut” instinct about each idea. How does each person feel about the idea? Again, it is important to detach the idea from the person who proposed it.



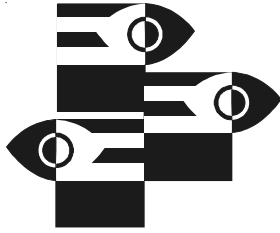
### 4. Blue - Process control

The group process ends with a return to process control.

It's also important to have a follow-up process. This should include hearing back from whomever was to get more information and re-viewing ideas (using the same process) with that new information.







## Terms of reference

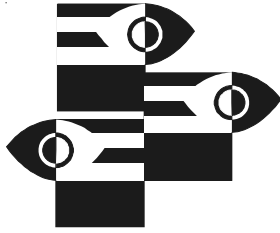
All groups need terms of reference. The terms provide a framework about who's part of the group, what they are supposed to do, how they may do their work, etc. Section 3.6 of the *Workplace Safety and Health Regulation* says the committee must have "written rules of procedure". It also lists things that must be included in the "rules". These are really terms of reference.

Terms of reference should include:

1. The name of the safety and health committee
2. Constituency - scope of representation (e.g. is it for one workplace or is it for a building or department)
3. A statement of the committee's purpose
4. Duties and functions (review *Responsibilities of workplace safety and health committees in Manitoba* - L.3)
5. Meetings - frequency, special meetings, quorum, committee procedures
6. Co-chairs
7. Terms of office
8. Recommendations - guidelines (Review the law.)
9. Assistance in resolving disagreements
10. Amendments







## The Triangle model

### to analyze racism & discrimination

Racism and discrimination are difficult to deal with. Sometimes they are difficult to recognize, especially if you are not the person affected.

However difficult it is, workplace safety and health committees must recognize that racism and discrimination are health hazards and may affect how health and safety is dealt with in the workplace. They may show up in terms of:

- ☐ who's on the committee
- ☐ who comes forward — or doesn't — to name symptoms or hazards
- ☐ how committee members, supervisors or others respond when racialized people report symptoms, hazards, etc.
- ☐ who does what kind of task in the workplace and the hazards they face (e.g. workers of colour are more likely to face verbal and/or physical violence)
- ☐ how other language and cultural practices are recognised in the workplace
- ☐ harassment of individuals or groups of workers, or
- ☐ conflict about particular health and safety issues.

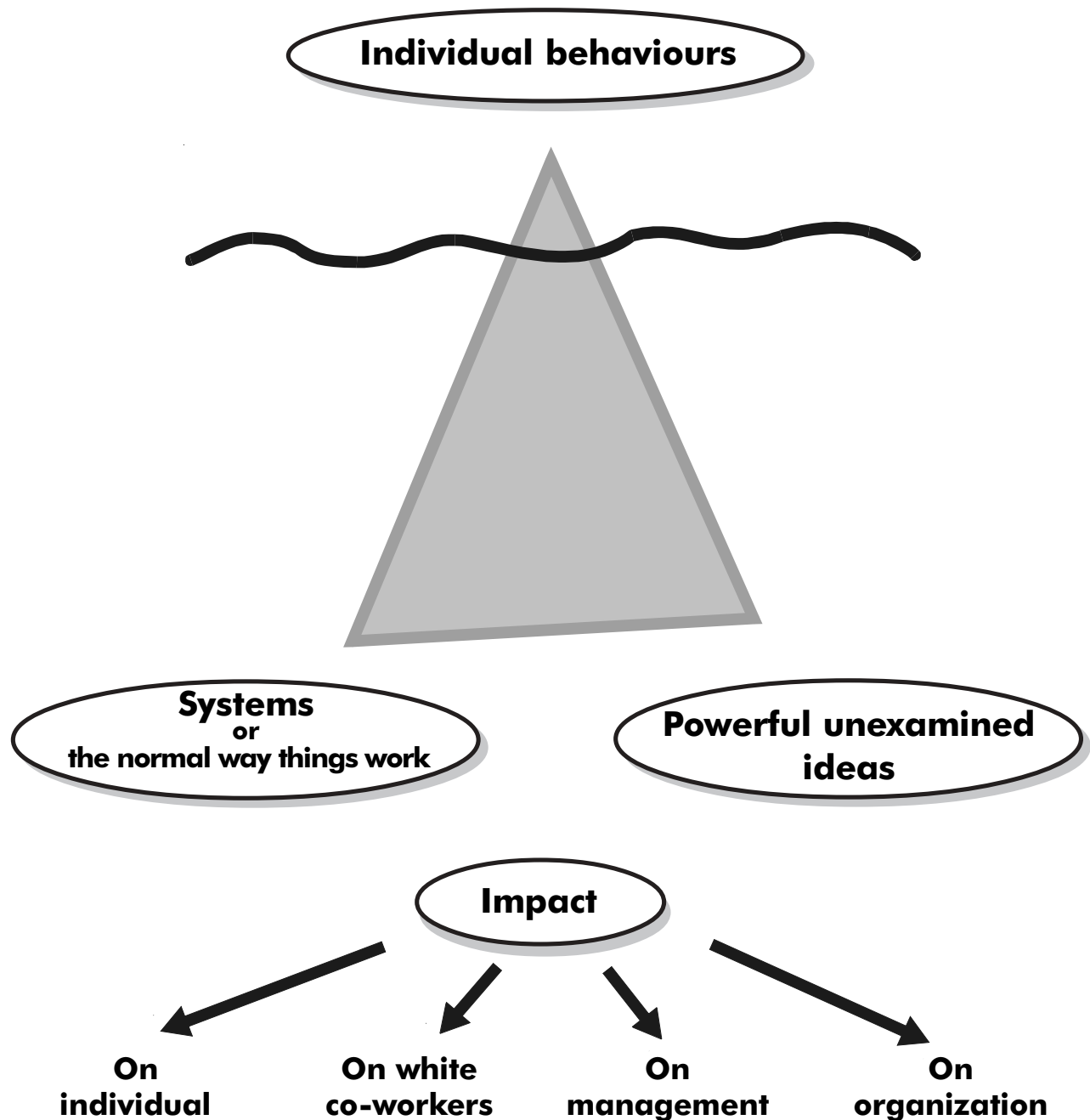
The Triangle model provides a way to identify:

- ☐ individual behaviours — comments, feelings and actions that send a message of discrimination and racism (e.g. “those people always ...)
- ☐ the larger systems at work (e.g. hiring, promotion and supervision practices, what seems “normal”), and
- ☐ unexamined ideas — the “elephant in the room” that we ignore or assumptions don't want to mention (e.g. who's trustworthy or lazy, what “they” can do or not do physically).

The tool is on the next page. See the Committee Activity on page B-17 about one way to use it. For more information, also see *Dancing on live embers: Challenging racism in organizations*; published by Between the Lines in 2005, by Tina Lopes and Barb Thomas.



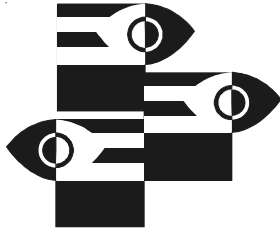
# The Triangle model to analyze racism & discrimination



Based on a graphic from "Dancing on Embers - Challenging Racism in Organizations" by T. Lopes & B. Thomas, Between the Lines - 2006







## Visions of a safe and healthy workplace - what would it look like?

After getting a basic list of your goals for a healthy and safe workplace, expand on some of the ingredients. Here are some items and activities you might add to your list.

The safety and health program has policies and procedures that cover:

- reporting all symptoms and hazards, including “near-misses”
- getting information about health and safety, hazards, rights, responsibilities, etc. to all workers
- how to identify symptoms hazards (e.g. surveys, inspections, investigations)
- maintenance schedules and reports
- fixing hazards
  - principles or guidelines for short- and long-term solutions
  - responsibilities (the employer, then supervisors)
  - making sure the solutions or “fixes” work
- training all employees about:
  - responsibilities for all the “players”
  - workers’ rights
  - how to do the job properly
  - the hazards of each task
  - symptoms that may occur, and the hazards behind them
  - what is available to prevent harm from the hazard (e.g. ventilation, protective equipment) and how it’s supposed to work
  - when and how to use protective equipment, as well as its limits
  - reporting procedures (e.g. for symptoms, hazards, protective equipment that doesn’t work)
- who’s responsible for what (e.g. all job descriptions include health and safety)
- harassment, discrimination, etc. is not acceptable if people bring up health and safety issues, ask questions or use their rights
- regular evaluation of all health and safety activities, policies and procedures, and requirements to make changes as needed

Supervisors are competent in health and safety because the employer provides:

- training about their health and safety responsibilities
- information about relevant health and safety issues
- practical guidance about dealing with health and safety issues with their staff
- support and time to do these things

The committee or representative:

- is recognized and respected by everyone in the workplace
- knows the health and safety law and what committees/representatives do
- asks about and deals competently with health and safety issues
- monitors what the employer’s doing about health and safety
- provide feedback and information to the employer and employees about what the committee/rep is doing (especially about questions, complaints or concerns)
- is effective (see 10 ingredients list on the next page)

(cont’d)



- inspects the workplace regularly
- make solid recommendations to the employer
- has time to do the job
- follows up on inspections, investigations, reports, recommendations, complaints and concerns

From management, committee members or representatives get:

- support (e.g. space for materials and working, help when needed, attention to their needs)
  - training for all members (including minimum expected)
  - orientation for new members
  - time for what committee members or representatives must do (e.g. inspections, prepare for meetings, attend meetings)
  - access to information about health and safety activities and statistics
  - quick and proper responses to recommendations
  - regular conversations with management about what's working and what needs improvement, in terms of the committee
- 

## **The ingredients of effective joint health and safety committees**

Effective joint health and safety committees don't fall from the sky. They need to be built, nurtured and supported. Based on our experience (supplemented by studies and experiences elsewhere), here are 10 necessary ingredients:

1. Commitment, support, participation and respect from all levels of management, especially at "the top".
2. Organizational acceptance that committee activities are real work, not a volunteer activity or add-on; adequate time for committee work, including preparation for activities and meetings, is essential.
3. Competent, trained supervisors with good "people skills".
4. Knowledgeable workers - they are trained, know their rights and participate in health and safety decisions and activities.
5. A comprehensive health and safety program, set in a preventive framework that requires everyone involved to deal with all six hazard categories and look for root causes.
6. All committee members trained and practicing the principles, content and processes required (e.g. they have with skills to run meetings, inspect the workplace, "chat people up", research hazards and solutions and make the case for changes).
7. "New eyes" come into workplaces (e.g. via trained facilitators/trainers, exchanges and discussions).
8. Participatory methods, including visual tools and materials.
9. Short and long-term planning and evaluation of committee activities, integrated into the organisation's activities.
10. Recognition that conflict is inherent in joint worker-management committees; processes set up to deal with it in a respectful and healthy way.





## Workplace safety and health committee self-evaluation - A quick check

Yes	No	Don't know	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has written terms of reference.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are 4 to 12 committee members, at least half representing workers.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Co-chairs share chairing of meetings equally.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Names and work locations of members and alternates are posted on the committee's bulletin board.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each member has at least two days of training per year.

### Committee structure

Yes	No	Don't know	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Meet at least once every three months or preferably once a month.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Co-chairs prepare and distribute agendas at least three days in advance, to allow members to prepare.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Co-chairs rotate chairing of meetings (i.e. they take turns).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Review minutes to make sure that people have done what they were as signed to do, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Review and discuss inspection reports.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Review and discuss investigation reports.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide enough time to complete agenda items, including new issues.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Within one week of the meeting, distribute minutes to committee and send a copy to the Workplace Safety and Health Division.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Post minutes in a "prominent" place within a week and leave them up for at least a month after the next meeting.

### Meetings

Yes	No	Don't know	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identifies health and safety concerns and recommends action.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considers worker concerns and acts quickly.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Advises employer about the workplace program and monitors its effectiveness.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Advises employer about education activities and monitors their effectiveness.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Assigns representatives to specific areas of the workplace to inspect.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Assigns representatives to participate in investigations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensures inspections are done regularly and investigations are done when needed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Asks for and gets information about testing of equipment or hazards, inspections, investigations, and reports about health and safety monitoring or audits.

### Duties and functions



Yes	No	Don't know	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b><u>Committee recommendations</u></b> Committee writes direct, do-able and complete recommendations to the employer, when required.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Committee members know that they may call in the Workplace Safety and Health Division if the committee cannot reach agreement.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Committee members are prepared to call the Workplace Safety and Health Division if the employer rejects recommendations or does not reply within

30 days.

### Scoring

Score four points for each Yes.

Less than 36	Immediate action should be taken. The committee is not effective.
37 to 60	Some committee activities exist, but planning and organization is required.
61 to 83	Committee is active but needs some improvement.
84	Committee meets recommended minimum compliance with legal requirements.
85 to 100	Committee meets or exceeds compliance with legal requirements.

### Action plan

Use the checklist to create an action plan about what the committee needs to improve. Set target dates and, if appropriate, the committee members responsible. Review it regularly.

For a more detailed evaluation of committee effectiveness, use the form *Workplace Safety and Health Committee self-evaluation - How effective are we?* (CP.20B)

Adapted from the form in the Hospital Employees Union's *Health and safety manual for stewards serving on joint OH&S committees*, published in 2004 (see <http://www.heu.org>, under for members> special reports). The HEU material is based on a more detailed document prepared by the British Columbia WCB, available in [http://www.worksafebc.com/publications/health\\_and\\_safety/by\\_topic/assets/pdf/jointoch.pdf](http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/jointoch.pdf).





## Workplace safety and health committee self-evaluation checklist - How effective are we?

Use this checklist to help you evaluate your joint health and safety committee's operations. Place a check in the appropriate column beside each item. Check more than one box per item if you wish. To help you do this, have a copy of a recent agenda and minutes, along with terms of reference, ground rules etc.

### Structure

D/K = Don't Know

N/I= Needs Improvement

N/A = Not Applicable

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
1. Does the committee have agreed terms of reference?						
2. Are committee roles and responsibilities clearly defined? (See L.3)						
3. Is the committee the right size?						
4. Are there at least as many worker representatives as employer representatives on the committee?						
5. Does the union select their representatives?						
6. Are all sectors, departments, and all workers adequately represented on the committee?						
7. Does the committee always use a clear, written agenda? (See CP.3)						
a) Is the agenda set and distributed to individual members at least three days before the meeting?						
b) Does the agenda indicate who is responsible for particular roles within the meetings?						
c) Does the agenda clearly specify the intended purpose of the discussion items?						
d) Does agenda include time limits for each item?						
e) Do the co-chairs set the agenda together?						
8. Does the committee produce clear, action-oriented minutes of every meeting? (See CP.13A)						
a) Do the minutes specify who is responsible for carrying out committee decisions?						
b) Do minutes specify deadlines for completion of activities based on committee decisions?						
c) Do the minutes accurately summarize the content of committee discussions?						
d) Are committee meeting notices and minutes posted on designated bulletin board(s)?						
e) Is a copy of the committee minutes given to the employer/prime contractor?						
f) Are copies of minutes sent to committee members and WSHD within 7 days by employer?						
9. Does the committee report to the "right" person representing the employer?						
10. Does the committee receive the necessary support from the employer?						



**Process - general** (For more about this, see Parts B and H.)

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
1. Do committee members agree on the basic goals and purposes of the committee?						
2. Does the committee have “ground rules” about the process they use for meetings and other activities?						
3. Do committee members feel free to express themselves honestly and directly during committee meetings?						
4. Are conflicting opinions and points of view treated with respect? (See CP.9)						
5. Do committee members learn from one another?						
6. Does the committee work through problems in a systematic, logical way? (See CP.17)						
a) Do members clearly define the problem and its root causes (what, who, when, where and how) before considering solutions? (See CP.16)						
b) Does the committee usually use techniques like brain storming to generate creative ideas?						
c) Does the committee often use flipcharts or white boards to display key points for everyone to see?						
d) Does the committee look at a variety of possible solutions to problems before selecting the best solution(s)?						
e) Does the committee base selection of priority problems and/or solutions on clearly stated criteria? (See CP.6A)						
7. Do the co-chairs work well together to facilitate discussions? (See CP.4)						
8. Do committee members attend most meetings?						
9. Do committee members have alternates in case they cannot attend a regularly- scheduled meeting?						
10. Does the committee pay enough attention to the social or human relations aspects of group work?						
11. Do all committee members have an opportunity to contribute to the agenda?						
12. Does the committee monitor its own use of time against the agenda during meetings?						
13. Is the whole committee actively involved in all major workplace health and safety activities?						
14. Do committee members have adequate time and resources (e.g. office space, photocopying, clerical support) to carry out their responsibilities?						
15. Are all committee members paid for all the time it takes to carry out their responsibilities, including preparation time?						
16. Does the committee meet at least every 3 months?						
17. Does the committee call special meetings when necessary?						



## Process - general

cont'd

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
18. Does the committee have an orientation session for new members? For new employees? (See CP.14)						
19. Do all committee members get training about their roles, responsibilities and the practicalities of their committee activities?						
20. Do committee members get follow-up training regularly and when new laws or workplace "rules" are introduced?						
21. Does the committee regularly evaluate its work and processes? (with outside help?)						

## Process - specific duties

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
1. Does the committee solicit (e.g. survey), receive and deal with complaints or concerns from employees?						
2. Does the committee protect the anonymity of complainants who request it and the confidentiality of all those whose situations they discuss or review?						
3. Does the committee report back to people who bring issues to the committee about what has been done?						
4. Does the committee participate in identifying all six categories of hazards found in the workplace? (See SH.2)						
5. Does the committee tell all workers when tasks or work are found to be dangerous (unsafe or unhealthy)?						
6. Does the committee develop and promote prevention measures to deal with all types of hazards? (See SH.13 and SH.2)						
7. Does the committee check the effectiveness of all prevention measures?						
8. Does the committee review new equipment, tools, materials, work stations or processes before they are introduced, and make recommendations based on anticipated or known health and safety hazards?						
9. Does the employer work with the committee to develop and review the workplace health and safety program required by the Act?						





## Process - specific duties

cont'd

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
10. Does the committee develop and promote programs to educate and provide information about health and safety, particularly WHMIS?						
11. Does the committee always make recommendations to the employer, based on their discussions about each issue on their plate? (See CP.15)						
12. Does the committee inspect the workplace regularly? (See SH.3, 4 and 5)						
13. Do committee members participate in all incident and dangerous occurrence investigations? (See SH.11)						
14. Does the worker co-chair or a designated replacement always go with safety and health officers (SHOs/inspectors) who come to do inspections or investigations?						
15. Does the employer co-chair or a designated replacement also go on inspections with SHOs?						
16. Are both co-chairs or their designated representatives present when SHOs present their decisions/reports?						
17. Do committee members know about their roles in refusals and follow these "rules"? (See L.2)						
18. Does the committee keep records about complaints and how they deal with them, as well as other things they do?						
19. Does the committee regularly use incident, investigation and workplace inspection reports, first aid records and health and safety statistics to inform and support decisions? (See CP.10.)						
20. Does the committee receive monthly, cumulative quarterly and cumulative annual health and safety statistics?						
21. Does the committee review the program, WHMIS training, the inventory, etc. regularly, and at least as often as legally required?						





## Results

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
1. Does the committee inspect for and deal with all types of hazards (See SH.2), specifically:						
a) safety/mechanical?						
b) chemical and mineral?						
c) physical (from energy sources)?						
d) communicable/biological?						
e) ergonomic design?						
f) stressors/work organization?						
2. Are there effective programs about:						
a) WHMIS?						
b) ergonomics?						
c) violence prevention?						
d) dealing with all other hazard categories?						
i) safety/mechanical?						
ii) chemicals and minerals?						
iii) physical?						
iv) communicable/biological?						
v) other stressors/work organization hazards?						
f) toxics use reduction (buying, using and producing fewer and less toxic substances)?						
g) other prevention activities?						
h) return-to-work?						
i) accommodating disabled employees?						
j) tying together all the programs in an overall document and setting out general policy and responsibilities?						
3. What systems are there to:						
a) collect, analyse and use illness, injury and near-miss data?						
b) collect, analyse and use hazard information?						
c) collect, analyse and use information collected during inspections, investigations, audits, etc.?						
4. Is the committee:						
a) included in all these tracking and analysing systems?						
b) all involved in worksite inspections, incident investigations and related follow-up?						
c) able to influence the planning of new processes, procedures and health and safety systems?						
d) able to influence the purchase of new equipment, chemicals, tools, and other materials?						
e) successfully identifying and prioritizing significant hazards and problems (in all six categories)?						
f) unable to address some issues well?						
g) leaving issues unresolved?						
h) using the provisions of the Act and regulations to aid decisions and recommendations?						



## Results cont'd

Item	Yes	No	D/K	N/I	N/A	Specifics to follow up or inform discussion
i) making clear, specific recommendations to address hazards and other health and safety issues?						
j) regularly tracking how their decisions and recommendations are dealt with?						
k) auditing investigations and related activities in which it is not directly involved?						
l) regularly evaluating its work?						
5. Has the employer provided written responses to committee recommendations within the 30-day time limit?						
6. Does the employer consistently implement committee recommendations?						
7. Do employees perceive that the committee is performing a useful function?						
8. Has the number of complaints or concerns coming to the committee decreased?						
9. Has the number of injuries or occupational illnesses or diseases gone down?						

What are three things your committee is doing well?

- 1.
- 2.
- 3.

List the top three (3) improvements your committee should make in the next year.

- 1.
- 2.
- 3.





# Safety & Health Toolbox

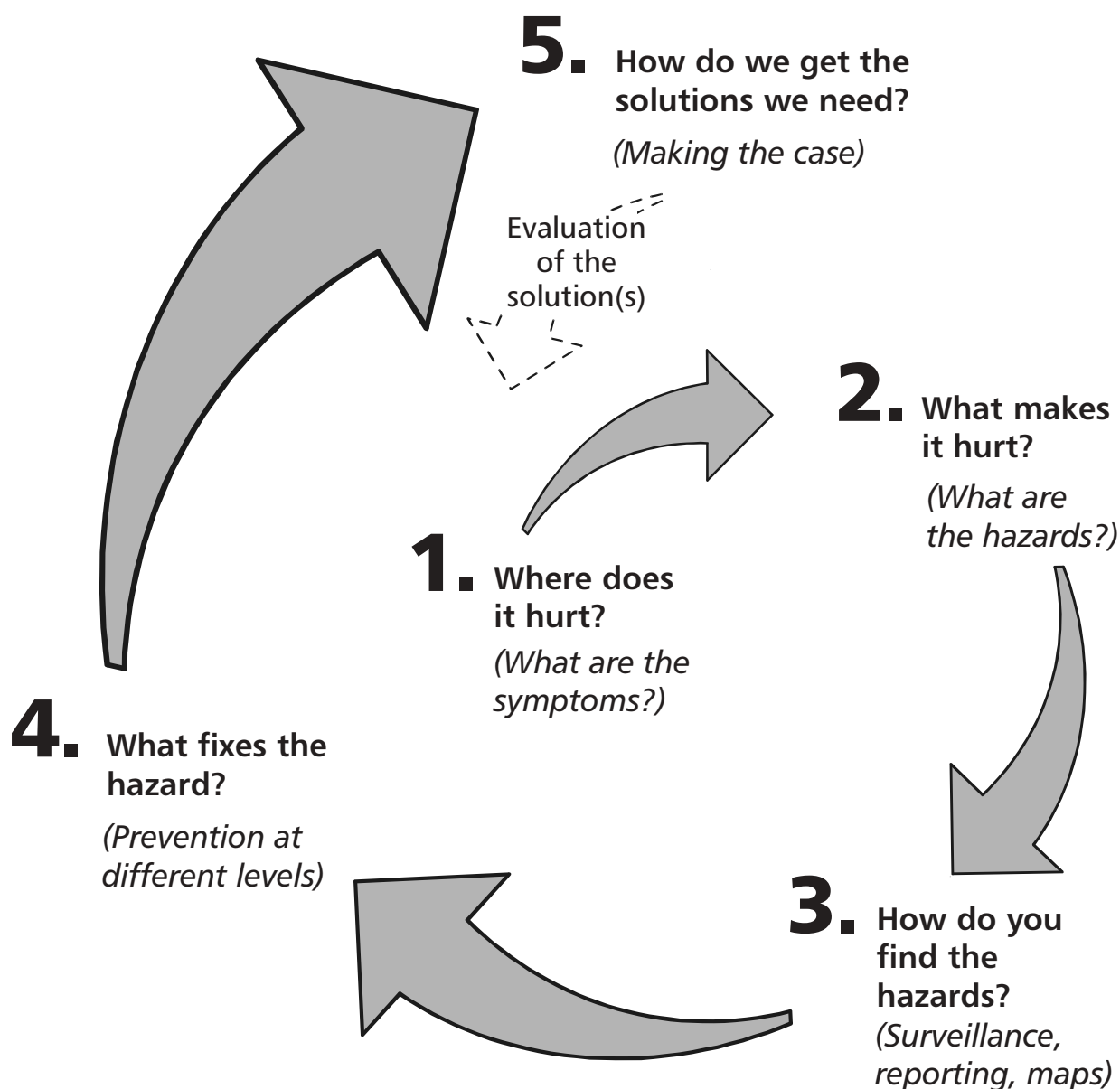
- SH.1 Five steps to a healthy and safe workplace
- SH.2 Hazards - the problems behind our symptoms
- SH.3 Inspections - how to do them
- SH.4 Inspections - looking for all hazards - using the SOBANE screening approach
- SH.5 Inspections - what the HEC is going on?
- SH.6 Ergonomic hazards - the problems behind our aches and pains
- SH.7 Ergonomic hazards - examples of musculoskeletal injuries
- SH.8 Ergonomic myths and realities
  - a. Computer work stations: *conventional vs current wisdom*
  - b. Women need "special treatment"
- SH.9 Ergonomic hazards: Step 1 - looking for the symptoms  
(A screening checklist adapted from the SOBANE method)
- SH.10 Ergonomic hazards: Step 2 - looking for the hazards: SOBANE  
(An observation checklist adapted from the SOBANE method)
 

<ul style="list-style-type: none"> <li>1. Computer or monitor work</li> <li>2. Tools, materials, controls, products</li> <li>3. Tools</li> <li>4. Work station - obstructions</li> <li>5. Posture - sitting</li> <li>6. Posture - standing</li> <li>7. Posture - neck, shoulders</li> <li>8. Posture - elbows, forearms, wrists, hands</li> <li>9. Posture - other positions/postures</li> <li>10. Repetition</li> <li>11. Force - manual materials handling equipment</li> <li>12. Force - vibrating tools</li> </ul>	<ul style="list-style-type: none"> <li>13. Force - wrist and hand strain</li> <li>14. Force - pushing, pulling with the arms</li> <li>15. Force - lifting: characteristics of the load</li> <li>16. Force - lifting: starting position</li> <li>17. Force - lifting: moving the object</li> <li>18. Force - lifting: frequency and weight</li> <li>19. Work environment - general</li> <li>20. Work environment - lighting</li> <li>21. Work organization/stressors - time issues</li> <li>22. Work organization/stressors - other hazards</li> <li>23. Summary of observations</li> </ul>
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- SH.11 Incident investigation report form
- SH.12 Mapping tools to see the workplace with "new eyes", supplemented by:
  - Where does it hurt? - Body map outline
  - Hazard categories for mapping
- SH.13 Prevention triangle
- SH.14 Workplace stressors have toxic effects





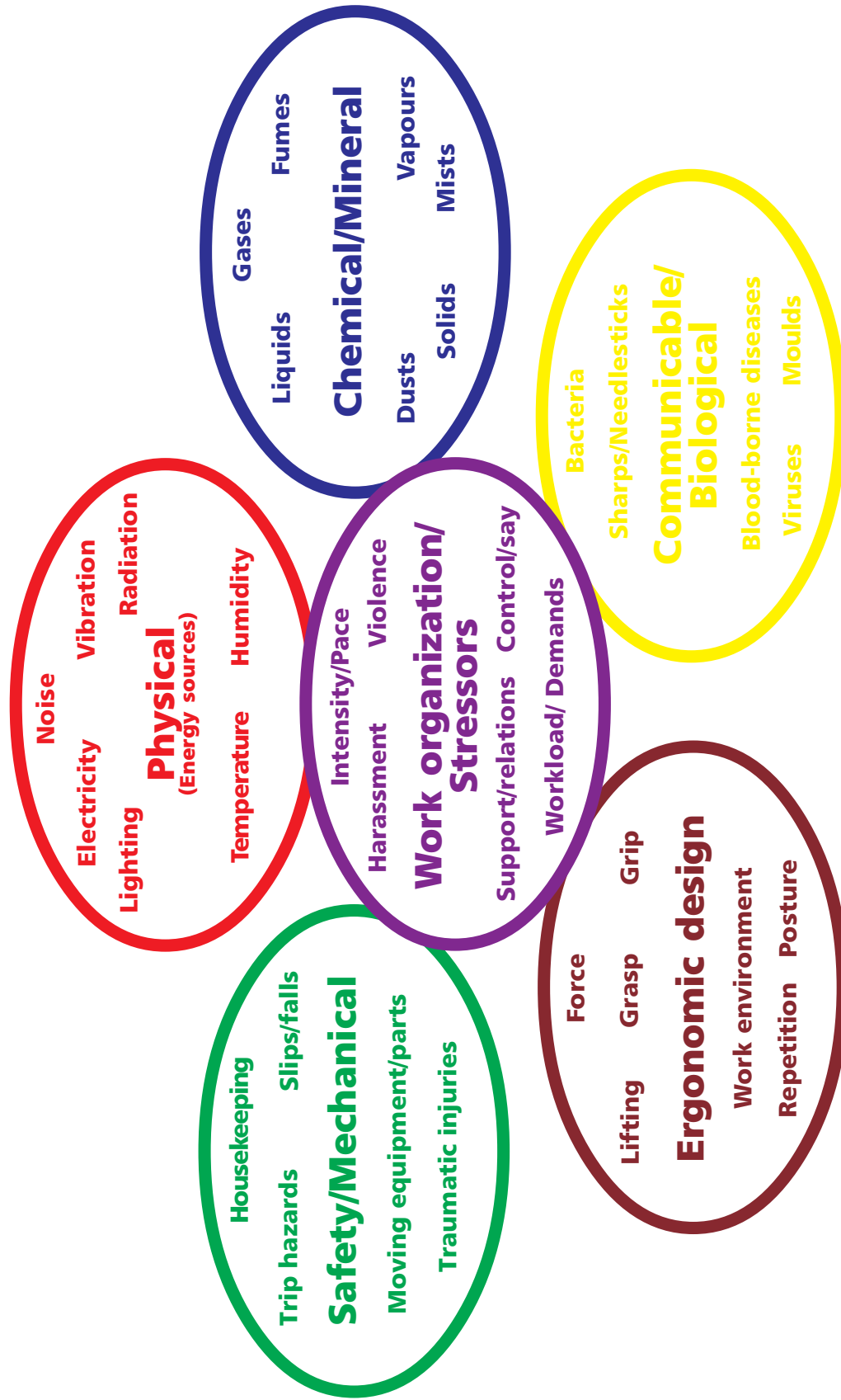
## Five steps to a healthy and safe workplace







# Hazards - the problems behind our symptoms



# Hazard categories

**Chemical** hazards include: gases, liquids and solids, and the things into which they can be changed. Note that vapours are the gaseous form of liquids, and fumes are very small, airborne, solid particles formed by the cooling of a very hot vapour. Smaller than dusts, fumes are more easily breathed into the lungs. Therefore there are paint vapours and welding fumes. It matters when you use respirators or design ventilation systems.

**Communicable/Biological** hazards aren't just found in hospitals or personal care homes. They're the "bugs" we have to deal with when we come in contact with others, moulds, sharps (also found in other jobs than health care), etc.

**Ergonomic design** hazards, sometimes called biomechanical hazards, involve problems with the design and organisation of work. Ergonomics can be defined as the "law of work", in which the key is to *fit the job to the worker, not the other way around*. It's about how much people are expected to do with their bodies and brains; as a Canadian ergonomist says, workers are expected to do things on the job that robots do not do.

These hazards usually affect our musculoskeletal system - they cause aches and pains. However, they also include such things as the design of equipment controls or operating systems. So there also can be effects on our ability to see, concentrate, use operating equipment/computers, etc. Some ergonomic hazards are considered physical hazards in other circumstances.

**Physical** hazards are not the physical symptoms of an illness or injury or something that is visible. They are hazards from energy sources. Compare them with safety/mechanical hazards. This category includes the hazards associated with indoor air problems.

**Safety/Mechanical** hazards are the slip, trip, fall type of hazards. They include machinery with moving parts. They are not physical hazards.

**Work organization** hazards or **stressors** cause us stress (short-term effects) and strain (long-term or chronic effects). They are related to how much say we have about any part of our work, how hard we work, how much we have to do (workload), what kind of social relationships there are at work, what kinds of rewards we get for our efforts, the threat of violence, lack of respect, etc.





## The general approach: What the HEC is going on?

The first page is best used during an inspection. Before doing one, you can fill in the items for which you want to look for specifically, or just some things to look for in general.

- Is there a **H**azard?
  - look at the workplace for hazards by category (See SH.2)
- Is there an **E**xposure?
  - rate the hazards for the likelihood people are exposed to them  
ie. can people be affected by the hazard? can the hazard get into the body by at least one route of entry?
  - what is supposed to prevent or reduce the exposure?
  - how well is it working?
- What are the **C**onsequences?
  - who could be exposed ?
  - how often are they exposed?
  - for how long?
  - how much are they exposed to?
  - what effects are possible (acute and chronic)?

The HEC sheet is very general, but it provides a useful framework for your inspections. It can be adapted with more specific categories and items or colour-coded to help you keep track of the hazard categories.

[illegible]

The second page can help you prepare your report and recommendations. Alternately, use the form to record the results of your inspection.

Item #	Problem/hazard	Priority	Action required		Who's involved?	Dates for change	Done & checked by
			Short term	Long term			

Workplace Inspections - What the NEC is going on

See SH.5 for a blank form



## Preparation

Get together a “toolbox”. It should include:

- floor plans, block diagrams and work area descriptions
- inspection checklists and report forms
- list of things to look for (see below)
- list of people to whom you should talk (supervisors, union reps or members, worker/health and safety committee reps, specific workers)
- information from material safety data sheets (MSDSs), especially for things that:
  - are considered a carcinogen, allergen/sensitizer or reproductive toxin
  - have other serious chronic effects
- paper for notes and sketches
- clip board to carry paper & write on
- measuring tape
- tissue paper on a stick (to check the ventilation)
- camera
- personal protective equipment (PPE) you need for different work areas
- a card with your name, phone number and/or e-mail address to give to people who want to talk to you another time, etc.
- ... **and** something in which to carry these things without hurting your body.

The **list** of things to check out should be based on:

- people’s complaints
- incident or near-miss reports
- previous inspection reports and follow-up notes
- health and safety committee minutes
- reports from other people’s inspections or investigations (WSHD, consultants)
- anything else you think of

Plan your route beforehand. Ask about areas where you’ll need PPE or where you cannot take certain items because of static, etc. You might decide to ask specific questions based on the information you gather. It helps to write these down ahead of time.

## Doing the inspection

Be methodical and thorough. This is a useful sequence to use when you enter an area:

- look **around**: get in the habit of keeping to a system by starting from the left or right
- look **down**: check the floor and pits, etc.
- look **up**: check the ceiling, upper storage racks and cupboards, overhead fixtures, etc.
- look **inside**: storage cabinets, cupboards, storage rooms, etc.

Always check for MSDSs, labels and warning signs.

Do not operate equipment. If you need to see something in action, ask the operator to demonstrate. If the operator doesn’t know about possible hazards, this is a good indication there may be reason for concern.

Some hazards are difficult to see or assess with just your senses. Never taste anything or sniff at unknown vapours or gases.

Never ignore something because you don’t know how to accurately judge possible hazards. When in doubt, ask! If you want more information, go to your resources after the inspection.

Talk to workers and supervisors. Workers, in particular, deal directly with a task, machine or equipment, so their “take” on a situation is essential. Be aware that some people may not want to talk to you if the supervisor is within ear-shot or can see them. Or, they may have questions you can’t answer right away. Your card can be useful to give them for follow-up.

If you’re doing the inspection with someone else, two sets of eyes can be better than one. Decide how you’ll divide up the work. For example, each person could take two or three types of hazards on which they will concentrate.



Be prepared to recommend monitoring equipment if you think it's really needed. On the other hand, your tissue paper on a stick is a handy way to measure ventilation, especially if exhaust vents are in hard-to-reach places. If a place is noisy, you know it's above 85 decibels (dB) if you have to raise your voice to talk to someone one meter away.

## Writing things up and down

Use the HEC sheet or other inspection checklist you put together, along with the floor plan or drawings you make on the spot.

Don't rely on your memory. For each hazard:

- locate it
- give a clear description
- think about what difference it makes if the equipment or tool is being used or not, and if something is out of order, come back another time to see it working
- consider what happens when you're not there (e.g. maintenance, non-routine activities, different shifts) and ask questions to figure out if you should come back
- ask for suggestions about what would fix something or improve a situation

After looking at a possible hazard:

- figure out if the complaints or questions you get from people in the area, or the problems you see, are one-time events or happen often
- fill in the other parts of the HEC sheet under Exposure and Consequences
- rate the hazard in terms of whether or not
  - it could be prevented altogether
  - is adequately controlled now
  - there are inadequate or no prevention measures
  - you're not sure if prevention measures are needed or adequate
- write down your questions, observations and information from people in the area right away, in case you're interrupted
- note anything which hasn't been corrected

since the last time you or someone else looked at the situation

- take a picture or make a sketch if something's hard to describe or you want to back up your notes

## If you find problems

If something is an immediate hazard, talk to the worker(s), union steward (if there is one) and supervisor. Recommend the equipment, tool or task be stopped until changes are made. Include protective equipment that might allow work to continue for a short time until repairs are done. Make notes about what you said, and to whom.

If your recommendation is not followed, be prepared to call or talk to someone else in authority, as soon as possible. Be prepared with information about:

- what you found
- why you think it's a serious problem that needs to be fixed immediately
- what you recommended doing
- who you talked to
- what you said
- what the people you talked to said and did

For other hazards, talk to the worker(s) and supervisor about what you found, as soon as possible. Ask why something is the way it is, to better understand a situation. Ask for suggestions about how to fix a problem. (**Resist recommending solutions before you have all the information you need.**)

Be sure to tell them you'll have a written report done by a certain date. If you can, offer to return to discuss your report and recommendations.

Note things that are working well, or provide good examples of how to do something or deal with a hazard. You may want to keep a list of these good practices for discussions about how similar situations can be addressed.



## After the inspection

Don't make assumptions about why something is or isn't a hazard. If you didn't get enough information to make a decision, figure out what else you need to know. The best question you can always ask is: *why?*

If you did the inspection with others, debrief about what you saw, heard, etc.

Before recommending changes, consider:

- the *Prevention triangle* - how close are you to the source of the problem?
- short- and long-term solutions
- who's affected by the changes?
- what are the consequences of the changes?
- are new hazards created?
- what do(es) the worker(s) involved have to say?
- what does the supervisor have to say?
- what does the union say? (if there is one)

Write up your report. Include:

- problems fixed since the last inspection
- progress on problems found in earlier inspections
- reasons why they haven't been fixed yet
- new problems
- priorities and reasons for this assessment
- proposed solutions and strategies if you have helpful ideas (short- and long-term)
- steps needed to investigate something further
- recommended follow-up, including dates and people who are responsible for it

You can use the second part of the HEC checklist and *Healthy solutions for workplace hazards* chart (CP.10) to do this.

Present it to the committee, relevant supervisor(s), employer and health and safety staff.

Figure out what kind of follow-up is needed, the dates involved and who is responsible for what. Always get a record in the committee minutes about what's been done and needs to be done.

This has been adapted from the British Columbia Federation of Labour's "Occupational health and safety education project", Vancouver, 2002, with additional materials from Margaret Keith and others (2002) *Barefoot research*. Geneva: International Labour Organisation, and personal experience.





# Inspections - looking for all hazards

## Using the SOBANE screening approach\*

Workplace safety and health committee members must inspect their workplaces. Like many other activities, good inspections take time. It also takes time to learn how to do inspections.

For general guidance about the “how”, see **Inspections -- how to do them** (SH.3). Use it with this document as you learn the skills required.

This tool is designed to help you look for all the hazards in your workplace, by category. Using a screening approach, it lets you identify problems that require more information and detailed inspection or observations, while doing “quick fixes”. There are seven sections to this inspection tool; some have sub-topics:

1. **General working conditions**
2. **Safety/Mechanical hazards** (Traumatic injuries/incidents; Electricity, fire and explosions)
3. **Physical hazards** (Lighting; Noise; Temperature and humidity; Vibration)
4. **Chemical/Mineral hazards**
5. **Communicable/Biological hazards**
6. **Ergonomic design hazards** (Forms, controls and signals; Work materials, tools, machines; Repetition and postures; Force (including materials handling))
7. **Work organization hazards/stressors** Work procedures; Autonomy and responsibilities; Work content; Time

constraints; Relationships between workers and with management; Social and general environment

If you need to get into more details about ergonomic hazards, see SH.10 in this manual. If you need to look at other hazards, see the *Resource Guide* for other materials available elsewhere (e.g. noise, indoor air, chemicals).

### Planning inspections with this tool

Don't be put off by the length of the document. It's designed to be thorough while the format makes it easy to read and use.

Start with a committee discussion about how to organise inspections. Set a deadline by which the whole workplace has to be done and work backwards from that to set time lines.

Always try to have two people work together. Members who are new to inspections could go with those who have more experience. Try to include one worker and one supervisor from each area that you inspect. Always plan on talking to people working in the areas you're inspecting.

Consider different ways to get through the entire workplace. Two-person teams can take one department and look for all hazards there. Teams can take one or two categories of hazards and look for those in the whole workplace.





Make sure that committee members have time to do a proper inspection. If it takes longer than expected, individuals should talk with the co-chairs and/or their supervisors about how to get the time they need.




### How to use this inspection tool

Start with the hazard category in which you're interested. Decide if you want to look for all aspects of the category or for one of its sub-topics. The summary sheet at the back will help you choose.

Select the section of the inspection tool that you want to use. For each one, look at the columns about the general topic and what you should "consider".

The general topic about prevention measures may refer to a "level" of prevention. For more about these levels, see the Prevention triangle in this manual (SH.13) and *Part G Step 4: What fixes the hazards?*

This is a screening approach – to find out if you need to do more and/or if a quick fix is possible. There are three main answers:

- |   |                          |   |
|---|--------------------------|---|
|   | <b>Green light (G):</b>  | the situation's is just fine                                      |
|  | <b>Yellow light (Y):</b> | the situation is average, fix if possible                         |
|  | <b>Red light (R):</b>    | unsatisfactory situation, may be dangerous and changes are needed |

Circle the appropriate "light". If it's not "Green (G)", go to the next column to estimate what the problem costs. There are four



categories: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$). There's a reminder line about this at the bottom of each page.

When you think about costs, also consider the legal term "**reasonably practicable**". It is used in the *Act* and regulations, usually to describe employer's duties (things they must do). The idea is important when making the case for health and safety changes. It can be a legal reason to justify spending money.

The words mean there must be a big difference between what it costs to fix a hazard (in time, effort and money) and what it costs to leave it alone. Only then is it not "reasonably practicable" to fix the problem. The more serious the hazard, the bigger the difference has to be before nothing has to be done, legally.

The next step is to figure out what can be done right away for a "quick fix". Who will do it? What deadline is reasonable? What might it cost?

Finally, it's important to decide if you need to check out more about the situation or hazard. Do you need more time to look at how something functions? Is a longer-term solution needed? Need more information? If so, mark it down in the last column.

Use the **summary** at the end of the document to list what still needs to be done, by whom, etc.

\* This list is the result of adapting the Belgian SOBANE materials (see *Part F. Step 3: How do you find symptoms and hazards* in the manual) to the New Eyes approach. For the original SOBANE document in English, see [http://www.sobane.be/langues/eng/the\\_mother\\_guide\\_deparis4\\_2006.doc](http://www.sobane.be/langues/eng/the_mother_guide_deparis4_2006.doc).




























## 1. General working conditions -- Premises and working areas

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Access to work areas	Easy, direct and wide enough (at least 80 cm/31.5 in.)?	😊 (G) 😐 (Y) 😞 (R)						
Circulation paths (for people and vehicles)	Good visibility?	😊 (G) 😐 (Y) 😞 (R)						
	Not obstructed with objects, boxes, pallets, etc.?	😊 (G) 😐 (Y) 😞 (R)						
	Well marked by lines?	😊 (G) 😐 (Y) 😞 (R)						
	Wide enough for people and vehicles?	😊 (G) 😐 (Y) 😞 (R)						
Emergency exits	Not obstructed?	😊 (G) 😐 (Y) 😞 (R)						
	Quite visible?	😊 (G) 😐 (Y) 😞 (R)						
	Signs have appropriate words and/or symbols?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not  (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Facilities/ "welfare"</b> (e.g. washrooms, changing areas, showers, cafeteria, etc.)	For women and men, where appropriate?	 (G)  (Y)  (R)						
	Right size?	 (G)  (Y)  (R)						
	Comfortable?	 (G)  (Y)  (R)						
	Well-equipped? Does it meet legal requirements?	 (G)  (Y)  (R)						
<b>Floors</b>	In good condition?	 (G)  (Y)  (R)						
	Level?	 (G)  (Y)  (R)						
	Not slippery?	 (G)  (Y)  (R)						
	Safe? (e.g. no tripping hazards)	 (G)  (Y)  (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (Y) or 😡 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Obstructions	Appropriate storage procedures?	😊 (G) 😞 (Y) 😡 (R)						
	Is the area tidy?	😊 (G) 😞 (Y) 😡 (R)						
Storage spaces	Are there enough cupboards, spaces, etc.?	😊 (G) 😞 (Y) 😡 (R)						
	Are they easily accessible?	😊 (G) 😞 (Y) 😡 (R)						
Technical maintenance and housekeeping	Working areas well and regularly maintained and pleasant?	😊 (G) 😞 (Y) 😡 (R)						
	Enough containers, well located and appropriate?	😊 (G) 😞 (Y) 😡 (R)						
Waste/garbage/recycling	Sorted and taken out properly?	😊 (G) 😞 (Y) 😡 (R)						
	Is everything recycled that could and should be?	😊 (G) 😞 (Y) 😡 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Therefore, the **overall situation** for **General working conditions** -- **Premises and working areas** is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 2. Safety and mechanical -- Traumatic injuries/incidents

Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Falls from heights	Fall protection system(s) (e.g. scaffolds, harness)?	😊 (G) 😐 (Y) 😞 (R)						
	Systems and equipment are checked regularly?	😊 (G) 😐 (Y) 😞 (R)						
	Systems and equipment is maintained?	😊 (G) 😐 (Y) 😞 (R)						
Falls on the ground	Floor in good condition?	😊 (G) 😐 (Y) 😞 (R)						
	Floor is tidy, no clutter?	😊 (G) 😐 (Y) 😞 (R)						
	Clean floor?	😊 (G) 😐 (Y) 😞 (R)						
Falling or projecting objects	Safety of the activities?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (Y), what's the cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Falling or projecting objects</b> (cont'd)	Tools and materials are stored properly?	😊 (G) 😞 (Y) 😡 (R)						
<b>Mechanical hazards</b> (e.g. shocks, dragging, crushing, cuts, punctures, burns)	Barriers, machine guards, pulley covers are present and used?	😊 (G) 😞 (Y) 😡 (R)						
	Needles or cutters used?	😊 (G) 😞 (Y) 😡 (R)						
	Heat sources?	😊 (G) 😞 (Y) 😡 (R)						
<b>Work clothes</b>	Available?	😊 (G) 😞 (Y) 😡 (R)						
	Appropriate?	😊 (G) 😞 (Y) 😡 (R)						
	Used?	😊 (G) 😞 (Y) 😡 (R)						
	Fit the workers using it/them?	😊 (G) 😞 (Y) 😡 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Work clothes (cont'd)	Maintained and cleaned?	😊 (G) 😐 (Y) 😞 (R)						
	Stored in appropriate place?	😊 (G) 😐 (Y) 😞 (R)						
Other prevention measures - level 3: personal protective equipment (PPE)	Are there respirators, safety glasses, and gloves, as needed?	😊 (G) 😐 (Y) 😞 (R)						
	For using machines: are there glasses, gloves?	😊 (G) 😐 (Y) 😞 (R)						
	For working at heights: safety harness, etc.?	😊 (G) 😐 (Y) 😞 (R)						
	Is it appropriate for the task and worker (e.g. fit)?	😊 (G) 😐 (Y) 😞 (R)						
	Is it stored in a clean space?	😊 (G) 😐 (Y) 😞 (R)						
	Is it maintained and checked regularly?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Other prevention measures - level 3: personal protective equipment (PPE) (cont'd)	Is it replaced when it doesn't work properly?	😊 (G) 😞 (Y) 😞 (R)						
	Is there a procedure to report these kinds of safety hazards?	😊 (G) 😞 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😞 (Y) 😞 (R)						
Incident investigation procedures	Systematic (i.e. thorough) and comprehensive (e.g. look for root causes)?	😊 (G) 😞 (Y) 😞 (R)						
	Known and understood?	😊 (G) 😞 (Y) 😞 (R)						
	Are the form and the instructions clear?	😊 (G) 😞 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Incident investigation procedures</b> (cont'd)	Used?	😊 (G) 😐 (Y) 😞 (R)						
<b>First aid</b> (first aid room, first aid kits, first aid staff or workers)	Well-located?	😊 (G) 😐 (Y) 😞 (R)						
<b>First aid</b> (first aid room, first aid kits, first aid staff or workers)	Appropriate?	😊 (G) 😐 (Y) 😞 (R)						
	People trained and upgraded regularly?	😊 (G) 😐 (Y) 😞 (R)						



Therefore, the **overall situation** for **Safety and mechanical** -- **traumatic injuries/incidents** is:

**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 2. Safety and mechanical -- Electricity, fire and explosions

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Electricity	<b>The general wiring</b> -- circuit breakers, fuses, grounds, signs, etc.	😊 (G) 😐 (Y) 😞 (R)						
	<b>The material</b> -- wires, cables, extensions, grounding, etc.	😊 (G) 😐 (Y) 😞 (R)						
	<b>The equipment</b> -- connections, emergency stops, grounding, maintenance, insulation, batteries	😊 (G) 😐 (Y) 😞 (R)						
Fire and explosion	<b>Inflammable or explosive materials</b> -- quantity, storage, ventilation, supply	😊 (G) 😐 (Y) 😞 (R)						
	<b>Sources</b> -- flames, sparks or sources of heat (e.g. static electricity), signs	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Fire and explosion (cont'd)	<b>Fire fighting devices</b> -- automatic fire detection and extinguishers, other fire extinguishers, hose reels, hydrants, signs for them	😊 (G) 😐 (Y) 😞 (R)						
	<b>Compartmentalisation of areas, stairs</b> -- e.g. shafts, fire doors (condition, obstructions), channels or holes (e.g. cables, pipes)	😊 (G) 😐 (Y) 😞 (R)						
	<b>The workplace fire marshals, etc.</b> -- trained, available	😊 (G) 😐 (Y) 😞 (R)						
	<b>Instructions in case of fire</b> -- evacuation plans, fire alarms, emergency exits and gangways, meeting points, fire drills, etc.	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Fire and explosion (cont'd)	Signs -- storage sections, fire fighting devices, emergency exits, escape lighting, plans by floor, etc.	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report these kinds of safety hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for *Safety and mechanical -- Electricity, fire and explosions* is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



### 3. Physical hazards - lighting

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
General lighting of the work areas and task	Neither too much nor too little: able to see the details of work, but not too bright	😊 (G) 😐 (Y) 😞 (R)						
Daylight and view outside	Acceptable, through clean windows?	😊 (G) 😐 (Y) 😞 (R)						
Shade on the work	Is there any?	😊 (G) 😐 (Y) 😞 (R)						
Reflections or glare	On tables, metal or glass surfaces, plastic sheets, windows, screens?	😊 (G) 😐 (Y) 😞 (R)						
	Especially by the sun: do windows have curtains, blinds or screens?	😊 (G) 😐 (Y) 😞 (R)						
	No direct sight of the light sources?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (Y), what's the cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Lighting uniformity	In the work areas and gangways (staircases, etc.)?	😊 (G) 😞 (Y) 😞 (R)						
Light quality and colour	Appropriate for the task, including colour rendering/appearance?	😊 (G) 😞 (Y) 😞 (R)						
Light fixtures	Cleaned regularly?	😊 (G) 😞 (Y) 😞 (R)						
	Defective bulbs are quickly replaced?	😊 (G) 😞 (Y) 😞 (R)						
Work at computer monitors	The worker does not face or have their back to a window or a significant light source	😊 (G) 😞 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report lighting hazards?	😊 (G) 😞 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😞 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Other prevention measures - Level 3 : Personal protective equipment (PPE)	Is there appropriate PPE where required for hazardous types of light?	😊 (G) 😐 (Y) 😞 (R)						
	Does the PPPE fit?	😊 (G) 😐 (Y) 😞 (R)						
	Is it stored properly? Replaced when necessary?	😊 (G) 😐 (Y) 😞 (R)						



Therefore, the **overall situation** for *Physical hazards* -- *lighting* is:

**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



### 3. Physical hazards - noise

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
In all work areas	Do people a meter apart have to raise their voices to speak? (If so, it's more than 85 decibels)	😊 (G) 😐 (Y) 😞 (R)						
	Do sounds/noise interfere with talking, listening or concentrating?	😊 (G) 😐 (Y) 😞 (R)						
Work stations	As far as possible from noise sources?	😊 (G) 😐 (Y) 😞 (R)						
Means of communication	Does it account for ambient noise?	😊 (G) 😐 (Y) 😞 (R)						
Holes, openings	Is there noise from other workplaces, around doors, etc.?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report noise hazards?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Reporting hazards (cont'd)	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						
Other prevention measures - Level 3 : Personal protective equipment (PPE)	Is there appropriate PPE where required for hazardous noise levels?	😊 (G) 😐 (Y) 😞 (R)						
	Does the PPPE fit?	😊 (G) 😐 (Y) 😞 (R)						
	Is it stored properly? Replaced when necessary?	😊 (G) 😐 (Y) 😞 (R)						
	Are workers trained about how to use the PPE?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for *Physical hazards* -- *noise* is:

**Our questions are:**



\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



### 3. Physical hazards - temperature and humidity

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Temperature	Not too warm or too cold, no significant variations?	😊 (G) 😐 (Y) 😞 (R)						
Humidity	Not too dry or too humid?	😊 (G) 😐 (Y) 😞 (R)						
Drafts	By the windows and the doors? Elsewhere? (shouldn't be any)	😊 (G) 😐 (Y) 😞 (R)						
Sources of cold, heat and humidity	Are sources from water, vapours, machines, sun, etc. removed?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report temperature and/or humidity hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						
Work clothing	Comfortable for the temperature and/or humidity?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Other prevention measures - Level 3 : Protective clothing	Provided if necessary (e.g. for warmth or dryness, against radiating heat)?	😊 (G) 😐 (Y) 😞 (R)						
	Good quality, appropriate and comfortable?	😊 (G) 😐 (Y) 😞 (R)						
Drinks	Available where it is hot or cold?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for *Physical hazards* -- *temperature and humidity* is:



Our questions are:

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



### 3. Physical hazards - vibration

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Vehicles</b> (trucks, forklifts, etc.)	Appropriate for the job?	😊 (G) 😐 (Y) 😞 (R)						
	Floor, aisles, tires, seats and suspension in good condition?	😊 (G) 😐 (Y) 😞 (R)						
<b>Machines</b> (e.g. drills, grinders)	Appropriate for the work to be performed?	😊 (G) 😐 (Y) 😞 (R)						
	Not too heavy?	😊 (G) 😐 (Y) 😞 (R)						
	Not vibrating?	😊 (G) 😐 (Y) 😞 (R)						
	In good condition and regularly maintained?	😊 (G) 😐 (Y) 😞 (R)						
<b>Tools and their parts</b>	Adequate?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Tools and their parts (cont'd)	In good condition?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report temperature and/or humidity hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						
Training	Vehicles, machines and tools used properly?	😊 (G) 😐 (Y) 😞 (R)						
	Good work postures, forces, work with 1 or 2 hands, etc.?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for **Physical hazards --vibration** is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 4. Chemical and mineral hazards

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Chemical or mineral hazards and products	Inventory of products and chemicals available and up to date?	😊 (G) 😐 (Y) 😞 (R)						
	Documentation about the hazards available, including material safety data sheets (MSDSs)?	😊 (G) 😐 (Y) 😞 (R)						
Procedures	About using chemicals and minerals: clear and followed, for mixtures, etc.?	😊 (G) 😐 (Y) 😞 (R)						
	In case of incidents (e.g. spills, splashes), are they known and followed?	😊 (G) 😐 (Y) 😞 (R)						
Labels	Appropriate and well-labelled containers?	😊 (G) 😐 (Y) 😞 (R)						
Storage	By toxic, corrosive, flammable, etc. products?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Storage (cont'd)	Stored in appropriate, isolated and labelled spaces?	😊 (G) 😐 (Y) 😞 (R)						
Wastes	Removed in a controlled way using proper procedures?	😊 (G) 😐 (Y) 😞 (R)						
	In appropriate containers?	😊 (G) 😐 (Y) 😞 (R)						
Signs	Appropriate and followed (no smoking, restricted areas, etc.)	😊 (G) 😐 (Y) 😞 (R)						
Training	About hazards and procedures? (WHMIS requirements met?)	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report chemical and mineral hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						
Collective pre-vention measures (Level 1)	Toxics use reduction and "green" substitution policies?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (Y) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Collective prevention measures - Level 2	Local exhaust ventilation where required (is it right at the source)?	😊 (G) 😞 (Y) 😡 (R)						
	Ventilation system properly checked and maintained?	😊 (G) 😞 (Y) 😡 (R)						
	Operators isolated from exposure, if need be?	😊 (G) 😞 (Y) 😡 (R)						
Other prevention measures - Level 3	Showers, hand and eye wash stations well located and in good condition?	😊 (G) 😞 (Y) 😡 (R)						
	Appropriate rules that are followed (e.g. no smoking, restricted areas, etc.)?	😊 (G) 😞 (Y) 😡 (R)						
	General ventilation with fresh air?	😊 (G) 😞 (Y) 😡 (R)						
	No one eats on the job?	😊 (G) 😞 (Y) 😡 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Other prevention measures - Level 3 : Personal protective equipment (PPE)	Gloves, masks, glasses, clothing, etc. available?	😊 (G) 😐 (Y) 😞 (R)						
	Appropriate for task, fit people?	😊 (G) 😐 (Y) 😞 (R)						
	Maintained, repaired and used properly?	😊 (G) 😐 (Y) 😞 (R)						
	Replaced when broken, not working, etc.?	😊 (G) 😐 (Y) 😞 (R)						
	Women (especially pregnant or nursing), young workers, those with allergies, with literacy and/or language needs, etc.?	😊 (G) 😐 (Y) 😞 (R)						
Attention to workers with special needs								

Therefore, the **overall situation** for *Chemical and mineral hazards* is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 5. Communicable/Biological hazards

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Communicable or biological hazards and products	Inventory of products and substances available and up to date?	😊 (G) 😐 (Y) 😞 (R)						
	Documentation about the hazards available, including material safety data sheets?	😊 (G) 😐 (Y) 😞 (R)						
Procedures	About using biological substances: are the procedures clear and followed, apply to mixtures, etc.?	😊 (G) 😐 (Y) 😞 (R)						
	In case of incidents (e.g. spills, splashes), are procedures known and followed?	😊 (G) 😐 (Y) 😞 (R)						
Labels	Appropriate and well-labelled containers?	😊 (G) 😐 (Y) 😞 (R)						
Storage	By category?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Storage (cont'd)	Stored in appropriate, isolated and labelled spaces?	😊 (G) 😐 (Y) 😞 (R)						
Wastes	Removed in a controlled way using proper procedures?	😊 (G) 😐 (Y) 😞 (R)						
	In appropriate containers?	😊 (G) 😐 (Y) 😞 (R)						
Signs	Appropriate and followed (no smoking, restricted areas, etc.)	😊 (G) 😐 (Y) 😞 (R)						
Training	About the procedures and hazards (WHMIS requirements met)?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report communicable or biological hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						
Collective pre-vention measures (Level 1)	No fungi or moulds	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Collective prevention measures (Level 1) (cont'd)	Toxics use reduction and "green" substitution policies?	😊 (G) 😐 (Y) 😞 (R)						
	Local exhaust ventilation where required (at source)?	😊 (G) 😐 (Y) 😞 (R)						
Collective prevention measures (Level 2)	Ventilation system properly checked and maintained?	😊 (G) 😐 (Y) 😞 (R)						
	Operators isolated from exposure, if need be?	😊 (G) 😐 (Y) 😞 (R)						
Other prevention measures - Level 3	Showers, hand and eye wash stations well located and in good condition?	😊 (G) 😐 (Y) 😞 (R)						
	Appropriate rules that are followed (e.g. no smoking, restricted areas, etc.)?	😊 (G) 😐 (Y) 😞 (R)						
	General ventilation with fresh air?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Other prevention measures - Level 3 (cont'd)	No one eats on the job?	😊 (G) 😐 (Y) 😞 (R)						
	Vaccinations in order, as required	😊 (G) 😐 (Y) 😞 (R)						
	Gloves, masks, glasses, clothing, etc. available	😊 (G) 😐 (Y) 😞 (R)						
Other prevention measures - Level 3: Personal protective equipment (PPE)	Appropriate for task?	😊 (G) 😐 (Y) 😞 (R)						
	Maintained, repaired?	😊 (G) 😐 (Y) 😞 (R)						
	Fit people? Used properly?	😊 (G) 😐 (Y) 😞 (R)						
Attention to special needs workers	Women (esp. pregnant or nursing), young workers, those with allergies, for literacy and/or language needs, etc.	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Therefore, the **overall situation** for *Communicable/Biological hazards* is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 6. Ergonomic design -- forms, controls and signals

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Work orders	Forms, lists, etc. are legible?	😊 (G) 😐 (Y) 😞 (R)						
Signals and controls (e.g. buttons, levers, pedals)	In good condition?	😊 (G) 😐 (Y) 😞 (R)						
Position	Near and facing the worker, neither too high, nor too low?	😊 (G) 😐 (Y) 😞 (R)						
	Well located on the control panel (e.g. number and colours of buttons, lights)	😊 (G) 😐 (Y) 😞 (R)						
	Emergency stop system (e.g. buttons, cables) available and easily accessible	😊 (G) 😐 (Y) 😞 (R)						
Characteristics	Expected shapes, colours, directions (e.g. needles move from left to right, green = go or okay, red = stop)	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Characteristics</b> (cont'd)	Alarms can be heard or lights bright enough?	😊 (G) 😐 (Y) 😞 (R)						
	Size, form and dimensions (e.g. buttons, indicators) are appropriate for people using them?	😊 (G) 😐 (Y) 😞 (R)						
<b>Force</b>	No excessive pressure with the fingers or feet?	😊 (G) 😐 (Y) 😞 (R)						
<b>Reporting hazards</b>	Is there a procedure to report these ergonomic hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation for Ergonomic design** -- *forms, controls and signals* is:

Our questions are:



\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 6. Ergonomic design -- work materials, tools, machines

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
For all work materials, tools and machines	Inventory available?	😊 (G) 😐 (Y) 😞 (R)						
	Appropriate for each task (e.g. dangerous machines are isolated for safety)	😊 (G) 😐 (Y) 😞 (R)						
Maintenance	Are tools and machines in good condition?	😊 (G) 😐 (Y) 😞 (R)						
	Regular maintenance, thorough annual checks?	😊 (G) 😐 (Y) 😞 (R)						
	Put away in case of problems (e.g. damaged cable, cracks, tears, general wear)?	😊 (G) 😐 (Y) 😞 (R)						
	Cleaned up and put away as needed, in places which are easily accessible to the work stations or areas?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Dimensions and forms (shapes)	Easy to grab safely?	😊 (G) 😐 (Y) 😞 (R)						
	Easy to use without tiring the hands or arms?	😊 (G) 😐 (Y) 😞 (R)						
	Are handles adapted to the job (e.g. bent), not too long or too short, not too thick or too thin, not too rough or too smooth?	😊 (G) 😐 (Y) 😞 (R)						
Adapted to the worker?	No parts that could cause injury?	😊 (G) 😐 (Y) 😞 (R)						
	Not too heavy?	😊 (G) 😐 (Y) 😞 (R)						
	No vibration?	😊 (G) 😐 (Y) 😞 (R)						
	Adapted for left-handed people?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Training	About the safest, healthiest and most efficient use of the materials, tools and machines?	😊 (G) 😐 (Y) 😞 (R)						
	Is there a procedure to report these ergonomic hazards?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						



Therefore, the **overall situation** for *Ergonomic design* -- *work materials, tools, machines* is:

**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)

























## 6. Ergonomic design -- repetition and postures

Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Postures	Repetition of the same gestures	Not continuously?	😊 (G) 😐 (Y) 😞 (R)					
	Straight back, not bent?	😊 (G) 😐 (Y) 😞 (R)						
	Straight head (no flexion, extension nor rotation, i.e. neck is not twisted or bent)?	😊 (G) 😐 (Y) 😞 (R)						
	Shoulders relaxed, not raised?	😊 (G) 😐 (Y) 😞 (R)						
	Arms close to the body, not spread out or raised above shoulder level?	😊 (G) 😐 (Y) 😞 (R)						
	Hands in a normal position, wrists not bent?	😊 (G) 😐 (Y) 😞 (R)						
	Feet on the ground or a foot rest?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not  (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Postures</b> (cont'd)	No kneeling or crouching without support or a cushion?	 (G)  (Y)  (R)						
	No repeated or prolonged uncomfortable positions?	 (G)  (Y)  (R)						
<b>Working heights</b> (e.g. of tables, desks, shelves, machinery, tools)	Make the work posture described above possible?	 (G)  (Y)  (R)						
	Appropriate seats that are stable and comfortable?	 (G)  (Y)  (R)						
<b>Seated or seated/standing posture</b> (preferred)	Support for the forearms on the desk or with armrests that can be adjusted for height?	 (G)  (Y)  (R)						
	Room for knees and legs under the desk or work surface?	 (G)  (Y)  (R)						
<b>Standing posture</b> (upright posture)	Nothing gets in the way of movements?	 (G)  (Y)  (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Standing posture (upright posture) (cont'd)	Comfortable support for the thighs and/or the arms, at the appropriate height?	😊 (G) 😐 (Y) 😞 (R)						
	Step ladder available for working at heights?	😊 (G) 😐 (Y) 😞 (R)						
Assistance	Step ladder is stable, solid, and easy to use safely (to avoid falls)?	😊 (G) 😐 (Y) 😞 (R)						
	Is there a procedure to report these ergonomic hazards?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for *Ergonomic design* -- *repetition and posture* is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 6. Ergonomic design -- force (including materials handling)

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Gestures (movements) and forces	Not abrupt?	😊 (G) 😐 (Y) 😞 (R)						
	Not too hard or forceful?	😊 (G) 😐 (Y) 😞 (R)						
	No fast or repeated movements?	😊 (G) 😐 (Y) 😞 (R)						
Hand forces	Moderate, without bending or twisting?	😊 (G) 😐 (Y) 😞 (R)						
	Not using the hand as a hammer?	😊 (G) 😐 (Y) 😞 (R)						
Loads	Light?	😊 (G) 😐 (Y) 😞 (R)						
	Balanced?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Loads (cont'd)	Comfortable to grab (pick up) (e.g. good handles, no cutting edges, not slippery, not too hot or too cold)?	😊 (G) 😐 (Y) 😞 (R)						
	At a good height (i.e. picking up and putting down at waist level)	😊 (G) 😐 (Y) 😞 (R)						
	Back is not twisted or bent (depending on the situation)?	😊 (G) 😐 (Y) 😞 (R)						
	Carried only for a short distance?	😊 (G) 😐 (Y) 😞 (R)						
	Appropriate for the task -- for heavy or unstable loads, hoists, trucks, etc. (pushed rather than pulled)?	😊 (G) 😐 (Y) 😞 (R)						
Mechanical devices	Appropriate for the task -- for frequent movement: conveyor belts, etc.?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Mechanical devices (cont'd)	High standard?	😊 (G) 😐 (Y) 😞 (R)						
	Well-located?	😊 (G) 😐 (Y) 😞 (R)						
	Quick and easy to use?	😊 (G) 😐 (Y) 😞 (R)						
Training	About how to handle loads?	😊 (G) 😐 (Y) 😞 (R)						
	Appropriate to the work situation?	😊 (G) 😐 (Y) 😞 (R)						
Tiredness at the end of the day	Acceptable amount?	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report these ergonomic hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Therefore, the **overall situation** for *Ergonomic design* -- *force (including materials handling)* is:  
**Our questions are:**



\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)










## 7. Work organization/stressors -- Work procedures, etc.

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Work organization	Clear and appropriate?	😊 (G) 😐 (Y) 😞 (R)						
	Lets people work without facing health or safety hazards?	😊 (G) 😐 (Y) 😞 (R)						
	Work planning appropriate in time and space?	😊 (G) 😐 (Y) 😞 (R)						
Work procedures	Work procedures clear and applied?	😊 (G) 😐 (Y) 😞 (R)						
Work circumstances (places, tools, materials, stock, unforeseen events, external requests, time, etc.)	Allow applications of the usual work procedures?	😊 (G) 😐 (Y) 😞 (R)						
	Quality work is possible?	😊 (G) 😐 (Y) 😞 (R)						
Supplies/stock	Inventory and stock sizes are not too large or too small?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...   	If not  (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Independence between neighbouring work stations or areas	Not too much or too little?	  						
Interactions and communications (between workers)	Easy and free, even if at different work stations?	  						
Means of communication	Appropriate and pleasant? (if voice, computer, etc.)	  						
All work areas or vehicles	Is anyone isolated or working alone?	  						
Reporting hazards	Is there a procedure to report these stressors?	  						
	Is the procedure easy to use and followed?	  						

Therefore, the **overall situation** for **Work organization/stressors** -- *work procedures, etc.* is:

Our questions are:



\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 7. Work organization/stressors -- Autonomy and responsibilities

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Orders and expectations	No contradictions?	😊 (G) 😐 (Y) 😞 (R)						
Range of initiative	Everyone can adapt the way s/he works without disturbing others?	😊 (G) 😐 (Y) 😞 (R)						
Autonomy	Everyone can leave his/her workstation for short breaks (e.g. washroom) without disturbing production or work activities?	😊 (G) 😐 (Y) 😞 (R)						
Freedom of contact	Everyone has the contact needed with peripheral co-workers (e.g. maintenance, purchasing, quality) or with other departments?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Degree of attention or concentration needed	Average according to the seriousness of the actions/ tasks required?	😊 (G) 😐 (Y) 😞 (R)						
	Average, according to the unpredictable nature of the tasks?	😊 (G) 😐 (Y) 😞 (R)						
Decisions	Limited number of possible choices?	😊 (G) 😐 (Y) 😞 (R)						
	Information available?	😊 (G) 😐 (Y) 😞 (R)						
	Decisions not too difficult to make?	😊 (G) 😐 (Y) 😞 (R)						
	Required reaction speed is normal?	😊 (G) 😐 (Y) 😞 (R)						
Responsibilities	Not too many or too few?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Responsibilities</b> (cont'd)	Everyone knows their responsibilities and carries them out?	(G) (Y) (R)						
<b>Errors</b>	Everyone can correct his or her errors themselves?	(G) (Y) (R)						
<b>Reporting hazards</b>	Is there a procedure to report these stressors?	(G) (Y) (R)						
	Is the procedure easy to use and followed?	(G) (Y) (R)						



Therefore, the **overall situation** for **Work organization/stressors** -- **autonomy and responsibilities** is:

**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 7. Work organization/stressors -- work content

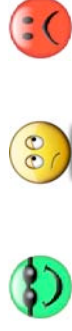
Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Work interest	Interesting and diversified (including preparation tasks, quality, maintenance)?	😊 (G) 😐 (Y) 😞 (R)						
Quality	Everyone's work corresponds to their function and work capacities?	😊 (G) 😐 (Y) 😞 (R)						
Information and training	For everyone?	😊 (G) 😐 (Y) 😞 (R)						
	About procedures, hazards and prevention methods?	😊 (G) 😐 (Y) 😞 (R)						
Emotional load	When starting a job or new task, and regularly after (e.g. refreshers)?	😊 (G) 😐 (Y) 😞 (R)						
	Not too heavy?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Reporting hazards</b>	Is there a procedure to report these stressors?	😊 (G) 😐 (Y) 😞 (R)						
<b>Reporting hazards</b> (cont'd)	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for **Work organization/stressors** -- **work content** is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 7. Work organization/stressors -- time constraints

Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Work schedules and work program</b>	Received sufficiently in advance?	😊 (G) 😐 (Y) 😞 (R)						
	Allow everyone to organize their working day as s/he wants?	😊 (G) 😐 (Y) 😞 (R)						
	Flexible within an acceptable range?	😊 (G) 😐 (Y) 😞 (R)						
	Not excessive?	😊 (G) 😐 (Y) 😞 (R)						
<b>Work rate</b>	Can catch up quickly if need be (e.g. if production delays, interruptions)?	😊 (G) 😐 (Y) 😞 (R)						
	Work schedules and holidays?	😊 (G) 😐 (Y) 😞 (R)						
<b>Group autonomy</b> (the group organizes itself about these things)								

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (R), what's the cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Group autonomy</b> (the group organizes itself about these things) (cont'd)	Work distribution, breaks, rotations?	😊 (G) 😐 (Y) 😞 (R)						
	Production or work delays?	😊 (G) 😐 (Y) 😞 (R)						
	Overtime?	😊 (G) 😐 (Y) 😞 (R)						
	Peak and off periods?	😊 (G) 😐 (Y) 😞 (R)						
	Additional and last-minute work?	😊 (G) 😐 (Y) 😞 (R)						
<b>Work interruptions</b>	Few unexpected events?	😊 (G) 😐 (Y) 😞 (R)						
<b>Breaks/rest periods</b>	Frequent and short?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Breaks/rest periods (cont'd)	Organized to consider work-load, difficult postures, repetitive movements and mental fatigue?	😊 (G) 😊 (Y) 😊 (R)						
Reporting hazards	Is there a procedure to report these stressors?	😊 (G) 😊 (Y) 😊 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😊 (Y) 😊 (R)						



Therefore, the **overall situation** for **Work organization/stressors** -- **time constraints**. is:

**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 7. Work organization/stressors -- Relationships between workers and with management

Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Communications during work	Always possible, whether related to work or not?	😊 (G) 😐 (Y) 😞 (R)						
	The organization of the work and space lets people see one another?	😊 (G) 😐 (Y) 😞 (R)						
Allocation of work	Impartial within the group?	😊 (G) 😐 (Y) 😞 (R)						
	Everyone knows their work and role?	😊 (G) 😐 (Y) 😞 (R)						
Mutual assistance between workers	Is there for work problems?	😊 (G) 😐 (Y) 😞 (R)						
There is regular consultation about the work	Among the workers, departments and management?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (Y) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
There is regular consultation about the work (cont'd)	To solve the problems	😊 (G) 😞 (Y) 😞 (R)						
	To define, plan and allocate work?	😊 (G) 😞 (Y) 😞 (R)						
The management	Is known, appreciated and respected?	😊 (G) 😞 (Y) 😞 (R)						
	There is harmony, confidence, co-operation and good social climate?	😊 (G) 😞 (Y) 😞 (R)						
	No strained relations, no conflicts of interest?	😊 (G) 😞 (Y) 😞 (R)						
	Support in case of work or personal difficulties?	😊 (G) 😞 (Y) 😞 (R)						
Relations with the management	Responsibilities are delegated?	😊 (G) 😞 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem 😞 (Y) or 😡 (R) cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Workers' suggestions and feedback	Encouraged, heard and taken into account?	😊 (G) 😞 (Y) 😡 (R)						
	Problems are reported?	😊 (G) 😞 (Y) 😡 (R)						
Evaluations	Everyone knows how their work is evaluated?	😊 (G) 😞 (Y) 😡 (R)						
	Knows if and how they are monitored?	😊 (G) 😞 (Y) 😡 (R)						
	Everyone knows the evaluation criteria and consequences	😊 (G) 😞 (Y) 😡 (R)						
	Each person is told about the results of their evaluation?	😊 (G) 😞 (Y) 😡 (R)						
	Everyone's work is properly appreciated?	😊 (G) 😞 (Y) 😡 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Reporting hazards	Is there a procedure to report these stressors?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

Therefore, the **overall situation** for *Work organization/stressors* --



*Relationships between workers and with the management* is:

**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



## 7. Work organization/stressors -- Social and general environment

Topic	Consider	The situation is ...	If not 😊 (G), what's the <u>problem</u> cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
<b>Promotions</b> (are possible)	According to clear and unbiased criteria, known and approved by all (and/or in the union contract)?	😊 (G) 😐 (Y) 😞 (R)						
	On the basis of evaluations and according to performance and/or union contract?	😊 (G) 😐 (Y) 😞 (R)						
<b>Discrimination</b>	None by age, sex, heritage, sexual orientation, union membership, personal characteristics, etc.	😊 (G) 😐 (Y) 😞 (R)						
	None used in hiring or promotions?	😊 (G) 😐 (Y) 😞 (R)						
<b>Employment</b>	Stable?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Employment (cont'd)	Confidence in the organization's integrity and future (i.e. job security)?	😊 (G) 😐 (Y) 😞 (R)						
	Return-to-work and use of replace-ments and temporary workers are well managed?	😊 (G) 😐 (Y) 😞 (R)						
Salary or wages	Corresponds to required capacities the work done and/or the union contract?	😊 (G) 😐 (Y) 😞 (R)						
Workplace safety and health committee or representative	All members able to do their committee duties?	😊 (G) 😐 (Y) 😞 (R)						
	Is effective and respected?	😊 (G) 😐 (Y) 😞 (R)						
Stress and strain (toxic stress) problems	Is there dissatis-faction, stress, strain, harassment, etc.?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)





Topic	Consider	The situation is ...	If not 😊 (G), what's the problem cost? *	What can be done to improve the situation right away?	By whom?	By when?	What does the quick solution cost? *	Need to check out more?
Stress and strain (toxic stress) problems (cont'd)	Support policies and procedures exist and are used?	😊 (G) 😐 (Y) 😞 (R)						
	Preventive action(s) are taken when problems or issues come up?	😊 (G) 😐 (Y) 😞 (R)						
Working conditions in general	Allow personal and professional development?	😊 (G) 😐 (Y) 😞 (R)						
	Compatible with outside life (e.g. family and other responsibilities)	😊 (G) 😐 (Y) 😞 (R)						
	All workers are satisfied, on the whole	😊 (G) 😐 (Y) 😞 (R)						
Reporting hazards	Is there a procedure to report these stressors?	😊 (G) 😐 (Y) 😞 (R)						
	Is the procedure easy to use and followed?	😊 (G) 😐 (Y) 😞 (R)						

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



Therefore, the **overall situation** for **Work organization/stressors** -- **Social and general environment** is:



**Our questions are:**

\* Costs, in terms of time, effort and money: nothing (0), a little (\$), some (\$\$), or a lot (\$\$\$)



# Inspections - what the HEC\* is going on?

Choose the hazard category for which you are using this sheet; write that on the line in the second column. Use page one to list the hazards found. Use the second page to jot down ideas about priorities, possible solutions and, if it's a quick fix, who's to do what by when.

Date: \_\_\_\_\_ Work area: \_\_\_\_\_ Done by: \_\_\_\_\_

Item #	What are the Hazards?	What are the Exposures?			What are the Consequences?				
		Is exposure possible?	What prevention/control measures are there supposed to be?	How well are they working?	Who can be exposed?	How often?	How long?	How much?	What is the possible effect?



\*HEC = Hazard? Exposure? Consequences?

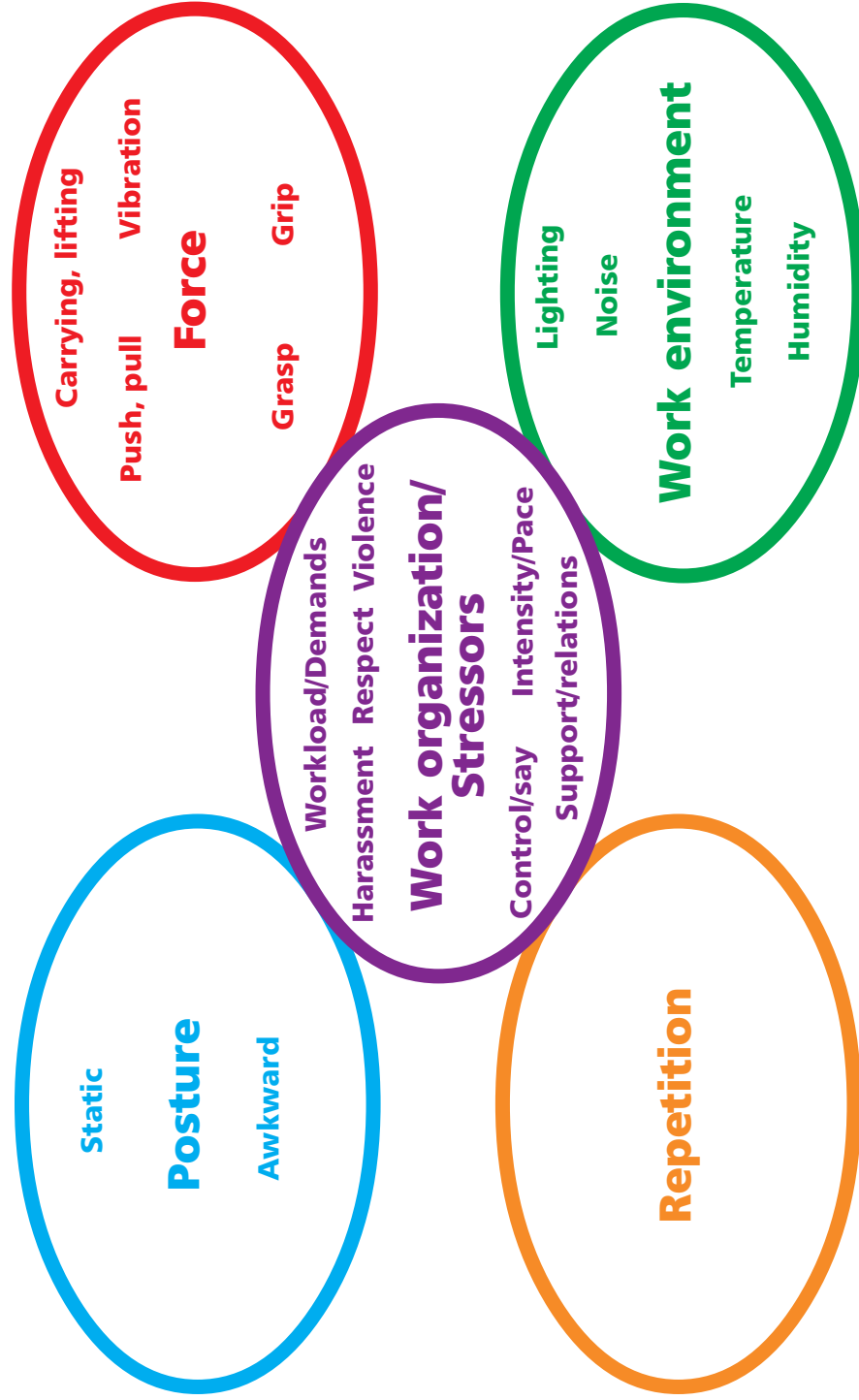


Item #	Problem/hazard	Priority	Action required		Who's involved?	Dates for change	Done & checked by
			Short -term	Long -term			





## ***Ergonomic hazards - the problems behind our aches and pains***



**SH.6**



# Ergonomic hazards lead to musculoskeletal injuries (MSIs)

Ergonomics can be defined as the “law of work”. The approach is to **fit the job to the worker**, *not the other way around*. It’s about how much people are expected to do with their bodies and brains. As a Canadian ergonomist says, workers are expected to do things on the job that robots don’t do.

When an ergonomic approach is not used to design work activities, tools and/or equipment, you may be exposed to (your body comes in contact with or must deal with) a variety of problems. The odds are that you will end up with “aches and pains”, “sprains and sprains”, musculoskeletal injuries (MSIs) -- whatever you call it, it’s a lot of pain.

When wear and tear reaches a certain point, the result is some kind of disability. It can be short-term but many take a long time to heal, partly because the hazard is not fixed. Sometimes, the damage is permanent.

Whether it lasts a long time or a short time, an MSI affects life on and off the job. Everyday activities can be difficult or impossible -- opening a jar, chopping an onion, driving a car, lifting a child, turning a door knob, getting dressed, and holding a toothbrush.

These injuries, and their often-unseen effects, can be prevented -- by dealing with the hazard(s). There are different types of ergonomic hazards; here are some definitions and examples:

## Force:

The amount of pressure a person uses for a task. It includes pushing, pulling, lifting and even using a computer keyboard. Force puts a strain on the body and can cause damage to body parts or tissues.

Contact stress is one type of force. This may occur if a tool handle or edge digs into the soft tissue of the palm of the hand, the hand is used as a hammer, or someone works on their knees. The contact concentrates force on a small area, putting pressure on those tissues. It may cause injuries.

Vibration is another kind of force. It is found in vibrating tools and equipment. When vibration affects the hands and arms, it can

damage the nerves and/or blood vessels so that a person’s hands/fingertips go numb and cannot be used easily.

Examples of force include:

- ☐ lifting heavy boxes
- ☐ the grasp or grip used to hold something (avoid pinch grips)
- ☐ computer keyboard work
- ☐ jack hammer (vibration)
- ☐ resting the palm of hand or wrist on a tool handle or edge of something

## Posture:

Awkward posture is working in positions that feel uncomfortable. It could be working with your arms over your head,

twisting, bending or reaching, or working with a bent back, bent wrist, etc. This can stretch a person’s physical limits, compress nerves and irritate tendons.

Static posture involves working with your body or (part of) a limb in one position for a long time. This includes constant standing or sitting or holding your arm, neck or shoulder in one position. Doing this can restrict blood flow and damage muscles.

Examples of posture hazards include:

- ☐ working with arms above your head (awkward; also static if it lasts)
- ☐ working with bent joints (awkward; also static if it lasts)



- ☐ standing or kneeling for a while (static)
- ☐ working with your neck cricked to see the computer screen (awkward and static)

### **Repetition:**

This means doing the same motion over and over, without adequate rest -- even mini- breaks. Repetition overuses the same muscles, tendons, and other soft tissues. It can irritate tendons and increase pressure on nerves and may cause permanent damage.

Examples of repetition include:

- ☐ traditional assembly line work
- ☐ data entry
- ☐ piecework sewing

### **Work environment:**

These hazards are part of the general work environment; as energy sources, they also are physical hazards such as humidity, temperature, noise and light.

People working in cold temperatures can get stiff and sore; they may drop things. Noise causes deafness and interferes with our ability to hear and understand people's words and other sounds. Poor lighting can lead to trips or falls and poor postures as we try to read things (e.g. with glare).

Examples of ergonomic work environment hazards include:

- ☐ working with cold objects
- ☐ outdoors work during the summer
- ☐ working indoors with low or high humidity
- ☐ work with or near loud machinery or equipment
- ☐ poor lighting (too much or little)

### **Stressors/work organisation:**

These hazards "stress us out". But it is not easy to see these invisible aspects of work.

Stressors include:

- ☐ how much say or control we have about our work;
- ☐ how people and technology work together to produce a product or provide a service;
- ☐ too much or too little workload or demands on our body and mind; and
- ☐ the amount of respect and support we (don't) get on the job.

Job-related stressors are the result of choices those in authority make. They cover "technical aspects" of work -- production methods, technology -- and the "people aspects" -- how people will use the technology, how our skills and knowledge are used (or not), social interactions, etc.

Stressors or work organization hazards that are important in ergonomic issues include:

- ☐ pace of work
- ☐ workload
- ☐ staffing levels
- ☐ hours of work
- ☐ supervision style
- ☐ production quotas
- ☐ deadlines
- ☐ number and length of rest breaks
- ☐ flexibility allowed for family and other responsibilities
- ☐ violence (including harassment and discrimination)

Work organization hazards/stressors are at the center of the ergonomic hazards chart. That's because they are often the "why?" behind many other hazards. Studies also tell us that "stress" sets us up for MSIs in the neck, shoulders and lower back.

For example, if the speed of a job is increased, workers may have more repetitive motions, perhaps in more static postures. Deadlines or production quotas can cause muscles to tense up, adding to "wear and tear" on soft tissues and leading to MSIs.

To figure out how stressors and other ergonomic hazards are connected, try asking:

1. *But why? (up to five times);* or
2. *What makes the symptoms worse?*







## Ergonomic hazards - examples of musculoskeletal injuries (MSIs)

Body part	MSI	Description	Symptoms	Activity/symptom link
<b>Arms</b>	Epicondylitis	<i>"tennis elbow"</i> affects the tendons on the lateral/outside of the elbow; <i>"golfer's elbow"</i> affects those on the medial/in side	pain, weakness, swelling, burning sensation or dull ache from elbow sometimes to wrist, when picking up things with wrist bent	repeated bending or straightening of the elbow from its neutral position (a right angle); twisting wrist and forearm <i>lateral</i> : hammering, lifting with out-stretched fingers, bending wrist against force <i>medial</i> : rotating forearm and bending wrist at the same time
<b>Back</b>	Back pain	pain anywhere in the back; often in the lower back, below the waist	tenderness, stiffness or fatigue which may be linked to disc, vertebrae, ligament, muscle, spinal cord or nerve problems	lifting, carrying, pushing, pulling, sitting or standing all day, walking on hard surfaces, etc.
<b>Feet</b>	Achilles tendonitis	inflammation of the tendon connecting the heel bone to calf muscles in the back of the leg	pain at the heel and lower back leg, difficulty walking, ankle's not flexible	inflexible shoes, going from high heels to flat shoes/ runners
	Ganglion	a mass forms when tissues around certain joints gets inflamed and swells with fluid	hard "bump" under the skin, usually on top of foot	tight footwear
<b>Knees</b>	Bursitis	<i>"housemaid's knee"</i> , <i>"carpetlayer's knee"</i>	pain and swelling	working on or with knee often using force
<b>Neck and shoulders</b>	Biceps tendonitis	pain where the biceps tendon meets the shoulder joint	pain when raising arms, lifting, pulling	slumped posture, moving arm across desk that's too high/far away
	Bursitis	bursa inflamed	pain, perhaps restricted movement	work with arms above shoulders
	Rotator cuff tendonitis	inflammation of one or more shoulder tendons	pain, weakness, swelling, burning sensation or dull ache when reaching	arms raised away from the sides, usually also rotating the arm from the shoulder



Body part	MSI	Description	Symptoms	Activity/symptom link
<b>Neck and shoulders</b> (cont'd)	Tension neck syndrome	involves neck muscles	pain in neck and shoulder area, guarding muscles, limited range of neck motion	stress, computer work, assembly line work, holding neck in one (static) position
	Thoracic outlet syndrome	the neck and shoulder nerves and blood vessels are compressed/squashed	pain, numbness, swelling of the hands, weakness from forearm down, cold	prolonged shoulder flexion, overhead work, carrying heavy loads on the shoulder or with arms at the side
<b>Wrist and hands</b>	Carpal tunnel syndrome	the median nerve going through the wrist bones is squeezed by inflamed tendons and then by inflamed tendon sheaths/covers	tingling, numbness (thumb and first 2 or 3 fingers), burning, pain (that may wake you up), wasting of muscles at base of thumb, dry palm, can't grasp	bending and straightening wrist repeatedly and rapidly, especially flexion – moving the wrist (up) towards the body – combined with force
	DeQuervain's disease/syndrome	tendon and its sheath at base of thumb are inflamed	pain, weakness at base of the thumb, side of the wrist and sometimes index finger, especially when doing something like turning a beer cap or wringing things	using pinch grip - thumb and forefinger - especially with force (e.g. grabbing file folders)
	Dupuytren's contracture	ring (and then middle and little) fingers pulled towards palm	thickened palm or nodule on finger tendon	often inherited but aggravated by typing and other repeated small movements of the palm of the hand
	Extensor tendonitis	tendons of muscles that straighten/bend fingers affected	pain on top of hand near the wrist	holding hands in "stop traffic" position
	Ganglion	see above	aches and weakness; bump under the skin	precise, repetitive hand movements
	Trigger finger	tendonitis/tenosynovitis of fingers, also called flexor tendonitis	pain, fingers locked in bent position	pinch grip, pulling tool trigger repeatedly, especially with bent wrist
	Vibration white hand/Raynaud's/"white finger"	hand and finger blood vessels are constricted (made smaller)	fingers turn white and numb, can't hold things, do up zippers	vibration, aggravated by smoking and some drugs that constrict blood vessels



# Ergonomic hazards - some myths & realities

## Computer work stations: *conventional versus current wisdom*

There are a lot of myths out there about how to set up computer work stations. The conventional and current wisdom about this topic is explained on a website that has other information about office ergonomics (<http://www.office-ergo.com>). The text in this document comes from that site, except where there are notes in brackets. It's re-formatted to be more user-friendly.

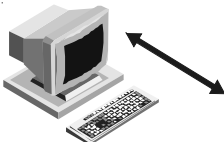
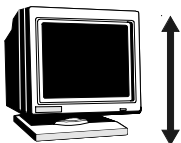
Most of us have some misinformation about office setup and posture. Much of the misinformation is quite old, but it persists because:

- We've heard it all our lives,
- Everybody we know seems to think the same thing,
- It sort of makes mechanical sense (but not biological sense!),
- We actually heard or saw it RECENTLY, perhaps in a sales presentation for some kind of ergo gizmo.




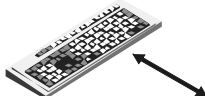
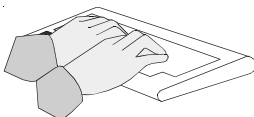
Unfortunately, not all writers, trainers, product designers, or even physicians can keep up with all the scientific developments.



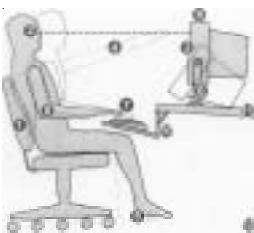

Here are examples of conventional ergonomic wisdom that are being disproved. Happily, most involve a RELAXING of old strict rules.

Current ergonomics encourages variety and movement rather than an exact posture. The ultimate standard is individual comfort (especially over time), tempered by individual preference, control, and choices.

Topic	Conventional wisdom	Current wisdom
<b>Monitor distance</b> 	It should be 18-24 inches away.	The best distance is "as far away as possible while still being able to read it clearly." Longer distances relax the eyes. The "conventional" 18-24 inch recommendation is unnecessarily close.
<b>Monitor height</b> 	The top of the screen should be about eye height. Put the monitor on top of the CPU.	This is fine for some people, wrong for many. The current recommendation is that eye height is the highest a monitor should be, not the best height. Many people find a low monitor is more comfortable for the eyes and neck. Put the monitor on the work surface, because of the height issue.



Topic	Conventional wisdom	Current wisdom
<b>Wrist angle</b>  	Keep them straight.	As far as we know, this is correct.
<b>Wrist rests</b>  	They can do no wrong and should always be used. You only need them for the keyboard but not the mouse.	This is wrong. They may cause harm if they're too thick, too thin, too hard, or have sharp edges (even sharp foam edges). They also can cause harm, we think, if they're constantly used - they probably should be used just during pauses. The carpal tunnel is under the wrist/palm and should not be subjected to much extra pressure. Mouse wrist rests are a good idea in many cases, but the same warnings apply.
<b>Keyboard design</b>  	"Ergonomic" keyboards are good for everybody.	Actually, some are good and some are probably bad. Some are right for some people and not for others. The only kind of ergonomic keyboard that many ergonomists can recommend in good conscience is one that can be configured to look exactly like a normal keyboard. These boards are hinged and can be changed to a new shape gradually. (Note: This means that ones like Microsoft's "ergonomic" wavy keyboard are not; the Goldtouch keyboard -- at left - is one true ergonomic on the market, according to studies by NIOSH.)
<b>Keyboard distance</b>  	It should be approximately at the front of the work surface.	This conventional wisdom is limiting. There's nothing wrong with pushing the keyboard back farther if the forearms are supported, provided the wrist is kept straight and the elbows aren't resting on anything hard or sharp. Usually, to make a pushed-back keyboard work, the work surface should be higher than elbow height. (see keyboard height, below)
<b>Keyboard height</b>	It should be at elbow height.	This is wrong, or at least too narrow. Variation from elbow height is fine, especially in the lower-than-elbow direction.
<b>Keyboard angle</b>  	It should be flat, or up on its little support legs.	This is wrong. The keyboard angle depends entirely on the forearm angle. It should be in the same plane as the forearm. Therefore, a low keyboard should be slanted back. Some people expect they won't be able to see the keys if the keyboard is sloped back, but this is usually not a problem.

Topic	Conventional wisdom	Current wisdom
<b>Mouse placement</b> 	Push it away	Closer is usually better - next to the keyboard is the goal. (NOTE: this is why keyboards without number pads are best. The space the pads occupy is really where the mouse should be. Consider a fixed mouse too.)
<b>Chair height</b> 	The height should allow the feet to reach the floor when the legs are in the "conventional wisdom" position of 90 degrees (at the knee).	The 90-degree knee posture is not "correct" ergonomics although it is not harmful. The legs should move very often, not stay fixed in the 90- degree position. The chair should, if possible, be low - low enough for the feet to rest on the floor, even when extended. However, if the chair is at a good height but the keyboard height can't be adjusted to elbow height or lower, then it's necessary to adjust the chair upwards. In this case, a footrest is an option.
<b>Footrests</b>	These are always a fine alternative and chairs and work surfaces don't need to be lowered if one is available.	The truth is that footrests are a distinctly second-class choice because the feet only have one place to be, and leg postures are limited. However, if the chair is already low enough, footrests offer a chance to change leg postures and are recommended.
<b>General posture</b> 	There is a "correct" one.	Posture change seems to be as important as posture correctness, especially for the spine's intervertebral discs. The discs lose fluid during the day because of the weight they carry. It appears that posture change is essential to help pump fluid back into the discs. People who stand all day tend to have back problems - but so do people who sit still all day.
<b>Sitting posture</b> 	Wisdom prescribes an upright posture, with the hips at 90 degrees.	Research supports having a much wider hip angle - with 130 degrees or so as an "optimum" angle. The reason? When the hips are straightened, the vertebrae of the lower spine are aligned with each other in a way that reduces and evens out pressure on the intervertebral discs. In fact, sitting upright is less desirable than reclining. When reclining, the lower back muscles work less and the spine supports less weight, since body weight is held up by the chair's backrest.

Topic	Conventional wisdom	Current wisdom
<b>Rest breaks</b>	Recommendations are usually for ones about 15 minutes long, every two hours or so.	This is insufficient for single-task work such as typing. Research supports the idea of very short breaks taken very frequently. For example, 30-second breaks every 10 minutes or so. These should be in addition to the normal 15-minute coffee breaks.



# Ergonomic hazards - some myths & realities

## Women need *"special treatment"*

People in the same jobs will do their jobs differently. After all, individuals are not the same anthropometrically; our body parts are often different lengths and widths and proportionally not exactly the same as other people.

Here are some things to consider:

- ❑ jobs in which women work are usually more repetitive, monotonous and stressful than men's
- ❑ caring, nurturing and supportive roles are key parts of women's work, while men still tend to do "heavy" manual, technical and managerial tasks
- ❑ men are more often exposed to chemicals, forceful exertions, and vibration



- ❑ tool design, working surface height, and equipment dimensions can make very different demands on the body, depending on workers' dimensions (anthropometry)
- ❑ using "average" sizes or dimensions can make a big deal out of physical differences between men and women when it's less of an issue in real life. Differences are important, but so is the amount of overlap (e.g., how well hands fit, or don't fit tools; amounts that can be lifted in what circumstances).

In a study at Canadian army bases:

- average wrist to index finger length for women was 170 mm (6.7 inches) and for men - 183 mm (7.2 inches) or 7.6% higher
- 92% of the women's hands were shorter than that of the average man
- about 92% of the men's hands are longer than that of the average woman;
- 36% of the women's and 46% of the men's hands were between 170 mm & 183 mm long
- **when height and size are factored in, apparent gender differences in workplace health problems may disappear**

The bottom line: avoid stereotypes, but be aware that differences exist. Yes, ergonomics is about adapting workplaces, tools and equipment to individual's needs, but finding problems also requires looking for patterns and investigating individual situations.







**Instructions:**

Then have the person fill out the body map on the next page; this provides more specific information.

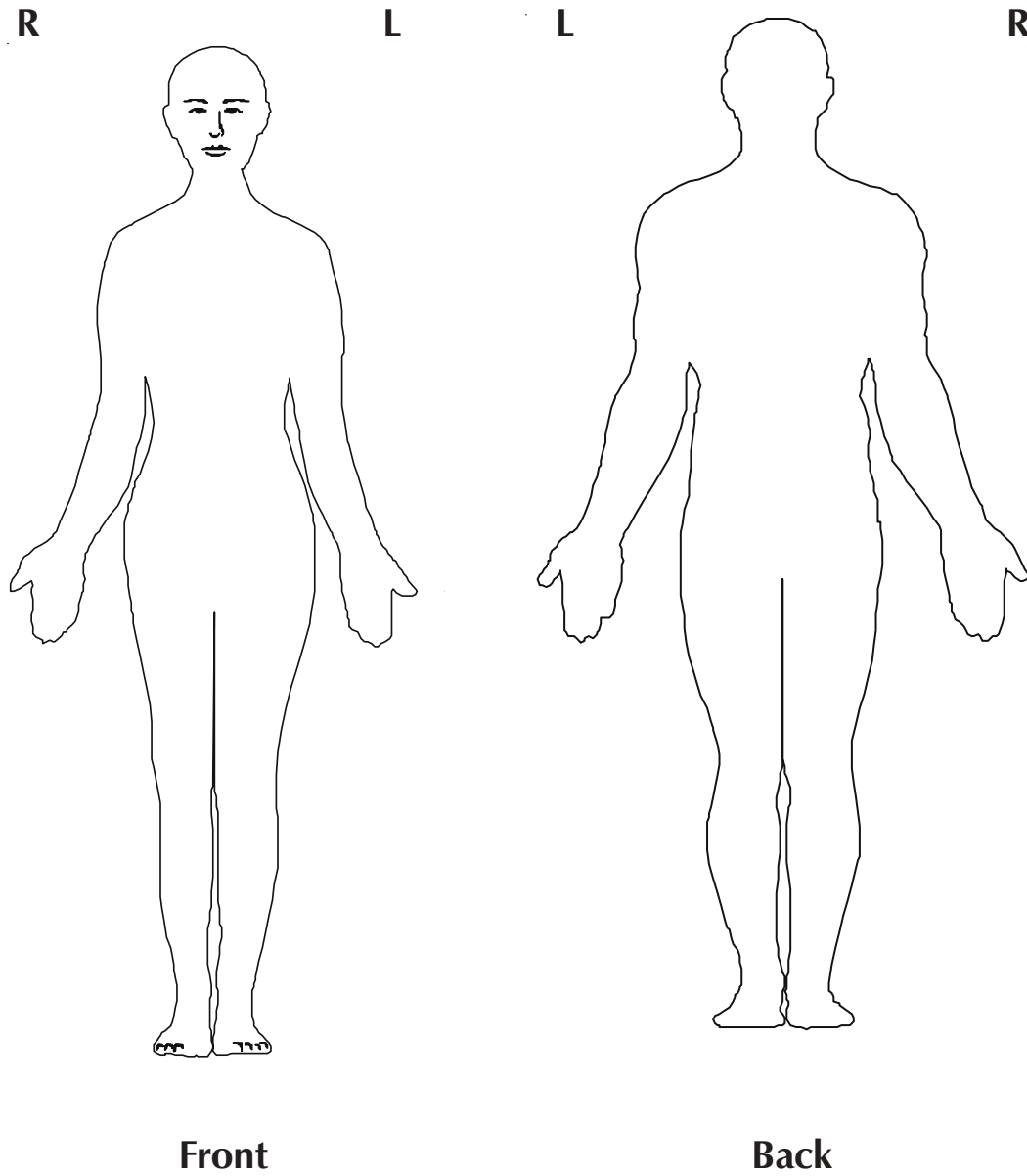
In the next section, ask the person to go over the specific spots on the body map. For each one, ask the questions in the columns, except for the shaded one. That's the place for you to later analyze which ergonomics hazards are (likely) present.

<b>Workplace:</b>	<b>Name</b> of person:
<b>Work station/job</b>	<b>Date of discussion:</b>
	<b>With</b> (person filling in form):
<p><b>What kinds of problems or complaints are there about aches and pains or discomfort in the:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> head?</li> <li><input type="checkbox"/> neck?</li> <li><input type="checkbox"/> shoulders?</li> <li><input type="checkbox"/> elbows and arms?</li> <li><input type="checkbox"/> wrists and hands?</li> <li><input type="checkbox"/> back?</li> <li><input type="checkbox"/> legs?</li> <li><input type="checkbox"/> knees?</li> <li><input type="checkbox"/> feet?</li> </ul> <p>(whether or not you think they are related to the job)</p>	<p><b>Summarize here:</b></p>        <p><b>For details, use the body map on the next page.</b></p>

\* See [www.sobane.be/fr./tms.html](http://www.sobane.be/fr./tms.html) and [www.sobane.be/langue\\_eng.html](http://www.sobane.be/langue_eng.html)



**Step 1 for finding ergonomic hazards: Screening**



## Step 1 for finding ergonomic hazards: Screening

Body area affected (from body map)	When? (What are you doing when you notice the ache/pain/discomfort?)	What causes the problem or complaint?	What kind of ergonomic hazard is it?*( fill in later, if need be)	What can be done immediately to avoid it?	What should be analyzed or investigated in more detail? (See SH.10)

\***Uncomfortable postures or positions:** twisting, arms raised, bent wrists, pinch grip with fingers, non-neutral positions

**Heavy and repeated efforts (force):** tightening things, pulling, pushing, lifting, hitting something

**Repetition:** of the same movement or gestures

**Work environment issues:** humidity, temperature, vibration, lighting or other physical hazards

**Stressors/work organization hazards:** pace of work, time pressures, inadequate machines or tools, chance of violence, no say about what you're doing, little or no support or respect, etc.





## Ergonomic hazards: Step 2 - *Looking for the hazards*

An observation checklist adapted from the SOBANE method\*

Instructions:

Look at the observation heading. Decide if it applies. Then use the observation sheet for each topic.

Work station/job: \_\_\_\_\_

Date: \_\_\_\_\_

Observation headings	Check out	Applicable?
1. Computer or monitor work	Arrangement of the work station	
2. Tools, materials, controls, products	Visual controls	
	Reach distance	
3. Tools	Tools adapted/adjustable for work and workers	
	Handle shape	
	Weight	
	Controls	
4. Work station - obstructions	Obstructions at the work station	
	Obstructions under the work surface	
5. Posture - sitting	Work surface height	
	Quality of the seat/chair	
	Back support	
	Adjustment of the seat height	
	Foot rest	
	How long the person sits	
6. Posture - standing	Height of the work surface	
	Bending the body forward or backward	
	Time spent standing	
	Support for the knees, hips, trunk, arms etc.	
7. Posture - neck, shoulders	Position of the neck	
	Position of the shoulders	
8. Posture - elbows, forearms, hands, wrists	Position of the elbows and forearms	
	Position of the wrists and hands	
9. Posture - other positions/postures	Twisted posture	
	Prolonged fixed posture	
	Others (kneeling, squatting, lying down)	
10. Repetition	Repetitive motions	



Observation headings	Check out	Applicable?
11. Force - manual materials handling equipment	Adapted/adjustable for work and workers	
12. Force - vibrating tools	Necessary and adapted to the work and worker	
13. Force - wrist and hand strain	Wrist and hand strain/effort	
14. Force - Pushing, pulling with the arms	Effort with the arms to push/pull	
15. Force - lifting: characteristics of the load	Handles	
	Dimensions	
	Sharp edges, rough surfaces, etc.	
16. Force - lifting: starting position	Starting position	
	Horizontal distance for grasping the load	
17. Force - lifting: moving the object	Heights when grasping and dropping the load	
	Travel distance of the load	
18. Force - lifting: frequency & weight	Frequency of lifting	
	Weight	
19. Work environment - general	Temperature	
	Drafts	
20. Work environment - lighting	Reflection	
	Glare	
21. Work organization/stressors - time issues	Time constraints	
	Breaks/rest periods	
	Overtime	
22. Work organization/stressors - other hazards	Production bonuses	
	Job rotation	
23. Summary of observations		

\* Translated and adapted from *Troubles musculosquelettiques du dos et des membres superieurs (TMS). Strategie d'évaluation et de prevention des risques*. (Belgian) Ministere federal de l'Emploi et du Travail. 2002. Also used: materials from <http://www.sobane.be> and J.B. Malchaire and A. Piette, "Co-ordinated strategy of prevention and control of the biomechanical factors associated with the risk of musculoskeletal disorders," *International Archives of Occupational and Environmental Health*, 2002, Vol 75: pgs. 459 - 467.





# 1. Computer or monitor work

Ergonomic  
design

How is the work station organized or laid out?

Note: For background information, see other side.

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





# 1. Computer or monitor work



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Layout</b>	<p>If accessories - screen/monitor, keyboard, mouse, document holder - are poorly placed, have poor posture, tired muscles and pain in:</p> <ul style="list-style-type: none"> <li>• nape of the neck - especially if screen/monitor or document holder is too high or too low</li> <li>• shoulder &amp; arms - especially if the keyboard is badly placed</li> <li>• wrists &amp; hands - when flexed or twisted or resting on edge of the table</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid reflections - the screen/monitor should not face a window or have one directly behind it</li> <li>• Choose furniture &amp; equipment that allows the person to work with their neck upright, the shoulders relaxed, wrists in neutral position (straight) and elbows at a 90° or more</li> <li>• Adapt arrangement of materials for the task: <ul style="list-style-type: none"> <li>- document holder facing the person, to let them read the information (e.g. coding work)</li> <li>- screen/monitor facing the person where tasks require them to look at it continuously</li> </ul> </li> </ul>

Translated and adapted from SOBANE materials, available at [www.sobane.be/fr/tms\\_obs.html](http://www.sobane.be/fr/tms_obs.html)







## 2. Tools, materials, controls, products

**Ergonomic design**

What do you see or notice in terms of:

Note: For background information, see other side.

- visual controls?

- distance required to reach tools/materials/controls/products?

In conclusion, the current situation

is acceptable

needs improvement



What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side



	<b>2. Tools, materials, controls, products</b>	
We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Visual controls</b>	Position of dials, screens, etc. determines: <ul style="list-style-type: none"> <li>• eye movement</li> <li>• head posture</li> <li>• trunk posture</li> </ul>	Position dials, screens etc. in front of the operator, especially when: <ul style="list-style-type: none"> <li>• they are referred to or used frequently</li> <li>• they are important for safety and production quality</li> </ul> The line of sight must be: <ul style="list-style-type: none"> <li>• slightly below the horizontal plane</li> <li>• directly in front of the operator or slightly to the left or right</li> </ul>
<b>Distance to reach</b>	If too far: <ul style="list-style-type: none"> <li>• awkward postures - extended arms and shoulders, bent back ...</li> <li>• tendon and joint problems</li> <li>• local and general muscle fatigue</li> <li>• back and neck pain</li> </ul>	Position controls, materials and tools: <ul style="list-style-type: none"> <li>• directly in front - if standing, less than 50 cm (20") away ; if sitting, less than 38 cm (15") away</li> <li>• at heart level</li> <li>• less than 60 cm (24") - arm's length away for major or frequently used controls</li> </ul> Never reach behind.  Perform repetitive tasks with shoulders relaxed and elbows bent about 90° or more.

Translated and adapted from SOBANE materials, available at [www.sobane.be/fr/tms\\_obs.html](http://www.sobane.be/fr/tms_obs.html)





### 3. Tools

**Ergonomic  
design**

**What do you see or notice in terms of:**

Note: For background information, see other side.

- how suitable/appropriate are the tools for the work and workers?
  
  
  
- handle shape?
  
  
  
- weight?
  
  
  
- controls?

**In conclusion, the current situation**

**is acceptable**

**needs improvement**

**What *specific* improvements can be made?**

**Should we analyze the situation or the proposed solutions in more detail?**

**no**

**yes - more detail  
on other side**





### 3. Tools

**Ergonomic  
design**

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>If tools are suitable or appropriate for the work &amp; workers</b>	<p>If poorly chosen:</p> <ul style="list-style-type: none"> <li>• overwork, poor postures, shoulder problems</li> <li>• hand injuries, blisters, tendonitis, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Choose the tool that is best suited for the job so that the wrist remains straight and at a normal height</li> <li>• Standardize nuts, bolts, etc. to reduce the number of tools required</li> <li>• Tools that can be used by anyone - women, men, left-handed people</li> <li>• Directly in front of the operator or slightly to the left or right</li> </ul>
<b>Handle shape</b>	<p>If poorly suited:</p> <ul style="list-style-type: none"> <li>• poor arm posture - raised, stretched, twisted; twisted wrist etc.</li> <li>• crushed hands /fingers if too small or sharp-edged</li> <li>• more strength required</li> </ul>	<ul style="list-style-type: none"> <li>• Shaped so the wrist remains straight and the handle fits well in the hand</li> <li>• Handle not too smooth/rough/sharp <ul style="list-style-type: none"> <li>- wood or metal coated with rubber/plastic</li> <li>- 10 cm to 12 cm (4" - 5") long</li> <li>- diameter of handle about <ul style="list-style-type: none"> <li>&gt; 60 mm (2.25") for tools requiring strength</li> <li>&gt; 12 mm (0.5") for precision tools</li> </ul> </li> </ul> </li> <li>• May be used by both left-handed and right-handed people</li> </ul>
<b>Weight</b>	<p>If too heavy:</p> <ul style="list-style-type: none"> <li>• tired arms, cramps, tendonitis and other musculoskeletal problems</li> </ul>	<ul style="list-style-type: none"> <li>• For work requiring strength: between about 1.5 kg (3lb) &amp; 2 kg (4.5lb)</li> <li>• For precision work: between 400 g (0.5 lb) and 1.5 kg (3lb)</li> <li>• For heavier tools/special systems: counterbalanced support devices, elbow rests, etc.</li> </ul>
<b>Controls</b>	<p>If poorly positioned:</p> <ul style="list-style-type: none"> <li>• poor postures</li> </ul> <p>If too stiff:</p> <ul style="list-style-type: none"> <li>• constant exertion and fatigue</li> </ul> <p>If too sensitive:</p> <ul style="list-style-type: none"> <li>• risk of mistakes, incidents, injuries</li> </ul>	<ul style="list-style-type: none"> <li>• Controls that are easy to operate without stress for the fingers, hands, or wrists</li> <li>• Controls that are not too stiff nor too sensitive</li> <li>• May be used by left-handed people</li> </ul>

Translated and adapted from SOBANE materials, available at [www.sobane.be/fr/tms\\_obs.html](http://www.sobane.be/fr/tms_obs.html)





## 4. Work station: obstructions

Ergonomic  
design

**What do you see or notice in terms of:**

Note: For background information, see other side.

- obstructions at the work station?

- obstructions under the work surface?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 4. Work station: obstructions

**Ergonomic  
design**

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Obstructions the workstation</b>	<p>If obstructed:</p> <ul style="list-style-type: none"><li>• poor work postures</li><li>• fatigue and back pain</li><li>• less precise moves/control</li><li>• increased risk of hitting something or being injured</li></ul>	<ul style="list-style-type: none"><li>• Have a clear access path that is 60 cm - 80 cm (24" - 31.5") wide</li><li>• Provide at least 1 m (39") clear space in front of &amp; behind station</li><li>• Provide sufficient and adequate storage space</li><li>• Keep work station and work surfaces clean and tidy</li></ul>
<b>Obstructions under the work surface</b>	<ul style="list-style-type: none"><li>• Crossing legs impossible</li><li>• Static posture of feet and legs</li><li>• Fatigue</li></ul>	<p>Pay attention to recommendations about leg and foot room for seated workstations:</p> <ul style="list-style-type: none"><li>• height for a desk - 65 cm (25.5"); typing - 60 cm (24")</li><li>• knee room - 58 cm (23") wide</li><li>• depth - 60 cm (24")</li></ul> <p>Do not store things under the work surface.</p>

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## 5. Posture - sitting

Ergonomic  
design

**What do you see in terms of:**

Note: For background information, see other side.

- the height of the work surface in relation to the worker?
- the quality of the seat/chair?
- back support?
- how the seat height is adjusted?
- foot rest?
- how long the person sits?

**In conclusion, the current situation**

**is acceptable**

**needs improvement**

**What *specific* improvements can be made?**

**Should we analyze the situation or the proposed solutions in more detail?**

**no**

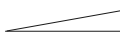
**yes - more detail  
on other side**





## 5. Posture - sitting



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Height of the work surface</b>	If badly adjusted: <ul style="list-style-type: none"> <li>• bad postures</li> <li>• extended arms &amp; rounded back</li> <li>• difficult movements</li> </ul>	Adjust the work surface depending on the task: <ul style="list-style-type: none"> <li>• support forearms: a few cm/inches above elbows</li> <li>• industrial work that requires free arm movements: 5 to 15 cm (2" - 6") below the elbows</li> <li>• computer or typing work: keyboard sloping away and slightly below the elbow is best</li> </ul>
<b>Chair quality</b>	If it's not good: <ul style="list-style-type: none"> <li>• poor postures</li> <li>• compressed thighs or under the knees</li> <li>• poor stability</li> <li>• difficult movements</li> </ul>	Choose a chair with these features: <ul style="list-style-type: none"> <li>• adjustable height and back</li> <li>• seat pan large enough to allow movement</li> <li>• seat pan slightly tilted towards the front (<math>2^{\circ}</math> - <math>5^{\circ}</math>)</li> <li>• rotation and casters, with 5 spokes</li> <li>• seat and back padding about 2.5 cm (1")</li> </ul>
<b>Back support</b>	If there's none or a poor support, the spine is not supported and back problems	Chair with lumbar support just above the hips (fit "S" curve of back, not at hips) which can be used whatever the task so the spinal column remains upright.
<b>Seat height adjustment</b>	If too high or too low: <ul style="list-style-type: none"> <li>• back &amp; neck flexed</li> <li>• thighs compressed</li> <li>• poor posture for shoulders &amp; arms</li> </ul>	Adjust the height of the work surface to have: <ul style="list-style-type: none"> <li>• thighs horizontal or slanted down</li> <li>• legs vertical or extended/slanted down</li> <li>• feet flat on the floor or supported</li> </ul> <p>Train the person to adjust the height of the seat and back according to person's height</p>
<b>Foot support</b>	For short people avoid compression under the knees	Provide a support: <ul style="list-style-type: none"> <li>• surface (length x width): 30 cm x 40 cm (12" x 16")</li> <li>• incline an angle of close to <math>10^{\circ}</math> </li> <li>• important support does not move</li> </ul>
<b>Time in seated position</b>	If too long, poor posture (flexed neck) are maintained for too long	Organize work to allow getting up and/or alternating between standing and sitting positions

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## 6. Posture - standing

Ergonomic  
design

**What do you see or notice in terms of:**

Note: For background information, see other side.

- the height of the work surface?
- bending the body backward or forward?
- the amount of time spent standing?
- supports for knees, hips, trunk, arms, etc.?

**In conclusion, the current situation**

**is acceptable**

**needs improvement**

**What *specific* improvements can be made?**

**Should we analyze the situation or the detail**

**no**

**yes - more**



**proposed solutions in more detail?**

**on other side**





## 6. Posture - standing

**Ergonomic  
design**

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Height of the work surface</b>	If poor: <ul style="list-style-type: none"><li>• raised shoulders, bent back or neck</li><li>• general and local fatigue</li></ul>	Adjust the height of the work surface to the size of the operator and according to the task and the type of work: <ul style="list-style-type: none"><li>• precision work - 95 cm - 110 cm (37.5" - 43")</li><li>• light work - 85 cm - 95 cm (33.5" - 37.5")</li><li>• heavy work - 70 cm - 90 cm (27.5" - 35.5")</li></ul>
<b>Bending the body backward or forward</b>	Sooner or later, bending leads to: <ul style="list-style-type: none"><li>• back muscle fatigue</li><li>• compressed discs in the spine</li><li>• back pain</li></ul>	<ul style="list-style-type: none"><li>• Position controls, tools, equipment within easy reach of the operator</li><li>• Maintain the same height throughout the entire production circuit</li><li>• Provide space for feet at the base of the work surface so the operator can get close to what they are working on</li><li>• For loads that have to be gripped or moved, position them at a height of more than 60 cm (24")</li></ul>
<b>Amount of time spent standing</b>	Prolonged standing leads to: <ul style="list-style-type: none"><li>• swelling of the legs &amp; varicose veins</li><li>• back and neck fatigue &amp; pain</li><li>• increased blood pressure</li></ul>	<ul style="list-style-type: none"><li>• Provide a sit-stand stool, with room for knees and feet to fit under the work station/surface</li><li>• Allow for work periods where workers can walk and sit down</li></ul>
<b>Supports for knees, hips, trunk, arms ...</b>	Local supports can reduce: <ul style="list-style-type: none"><li>• muscular strain</li><li>• leg and back pain</li></ul>	<ul style="list-style-type: none"><li>• Put a hip rest at the edge of the work surface</li><li>• Position a hand grip where workers can hold onto it with one hand for high working surfaces</li><li>• Vary working positions to avoid constant leaning</li><li>• Never lean against a sharp edge</li></ul>

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## 7. Posture - neck and shoulders

Ergonomic  
design

What do you see or notice in terms of:

Note: For background information, see other side.

- the position of the neck?

- the position of the shoulders?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 7. Posture - neck and shoulders

Ergonomic  
design

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Neck position</b>	<p>If neck is bent forward (inclined), back (flexed) or to either side:</p> <ul style="list-style-type: none"><li>• muscle fatigue/soreness</li><li>• pain &amp; stiffness/tight feeling</li><li>• may injure tendons, muscle or vertebrae in the neck</li></ul>	<p>Train people so they:</p> <ul style="list-style-type: none"><li>• pivot the chair to look to the side</li><li>• relax and support their back against the chair</li><li>• keep the work surface at a height so they can work with their neck straight</li><li>• use the document holder/reader placed at the same height as the screen/monitor</li><li>• take regular short breaks</li><li>• change posture and relax the neck regularly</li></ul>
<b>Shoulder position</b>	<p>If the shoulders are rotated or are raised during work:</p> <ul style="list-style-type: none"><li>• muscle fatigue/soreness</li><li>• pain in the shoulders and arms</li><li>• joint &amp; tendon injuries</li></ul> <p>Working with the arms above the shoulders:</p> <ul style="list-style-type: none"><li>• extending the trunk forward</li><li>• pain in the shoulders and arms</li><li>• less precise control</li></ul>	<ul style="list-style-type: none"><li>• Prevent and do not have activities where:<ul style="list-style-type: none"><li>- hands are above the level of the heart</li><li>- arms extended forward without support</li><li>- arms spread apart or towards the front</li><li>- shoulders are rotated</li></ul></li><li>• Have enough space so people can pivot or swirl when moving their feet</li><li>• Put materials, products, tools being used etc. within easy reach of the hands</li><li>• If it's necessary to reach for something that is higher:<ul style="list-style-type: none"><li>- use a platform or stool that is light and easy to move</li><li>- train workers to keep a hand on a fixed support at the height</li></ul></li></ul> <p>In some situations, the forearms can be suspended when doing repetitive static work. This is restrictive and should be avoided as much as possible.</p>

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## 8. Posture - elbows, forearms, hands & wrists



What do you see or notice in terms of:

Note: For background information, see other side.

- the position of the elbows and forearms?

- the position of the hands and wrists?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 8. Posture - elbows, forearms, hands & wrists



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Position of the elbows and forearms</b>	<p>If the arms are pressed against a surface or the sharp edge of a table:</p> <ul style="list-style-type: none"><li>• compression of the nerves &amp; tendons</li><li>• pain &amp; tingling feelings</li></ul> <p>If there is frequent rotation of the forearms:</p> <ul style="list-style-type: none"><li>• inflammation of the tendons (epicondylitis, a.k.a. tennis or golfers' elbow)</li></ul>	<ul style="list-style-type: none"><li>• Provide support for the elbows when doing work that involves data entry, typing or using the mouse</li><li>• Remove tasks that force the forearms to rotate</li><li>• If the forearms must be extended, provide support for the elbows.</li><li>• Round off edges of tables, desks and benches if people are leaning elbows &amp; forearms on them</li><li>• Use tools that allow the forearm to be bent at about 90° or more</li></ul>
<b>Position of the hands and wrists</b>	<p>If the hands or wrists are always flexed (not in a neutral position):</p> <ul style="list-style-type: none"><li>• friction of the nerves and tendons</li><li>• less force possible</li><li>• makes the task more tiring and difficult</li></ul>	<ul style="list-style-type: none"><li>• Bring materials and tools closer to the worker</li><li>• Choose tools that have bent handles so that the wrists can be straight</li><li>• Put the task at an angle</li><li>• Organize the work so workers can change positions</li><li>• Provide wrist supports</li><li>• Round the edges of work surfaces</li></ul>

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## 9. Posture - other positions/postures

Ergonomic  
design

What do you see in terms of:

Note: For background information, see other side.

- a twisted posture/position?
- prolonged posture/position?
- other postures/positions: kneeling, squatting, lying down?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 9. Posture - other positions/postures

**Ergonomic  
design**

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Twisted posture or position</b>	<p>If the back or trunk is twisted:</p> <ul style="list-style-type: none"> <li>• muscle fatigue</li> <li>• back problems</li> </ul>	<ul style="list-style-type: none"> <li>• Rotating and moveable chairs:</li> <li>• Products/objects and orders facing the person</li> <li>• Use pivoting conveyors or tables whenever the product or object changes direction</li> </ul>
<b>Prolonged (i.e. static) postures or positions</b>	<p>A prolonged and fixed or static posture involves:</p> <ul style="list-style-type: none"> <li>• fatigue for the contracted muscles (static load)</li> <li>• overloading joints and tendons</li> </ul>	<ul style="list-style-type: none"> <li>• Alternate with tasks allowing movement</li> <li>• Reduce continuous muscular efforts (static positions)</li> <li>• Provide elbow supports, padded to level of the chair</li> <li>• Avoid keeping arms in the air or the body leaning forward</li> <li>• Avoid: <ul style="list-style-type: none"> <li>- high effort for more than 10 seconds</li> <li>- moderate effort for more than 1 minute</li> <li>- low effort for more than 4 minutes</li> </ul> </li> </ul>
<b>Other postures or positions</b>	<ul style="list-style-type: none"> <li>• Tired legs</li> <li>• Problems for hips, knees, ankles</li> <li>• Losing balance and chance of falling</li> </ul>	<ul style="list-style-type: none"> <li>• Keep materials, products &amp; tools within easy reach</li> <li>• Organize the work area so the person can work seated or standing</li> <li>• Layout loads so they can be handled at a height between 70 cm - 80 cm (27" - 31") above floor</li> <li>• Foresee/be aware of stable support points</li> </ul>

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## 10. Repetition



What do you notice about repetitive motions? Note: For background information, see other side.

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 10. Repetition



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Repetition</b>	<p>No recovery time for repetitive tasks leads to:</p> <ul style="list-style-type: none"><li>• A build-up of muscle and tendon strain and fatigue</li><li>• A loss of precision</li><li>• A drop in alertness, increasing the risk of incidents causing injury and damage</li></ul>	<ul style="list-style-type: none"><li>• Reduce the work pace whenever possible</li><li>• Design the job so that each arm or hand can be used in turn (alternated)</li><li>• Arrange for frequent rotations between workstations that require different postures and effort (note: studies say that if workers' backs may be affected by the tasks, this may not be a very effective "fix")</li><li>• Arrange for short, frequent breaks (5 minutes per hour)</li><li>• Provide pneumatic or electric tools for the most repetitive tasks</li><li>• With the operators, examine how repetitive tasks can best be done to minimize effort and posture strain</li><li>• Teach this technique to everyone</li></ul>

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## 11. Force - manual material handling equipment



What do you notice about manual material handling equipment?

Note: For background information, see other side.

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 11. Force - manual material handling equipment



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Material handling equipment</b>	<p>Proper material handling equipment reduces:</p> <ul style="list-style-type: none"><li>• awkward posture</li><li>• muscular strain</li><li>• consequently reduces arm, neck, and back problems</li></ul>	<ul style="list-style-type: none"><li>• Use mechanical equipment in the following situations:<ul style="list-style-type: none"><li>- When weight involved is more than 15 kg (33 lbs.)</li><li>- Carrying distance is more than 10 m (30')</li><li>- Lifting is done more than several times per hour</li></ul></li><li>• Carefully select the equipment (e.g. hoists, forklifts); poorly-designed equipment will not be used</li><li>• Select equipment according to the weight of the load and the frequency of handling, and the needs of those who will use it</li></ul>

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## 12. Force - vibrating tools



Are vibrating tools absolutely necessary?

Note: For background information, see other side.

Are they suited for the work and the workers?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 12. Vibrating tools



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Vibrating tools</b>	<p>Vibration leads to:</p> <ul style="list-style-type: none"> <li>• limited mobility and joint pain (hands, elbows) typical of impact hammers, pneumatic drills, power chisels etc.</li> <li>• whitening of fingers when exposed to cold (a.k.a. Reynaud's disease or vibration white finger)</li> <li>• tingling, numbness</li> </ul>	<ul style="list-style-type: none"> <li>• Use the machine or tool that is best suited for the task/job</li> <li>• Maintain machines or tools on a regular basis (sharpening)</li> <li>• Handles <ul style="list-style-type: none"> <li>- provide anti-vibration handles</li> <li>- coat contact surfaces with rubber, felt, cork, etc.</li> <li>- hold the machine only by the handles</li> <li>- use gloves that fit the worker (not too bulky or too thin)</li> </ul> </li> <li>• Improve postures and reduce strain: <ul style="list-style-type: none"> <li>- support the tool with a counter-weight</li> <li>- adjust the height of the work surface</li> <li>- train the operator to make the best use of the tool, using as little grip force and pressure as possible</li> <li>- immobilize the items that are being tooled</li> </ul> </li> <li>• Organize the work differently: <ul style="list-style-type: none"> <li>- limit the time for using vibrating tools</li> <li>- increase the number of rest periods</li> <li>- alternate work with non-vibrating tools</li> </ul> </li> </ul>

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## 13. Force - wrist and hand strain

Ergonomic  
design

What do you notice about wrist and hand strain/effort?

Note: For background information, see other side.

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 13. Force - wrist and hand strain



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Position of the wrist and hand</b>	<p>When force exerted is high (tightening, squeezing, etc.) or low but sustained (keyboard, mouse, etc.):</p> <ul style="list-style-type: none"> <li>• fatigue</li> <li>• joint problems</li> </ul> <p>When the heel of the hand is used as a hammer or for squeezing:</p> <ul style="list-style-type: none"> <li>• compressed tendons, nerves, blood vessels</li> <li>• carpal tunnel syndrome, among others</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce the following to a minimum: <ul style="list-style-type: none"> <li>- tightening and squeezing</li> <li>- exerting sudden force</li> <li>- fine grasping with the fingers (pinch grip)</li> <li>- using the heel of the hand as a hammer</li> </ul> </li> <li>• Assess the need to tighten “to the max” (avoid as best as possible)</li> <li>• Provide technical aids (types of couplings, sealing rings, etc.)</li> <li>• Provide tools with long enough handles</li> <li>• Provide hydraulic or electric tools</li> <li>• Carry objects (files) in containers with handles to avoid pinching the fingers</li> <li>• Use pliers or failing that, the whole hand, to grasp small objects, rather than the fingers which can only grip them (and use more force in the process)</li> <li>• Provide regular breaks, even when minor effort is sustained</li> </ul>

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## 14. Force - pushing/pulling with arms

Ergonomic  
design

What do you notice about strain from pushing or pulling with arms?

Note: For background information, see other side.

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 14. Force - pushing/pulling with arms



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Strain from pushing and pulling with the arms</b>	<p>Using a cart leads to:</p> <ul style="list-style-type: none"><li>• Reduced muscular strain and problems</li></ul> <p>But an increased risk of:</p> <ul style="list-style-type: none"><li>• Getting fingers and hands caught</li><li>• Injuring feet and legs</li><li>• Dislocating arm, shoulder, or back joint</li></ul>	<ul style="list-style-type: none"><li>• Provide:<ul style="list-style-type: none"><li>- 2, 3, or 4-wheeled handcarts for loads up to 200 kg (440 lb)</li><li>- Hand dollies for loads under 700 kg (1550 lb)</li><li>- Maximum use: 200 times per work day</li><li>- Carrying distance under 35 m (115')</li><li>- Motorized carts or conveyers for heavy loads to be moved over long distances</li></ul></li><li>• Ensure that the floor is not slippery or uneven</li><li>• Reduce friction of rolling surfaces</li><li>• Provide 4 large-diameter, wide, low-friction wheels</li><li>• Provide a handle slightly above elbow height</li><li>• Reduce the load if it must be pushed or pulled<ul style="list-style-type: none"><li>- with the hands above shoulder level or below waist level</li><li>- or for more than 5 seconds</li><li>- or when the object is not directly in front</li></ul></li><li>• Reduce the distance to be covered by bringing the stock area closer, for instance</li><li>• Push rather than pull</li><li>• Provide non-slip shoes</li></ul>

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## 15. Force - characteristics of the load



What do you see or notice in terms of:

Note: For background information, see other side.

- handles?
  
  
  
  
  
  
  
  
  
  
- dimension of the load?
  
  
  
  
  
  
  
  
  
  
- edges that can cut, rough surfaces etc.?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 15. Force - characteristics of the load



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Handles</b>	If there are handles: <ul style="list-style-type: none"><li>• easier to hold</li><li>• less likely to fall or drop</li></ul>	<ul style="list-style-type: none"><li>• Put handles on objects that weigh more than 4.5 kg (10 lbs)</li><li>• Put handles for two people if weight is more than 18 kg (40 lbs)</li><li>• Position handles below or at height of centre of gravity</li><li>• Handles:<ul style="list-style-type: none"><li>- should be slightly rough</li><li>- round/oval shape, diameter 19 to 38 mm ( " to 1 ")</li><li>- 115 mm (4 ") long</li><li>- free space of 50 mm (2") or 75 mm (3") if wearing gloves</li></ul></li></ul>
<b>Load dimensions</b>	If it's large: <ul style="list-style-type: none"><li>• reduces field of vision</li><li>• likely to fall or run into things</li><li>• muscle strain</li><li>• may cause back problems</li></ul>	<ul style="list-style-type: none"><li>• Limit load or objects to a maximum of:<ul style="list-style-type: none"><li>- 60 cm wide, 35 cm high, 40 cm deep (24" wide, 14" high, 16" deep)</li></ul></li><li>• Use mechanical aids for awkward or large loads</li></ul>
<b>Cutting edges, rough surfaces</b>	If object has cutting edges or rough surfaces: <ul style="list-style-type: none"><li>• may get local cuts and abrasions</li><li>• precise gestures are more difficult</li></ul>	<ul style="list-style-type: none"><li>• Remove edges that can cut or surfaces that are rough on the skin</li><li>• Wrap/box/bag dangerous objects</li><li>• Package loads that are too hot, cold or dirty</li><li>• Use protective gloves as a last resort</li><li>• Protect hands from heat and cold</li><li>• Handles/grips should be made of plastic, rubber or wood</li></ul>

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## 16. Force - lifting: starting position

Ergonomic  
design

What do you see or notice in terms of:

Note: For background information, see other side.

- the starting position?
- the horizontal distance for grasping the load?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 16. Force - lifting: starting position

Ergonomic  
design

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Starting posture</b>	<p>A poor starting posture:</p> <ul style="list-style-type: none"><li>• requires more muscle power</li><li>• overloads joints in the arms and spine</li><li>• increases the chances of incidents or injuries from running into things or people, cuts, or burns</li></ul>	<p>For small, compact loads:</p> <ul style="list-style-type: none"><li>• hold load as close to body as possible</li><li>• starting posture: comfortable, in position that allows holding the load close to the body - back can be bent (if lifting from floor especially)</li><li>• place feet on both sides of the load, if possible</li><li>• put one foot forward in the direction the load is to be moved</li><li>• lift using leg muscles, if possible</li><li>• avoid lifting from below knees and above shoulders</li></ul> <p>For larger loads:</p> <ul style="list-style-type: none"><li>• find another person to assist/help or use devices such as hand trucks, hoists, forklifts</li></ul>
<b>Horizontal distance for grasping the load</b>	<p>A load that is farther away from the body:</p> <ul style="list-style-type: none"><li>• requires more effort</li><li>• tires arms and back</li><li>• causes back problems</li></ul>	<ul style="list-style-type: none"><li>• Hold load as close to body as possible</li><li>• Remove all obstacles in travel path</li><li>• Reduce the size of the load</li><li>• Use mechanical lifting devices if load is bulky or heavy</li></ul>

Translated and adapted from SOBANE materials, available at [www.sobane.be/fr/tms\\_obs.html](http://www.sobane.be/fr/tms_obs.html)





## 17. Force - lifting: moving the object

Ergonomic  
design

What do you see or notice in terms of:

Note: For background information, see other side.

- the travel distance for the load?
- heights when grasping or putting down the load?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 17. Force - lifting: moving the object

**Ergonomic design**

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Travel distance for the load</b>	<p>The greater the distance:</p> <ul style="list-style-type: none"> <li>• the greater the muscle fatigue</li> <li>• the greater the risk of falling</li> </ul>	<ul style="list-style-type: none"> <li>• Carry the load with both hands</li> <li>• Limit the carry distance to 2 m (6')</li> <li>• Reduce the weight of loads and daily tonnage if distance is between 2 m and 10 m (6' to 30')</li> <li>• Use mechanized transport equipment when distance is more than 10 m (30')</li> <li>• Use sliding tables, conveyors belts, ball casters</li> <li>• Eliminate changes in heights between work surfaces</li> </ul>
<b>Heights when grasping or putting down the load</b>	<p>If the object is too high up:</p> <ul style="list-style-type: none"> <li>• leaning backward with arms raised</li> <li>• back and shoulder problems</li> </ul>	<ul style="list-style-type: none"> <li>• Grasping and dropping points should be on the same vertical height as much as possible, to reduce twisting</li> <li>• Move the start and finish points away from each other to force workers to turn their whole body or take a step, rather than twist at the waist</li> <li>• If the load dimensions are always the same, provide support ideally at 750 mm (30") but between 60 and 90 cm (24" and 36")</li> <li>• If load dimensions vary, provide adjustable height supports (e.g. lift table)</li> <li>• Completely avoid positions at ground level or above shoulder level</li> <li>• Provide mechanized lifting equipment for objects placed above shoulder level</li> <li>• Arrange storage areas taking into account the following:               <ul style="list-style-type: none"> <li>- height of workers - usually between 80 &amp; 175 cm (31.5" and 69")</li> <li>- weight of objects:                   <ul style="list-style-type: none"> <li>&gt; loads over 10 kg (22 lbs) at hip level</li> <li>&gt; lighter loads between knees &amp; shoulder level</li> </ul> </li> <li>- reaching distance: place frequently-lifted objects closer to the worker</li> </ul> </li> </ul>

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## 18. Force - lifting: frequency and weight



What do you see or notice in terms of:

Note: For background information, see other side.

• frequency of lifting?

• weight?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 18. Force - lifting: frequency and weight



We looked at ...	Why be concerned? (consequences)	Recommendations																																																				
Frequency of lifting	If lifting is frequent: <ul style="list-style-type: none"><li>•general fatigue</li><li>• local muscle fatigue</li><li>• movements less coordinated</li></ul>	<ul style="list-style-type: none"><li>•Limit lifting frequency to less than once per 5 minutes, if possible</li><li>• Use mechanical aids if loads are heavy, hard to handle, or lifted often</li></ul> <p>If loads are lifted frequently:</p> <ul style="list-style-type: none"><li>• store heavy loads (more than 10 kg/22 lbs) at hip level</li><li>• store light objects between 60 cm/24" (knee level) and 150 cm/60" (shoulder level)</li></ul>																																																				
Weight	Maximum weight depends on lifting conditions - all the factors reviewed above. If high, the likelihood of incidents and of back or hand/arm problems goes up quickly	<ul style="list-style-type: none"><li>• Display weights on loads</li><li>• For occasional lifting straight ahead with a good grasp and over a distance of 70 cm/28", lift loads with a recommended top weight of less than:</li></ul> <table><tr><th colspan="2"></th><th colspan="3">Distance of hands from body</th></tr><tr><th rowspan="5">Grip height</th><th></th><td>20 cm</td><td>35 cm</td><td>50 cm</td></tr><tr><td>40 cm</td><td>19 kg</td><td>11 kg</td><td>8 kg</td></tr><tr><td>75 cm</td><td>22 kg</td><td>12 kg</td><td>9 kg</td></tr><tr><td>100 cm</td><td>20 kg</td><td>11 kg</td><td>8 kg</td></tr><tr><td>140 cm</td><td>17 kg</td><td>10 kg</td><td>7 kg</td></tr></table> <table><tr><th colspan="2"></th><th colspan="3">Distance of hands from body</th></tr><tr><th rowspan="5">Grip height</th><th></th><td>8 "</td><td>14 "</td><td>20 "</td></tr><tr><td>16 "</td><td>42 lb</td><td>24 lb</td><td>18 lb</td></tr><tr><td>30 "</td><td>48 lb</td><td>26 lb</td><td>20 lb</td></tr><tr><td>40 "</td><td>44 lb</td><td>24 lb</td><td>18 lb</td></tr><tr><td>55 "</td><td>37 lb</td><td>22 lb</td><td>15 lb</td></tr></table>			Distance of hands from body			Grip height		20 cm	35 cm	50 cm	40 cm	19 kg	11 kg	8 kg	75 cm	22 kg	12 kg	9 kg	100 cm	20 kg	11 kg	8 kg	140 cm	17 kg	10 kg	7 kg			Distance of hands from body			Grip height		8 "	14 "	20 "	16 "	42 lb	24 lb	18 lb	30 "	48 lb	26 lb	20 lb	40 "	44 lb	24 lb	18 lb	55 "	37 lb	22 lb	15 lb
		Distance of hands from body																																																				
Grip height		20 cm	35 cm	50 cm																																																		
	40 cm	19 kg	11 kg	8 kg																																																		
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## 19. Work environment - general



What do you see or notice in terms of:

Note: For background information, see other side.

• temperature?

• drafts?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 19. Work environment - general

**Ergonomic  
design**

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Temperatures</b>	<p>If too cold:</p> <ul style="list-style-type: none"><li>• stronger muscle contractions</li><li>• less strength</li><li>• less co-ordination</li></ul> <p>If too hot:</p> <ul style="list-style-type: none"><li>• excessive sweating</li><li>• fatigue</li><li>• slippery hands</li></ul>	<ul style="list-style-type: none"><li>• Reduce gain or loss of heat to outside</li><li>• Reduce internal gain or loss of heat -<ul style="list-style-type: none"><li>- caulk hot and cold surfaces (ducts, walls, etc.)</li><li>- vent warm and humid gases at source</li><li>- eliminate all water and vapour leaks</li></ul></li><li>• Adapt clothing to conditions</li><li>• Keep temperatures above the following minimums:<ul style="list-style-type: none"><li>- very light work      20° C</li><li>- light work              18° C</li><li>- semi-heavy work      15° C</li><li>- heavy work            12° C</li></ul></li></ul>
<b>Drafts</b>	<p>If drafty:</p> <ul style="list-style-type: none"><li>• local chills</li><li>• muscle contractions, neuralgia</li></ul>	<ul style="list-style-type: none"><li>• Limit air speeds to:<ul style="list-style-type: none"><li>- 10 m/sec for short-term exposure</li><li>- 3 m/sec for intermittent work</li><li>- 1 m/sec for prolonged standing or heavy work</li><li>- 0.5 m/sec for prolonged sitting work</li></ul></li><li>• Eliminate all drafts on the face or neck</li></ul>

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## 20. Work environment - lighting



What do you see or notice in terms of:

Note: For background information, see other side.

- reflection?

- glare?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





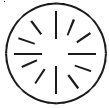
## 20. Work environment - lighting

Ergonomic  
design

We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Lighting: reflection and glare</b>	Poor lighting leads to: <ul style="list-style-type: none"><li>• poor vision</li><li>• reflection and glare</li><li>• poor work posture</li><li>• difficulty seeing dangerous objects/elements</li><li>• higher chance of incidents causing injury and damage</li></ul>	<ul style="list-style-type: none"><li>• Provide lighting based on the degree of perception/visibility needed, the size and contrast of objects to be handled, tool detail, etc.</li><li>• Eliminate all shiny surfaces (e.g. polished metal, glass, plastic sheeting, etc.)</li><li>• Provide even lighting on work surfaces</li><li>• Avoid major shadows and contrast</li><li>• Increase lighting on dangerous objects and elements</li><li>• Clean and maintain light fixtures on a regular basis</li></ul>

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## 21. Work organization/stressors - time issues



What do you notice about:

Note: For background information, see other side.

•time constraints?

• breaks/rest periods?

•overtime?

In conclusion, the current situation

is acceptable

needs improvement

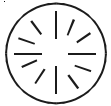
What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 21. Work organization/stressors - time issues



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Time constraints</b>	<p>Time constraints lead to:</p> <ul style="list-style-type: none"> <li>• Going beyond one's physiological limits more often</li> <li>• Local and general fatigue</li> <li>• Increased chance of incidents</li> <li>• Quick and abrupt movements</li> <li>• Increased effort</li> <li>• Sustained work without breaks</li> </ul>	<ul style="list-style-type: none"> <li>• Adapt organization and technical procedures to limit the frequency of rush situations</li> <li>• Assign tasks so that help can be available in rush situations</li> <li>• Assign a set of tasks to a group of people</li> <li>• Avoid factors that increase the work pace, particularly: <ul style="list-style-type: none"> <li>- tight or frequently changing deadlines</li> <li>- constant electronic monitoring of productivity</li> </ul> </li> </ul>
<b>Breaks/rest periods</b>	<p>Lack of regular breaks or rests leads to:</p> <ul style="list-style-type: none"> <li>• Poor posture and slower pace of work</li> <li>• Local and general muscular fatigue</li> <li>• Unco-ordinated breaks</li> </ul>	<ul style="list-style-type: none"> <li>• Studies say letting individuals choose when they need breaks reduces musculoskeletal injuries but not output</li> <li>• For heavy work: Mandatory breaks spread throughout the day</li> <li>• For moderate mental and physical effort: <ul style="list-style-type: none"> <li>- a 10- to 15- minute morning and afternoon break</li> </ul> </li> <li>• When the pace is set by a machine: <ul style="list-style-type: none"> <li>- a 3- to 5- minute break every hour</li> </ul> </li> </ul>
<b>Overtime</b>	<p>Working overtime leads to:</p> <ul style="list-style-type: none"> <li>• Local and general fatigue</li> <li>• Increased effort</li> <li>• Slower reaction times</li> <li>• Increased risk of incidents</li> <li>• Poorer performance and productivity</li> </ul> <p>And, over time, a higher chance of:</p> <ul style="list-style-type: none"> <li>• Isolation from family and friends</li> <li>• more injuries in general and MSIs in particular</li> <li>• poor life-work balance</li> <li>• weight gain</li> <li>• job strain/toxic stress</li> </ul>	<ul style="list-style-type: none"> <li>• Have enough staff on hand to cover production or activity peaks</li> <li>• Reduce overtime: <ul style="list-style-type: none"> <li>- hire extra staff during extra busy production periods</li> <li>- modify the job design (e.g. going from 2 to 3 positions etc.)</li> </ul> </li> <li>• Upon hiring, warn of the likelihood of overtime</li> <li>• Give plenty of advance warning when overtime will be required</li> <li>• Increase the length of the work day rather than the number of work days per week (but avoid going to more than 10 hours a day regularly)</li> </ul>

Translated and adapted from SOBANE materials, available at [www.sobane.be/fr/tms\\_obs.html](http://www.sobane.be/fr/tms_obs.html)







## 22. Work organization/stressors - other hazards



What do you notice about:

Note: For background information, see other side.

•production bonuses?

•job rotation?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail  
on other side





## 22. Work organization/stressors - other hazards



We looked at ...	Why be concerned? (consequences)	Recommendations
<b>Production bonuses</b>	Productivity incentives lead to: <ul style="list-style-type: none"><li>• A faster pace of work</li><li>• Increased fatigue</li><li>• Adverse work conditions, more injuries</li></ul>	<ul style="list-style-type: none"><li>• Eliminate production or risk-incentive bonuses</li><li>• Give priority to health and safety, while respecting operators' interests and productivity constraints</li><li>• If there are bonuses, integrate them permanently into the wages, while minimizing the stressors</li></ul>
<b>Job rotation</b>	Lack of rotation leads to: <ul style="list-style-type: none"><li>• Constant posture, movements, and strain</li><li>• Monotony and a decline in alertness</li><li>• Increased risk of incidents</li></ul>	<ul style="list-style-type: none"><li>• Enhance staff flexibility and versatility</li><li>• Organize the work so that:<ul style="list-style-type: none"><li>- the same task is performed for less than an hour</li><li>- two or more tasks using different muscle groups are alternated (being careful to provide rest for the back)</li></ul></li></ul>

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## 23. Summary of observations

Work station/job: \_\_\_\_\_ Done by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

Observation headings	Item	Current situation		Future situation (after quick fixes)	
	Not applicable	Acceptable	Needs improvement	Acceptable	Needs more analysis
1. Computer or monitor work					
2. Tools, materials, controls, products					
3. Tools					
4. Work station - obstructions					
5. Posture - sitting					
6. Posture - standing					
7. Posture - neck, shoulders					
8. Posture - elbows, forearms, hands, wrists					
9. Posture - other positions/postures					
10. Repetition					
11. Force - manual materials handling equipment					
12. Force - vibrating tools					
13. Force - wrist and hand strain					
14. Force - pushing, pulling with the arms					
15. Force - lifting: characteristics of the load					
16. Force - lifting: starting position					
17. Force - lifting: moving the object					
18. Force - lifting: frequency & weight					
19. Work environment - general					
20. Work environment - lighting					
21. Work organization/stressors - time issues					
22. Work organization/stressors - other hazards					



### Assessment of prevention measures and planned improvements

- Review the proposed changes in each heading
- Exactly who will do what and when?
  - When will the implementation be planned?
  - When will the change be **done**? (compliance monitoring)
- In order of priority

Who	What	When	
		Planning	Done



**Need more in-depth analysis**, taking into account:

- the effectiveness of prevention or improvement measures described below
- hazards that may result from implementing the improvements
- in terms of urgency and goals





# Incident Investigation Report Form

SH.11

Check all applicable boxes

Minor injury ☐

Equip/property damage only ☐

Fire ☐

Near miss ☐

Serious injury ☐

Spill/environmental damage ☐

Explosion ☐

Other \_\_\_\_\_

## Occurrence

Location of occurrence: \_\_\_\_\_

Day of week: \_\_\_\_\_ M / D / Y Time: \_\_\_\_\_ am ☐ pm ☐

Weather conditions: \_\_\_\_\_

Brief description of event: \_\_\_\_\_

## Particulars of injured employee

Name of injured: \_\_\_\_\_ Gender: M ☐ F ☐ Age: \_\_\_\_\_

Occupation: \_\_\_\_\_ Amount of experience in job: \_\_\_\_\_

Describe injury: [Show on body map location of injury] \_\_\_\_\_

Direct cause of injury: \_\_\_\_\_

Supervisor/foreman: \_\_\_\_\_

Name of witness(es): \_\_\_\_\_

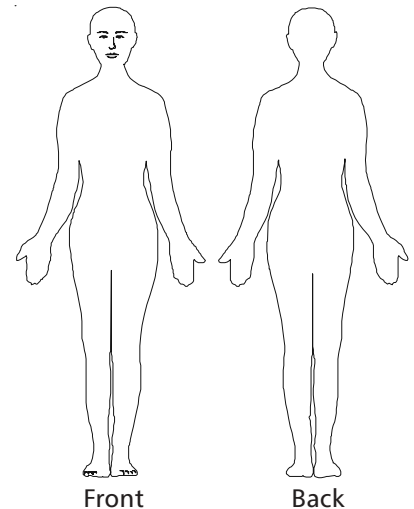
Who gave first aid: \_\_\_\_\_

Will employee be off work longer than day of incident? No ☐ Yes ☐

If "Yes", how long? \_\_\_\_\_

Hospital name/location: \_\_\_\_\_

Attending physician: \_\_\_\_\_



## Particulars of event

Explain the job or task being done and describe the events leading up to the incident. In the space below, draw diagram/map of area where incident occurred, and show equipment, tools, location of employee(s) when injured.

[Attach another sheet if necessary]



## Analysis

What specific actions and underlying conditions contributed to this incident?

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Check all applicable boxes for hazards involved:

Ergonomic ☐ Safety/Mechanical ☐ Physical ☐ Chemical ☐ Communicable/Biological ☐ Work organization/Stressors ☐

## Prevention

What corrective action has or will be taken to prevent a recurrence?

Action date / assigned to

<hr/>	<hr/>
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## Investigation team

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Name of person completing the report: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Workplace safety & health committee

Employee co-chair: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Comments/action: \_\_\_\_\_

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Employer co-chair: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Comments/action: \_\_\_\_\_

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# Guidelines for completing the INCIDENT INVESTIGATION REPORT FORM

## What is the purpose of investigating incidences?

Investigating incidences is an important tool for making a healthier and safer work environment. Incidents are preventable! By determining the causes of an incident, the health and safety committee can identify the reasons why the incident occurred and make recommendations to prevent it happening again. Incidents do not occur as unrelated events and there are always reasons why one occurs. The investigation needs to find the underlying causes so effective solutions can be made.

## Reporting "serious incidents" to the Workplace Safety & Health Division

When a "serious incident" occurs at a workplace, by regulation, the employer is required to report to the Workplace Safety & Health Division as soon as possible. A "serious incident" includes events that result in death or serious injury (see definition below); collapse or structural failure of a building, tower, crane, hoist, temporary construction support system or excavation; uncontrolled spill or escape of toxic, corrosive or explosive substance; an explosion, fire or flooding.

## Terms

minor injury - an employment injury or occupational illness where medical treatment is given but there is no lost time from work other than the day of the occurrence is experienced.

serious injury - fracture of a major bone; amputation; loss of sight; internal hemorrhage; third degree burns; unconsciousness resulting from concussion, electrical contact, asphyxiation; poisoning; cuts, injuries or work-related illnesses requiring hospitalization or time off work; an injury resulting in paralysis; any other injury likely to endanger life or cause permanent disability.

equipment/property damage - incidents that result only in damage to tools, equipment, machinery, vehicles, buildings and facilities.

spill/environmental damage - releases of liquids, solids and gases in the workplace or ones that result in pollution of soil, air and/or water on or around the location of the workplace.

fire - any fire that requires or results in the use of fire suppression equipment or requires the evacuation of a work area.

near-miss - an unplanned event that causes little or no property damage, but had the potential to cause major damage and/or injury.

other - could include incidents such as vehicle collisions, activation of a fall protection system, inadvertent immersion in water, high winds and other environmental conditions, temperature extremes, toxic substances or conditions.

## Occurrence

Location of occurrence - describe where the incident happened; be specific.

Day of week - if employee's work week starts on a day other than Monday, it should be noted and could be part of the "analysis" section. If the incident occurred on overtime, this again could be discussed in the "analysis". Other conditions that may have an impact and should be considered in

the "analysis" section include if incident occurs within days after switching on and off daylight saving time; the employee is returning from a lengthy absence from the workplace - holidays; employee has rotating shifts.

Weather conditions - include amount of cloud, temperature, wind speed, precipitation, if incident is outside or affected by these conditions.



## Particulars of injured employee

Amount of experience in job - how much experience does the employee have doing the particular task/job at time of incident.

Describe injury - explain type of injury/injuries and where located. If involving fingers explain which finger(s) were injured and where. Show location of injury on the body map.

Direct cause of injury - describe only the immediate cause of the injury/injuries. Why the condition(s)

existed for the incident to take place will be discussed in the "analysis".

Name of witness(es) - when gathering information and interviewing witnesses about the incident, make sure to emphasize that their information is confidential and also there can be no discriminatory action taken against them under the *Workplace Safety & Health Act*, sec. 42(1)(c).

## Particulars of event

When the report includes photographs, clearly describe what each image represents and what direction the view is facing. If using a digital camera, ensure the images are downloaded to a computer hard

drive or other memory device before deleting them from the camera. In the diagram space, orient the diagram/map so north is facing the top of the page.

## Analysis

This section looks at the specific actions, and underlying conditions that contributed to the incident, that were present or in effect at the time of the incident. This analysis should include looking at the task being done, materials and equipment used and other factors affecting the incident.

The six workplace hazard categories need to be explored to ensure all possible causes (the root causes) of the incident have been included. Each category has several elements to it and each may bear on the incident and must be examined.

Ergonomic design - repetitive work, work layout and environment, force/contact stress, posture/body position, work location layout and design, equipment design;

Safety/Mechanical - machine guards, interlocks & emergency stop devices, lock-out, pinch points, housekeeping, conditions of work floors and surfaces, trip hazards, moving equipment parts;

Physical - electricity, lighting/visibility, vibration, noise, temperature/humidity, ventilation, weather conditions (i.e. energy sources);

Chemical/Mineral - dusts, liquids, fumes, mists, solids, gases, vapours;

Communicable/Biological - moulds, viruses, bacteria, air quality, blood-borne diseases, sharps/needlesticks;

Work organization/Stressors - work process and procedures, health & safety standards and enforcement of these rules, pace/speed/intensity/pressure to produce, employee's emotional/physical status at time of incident, work load/demands, hours of work, labour/management issues, interaction with others in workplace, adequacy of supervision, maintenance provisions, hazard recognition and prevention, training/instruction/preparation of employee to do the job/task.

To get to the root cause of an incident, ask "WHY" five times. For example - an injury was caused by using a particular type of knife. Why was the worker injured? The knife slipped out of the employee's grasp. Why did the knife slip out of the grasp? etc.

## Prevention

Develop corrective action(s) that will prevent another incident. Some prevention strategies may include immediate or interim actions before long-term solutions can be put in place. Whether short-term or long-

term, the prevention action must be identified along with a target implementation date and a person assigned to ensure it takes place. (See the Prevention triangle for different types of prevention measures.)





## Mapping tools to see the workplace with “new eyes”

There are two main types of mapping tools for workplace safety and health - body maps and workplace maps.

Academics and doctors originally used body maps to investigate pain and musculoskeletal injuries (MSIs). Now many organizations and workplaces use them to look at symptoms. The injuries, illnesses and diseases for which they have been used range from MSIs to cancer to chronic pain.

Some body maps are drawn on the spot. Others are prepared and used to present information. In one workplace, information about workers compensation claims for people working around a printing press was put onto a map. The result: the map-makers “saw” head injuries they had not noticed on the list of statistics, and traced them back to a bar on which people were bumping their heads.

Workplace maps can be used to “see” symptoms, hazards and social information (e.g. how information gets around a workplace). The symptoms and hazards can be specific or general ones, depending on the questions and information you have.

Maps are becoming an essential tool for people dealing with health and safety issues.

**Why map?** Once something is visible, it’s hard to ignore the issue or situation. People talk about “seeing the workplace with new eyes” when they make body and workplace maps. The maps can be used to tell stories, identify “players” and start the process of prioritizing issues. Once identified, solutions can be developed and strategies to work towards them discussed.

For more information about mapping, see *Barefoot Research* in the Resource Guide and [www.hazards.org/ http://www.hazards.org/diyresearch/index.htm](http://www.hazards.org/diyresearch/index.htm).

### Body maps

You can make body maps in several ways.

For individuals or surveys: Use the body map outline included on page 5 of this document.

For groups: Use a sheet of paper (preferably a large one, like a flip chart) and draw a large version of the body map from this section. Label the front and back, and left and right sides.

To use the maps, also see Parts C and D of the Manual.

For more information about body maps, see the *Resource Guide* in this manual. For an example of how they were used during an investigation, see <http://www.cdc.gov/niosh/hhe/reports/pdfs/1998-0085-2715.pdf>.



## Workplace maps

Workplace maps are fun to make, easy to use and accessible to many. They can be made at meetings, before and after inspections or investigations, or by small committees analyzing particular problems.

These maps start with drawing the physical layout of the workplace or part of it. You then add information about who works there and safety and health issues.

These instructions are separated into basic and more advanced. Start with the version that suits your situation. Adapt as you go.

Remember that the instructions are for a map for one work area. Make more maps to cover the workplace and jobs elsewhere. Put them together in the way that best helps you “see” the connections and what’s happening.

## Instructions for making a workplace map

### 1. Get your supplies:

#### a) Basics

- one sheet of paper per work area
- coloured pens/pencils/markers - black, red, blue, yellow, brown, purple, green
- list of hazards (see below)
- *Hazard categories for mapping sheet*
- adhesive green dots (for workers) and red dots (supervisors) [get at stationary store]

#### b) More advanced

- flip chart sheet(s)
- markers - black, red, blue, yellow, brown, purple, green
- list of hazards (see below)
- *Hazard categories for mapping sheet*, p.6
- adhesive green dots (for workers) and red dots (supervisors) [get at stationary store]
- coloured string - three colours, including purple
- tape and scissors

### 2. Choose what work area you want to map. Make sure it is suitable for the size of paper. You want to be able to “see” hazards and where people are.

### 3. List the hazards. Beside each hazard category listed below, name one example found in the work area. You can add to this later. Use the *Hazards - the problems behind our symptoms* (SH. 2) sheet as a reminder about what each category includes.

*Physical* (from energy sources):

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*Chemical/Mineral:*

---

*Communicable/Biological:*

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*Ergonomic design:*

---

*Safety/Mechanical:*

---

*Work organization/Stressors:*

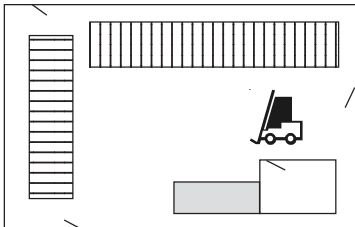
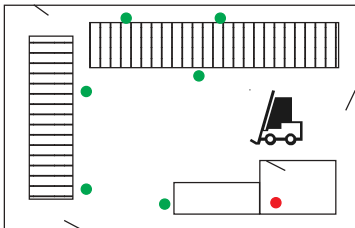
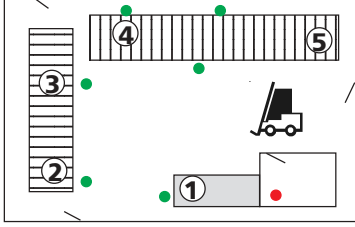
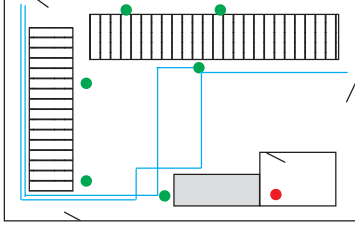
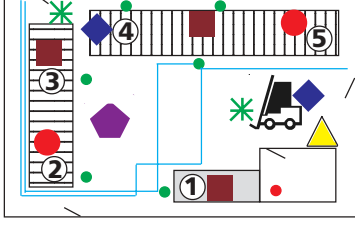
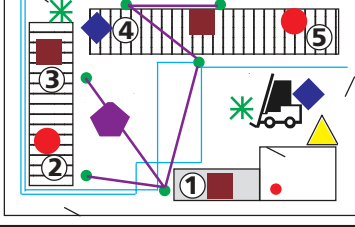
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### Mapping tools to see the workplace with “new eyes”

4. Make the map using the chart below. The physical layout should include all rooms, important doors, windows and stairs,

equipment/machinery, desks and computers, etc. Add things as you go along, if you miss anything.

Information	Basic map		More advanced map
Physical layout	Draw the layout on the paper, using a black marker or pen. Choose a scale that fits the page.		Draw the layout on the paper, using a black marker or pen. Scale the drawing so it fits the page.
People	Put the <u>green</u> dots where workers usually are. Use <u>red</u> ones for supervisors.		Put the <u>green</u> dots where workers usually are. Use <u>red</u> ones for supervisors.
Production process or flow of work	Mark the order of things the production process. Use numbers or draw a line to show where it goes from start to finish. If it is not a production line, see next row.		Use coloured string to show the order in which things are done, from start to finish. If it is not a production line, see next row.
Where people go (places without production lines)	Choose a “typical” worker. Use a coloured marker or pen to draw their path in the workplace - where they go from arriving to leaving.		Choose a “typical” worker. Use coloured string to show their path in the workplace - where they go from arriving to leaving. Use clear tape to hold it down.
Hazards	Use the <i>Hazard categories for mapping sheet</i> . Put hazards from your list on the map, use the colours and symbols on the sheet. Make the icons large if the hazard affects a lot of people or the levels are high.		Use the <i>Hazard categories for mapping sheet</i> . Put the hazards from your list on the map, using the colours and symbols for each type. Make the icons large if the hazard affects a lot of people or the levels are high.
Lines of communication			Use the purple string to mark how the grapevine gets information around this work area. Use another colour of string to show how health and safety information gets around here. Tape the strings down.





## Mapping tools to see the workplace with “new eyes”

5. Analyze the map. Looking at the map you made, discuss it with questions such as:
  - *What do you see? What’s going on?*
  - *Where is there more than one hazard?*
  - *What is one thing you learned from this map?*
  - *What’s missing?*
  - *What other information do we need?*
  - *How can we get it?*

Keep track of your answers to the last two questions. Decide how you will get the answers, assign individuals to do that and agree on a deadline.

Put smaller maps together to get a picture about what’s happening in the whole workplace. The same questions are a good place to start to analyze the bigger picture.

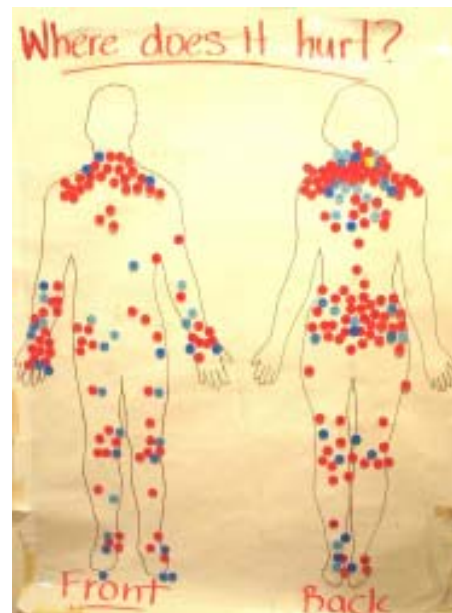
6. Set priorities about which hazards need to be fixed. Start by discussing:
  - *What are two priority hazards or situations in this work area?*
  - *Why are they important?*

For a more detailed, and organized, approach to setting priorities, use the tool called *Criteria for decision-making* (CP.6) in the Committee Process toolbox.

7. Follow-up by talking about how to use these maps. Examples include to:

- show where you expect to find hazards
- keep track of where hazards are found during inspections and investigations
- indicate where symptoms turn up
- view the workplace from above, making it easier to “see” and analyse situations
- set priorities
- present information
- plan changes

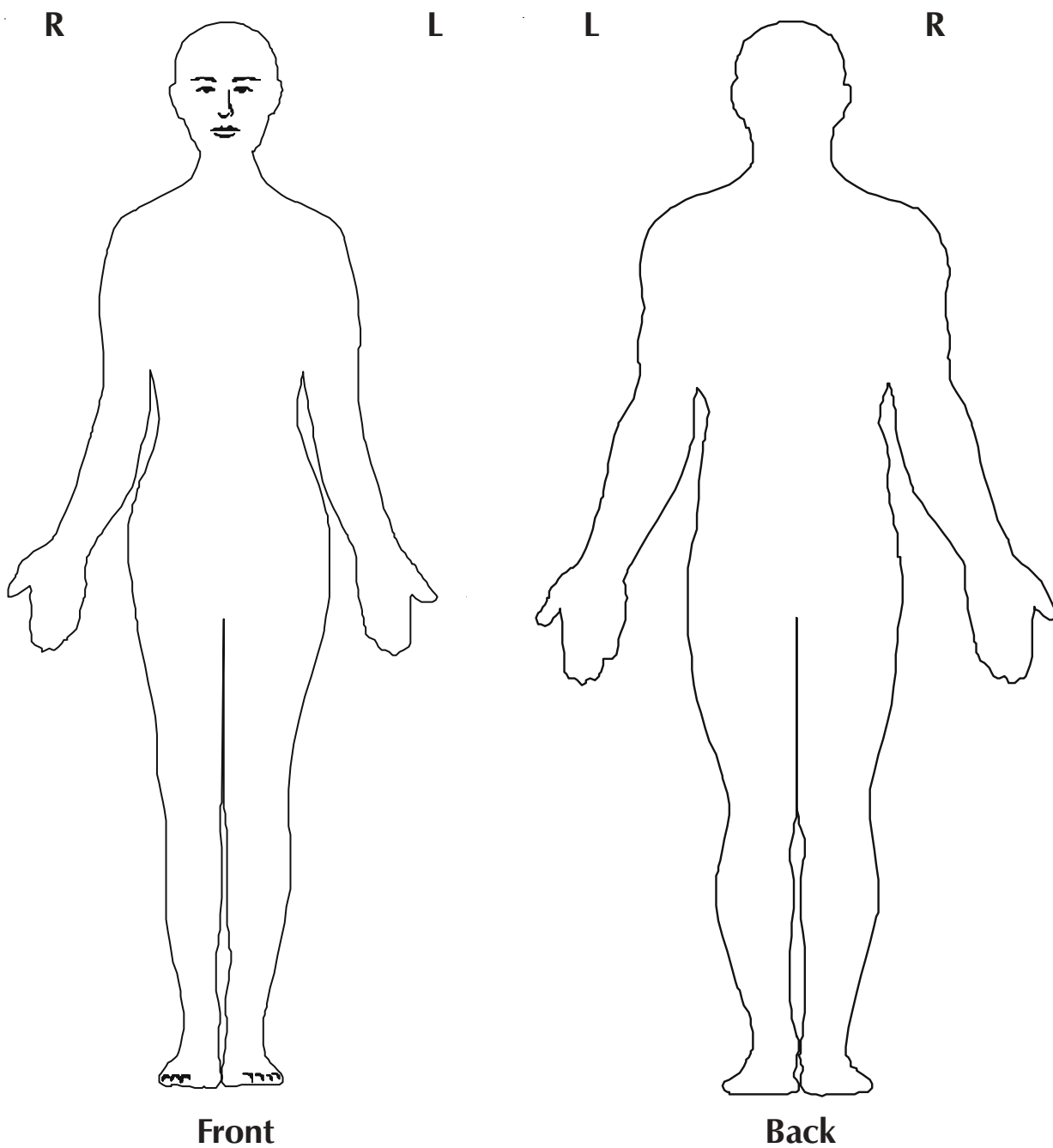
In your committee, make your own list of how you can use these maps.









Examples of workplace maps: left - a laundry area, bottom right - a hospital recovery room, and upper right - a body map.



# Where does it hurt?



## Hazard categories for mapping

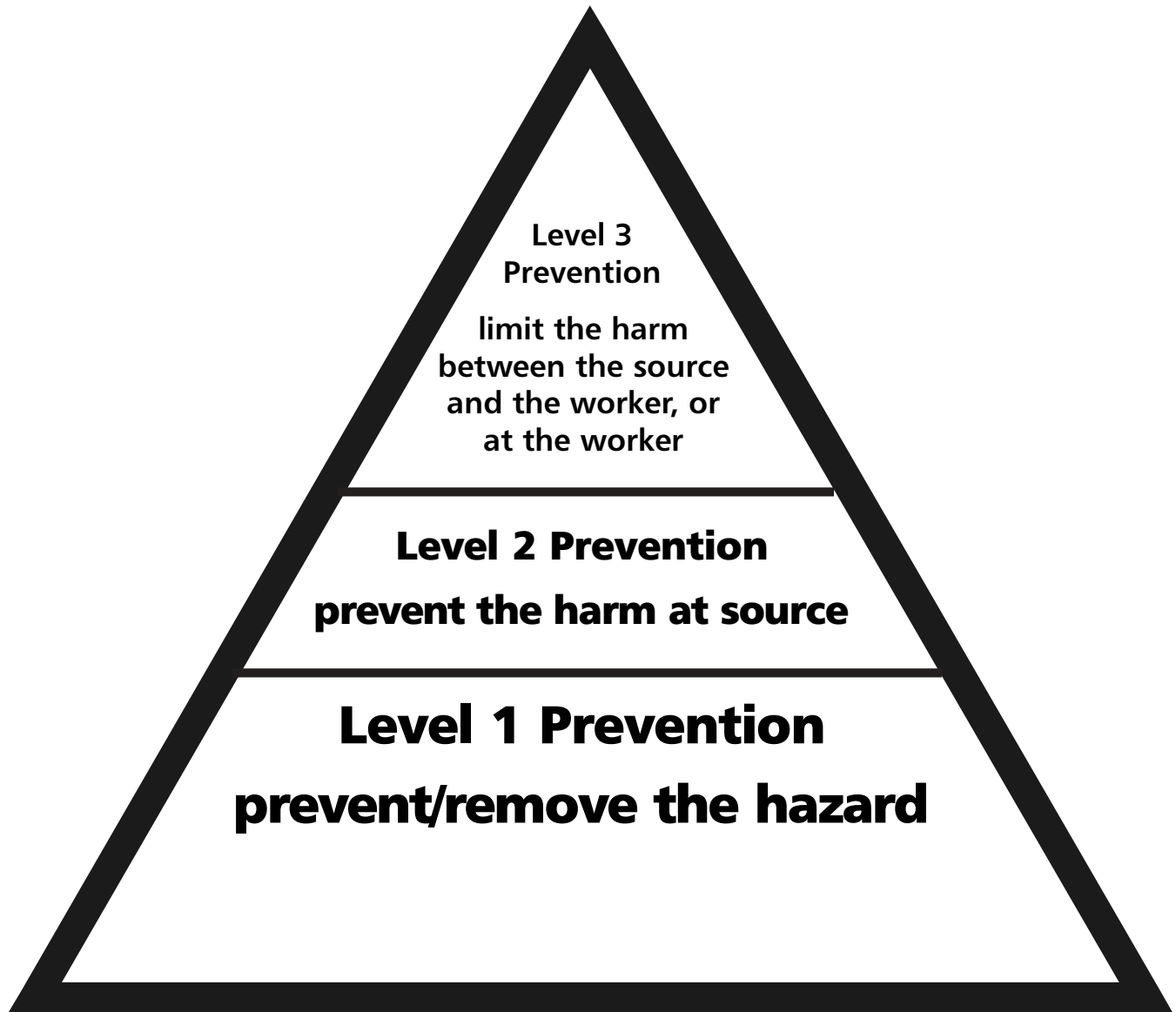
Hazard	Colour	Icon
<b>Physical (energy sources):</b> lighting, electricity, vibration, noise, temperature, humidity, radiation	Red	
<b>Chemical/Mineral:</b> gases, mists, vapours, solids, dusts, fumes, liquids	Blue	
<b>Communicable/Biological:</b> blood-borne diseases, viruses, bacteria, moulds, sharps/needlesticks	Yellow	
<b>Ergonomic design:</b> repetition, awkward and static posture, force (including contact stress), work environment	Brown	
<b>Safety/Mechanical:</b> slips/falls, housekeeping, tripping hazards, moving equipment/parts, things that cause traumatic injuries	Green	
<b>Work organization/Stressors:</b> pace/intensity, social support/relations, workload/demands, control/latitude, flexibility for non-work responsibilities, violence	Purple	





# Prevention triangle

*Principles for solving health and safety problems\**



**\* If you rely on level 3 prevention, the triangle is upside down and falls over.**



# What's behind the prevention triangle?

The triangle borrows two concepts from the environmental movement.

**Substitution** is the principle about getting rid of toxic substances whenever a healthier and/or safer substance is available especially a non-toxic one. Substitution also describes changes about how things are done, using a different technology or reorganizing the task to reduce or remove hazards.

The **precautionary principle** - “better safe than sorry” - is part of Canada’s federal environment law. The idea is that there must be proof that something is not harmful before it is used, rather than using workers or the community as guinea pigs and only taking action when problems appear.

The word “controls” is often used to describe changes or solutions that reduce exposure but don’t remove the hazard. The current focus is prevention as opposed to putting up with a hazard. The Belgians offer a very useful way to do this, with levels of prevention (see <http://www.meta.gov.be>).

**Level 1 prevention** is best. It gets rid of a hazard or avoids introducing a new one (when you use the precautionary principle). This is where substitution using non-toxic alternatives is most effective. Public health practitioners would call this primary prevention.

**Level 2 prevention** (or engineering solutions or controls at the source) limits the hazard at its source (reducing its spread). The hazard is still there but ways to prevent harm include:

- ventilation enclosing the hazard, taking it all out of the workplace (without damage the environment);
- enclosures to reduce noise levels;
- isolating the hazard or the people who may be exposed to it; and
- wet methods (with dusts).

**Level 3 prevention** only limits or reduces harm by putting something between the worker and the hazard source.

Changes or “controls” along the path between the hazard and workers, include:

- local ventilation that does not enclose the hazard;
- general ventilation;
- mechanical guards/devices; and
- some administrative controls (e.g. breaks).

At the worker (“controls at the worker”), Level 3 prevention includes personal protective equipment/clothing (PPE) and:

- some administrative activities (e.g. rotating workers, because studies say it just spreads the hazard around and may even make it worse for some, especially if hazards to the back are involved);
- work procedures, training and supervision, emergency plans;
- housekeeping, repair and maintenance programs, and hygiene practices and facilities; and
- things to take care of yourself (especially when you’re stressed).

These solutions are the least acceptable way to try to fix a problem, although there are times when they’re needed.



# Workplace stressors have toxic effects

## What we feel right away is ...

Dry mouth, difficulty swallowing

Out of breath or short shallow breathing

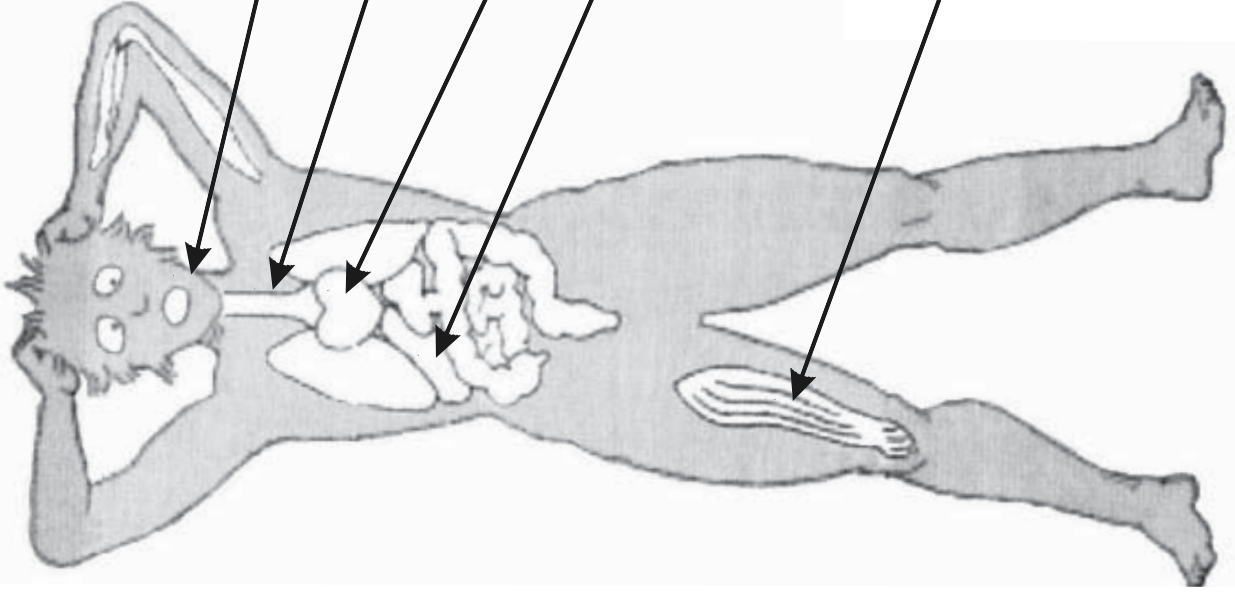
Heart races

Stomach feels “funny” (butterflies, knots)

Sweaty

Tense, achy, muscle pain, “shaky” feeling

Pins and needles



## What's going on? Short-term stress effects include...

Body fluids like saliva redirected into the bloodstream

Airways widen to bring in more oxygen/energy to muscles

Blood pressure and heart rate increase to send oxygen/energy to muscles

Liver releases stored energy

Skin sweats to cool hot working muscles

Bloodstream gets more cholesterol, fatty acids and sugar for extra energy

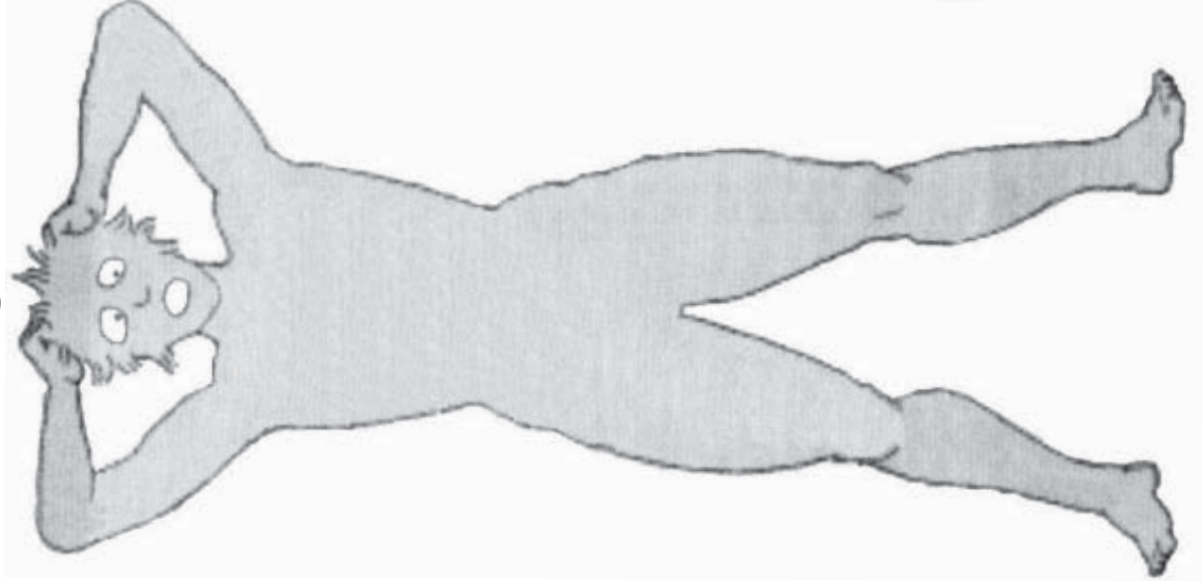
Protein production decreases, muscle tissue slowly breaks down

Muscles tense up

Calcium discharges from tense muscles



# Strain/toxic stress - long-term effects of stressors



## Physical effects include ...

Sleep disorders, insomnia, fatigue, exhaustion

Headaches, tension, grinding teeth

Cardiovascular problems such as high blood pressure, heart attacks, other heart and circulation system problems

Chest pain/problems

Immune system problems which then make it easier to get sick

Asthma

Digestive system problems - spastic colon, ulcers, impaired digestion, irritable bowel syndrome, weight gain or loss

Diabetes

Menstrual disorders

Sexual dysfunction

Joint and muscle pains, arthritis

Burnout

## Non-physical effects include ...

Anxiety, increased tension and fearfulness

Feeling apathetic, low self-worth, blaming ourselves for our stressed state

Social isolation, withdrawal at home and work, stop participation in family, sports and community activities

Inability to concentrate and finish tasks

Mistrust, blaming others (company, co-workers, union, government)

Drug and alcohol dependency

Conflict with family and friends (sometimes violent), arguing with co-workers and supervisors

Anger, frustration, envy

Depression, mood changes, constant negativity

Suicidal thoughts

Over reaction, irrational behaviour

Job dissatisfaction





# Using the Law Toolbox

- L.1 Introduction to rights, duties and the “players” in safety and health in Manitoba
  - 1. Worker rights, employer duties
  - 2. The players, in detail
  - 3. Players’ responsibilities - some more details
- L.2 Refusing “dangerous work”
- L.3 Responsibilities of workplace safety and health committees and representatives in Manitoba
- L.4 Translating the law - using plain language





## Introduction to rights, duties and the “players” in safety and health in Manitoba

Like most Canadian health and safety laws, Manitoba’s *Workplace Safety and Health Act* includes the principle of workers’ rights - ideas designed to protect their health and safety. These rights are there because employers have duties - things they must do.

This tool starts with a list of workers’ rights - to a healthy and safe workplace, to know, to participate, to refuse dangerous (unhealthy or unsafe) work, and to no discrimination for health and safety activities or using the other rights. The rights are not named specifically in the law; they are the result of employer responsibilities. For each right, we list employer duties and the section of the *Act* where they are found.

The next section is about the “players”. Who are they? What are they supposed to do? The list is a general one only. The third section provides more details about the main players’ responsibilities. Specifics for the committee/representative are in another tool - *Responsibilities of workplace safety and health committees and representatives in Manitoba* (L.3).







## 1. Worker rights, employer duties

<i>Worker right</i>	<i>Employer duty</i>	<i>... says this part of the law</i>
A healthy and safe workplace	Obey the law, in the context of the objects and purposes of the <i>Act</i> which talk about prevention.	<i>Act</i> , section 4(1)(b)
	Take care of all his or her workers' safety, health and welfare at work, in the context of the objects and purposes of the <i>Act</i> which talk about prevention (as far as reasonably practicable) ("Welfare" refers to things such as washrooms, washing up facilities, rest areas, etc.) Also is part of the right to refuse.	<i>Act</i> , section 4(1)(a)
	Run the workplace so that people not employed there are not exposed to health or safety hazards related to what goes on there (as far as reasonably practicable).	<i>Act</i> , section 4(2)(d)
	Provide and maintain a workplace, necessary equipment, systems and tools so they are not hazardous (as far as reasonably practicable).	<i>Act</i> , section 4(2)(a)
	When an employer, or someone representing them (e.g. a supervisor), knows - or ought to know - that something in the workplace is or could be dangerous to a worker's safety or health, s/he shall not make or let any worker do that task until the dangerous condition is fixed. Part of the law about the right to refuse.	<i>Act</i> , section 43.3(1)
	Provide all workers with <ul style="list-style-type: none"> <li>• information,</li> <li>• instruction,</li> <li>• training,</li> <li>• supervision, and</li> <li>• facilities</li> </ul> to prevent them from getting sick, hurt or dying because of work (as far as reasonably practicable). Also part of the right to know.	<i>Act</i> , section 4(2)(b)

The authors' wording presented above does not replace the Province of Manitoba's legislated Act and Regulations. The official versions can be found on-line at <http://www.gov.mb.ca/labour/safety/actregnew.html> or by contacting the Manitoba Workplace Safety and Health Division office.



## Introduction to rights, duties and the “players”

<i>Worker right</i>	<i>Employer duty</i>	<i>... says this part of the law</i>
A healthy and safe workplace (cont'd)	Have a written workplace safety and health program for each workplace where there are 20 or more regular employees.	Act, section 7.4(1)
	After getting a written recommendation from a committee or representative about possible safety or health problems, within 30 days provide a written answer that: <ul style="list-style-type: none"> <li>• has a timetable to implement the recommendations s/he accepts, and</li> <li>• gives reasons why s/he disagrees with any recommendation unless the employer implements all the recommendations before then. Also part of the right to participate.</li> </ul>	Act, section 41.1(2)
	If employees are working on a construction site with a prime contractor, give the prime contractor the name of the person supervising those workers on the project.	Act, section 4(2)(i)
	Co-operate with anyone else who has responsibilities under this law (e.g. SHOs, unions).	Act, section 4(2)(g)
To know	Make the health and safety programme available to these people, if they ask for it: <ul style="list-style-type: none"> <li>• the committee or rep,</li> <li>• anyone working there, or</li> <li>• a safety and health officer.</li> </ul>	Act, section 7.4(7)
	Make sure that all workers, and especially supervisors, know about any hazards workers may face on the job.	Act, section 4(2)(c)
	Ensure that all workers are supervised by someone who: <ul style="list-style-type: none"> <li>• is competent (in terms of knowledge, training or experience) to make sure that work is done safely, and</li> <li>• knows the Act and regulations that apply to the work being done.</li> </ul>	Act, section 4(2)(h)

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## Introduction to rights, duties and the “players”

<i>Worker right</i>	<i>Employer duty</i>	<i>... says this part of the law</i>
To know (cont'd)	Provide all workers with <ul style="list-style-type: none"> <li>• information,</li> <li>• instruction,</li> <li>• training,</li> <li>• supervision, and</li> <li>• facilities</li> </ul> to prevent them from getting sick, hurt or dying because of work (as far as reasonably practicable). Also part of the right to a healthy and safe workplace.	Act, section 4(2)(b)
	Provide information, instruction and training to workers to ensure, (as far as reasonably practicable) their health and safety before they: <ul style="list-style-type: none"> <li>• start any kind of work,</li> <li>• do work for which s/he was not trained, or</li> <li>• are moved to another area of the workplace or a different workplace with different facilities, procedures or hazards.</li> </ul>	Act, section 4(4)
	Make sure that workers know how to use equipment or devices that are supposed to prevent or reduce exposure to hazards.	Act, section 4(2)(c)
	When hollow-bore or intravenous needles are used in a medical workplace, make sure that: <ul style="list-style-type: none"> <li>• workers use only safety-engineered needles (as far as reasonably practicable) and</li> <li>• safe work procedures and practices for the use of those safety-engineered needles are implemented.</li> </ul> Also part of the right to a healthy and safe workplace.	Act, section 45.1(1),(2)
	When someone uses the right to refuse, shall not request or assign another worker to do the task, unless the other worker is told about the refusal and the reasons for it by the worker who refused, or by a SHO. Also part of the right to refuse.	Act, section 43(6)

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## Introduction to rights, duties and the “players”

<i><b>Worker right</b></i>	<i><b>Employer duty</b></i>	<i><b>... says this part of the law</b></i>
To know (cont'd)	<p>If a committee or representative asks, the employer or prime contractor shall give them:</p> <ul style="list-style-type: none"> <li>• information about tests of any equipment, devices or chemical or biological substances used in the workplace,</li> <li>• an health and safety inspection or investigation report for the workplace, and</li> <li>• a report about safety and health monitoring or audits in the workplace.</li> </ul> <p>Also part of the right to participate.</p>	Act, section 41.2
	<p>Let each member of the committee, a representative, or people they name, take paid educational leave each year</p> <ul style="list-style-type: none"> <li>• for the number of hours the worker usually works in two normal working days,</li> <li>• to attend safety and health seminars, programs or courses offered by the Division, approved by the Committee, or agreed to in the current union contract.</li> </ul> <p>Also part of the right to participate.</p>	Act, section 44(1)
To participate, through a joint committee or rep	<p>Set up a workplace safety and health committee:</p> <ul style="list-style-type: none"> <li>• for each workplace with at least 20 regularly employees, and</li> <li>• for any other workplace or class of workplace that the WSHD Director names.</li> </ul>	Act, section 40(1)
	<p>Organise the selection of a worker not associated with management as the worker safety and health representative (rep)</p> <ul style="list-style-type: none"> <li>• at a workplace (except for a construction project) where a committee is not required, but where at least 10 people work regularly,</li> <li>• at a construction project, and</li> <li>• at any other workplace or classes of workplaces that the Minister names.</li> </ul>	Act, section 41(1)
	Consult and co-operate with the joint health and safety committee or representative, about all the things they are supposed to do.	Act, section 4(2)(e), (f)
	Design the programme in consultation with the joint committee or the representative.	Act, section 7.4(6)

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## Introduction to rights, duties and the “players”

<i>Worker right</i>	<i>Employer duty</i>	<i>... says this part of the law</i>
To participate, through a joint committee or rep (cont'd)	After getting a written recommendation from a committee or representative about possible safety or health problems, within 30 days provide a written answer that: <ul style="list-style-type: none"> <li>• has a timetable to implement the recommendations s/he accepts, and</li> <li>• gives reasons why s/he disagrees with any recommendation</li> </ul> unless the employer implements all the recommendations before then.	Act, section 41.1(2)
	If a committee or representative asks, the employer or prime contractor shall give them: <ul style="list-style-type: none"> <li>• information about tests of any equipment, devices or chemical or biological substances used in the workplace,</li> <li>• an health and safety inspection or investigation report for the workplace, and</li> <li>• a report about safety and health monitoring or audits in the workplace.</li> </ul> Also part of the right to know.	Act, section 41.2
	Let each member of the committee, a representative, or people they name, take paid educational leave each year <ul style="list-style-type: none"> <li>• for the number of hours the worker usually works in two normal working days,</li> <li>• to attend safety and health seminars, programs or courses offered by the Division, approved by the Committee, or agreed to in the current union contract.</li> </ul> Also part of the right to know.	Act, section 44(1)
	If a SHO/inspector requests it, let someone go with him or her for an inspection or investigation, and pay that person (usually a committee member or rep).	Act, section 41.3(2)
	Pay committee members/ reps for time spent carrying out legal duties.	Act, section 40(11)
	Make sure that the names of the committee members or representatives are posted conspicuously in the workplace.	Act, section 40(9)

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## Introduction to rights, duties and the “players”

<i>Worker right</i>	<i>Employer duty</i>	<i>... says this part of the law</i>
To refuse	Take care of all his or her workers' safety, health and welfare at work, in the context of the objects and purposes of the Act which talk about prevention (as far as reasonably practicable). (“Welfare” refers to things such as washrooms, washing up facilities, rest areas, etc.) Also part of the right to a safe and healthy workplace.	Act, section 4(1)(a)
	When a worker uses the right to refuse, shall not request or assign another worker to do the task, unless the other worker is told about the refusal and the reasons for it by the worker who refused, or by a SHO.	Act, section 43(6)
No discrimination for health and safety activities or issues	No employer (or union or someone acting on behalf of either) shall take or threaten discriminatory action against a worker for a variety of things related to health and safety and using their health and safety rights. This includes taking reasonable action to protect someone else (e.g. the right to refuse).	Act, section 42(1)

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## 2. The players, in detail

### 2.1 The main “players”

Player	Who are they?	What are they supposed to do?
Employers	The “employer” is the person ultimately responsible for hiring people. Can be in a company or non-profit organisation, union or contractor, the provincial government or its agencies.	<p>Employers must look after their workers’ health, safety and welfare, so far as “reasonably practicable” (section 4(1), the Act).</p> <p>Employers also must:</p> <ul style="list-style-type: none"> <li>• maintain the workplace, tools and equipment to avoid/prevent hazards;</li> <li>• fix hazards; and</li> <li>• provide information, training and competent supervisors for all employees.</li> </ul> <p>There are particular “rules” for construction sites.</p>
Supervisors	People in charge of a workplace or who have authority over a worker. They also are employees, unless they are the employer (e.g. in a small workplace).	<p>Supervisors are caught between employers and other workers. That means they respond to workers’ questions or reports about health and safety. They also carry out the employer’s decisions about how to fix hazards, train workers, provide information, etc.</p> <p>Section 4.1 was added to the Act in 2002. It says supervisors must (as far as “reasonably practicable”):</p> <ul style="list-style-type: none"> <li>• do everything necessary to protect the health and safety of those they supervise; and</li> <li>• make sure those workers do their job according to the law.</li> </ul> <p>Supervisors also must tell those they supervise about all the health and safety hazards that they know are, or reasonably expect to find, in the work area.</p>

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## Introduction to rights, duties and the “players”

Player	Who are they?	What are they supposed to do?
Workers	Workers are employees. It doesn't matter where they work (except for workplaces covered by the federal law). A self-employed person who is hired for a job. Also anyone who is being trained, or serving an apprenticeship, wherever that's done.	Workers have the least responsibility for health and safety at work. Their main duty is to report hazards. It's because they must: <ul style="list-style-type: none"> <li>• take “reasonable care” to protect their own safety and health, and that of others who may be affected by what they do or don't do; and</li> <li>• when the job requires it, use devices or wear protective equipment provided by the employer or otherwise required by law (Part 6 of the <i>Workplace Safety and Health Regulation</i> says the employer must do certain things before requiring and providing protective equipment)</li> </ul>
Workplace safety & health committee/ representative	<p>This is are the legal name for joint employer-worker/union committees set up to deal with health and safety issues at work. Other names used include:</p> <ul style="list-style-type: none"> <li>• joint health and safety committee,</li> <li>• joint occupational safety and health (JOSH) committee,</li> <li>• safety committee, and</li> <li>• workplace health and safety advisory committee.</li> </ul> <p>Committees are required in workplaces with 20 or more regular workers. There usually is only one committee per workplace. [See the <i>Act</i>, sections 40(2), 40(3), 40(5) and 40(6) for exceptions.]</p> <p><u>Committees</u> have between four and 12 representatives. At least half of them must represent workers. In unionized workplaces, the union chooses its representatives. If there's no union, there must be a democratic election. Management appoints its representatives however it chooses, but cannot interfere with the selection of workers for the committee. Each “side” chooses a co-chairperson. [See <i>Act</i> sec. 40(8).] <u>Representatives</u> (reps) are workers who are not involved with management. They are required in workplaces with 10 - 19 regular employees, or when the Minister of Labour requires them. Reps are appointed according to the union's constitution or elected by the workers involved, in nonunion workplaces. Reps work with an employer representative.</p>	<p>Committees and representatives have the same duties. They include:</p> <ul style="list-style-type: none"> <li>• receive and deal with workers' health and safety questions and complaints;</li> <li>• inspect the workplace regularly;</li> <li>• participate in identifying workplace hazards and investigations of workplace incidents or near-misses;</li> <li>• develop and promote: <ul style="list-style-type: none"> <li>- ways to protect safety, health and welfare, and evaluate how well the solutions work; and</li> <li>- health and safety education and information programmes;</li> </ul> </li> <li>• make recommendations to the employer or prime contractor about workers' health and safety;</li> <li>• co-operate with a workplace health and safety department or company official (“occupational health service”); and</li> <li>• keep records about what they do.</li> </ul> <p>There are more details in other parts of the <i>Act</i> or regulations. For example, the employer must consult the committee or representative about any “safe work procedure” developed under the <i>Workplace Safety and Health Regulation</i>.</p> <p>Also see L.3 <i>Responsibilities of workplace safety and health committees in Manitoba</i>.</p>

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## Introduction to rights, duties and the “players”

Player	Who are they?	What are they supposed to do?
Unions	Unions are the collective voice of workers in a workplace. To be a player, they must be recognized as the bargaining agent for those workers.	<p>Unions play an important role in health and safety for they must choose:</p> <ul style="list-style-type: none"> <li>• worker representatives for the workplace safety and health committee,</li> <li>• workplace safety and health representatives (reps); and</li> <li>• worker representatives to go with safety and health officers/inspectors for inspections or investigations, when there's no committee or representative.</li> </ul> <p>Given that, they may expect people they choose to report to the union executive and/or members about what they're doing and to relay complaints and questions from members.</p>
Safety and health officers (inspectors)	In Manitoba, the Workplace Safety and Health Division (WSHD) or “the Division” looks after health and safety issues. They are part of the provincial Department of Labour and Immigration. Their inspectors are called safety and health officers or SHOs. The person in charge of the Division is the Director (sometimes called the Assistant Deputy Minister).	<p>The WSHD inspectors have few duties - things they must do - in relation to other players. But they do have a lot of “powers” - things they may do. They may go into workplaces without a warrant (unless it's a residence), test equipment, look at documents and stop people doing a job or close an entire workplace.</p> <p>Inspectors are the police officers of health and safety law. They are the only ones (aside from the courts) who can enforce the law - make people obey it. Inspectors use “orders” to enforce the law. These documents, called “improvement orders”, say what part of the law has been broken and directs the party responsible to “fix” the situation. The inspector can also issue improvement orders with “stop work warnings” and stop work orders (Sections 26 to 36 of the Act).</p> <p>If their improvement orders are not obeyed, inspectors also may go to the deputy minister of their department with that evidence. The deputy may assess an administrative penalty of up to \$5000 (section 53.1 and the <i>Administrative Penalties Regulation</i>).</p> <p>Anyone affected by an inspector's order or decision may appeal to the Director. Appeals of the Director's decision(s) go to the Manitoba Labour Board.</p>

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## 2.2 Other “players”

Who are they?	What must they do?	Where does it say this
Self-employed people	<ul style="list-style-type: none"> <li>operate their business to make sure that they or others are not exposed to safety or health hazards, as far as “reasonably practicable”</li> <li>on a construction project, tell the prime contractor when they’re working there</li> <li>obey the law</li> <li>co-operate with anyone carrying out their legal health and safety responsibilities</li> </ul>	Act, section 6
Owners (of land or buildings used for workplaces; for definition, see Section 1 in the Act)	<ul style="list-style-type: none"> <li>make sure that they provide and maintain land or buildings which they control, and is used for a workplace, so that there aren’t health and safety hazards for anyone, as far as “reasonably practicable”</li> <li>obey the law</li> <li>co-operate with anyone carrying out their legal health and safety responsibilities</li> </ul>	Act, section 7.2
Prime contractor, contractors, owners	<ul style="list-style-type: none"> <li>provide to every employer and self-employed person in the workplace all “required information” as far as “reasonably practicable”:               <ul style="list-style-type: none"> <li>that may affect the safety and health of anyone in a workplace;</li> <li>needed to identify and deal with existing or possible hazards related to a workplace, process, procedure or biological or chemical substance used at a workplace; or</li> <li>spelled out as required, in a regulation.</li> </ul> </li> </ul>	Act, sections 7.5(1) to 7.5(4)
Suppliers (who supply, sell, lease, install or provide these things for use in a workplace: tools, equipment, machines, devices, or biological or chemical substances)	<ul style="list-style-type: none"> <li>make sure that anything they provide, as far as reasonably practicable:               <ul style="list-style-type: none"> <li>is not hazardous when used according to the supplier’s instructions, and</li> <li>is consistent with what’s required in the health and safety law;</li> </ul> </li> <li>when a regulation says so, provide required written instructions and information to every employer, self-employed person, contractor or prime contractor to whom they supply (any of the items in the list at the left);</li> <li>obey the health and safety law.</li> </ul>	Act, section 7.3

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### 3. Players’ responsibilities - some more details

#### 3.1 Employers

The law says [the Act, section 4(2)] **employers must:**

- fix hazards - i.e. provide and maintain the workplace, and the tools and equipment there, to avoid safety and health hazards;
- provide information, instruction, training, supervision and “facilities” to make sure their workers’ health, safety and welfare is looked after;
- make sure that all workers, especially supervisors, know about health and safety hazards in the workplace and how to use protective equipment or devices;
- do things to prevent others (not employees) from facing health or safety hazards related to workplace activities;
- consult and co-operate with the committee or representative;
- co-operate with anyone who has responsibilities under the law (e.g. inspectors); and
- make sure that all workers are supervised by people who are competent (because of knowledge, training or experience) to make sure that job tasks are done in a safe and healthy way and who know the law as it applies to activities in the workplace.

**Section 42 of the Act** says that employers cannot discriminate against employees for a variety of activities related to health and safety, including:

- using their rights, including the right to refuse
- carrying out a duty
- taking “reasonable action” to protect another person’s health and safety
- doing their job as a committee member
- talking to a committee member or inspector
- obeying the law
- trying to have the law enforced

**Construction sites** have some particular “rules”. Where there is more than one employer or self-employed person at the same time, there has to be a **prime contractor**. Section 7(3) of the Act says this person must:

- make sure that everyone working on the project obeys the health and safety law (as far as reasonably practicable);
- co-ordinate, organize and oversee the performance of all work at the site;
- conduct their own activities to make sure that no one is exposed to safety or health hazards as a result of activities on the site (as far as reasonably practicable);
- co-operate with anyone doing their duty under the health and safety law; and
- obey this Act and the regulations.

Construction sites - and other workplaces - also may have **contractors**. Section 7.1 of the Act sets the scene by saying their responsibilities apply to situations where:

- an employer, their worker(s) or a self-employed person works under a contract with the contractor, and the employer or self-employed person has no direct and complete control of
  - a workplace, or
  - a process or procedure at the workplace.

In these situations, the contractor must make sure that the workplace, process or procedure does not create a health or safety hazard for anyone (as far as reasonably practicable).

When the construction project has a prime contractor, the contractor must give him/her the name of each employer or self-employed person whom the contractor has hired to work on the project. Like others, the contractor also must:

- co-operate with anyone doing their duty under the health and safety law; and
- obey this Act and the regulations.



### 3.2 Supervisors

The Act, Section 4.1 was added to the law in 2002. It says supervisors must, as far as “reasonably practicable” (see definition on page C-8):

- do everything necessary to protect the health and safety of workers they supervise;
- make sure workers whom they supervise do their job according to the law; and
- make sure that people they supervise use all the protective devices and/or equipment that the employer requires or provides to protect them, or whatever is required by the law.

It also says supervisors must:

- tell any workers they supervise about all the health and safety hazards that the s/he knows are, or can reasonably expect to find, in the area where the people are working;
- co-operate with anyone else who’s carrying out their legal responsibilities for health and safety (a committee member, inspectors etc.); and
- obey the health and safety law.

### 3.3 Workers

Workers have the fewest responsibilities when it comes to health and safety at work. They must:

- take reasonable care to protect their own safety and health, and that of others who may be affected by what they do or don’t do;
- when the job requires it, always use devices or wear protective equipment provided by the employer or otherwise required by law (see the *Workplace Safety and Health Regulation* - Part 6 for what the employer must do before requiring and providing protective equipment, etc.);
- consult and co-operate with the committee or rep;
- co-operate with anyone else who has legal health and safety duties; and
- obey the health and safety law.

### 3.4 Unions

Unions play an important role in health and safety for they must choose:

- worker representatives for the workplace safety and health committee;
- workplace safety and health representatives; or
- worker representatives to go with safety and health officers/inspectors for inspections or investigations, when there’s no committee or representative.

They may ask the Director of the Workplace Safety and Health Division to require employers to:

- have programs for more than one workplace, or for parts of workplaces; or
- set up a joint committee for more than one workplace or parts of workplaces.

Like employers, unions cannot discriminate against employees for a variety of activities related to health and safety, including:

- using their rights, including the right to refuse;
- taking “reasonable action” to protect another person’s health and safety;
- doing their job as a committee member;
- talking to a committee member or inspector; and
- trying to have the law enforced.



### 3.5 Committees and representatives

Committees and representatives have the same duties. The Act, section 40(10), says that, in general, they are supposed to:

- receive, consider and deal with workers’ health and safety questions and complaints;
- participate in identifying hazards related to workplace activities affecting workers and others;
- develop and promote ways to protect the safety, health and welfare of people in the workplace, and evaluate how well the solutions work;
- co-operate with an “occupational health service” (e.g. a safety and health department or company official) in the workplace;
- co-operate with safety and health officers/inspectors;
- develop and promote safety and health education and information programs;
- make recommendations to the employer or prime contractor about workers’ health and safety;
- inspect the workplace regularly;
- participate in investigations of workplace incidents or near-misses; and
- keep records about the questions or complaints they receive and what they do about them, as well as what else they do.

Other sections of the *Act* and regulations set out other duties and activities that committees and reps have. See L.3 (*Responsibilities of workplace safety and health committees and representatives in Manitoba*) for a more detailed explanation.





# Refusing “dangerous work”

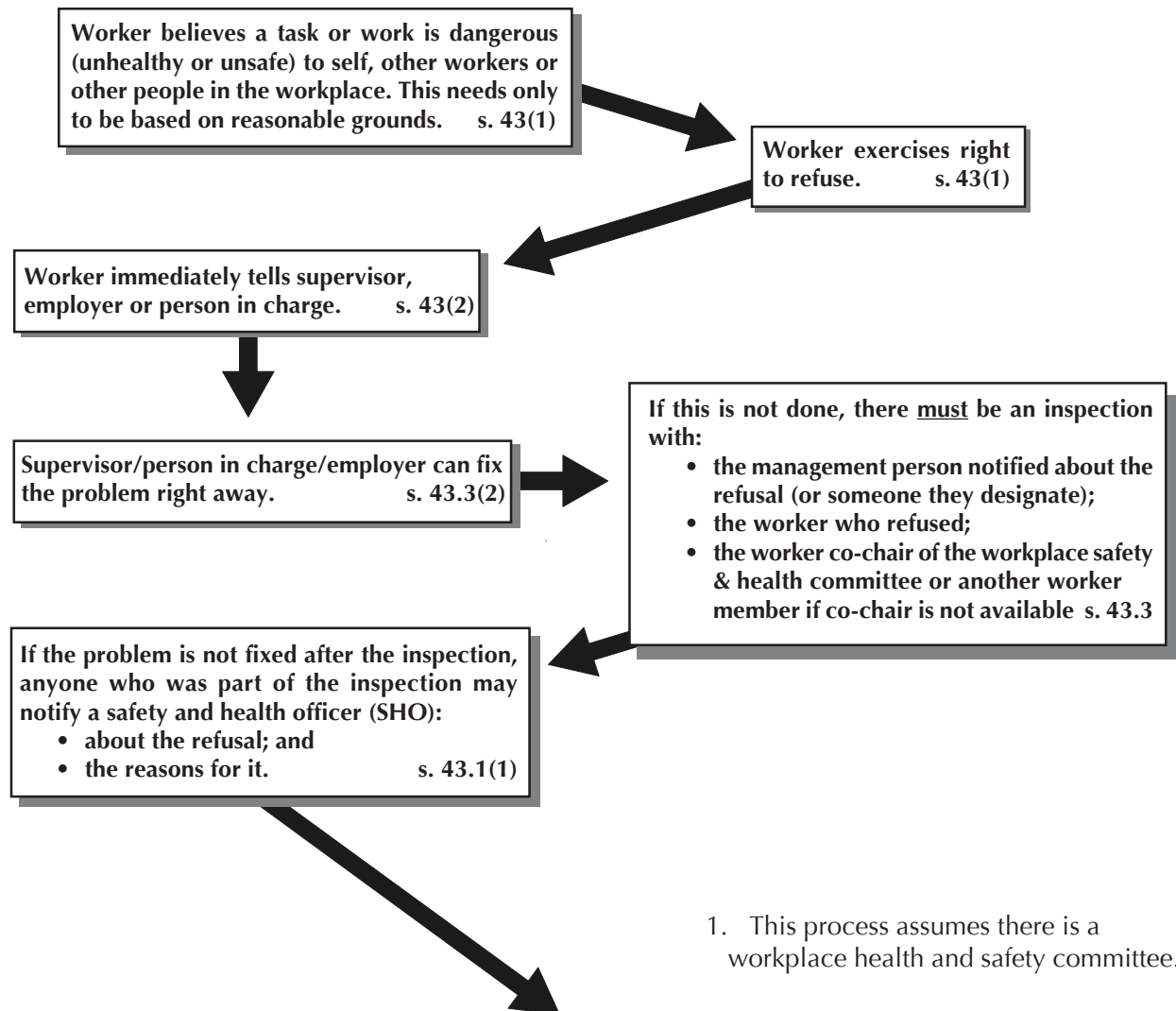
L.2

One of the most important rights workers have is refusing work that they think might hurt themselves or someone else. Here’s a summary of who has to do what when someone “exercises” or uses their right to refuse dangerous work.

## *Exercising the right to refuse unsafe or unhealthy work under the Workplace Safety and Health Act, sections 43(1) to 43.3(2)<sup>1</sup>*

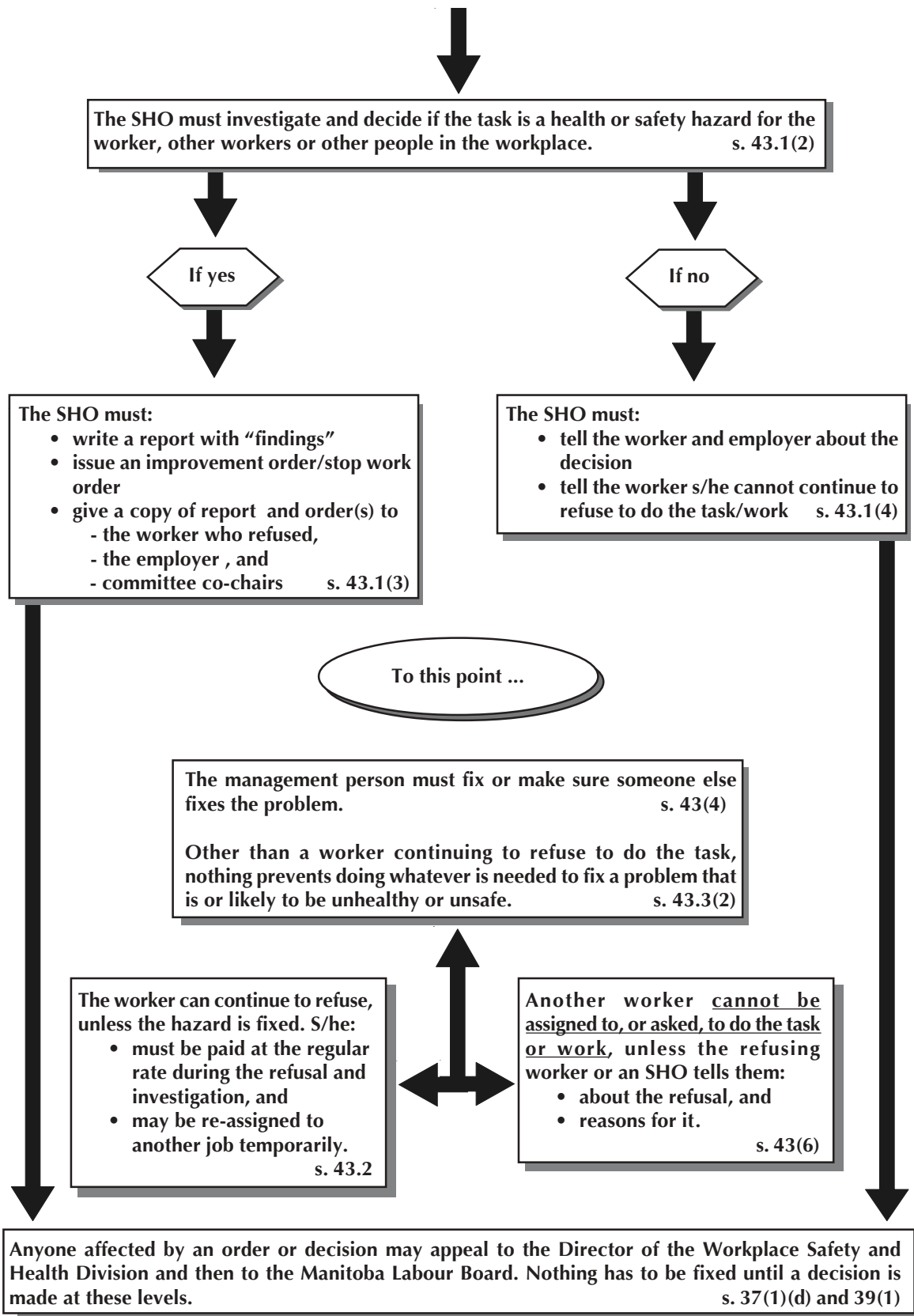
### **The context:**

The employer (including supervisors, agents or other representatives) must not make or allow a worker to do something the employer knows (or ought to know) is dangerous to a worker’s health and/or safety. s. 43.3(1)



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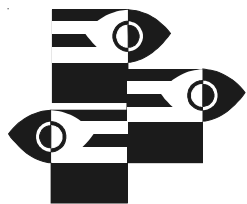




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## Responsibilities of workplace safety and health committees and representatives in Manitoba

This document lists what the Manitoba law says workplace safety and health committees and representatives are to be consulted about and what information they should get. Part A lists the topics that committees and reps have to be consulted about. Part B provides a list of documents that committees and reps are supposed to receive when requested by or required by law. Part C lists the other responsibilities committees and reps have.

columns together. The first names the part of the law and the second explains what it says. The third column is where you can “translate” what the law says into what should happen in your workplace. What does the legal requirement mean, in practical terms, for you as a committee member or rep? The fourth column lists who else should be involved. You might have something to add there. The last column gives you a way to check how well the responsibility is dealt with.

To use this tool, look at the first and second

**Act** = Workplace Safety and Health Act W210    **WSH reg** = Workplace Safety and Health Regulation MR 217/2006

<b>Part A - Be consulted about ...</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
Act s. 4(2)(e) s. 5 (c)	... and get co-operation to carry out, their responsibilities and functions.		Employer Workers	
Acts. 7.4(6)	.. what goes into the workplace health and safety program		Employer	
WSH Reg. s. 2.2	.. developing and implementing any “safe work procedures” required by the WSH regulation. Topics include: <ul style="list-style-type: none"> <li>- chemical or biological substances that may be health or safety hazards</li> <li>- compressed air</li> <li>- confined spaces</li> <li>- cranes and hoists</li> <li>- demolition work</li> <li>- diving</li> <li>- electrical work</li> <li>- elevated work platforms, falsework and flyforms</li> </ul>		Employer Supervisors Workers	

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<b>Part A - Be consulted about ...</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>WSH Reg.</i> s. 2.2 (cont'd)	<ul style="list-style-type: none"> <li>- explosives</li> <li>- fall protection</li> <li>- fire and explosive hazards</li> <li>- fire fighting</li> <li>- forestry and arboriculture</li> <li>- health care's infectious hazards (including those found in a laundry), patient handling and lasers</li> <li>- heat and cold</li> <li>- the use of machines, tools and robots</li> <li>- musculoskeletal injuries (ergonomics)</li> <li>- overhead electrical lines</li> <li>- personal protective equipment (PPE)</li> <li>- pile drivers</li> <li>- powered mobile equip.</li> <li>- work on ice</li> <li>- precast concrete work</li> <li>- radiation</li> <li>- roof work</li> <li>- building &amp; using temporary structures</li> <li>- trenches/excavations</li> <li>- welding &amp; related work</li> <li>- well drilling, operating or servicing</li> <li>- working alone/in isolation</li> <li>- working in traffic</li> </ul>		Employer Supervisors Workers	
<i>WSH Reg.</i> s. 36.2(1)	... assessing all information the employer has about chemical or biological substances in the workplace. The assessment must be done to figure out if the substance is a health or safety hazard for any worker. This also must be done when the employer gets new information about the substances.		Employer	

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<b>Part A - Be consulted about ...</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>WSH Reg.</i> s. 21.2(2)	.. where there are hazardous, irritating or corrosive substances in the workplace. If any are found, the employer must provide emergency washing facilities.		Employer Worker(s)	
<i>WSH Reg.</i> s. 35.3(2), s. 35.3(4)	... developing & implementing WHMIS training. The training must be evaluated at least once a year in consultation with the committee. *		Employer Worker(s)	
<i>WSH Reg.</i> s. 6.12	... letting certain workers use soft-soled, slip-resistant protective footwear without puncture-proof plates in the soles and toecaps.		Employer Worker(s)	
<i>WSH Reg.</i> s. 10.1(2)	...preparing a harassment prevention policy.		Employer Worker(s)	
<i>WSH Reg.</i> s. 5.9	... what's needed in the way of first aid when the regulation doesn't properly deal with an occupational health hazard		Employer	
<i>WSH Reg.</i> s. 11.1(1)	... identifying and assessing violence hazards in the workplace.		Employer Worker(s)	
<i>WSH Reg.</i> s. 9.1	... identifying the hazards facing workers who are working alone or in isolation.		Employer Worker(s)	

\* WHMIS is the Workplace Hazardous Materials Information System. The national "right to know" system includes requirements about material safety data sheets or MSDSs, labels and training.

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<b>Part B - Get copies of ...</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>Act</i> s. 36.6(1)	... an improvement/stop work order given to their workplace.		Safety & Health Officer	
<i>WSH Reg.</i> s. 36.6(3)	... records about health and safety measurements made in the workplace. (There are rules about when and how this monitoring is to be done, when, by whom, etc. There also are rules about what's to be in the report.) The records have to be kept for 30 years.		Employer	
<i>WSH Reg.</i> s. 12.6(3)	... the annual report about preventing and reducing noise exposures, and statistics about the hearing tests done. The employer must provide it within 30 days of finishing the report.		Employer	
<i>Act</i> s. 7.4(7)	... the finished workplace health and safety program, if they ask for it.		Employer	
<i>WSH Reg.</i> s. 5.5(4)	... the list of first aiders. If committee asks for it, employer must provide the list.		Employer	
<i>Act</i> s. 35(c)	... reports explaining how problems listed in improvement orders will be fixed. The orders come from government inspectors (SHOs). They say that the law have been broken (contravened) and things must change.		Employer (or whom-ever gets an improvement order) Safety & Health Officer (SHO)	
<i>Act</i> s. 41.2	... (a) information about tests done on equipment or tools, or for chemical or biological substances; (b) reports about health and safety inspections or investigations; and (c) reports about health and safety monitoring or audits (e.g. tests for things in the air, evaluations of procedures), if the committee asks for them.		Employer	

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<b>Part C - Committee/rep - other responsibilities</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>WSH Reg.</i> s. 3.2(1)	Be members for two years at least. Individual members may stay on the committee until they are re-appointed or re-elected, or someone is chosen to replace them.		Employer Union	
<i>Act</i> s. 40(10)(e)	Co-operate with any government inspector (safety and health officer) who is doing his or her job			
<i>Act</i> s. 40(10)(c)	Develop and promote ways to protect the safety, health and “welfare” of anyone in the workplace. Check how effective the prevention efforts are.		Employer Supervisors Health & safety staff Workers Clients Visitors Patients	
<i>Act</i> s.40(10)(f)	Develop and promote workplace health and safety education and information activities.			
<i>WSH Reg.</i> s. 3.12	Examine any logbook, assessment, inspection report or other document an employer or prime contractor has to keep (according to the law).		Employer	
<i>WSH Reg.</i> s. 3.3(3)	Get at least three days notice of regularly scheduled meetings.			
<i>Act</i> s. 13(a)	Get help from the Director of the Workplace Safety and Health Division (WSHD), so they can meet the goals of protecting workers’ health and safety.		Director, Workplace Safety and Health Division, Safety and Health Officer (SHO)	

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<b>Part C - Committee/rep - other responsibilities</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>WSH Reg.</i> s. 3.13, s. 3.14	Get information about lost-time injuries in the workplace. The employer must provide it. Committee members cannot talk about individuals' personal health information, unless the law requires it.		Employer	
<i>WSH Reg.</i> s. 3.8	Get information that comes to the employer and is addressed to the committee. The employer must get the information out as soon as possible; it must be within seven days after getting the material.		Employer	
<i>WSH Reg.</i> s. 35.17(1)	Get the source of information about the toxicology (health effects) listed on MSDSs of "controlled" products made in the workplace, if they request it. The employer is to provide this as soon as possible.		Employer	
<i>Act</i> s. 40(10)(a)	Get, look into, and deal with safety and health concerns and complaints in their workplace.		Workers, Supervisors, Employers, Health & safety staff, Union, "Outsiders"	
<i>WSH Reg.</i> s. 3.11(1)	Have a bulletin board just for health and safety issues. The employer must provide it, in a "prominent place".		Employer	
<i>WSH Reg.</i> s. 3.3(4)	Have a suitable location for meetings and resources needed to do their work. The employer is to provide these.		Employer	

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<b>Part C - Committee/rep - other responsibilities</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>Act</i> s. 44(1)	Have each member take training. The employer must cover wages and benefits for each person's regular hours for two days every year. Educational leave can be used for events offered by the WSHD, agreed to by the Committee or set out in the collective agreement.		Employer Supervisor Union	
<i>WSH Reg.</i> s. 35.12, s. 35.21(2)	Have easy access to material safety data sheets (MSDSs). Those about hazardous wastes also must be easily accessible.		Employer	
<i>WSH Reg.</i> s. 3.6(1), s. 3.6(2), s. 3.6(3)	Have rules about how it does its work. The terms of reference must say it meets regularly and set out when the committee meets, how changes of plans are to be sorted out, and how meetings are to be run. Other things can be covered if the committee agrees.		Committee	
<i>WSH Reg.</i> s. 2.9(2), s. 2.9(3)	Have the co-chairs be part of any investigation of serious events, injuries that require medical treatment or serious near-misses. If they can't do it, they may choose another person to participate. Be consulted about the written report about the investigation.		Employer Supervisors Workers	
<i>Act</i> s. 43(3)	Have the worker co-chair (or another worker committee representative) go on an inspection that is part of the refusal process.		Worker(s) Supervisor	
<i>Act</i> s. 43.1(3)	If an SHO backs a worker's refusal to do something that is dangerous to their health or safety, s/he must write a report. The committee co-chairs must get a copy of the report and any orders related to it.		Safety & Health Officer, Worker(s)	

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<b>Part C - Committee/rep - other responsibilities</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>Act</i> s. 40(10)(d)	If it exists, co-operate with an occupational health service (doctors, nurses or other health and safety professionals hired by the employer).			
<i>Act</i> s. 40(10)(h)	Inspect the workplace regularly.			
<i>Act</i> s. 40(10)(j)	Maintain records about how the committee gets and deals with concerns and complaints, and its other activities		Employer Workers	
<i>Act</i> s. 40(10)(g)	Make recommendations to the employer or prime contractor about workers' health and safety.			
<i>Act</i> s. 41.1(2), s. 41.1(3)	After making a written recommendation to the employer, get a written answer within 30 days (unless the employer has fixed the problem). The response must have a timetable for whatever the employer agrees to do. If s/he disagrees, the response must explain why.		Employer	
<i>Act</i> s. 41.1(4)	If the employer doesn't agree with the recommendations, the whole committee or one member may take the issue to the government.		Workplace Safety & Health Division	
<i>Act</i> s. 42(1)(f)	Not face discrimination for doing something to protect someone else's health and safety (including exercising the right to refuse on their behalf).		Workers Supervisors Employer Union	
<i>Act</i> s. 42(1)(d)	Not face discrimination for doing their "job" as a committee member or using their rights.		Supervisors Employer Union	

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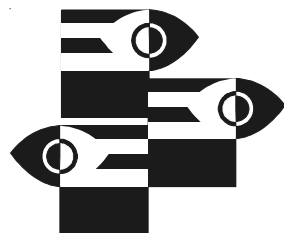


<b>Part C - Committee/rep - other responsibilities</b>				
<b>The law</b>	<b>says committees and reps are supposed to ...</b>	<b>which means in practical terms ...</b>	<b>Who else is involved?</b>	<b>We do (not) do this (yet)</b>
<i>Act</i> s. 40(10)(b)	Participate in procedures to identify health and safety hazards from the workplace, or tasks related to it. The hazards may affect workers or other people.		Employer Supervisors Health & safety staff Workers Clients visitors patients	
<i>WSH Reg.</i> s. 3.7(1)	Take minutes of its meetings. Co-chairs must sign the final version. Committees must make sure the minutes are kept for at least 10 years. The committee must get a copy of the minutes to the employer. The employer is responsible for sending a copy to the WSHD and each committee member.		Employer	
<i>Act</i> s. 40(11)	Take time off his/her regular job to do whatever work is required of committee members. Be paid for all the time spent doing committee work; if it's done on overtime, it must be paid at overtime rates.		Employer Supervisor	

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## Translating the law - using plain language

The law can be difficult to understand. To help us understand it, sometimes the “legalese” (words and phrases) need to be translated into plain language. Committee members and reps need to be able to do this, for themselves and others.

To start practising, we will use the main part of the law, the *Workplace Safety and Health Act*. The official words are on the left below. On the right is our “translation”. There is space below for you to make your own version.

### The Act says

#### PURPOSE OF THIS ACT

#### General objects and purposes

2(1) The objects and purposes of this Act are

- (a) to secure workers and self-employed persons from risks to their safety, health and welfare arising out of, or in connection with, activities in their workplaces; and
- (b) to protect other persons from risks to their safety and health arising out of, or in connection with, activities in workplaces.

### One translation is..

#### Purpose of this law

#### General goals

The goals of this law are to:

- make sure that workers and self-employed people don't face work-related hazards whether they are safety, health and welfare issues
- protect other people (e.g. clients, patients, the public) from work-related safety and health hazards

### Our translation is:

(continued on the next page)

The authors' wording presented above does not replace the Province of Manitoba's legislated Act and Regulations. The official versions can be found on-line at <http://www.gov.mb.ca/labour/safety/actregnew.html> or by contacting the Manitoba Workplace Safety and Health Division office.



## **The Act says**

Specific objects and purposes

2(2) Without limiting the generality of subsection (1), the objects and purposes of this Act include

- (a) the promotion and maintenance of the highest degree of physical, mental and social well-being of workers;
- (b) the prevention among workers of ill health caused by their working conditions;
- (c) the protection of workers in their employment from factors promoting ill health; and
- (d) the placing and maintenance of workers in an occupational environment adapted to their physiological and psychological condition.

## **One translation is..**

Specific goals of this law

Without limiting the general idea, the goals of this law also are to:

- promote all aspects of workers' health and keep workers healthy and happy
- prevent workers getting sick because of their jobs
- protect workers from all hazards on the job
- adapt the workplace to workers' mental and physical needs (i.e. use ergonomic principles)

## **Our translation is:**

The authors' wording presented above does not replace the Province of Manitoba's legislated Act and Regulations. The official versions can be found on-line at <http://www.gov.mb.ca/labour/safety/actregnew.html> or by contacting the Manitoba Workplace Safety and Health Division office.





# ***Building a solid resource foundation***

## ***A Resource Guide for health and safety activities in Manitoba***

**March, 2008**

(based on one prepared for the Winnipeg Regional Health Authority  
workplace safety and health committee courses, 2003)



## How's it laid out?

There are a lot of resources "out there" to give you the tools you need to complete a task or solve a problem.

This section provides a starting point to build a sound resource foundation. It will be at no charge.

help you create your own inventory of helpful people on your workplace safety and health committee(s) and within your organization.

There also is a list of provincial, national, and international organizations with expertise in occupational health and safety from which you can obtain detailed and accurate information, usually

## Getting started

Resources for workplace safety and health committees may include:

- ☐ information (from a variety of sources)
- ☐ people (e.g. union representatives, health and safety specialists, workers, supervisors)
- ☐ creative ideas
- ☐ time
- ☐ tools, equipment and other materials
- ☐ support from the union, management, workers, and technical people or specialists
- ☐ money
- ☐ knowledge and skills
- ☐ workplace contacts and networks

- ☐ the law and related documents
- ☐ organizational policies
- ☐ the Workplace Safety and Health Division (WSHD) in the Department of Labour and Immigration

All, or some, of these resources may be needed to solve a problem at any given time.

Time and money are probably the resources we think of most often to solve a problem. But they may be the resources in shortest supply!

So let's set time and money aside, for a moment, and consider other resources you can use. We'll look at them in terms of "assets".



# ***What assets are available?***

## **1. Within your workplace or organization**

Let's look at several places where you might find help, starting within your workplace. There's often more than you expect to find.

### Within the workplace safety and health committee

- ☐ What skills and experience do you bring to the table?
- ☐ Who else is on the joint committee?
- ☐ What assets do they bring to the table?
  - experience?
  - authority?
  - power of persuasion?
  - knowledge and skills?
  - creativity?
  - contacts?

### Within your workplace/organization

Think about your workplace or organization:

- ☐ Does senior management support the committee?
- ☐ Are there workplace health and safety policies and programs?
- ☐ What networks and contacts do you have?

- ☐ What departments might be helpful?

- maintenance?
- security?
- engineering?
- health and safety/first aid

Many workplaces hire people to do occupational health and safety work. These individuals often provide technical advice and support to joint health and safety committees, employers and workers. They may include occupational health nurses, occupational hygienists, ergonomists, safety officers, occupational physicians, engineers and others.

### Within the union local

In unionized workplaces, committee worker representatives are appointed or chosen by the union. If you are a union member, consider:

- ☐ What skills and experience do the members have that could help deal with occupational health and safety?
- ☐ What skills and experience does the leadership have, in terms of health and safety?
- ☐ How well does the local leadership back you?
- ☐ Do you have a full-time or part-time health and safety rep? Workers' compensation rep?
- ☐ What links do you have to other unions in the workplace? What other networks and contacts do you have?



## 2. Beyond your workplace or organization

All Manitoba employers and workers are covered by the *Workplace Safety and Health Act*, its related documents and “rules”. The *Act*’s goal is to prevent occupational health problems for Manitoba workers, in particular, and to adapt workplaces to employees’ mental and physical needs.

The Workplace Safety and Health Division of the Manitoba Department of Labour and Immigration administers and enforces the law. There may be a safety and health officer (SHO) from the Division that “looks after” your workplace.

For workers within Manitoba:

- ☐ your union may have a safety and health staff person
- ☐ other workplaces like yours, or in your community, may have health and safety reps
- ☐ the Manitoba Federation of Labour has a full-time health and safety person

For employers within Manitoba:

- ☐ your corporate headquarters may have health and safety staff
- ☐ check for sector organizations or others doing similar business/services

Depending on the resource needed, other government agencies, not-for-profit organizations and private consultants provide technical expertise, advice and training about occupational health and safety. (The Workplace Safety and Health Division and the Manitoba Workers Compensation Board have a guide to these individuals, etc. -- *The occupational health and safety resource guide* --available at their websites.)

There also may be health and safety staff elsewhere within the union or company/organization where you work. They could be at the provincial, national or international sites.

Beyond them is a vast “world wide web” of information.

Since there are so many places to get help, the lists in this *Guide* include the resources most likely to be useful; they are also those that are easiest to get to, as of August, 2007. In many cases, if you find them on the “web”, they will have links to other sites.

### Checking information

Not all sources are equal, in terms of accuracy in particular.

There is a checklist to help you evaluate the quality of health information at the end of the *Guide*. It comes from the Canadian Health Network (<http://www.canadian-health-network.ca/>).





## Resources in my *workplace/organization*

This table lets you organize information. When done, it will list all the people who are involved with health and safety, or could

be helpful to, your workplace safety and health committee(s).  
Change the layout to suit your needs.

**Organization/workplace name:** \_\_\_\_\_

### 1. Workplace safety and health committee

Worker representatives				Employer representatives			
Name	Union	Dept/site	Phone/e-mail	Name	Title	Dept/site	Phone/ e-mail
Co-chair				Co-chair			



\_\_\_\_\_ (Central committee)

(This is for workplaces where there are several committees, linked by a central or overseeing committee.)

Worker representatives				Employer representatives			
Name	Union	Dept/site	Phone/e-mail	Name	Title	Dept/site	Phone/ e-mail
Co-chair				Co-chair			



## 2. Helpful people in my *workplace/organization*

Occupational health & safety staff			
Name	Title	Phone / e-mail	
Senior management			
Name	Title	Phone / e-mail	



Infection control			
Name	Title	Phone / e-mail	
Maintenance			
Name	Title	Phone / e-mail	
Others/Special resources			
Name	Title	Phone / e-mail	



## General resources outside your workplace/organization

The list of resources starts with what can be found in Manitoba. It then goes to other provincial, national, and international occupational health and safety organizations that provide credible and accurate technical information and advice.

The organizations are listed alphabetically. The next list of resources is organized by topic.

You can reach most of the organizations using the internet. However, you may not be able to get all their materials that way. That's why we've included other ways to reach them, where possible.

Note: Be careful about information and advice related to laws and regulations. Different provinces and countries have different "rules" than Manitoba does.

### Resources in Manitoba

Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
Manitoba Federation of Labour	503 - 275 Broadway Winnipeg, Manitoba R3C 4M6	Tel: 947-1400 Fax: 943-4276	<a href="http://www.mfl.mb.ca/hs.shtml">http://www.mfl.mb.ca/hs.shtml</a>	The MFL has a health and safety staff person. The Federation's health and safety committee meets regularly. MFL health and safety conferences also take place regularly.
MFL Occupational Health Centre	102 -275 Broadway Winnipeg, Manitoba R3C 4M6 e-mail: <a href="mailto:mflohc@mflohc.mb.ca">mflohc@mflohc.mb.ca</a>	Tel: 949-0811 Fax: 956-0848	<a href="http://www.mflohc.mb.ca">http://www.mflohc.mb.ca</a>	The WRHA-funded Centre provides medical advice and technical help to workers, employers and joint committees. Its Resource Centre has lots of printed materials, access to electronic databases; materials also available on-line. Services are free.



Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
Safe Workers of Tomorrow (formerly known as Workers of Tomorrow)	3-1680 Notre Dame Ave. Winnipeg, Manitoba R3H 1H6  e-mail: <a href="mailto:presentations@workersoftomorrow.com">presentations@workersoftomorrow.com</a>	Tel: 992-2988 Fax: 956-4864	<a href="http://www.workersoftomorrow.com">http://www.workersoftomorrow.com</a>	Set up in 1997, provides free presentations to students in Manitoba. Uses staff and a volunteer group to discuss health and safety for young people.
Safety Services Manitoba (formerly the Manitoba Safety Council)	3-1680 Notre Dame Winnipeg, Manitoba R3H 1H6	Tel: 949-1085 Fax: 956-2897	<a href="http://www.safetyservicesmanitoba.ca/">http://www.safetyservicesmanitoba.ca/</a>	Provides training and/or support about "safety audits", personal protective equipment, and other topics. Annual conference is popular with many employers.
Workers' Compensation Board of Manitoba	333 Broadway Winnipeg, Manitoba R3C 4W3	Tel: 954-4760 Fax: 9544968  To report an injury, call 954-4100 or 1-800-362-3340	<a href="http://www.wcb.mb.ca">http://www.wcb.mb.ca</a>	Not-for-profit insurance agency. Employers' assessments go into a common fund, from which workers are paid benefits if they have a work-related injury, illness, disease or death. Also funds prevention-oriented projects (see the CIRP info).
Workplace Safety and Health Division, Manitoba Labour and Immigration	200 - 401 York Ave. Winnipeg, Manitoba R3C 0P8	Tel: 945-3446 Fax: 945-4556	<a href="http://www.gov.mb.ca/labour/safety">http://www.gov.mb.ca/labour/safety</a>	Responsible for administering and enforcing the Manitoba <i>Workplace Safety and Health Act</i> , regulations and codes of practice (i.e. the law). Develop guidelines about various topics; provide training and advice.



## Resources in other provinces/Canadian/national

Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
Alberta Workers' Health Centre	111-10451 170 Street Edmonton, Alberta T5P 4T2 e-mail: <a href="mailto:info@workershealthcentre.ca">info@workershealthcentre.ca</a>	(780) 486-9009 Toll Free: 1-888-729-4879 Fax: (780) 483-7632	<a href="http://www.workershealthcentre.ca/">http://www.workershealthcentre.ca/</a>	A registered charity that helps improve health and safety of Alberta workplaces and help those who have workplace injuries and illness. Includes an innovative play for schools and links to Alberta resources.
Canadian Centre for Occupational Health and Safety (CCOHS)	250 Main Street East Hamilton, Ontario L8N 1H6 email: <a href="mailto:clientservices@ccohs.ca">clientservices@ccohs.ca</a>	Tel: (Client services): 1-800-668-4284 (toll free)	<a href="http://www.ccohs.ca/">http://www.ccohs.ca/</a>	National centre for occupational health and safety information. Provides (usually) free practical information to answer workplace concerns. Lots of information about hazards, committees and fixing hazards. MSDSs also available, but not always free.
CanOSH	c/o CCOHS		<a href="http://www.canoshweb.org">http://www.canoshweb.org</a>	Find health and safety information, statistics and laws from Canadian jurisdictions.
Institute for Work and Health (IWH)	481 University Avenue Suite 800 Toronto, Ontario M5G 2E9 e-mail: <a href="mailto:info@iwh.on.ca">info@iwh.on.ca</a>	Tel: 416-927-2027 x 2131 Fax: 416-927-4167	<a href="http://www.iwh.on.ca/">http://www.iwh.on.ca/</a>	Independent organization. Researches and promotes prevention of work-related disabilities and improved treatment, recovery and return-to-work. Lots about ergonomics, musculoskeletal injuries/MSIs and stress.



<b>Resource</b>	<b>Address/e-mail</b>	<b>Phone/fax</b>	<b>URL (web address)</b>	<b>Comments</b>
Occupational Health and Safety Agency for Healthcare (OHSAH)	Suite 301 - 1195 West Broadway Street Vancouver, B.C. V6H 3X5	Tel: 604-775-4034 Toll free: 1-800-359-6612 Fax: 604-775-4031	<a href="http://www.ohsah.bc.ca">http://www.ohsah.bc.ca</a>	A joint employer and union organization, OHSAH focuses on health care. Does research, provides information and provides practical guides. Has many helpful resources for people outside the sector. Very innovative work about ergonomics and MSIs; also interesting materials about stress (see "mental health"), violence and working in the community.
Occupational Health Clinics for Ontario Workers (OHCOW)	601-15 Gervais Drive Don Mills, Ont. M3C 1Y8  e-mail: <a href="mailto:info@ohcow.on.ca">info@ohcow.on.ca</a>	Tel.: 877.817.0336	<a href="http://www.ohcow.on.ca/resources/index.html">http://www.ohcow.on.ca/resources/index.html</a>	A board of labour, employers and technical reps governs the network of six Ontario clinics. Clinics provide medical and other help. See their resources for a variety of practical materials including a heat stress index and noise calculator.
Ontario Ministry of Labour, Occupational Health and Safety Branch	Occupational Health and Safety Branch 655 Bay Street, 14th Floor Toronto Ont. M7A 1T7	416-326-7770	<a href="http://www.labour.gov.on.ca/english/hs/index.html">http://www.labour.gov.on.ca/english/hs/index.html</a>	Website includes Ontario law, revised occupational exposure limits, young workers info, proposed changes to their law, guidance materials, etc. Useful to know what's happening in a province that sets trends.





Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
Workers' Compensation Board of B.C. Worksafe Online	Vancouver, B.C. e-mail (for publications): <a href="mailto:WORKPUB@worksafebc.com">WORKPUB@worksafebc.com</a>		<a href="http://www.worksafebc.com/publications">http://www.worksafebc.com/publications</a>	A list of many resources from the B.C. Board. It looks after the provincial health and safety law and the workers' compensation system. Lots of useful ergonomics resources in particular. Materials also are available by sector and type of workplace. Check their main website too for important proposed changes and new hazard information.



## International resources

Remember that the words used in other countries may be different than those in Canada. For example, in England, “bullying” is often used when we might say

“violence”; in Europe (especially the ILO), “security” means general working conditions, including health and safety.

When searching for specific topics, try to be as general as possible to get the terms and information that you need. These resources could be quite useful for materials in different languages.

Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
Center to Protect Workers' Rights	8484 Georgia Avenue, Suite 1000 Silver Spring, MD 20910 e-mail: <a href="mailto:cpwrwebsite@cpwr.com">cpwrwebsite@cpwr.com</a>	Phone: 301- 578-8500 Fax: 301-578-8572	<a href="http://www.cpwr.com/indexstart.html">http://www.cpwr.com/indexstart.html</a>	The centre is an international leader in applied research, training, and service to the construction industry. Funded by NIOSH and founded by the Building Trades Council of the AFL-CIO. Especially good for ergonomic alternatives.
European Agency for Safety and Health at Work	Gran Via 33 E-48009 Bilbao, Spain e-mail: <a href="mailto:information@osha.eu.int">information@osha.eu.int</a>	Tel: 011-34-944-794-360 Fax: 011-34-944-794-383	<a href="http://osha.europa.eu/">http://osha.europa.eu/</a>	A European Union agency with government, employer and workers' organisations' reps. Tries to be a catalyst to develop, collect, analyse and disseminate information to improve Europe's state of health and safety. Materials available in different languages, with lots of links. Lots about ergonomics and MSIs, working conditions (including stress) and hazardous substances.



<b>Resource</b>	<b>Address/e-mail</b>	<b>Phone/fax</b>	<b>URL (web address)</b>	<b>Comments</b>
Global Occupational Health Network (GOHNET) newsletter	World Health Organization Avenue Appia 20 CH - 1211 Geneva 27 Switzerland	Tel.: 011-41 22 791 2111 Fax.: 011-22 791 3111	<a href="http://www.who.int/occupational_health/publications/newsletter/en/index.html">http://www.who.int/occupational_health/publications/newsletter/en/index.html</a>	Published twice a year. Includes Canadian materials.
Hazards Group	PO Box 199 Sheffield S1 4YL England  Editorial e-mail: <a href="mailto:editor@hazards.org">editor@hazards.org</a>	Tel: 011-44 114 201 4265	<a href="http://www.hazards.org">http://www.hazards.org</a>	An independent magazine and on-line publication. Aimed at union health and safety activists but very useful for others. Award-winning site has materials about mapping, ergonomics, stress, violence and other health and safety topics. Many international connections.
Health and Safety Executive (UK)	HSE Infoline Caerphilly Business Park Caerphilly, U.K. CF83 3GG  e-mail: <a href="mailto:hseinformationservices@natbrit.com">hseinformationservices@natbrit.com</a>	Tel: 011-44-08701-545500 Fax: 011-44-02920-859260	<a href="http://www.hse.gov.uk">http://www.hse.gov.uk</a>	The U.K. Health and Safety Executive (HSE) is the government agency responsible for health and safety issues in the U.K. Aside from chemical and other information, see their detailed research reports (look for CRRs).



Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
International Labour Organization	ILO-SafeWork CH-1211 Geneva 22 Switzerland e-mail: <a href="mailto:safework@ilo.org">safework@ilo.org</a>	Tel: 011-41-22-799-6715 Fax: 011-41-22-799-6878	<a href="http://www.ilo.org/public/english/protection/safework/">http://www.ilo.org/public/english/protection/safework/</a>	This UN agency promotes social justice and internationally-recognized human and labour rights. Has many materials, in different languages and links to sites around the world. Not the most user-friendly site but worth the effort. Look for information by sector or hazard (e.g. violence) or special needs (e.g. gender).
National Institute for Occupational Safety and Health (NIOSH)	Cincinnati, Ohio (with offices elsewhere in the USA)	Tel: 513-533-8326 Fax: 513-533-8573	<a href="http://www.cdc.gov/niosh">http://www.cdc.gov/niosh</a>	The U.S. government agency doing research and making recommendations about preventing work-related disease and injury. Health Hazard Evaluation (HHE) reports have practical solutions. Ergonomics documents are quite good. Also check for hazards by occupation or name.



Resource	Address/e-mail	Phone/fax	URL (web address)	Comments
New York Committee on Occupational Safety and Health (NYCOSH)	275 7th Avenue New York, NY USA 10001  e-mail: <a href="mailto:nycosh@nycosh.org">nycosh@nycosh.org</a>	Tel: 212-627-3900 Fax: 212-627-9812	<a href="http://www.nycosh.org/">http://www.nycosh.org/</a>	NYCOSH is one of a network of US community-union groups dealing with health and safety (COSH groups). Website covers hazards by group (e.g. young workers, women, immigrant workers) and hazards. Lots of links to other sites and materials, mostly in the US.
NIEHS Worker Education and Training Program	WETP Clearinghouse 1250 Connecticut Ave., Suite 610 Washington, D.C. 20036  e-mail: <a href="mailto:info@wetp.org">info@wetp.org</a>	Tel: 202-331-7733	<a href="http://www.wetp.org/wetp">http://www.wetp.org/wetp</a>	The Clearinghouse targets workers and trainers who deal with hazardous waste or respond to hazmat and other emergencies. Also has health and safety resources. The Curricula Catalogue provides access to training materials.



## Resources by topic

This is a selected list of resources about a wide range of topics of interest to health and safety committee members in general. It is only a **starting point**.

It is organized by hazard and other general categories. Many documents

can be downloaded for free directly from the Internet. The web site addresses are for the specific document(s).

Fact sheets can be handed out to workers or supervisors or posted on your

health and safety committee bulletin board.

Guidelines, research reports, and similar documents offer good information to support decision-making in your committee and organization.

Resource	Find it at:	Source/comments
<b>General issues</b>		
Barefoot Research	<a href="http://www.ilo.org/public/english/protection/ses/info/publ/barefoot.htm">http://www.ilo.org/public/english/protection/ses/info/publ/barefoot.htm</a> - line	Tools for doing your own detective work, put together by people from Canada, the UK and the US. Developed to help empower workers, protect their health and well being, and improve their level of basic security. The practical guide provides workers, employers and committees with tools to reach these goals, especially mapping, surveys, etc. Available free in paper, CD-ROM or to download.
“Decent work” and “Safe work” international campaigns	<a href="http://www.ilo.org/public/english/decent.htm">http://www.ilo.org/public/english/decent.htm</a> <a href="http://www.ilo.org/public/english/protection/safework/index.htm">http://www.ilo.org/public/english/protection/safework/index.htm</a>	The International Labour Organisation (ILO) is a tripartite agency of employers, governments and unions. Set up in 1919, now it is part of the United Nations. Canada is a member. In general, <i>seeks the promotion of social justice and internationally recognized human and labour rights</i> . See the key health and safety parts of their website (may not be user-friendly but worth the effort). Resources in different languages include hazard information, training materials and posters.



Resource	Find it at:	Source/comments
eI-COSH	<a href="http://www.cdc.gov/elcosh/index.html">http://www.cdc.gov/elcosh/index.html</a>	An electronic library about construction health and safety, started by the Center to Protect Workers' Rights and funded by NIOSH in the US. Organized by hazard, trade and language. Includes training materials and helpful links.
Health care hazards	Health care without harm: <a href="http://www.noharm.org/">http://www.noharm.org/</a>  Sustainable Hospitals Project: <a href="http://www.sustainablehospitals.org">http://www.sustainablehospitals.org</a>	<u>Health Care Without Harm</u> is an international coalition of 443 organizations in 52 countries (including Canada) working to protect health by reducing pollution in health care workplaces. Many alternatives for hazards from mercury to latex to electronics and pesticides and cleaners. <u>Sustainable Hospitals</u> is based at the (US) Lowell Center for Sustainable Production. Its staff has done a lot about alternatives for things used in hospitals and elsewhere (e.g. batteries, latex, environmentally-preferable purchasing, office supplies).
How to evaluate safety and health changes in the workplace?	<a href="http://www.cdc.gov/niosh/docs/2004-135/default.html">http://www.cdc.gov/niosh/docs/2004-135/default.html</a>	From NIOSH, this is a handy booklet, with concrete examples, about how to find out "Does it really work?" Covers different types of jobs and workplaces.
ILO <i>Encyclopedia of Occupational Health and Safety</i> , 4th Ed.	<a href="http://www.ilocis.org/en/contilo.html">http://www.ilocis.org/en/contilo.html</a>  (For the paid on-line subscription, get information from <a href="mailto:clientservices@ccohs.ca">clientservices@ccohs.ca</a> )	A four-volume encyclopedia, updated in the late 1990s. Has information about hazards by occupation, topic, type of workplace, sector, etc. Now available on-line (at a cost), as well as on CD and in print. Authors tend to be North American, with a strong European contribution.
Occupations and workplaces	<a href="http://www.ccohs.ca/oshanswers/occup_workplace/">http://www.ccohs.ca/oshanswers/occup_workplace/</a>	The Canadian Centre for Occupational Health and Safety (CCOHS) has a whole section about hazards by types of work or workplaces.



Resource	Find it at:	Source/comments
Prevention practices database	<a href="http://www.preventionbestpractices.org/index.html">http://www.preventionbestpractices.org/index.html</a>	Ontario Ministry of Labour's database is divided into topics and sectors. Ranges from MSIs to tools and trucks, and from construction to mining. Likely to be expanded with time.
Schools	Healthy school environments: <a href="http://www.epa.gov/schools/">http://www.epa.gov/schools/</a>	US Environmental Protection Agency (EPA) site provides an "assessment tool", information about indoor air issues (e.g. mould), and useful links.
Women's health and safety	<a href="http://www.hazards.org/women/">http://www.hazards.org/women/</a> <a href="http://www.cwhn.ca/resources/workplace/gba.html">http://www.cwhn.ca/resources/workplace/gba.html</a>	Hazards provides links to many organizations and materials, including Canadian resources. Also see the <i>Action plan</i> developed at a Canadian workshop about women's occupational health issues, at the Canadian Women's Health Network site.
Young workers	<a href="http://www.workersoftomorrow.com/">http://www.workersoftomorrow.com/</a> <a href="http://job-one.ccohs.ca/en/about.htm">http://job-one.ccohs.ca/en/about.htm</a>	Start with Manitoba's unique programme about health and safety for young workers, Safe Workers of Tomorrow. Includes speakers for schools and information about typical hazards and workers' rights issues, aimed at young workers. Also see information from across Canada at the CCOHS site.
<b><u>Biological/communicable hazards</u></b>		
Fact sheets	<a href="http://www.ccohs.ca/oshanswers/biol_hazards/">http://www.ccohs.ca/oshanswers/biol_hazards/</a>	Prepared by the Canadian Centre for Occupational Health and Safety (CCOHS). Covers everything from Legionnaire's disease to working around stinging insects to indoor air quality problems from mould. also covers needlestick injuries.
Infectious diseases	<a href="http://www.phac-aspc.gc.ca/id-mi/index.html">http://www.phac-aspc.gc.ca/id-mi/index.html</a>	The Public Health Agency of Canada site includes information about specific diseases and plans for dealing with "bird flu", pandemic flu, etc. For a satiric look at some plans, see the video at <a href="http://www.youtube.com/watch?v=XviF9ACuakQ">http://www.youtube.com/watch?v=XviF9ACuakQ</a> .





Resource	Find it at:	Source/comments
Mould (or mold) resources	<a href="http://www.epa.gov/iaq/molds/moldresources.html">http://www.epa.gov/iaq/molds/moldresources.html</a>	The US EPA page provides information about hazards of moulds, identifying them, clean-up and health effects. Also has links to others doing work about this hazard.
SEIU's <i>Guide to preventing needlestick injuries</i>	<a href="http://www.seiu.org/docUploads/NdstkBk.pdf">http://www.seiu.org/docUploads/NdstkBk.pdf</a>	Service Employees International Union (SEIU) was a major player in getting legislation the USA and Canada to prevent needle-stick injuries.
<p align="center"><b><u>Chemical hazards (also see Environment and public health)</u></b></p> <p>Chemicals often have several names. To be sure you've found information about the right one, it helps to have a Chemical Abstract System number (CAS number). These numbers are found on material safety data sheets in the section about hazardous ingredients. Otherwise, search for the name you have and then use the CAS number.</p> <p>Some resources tend to be pretty technical, but try them anyway. You may find information that is useful to someone who's helping you, or more "popular" sources that are less difficult to "translate".</p>		
Canadian Labour Congress (CLC-CTC)	<a href="http://www.clc-ctc.ca/">http://www.clc-ctc.ca/</a> and go to the health and safety and environment page	The national labour body's materials about green jobs, global warming, "just transition" for those affected by changes made for environmental reasons (e.g. banning materials). Also see the Prevent Cancer campaign. Materials in French and English.
Carcinogens report (National Toxicology Program)	<a href="http://ntp.niehs.nih.gov/">http://ntp.niehs.nih.gov/</a>	The NTP is a national US science agency that reports about the results of studies it has done about chemicals/ substances causing cancer. Useful but technical often. The report about cancer-causing substances is on this site.
European Environment Agency (particularly the precautionary principle)	<a href="http://reports.eea.eu.int/environmental_issue_report_2001_22/en">http://reports.eea.eu.int/environmental_issue_report_2001_22/en</a>	Start with the report <i>Late lessons from early warnings: the precautionary principle 1896–2000</i> . Then go to the "home" part of the website for other materials.



Resource	Find it at:	Source/comments
Green chemistry	<a href="http://www.epa.gov/greenchemistry">http://www.epa.gov/greenchemistry</a>	The U.S. Environmental Protection Agency (EPA) has information about green chemistry -- the design of chemical products and processes that get rid of or reduce the use and generation of hazardous substances. Links to other organisations.
Green purchasing or procurement	<a href="http://cleanproduction.org/Steps.Products.Green.php">http://cleanproduction.org/Steps.Products.Green.php</a> <a href="http://europa.eu.int/comm/environment/gpp">http://europa.eu.int/comm/environment/gpp</a> (European Union)	Buying “green” products -- for cleaning, furniture, carpets, desks, food, energy, etc. -- is part of a prevention-oriented health and safety programme. The European Union has several “directives” designed to build market demand for green products, found at their procurement site.
<i>Hazardous substance fact sheets</i>	<a href="http://web.doh.state.nj.us/rtrkhsfs/indexfs.aspx?lan=english">http://web.doh.state.nj.us/rtrkhsfs/indexfs.aspx?lan=english</a>	New Jersey Department of Health puts out these “right to know” documents. Generic and very detailed information about hundreds of chemicals. Language is clearer than most. Formatted like material safety data sheets (MSDSs). Has a glossary.
Labor Environmental Alliance Society (LEAS)	<a href="http://www.leas.ca/index.htm">http://www.leas.ca/index.htm</a>	This Vancouver-based group does work about toxics and how to use/find “greener” substitutes. Their <i>Cancersmart Consumer Guide</i> has been updated and re-printed several times; the alternative cleaners booklet (also updated) is very practical. Other publications include topics such as endocrine disruptors and wood waste. Some also are available in presentations that can be downloaded.
Lowell Center for Sustainable Production	<a href="http://www.sustainableproduction.org">http://www.sustainableproduction.org</a>	Based at the University of Massachusetts, Lowell, and working with the Toxics Use Reduction Institute (TURI). Has projects about specific sectors (e.g. hospitals). Looks at chemicals, ergonomics and other health and safety and environmental issues.



Resource	Find it at:	Source/comments
Medline plus	<a href="http://medlineplus.gov/">http://medlineplus.gov/</a>  The free version of the Medline database (of studies) can be found at <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	From the US National Library of Medicine and the National Institutes of Health. Includes a medical dictionary. Can help you find scientific papers about many health effects of specific substances, jobs, sectors, etc. Also about prevention. Usually, you only get the summary or abstract of the paper. Get the full document using inter-library loan at your local public library.
NIOSH Pocket guide to chemical hazards	<a href="http://www.cdc.gov/niosh/npg/">http://www.cdc.gov/niosh/npg/</a>	National Institute for Occupational Health and Safety. Lists many common chemicals, with information about the substances, their properties and how to prevent/reduce exposure to them.
P2 (pollution prevention) Gems	<a href="http://www.p2gems.org/">http://www.p2gems.org/</a>	From the Massachusetts <a href="#">Toxics Use Reduction Institute (TURI)</a> . Pollution prevention (P2) is a strategy to reduce or eliminate hazards at the source. It is also called source reduction. This site has technical and process tools and links to relevant organizations. Information also is presented by job and sector.
Pesticide Action Network (North America) (PANNA)	<a href="http://www.pesticideinfo.org/Index.html">http://www.pesticideinfo.org/Index.html</a>	Lots of information about pesticides, with connections to international/non-North American sources. Good for alternatives, as well as detailed information about specific “active ingredients” in products.
Workplace Hazardous Materials Information System (WHMIS)	<a href="http://www.hc-sc.gc.ca/hecs-sesc/whmis/index.html">http://www.hc-sc.gc.ca/hecs-sesc/whmis/index.html</a>	Health Canada provides the federal government’s site for information about this national system. It is the law that sets out the “right to know” for workers and “rules” for their employers. Covers material safety data sheets (MSDSs), labels, training and general requirements.



Resource	Find it at:	Source/comments
<b>Committee activities</b>		
General information for joint health and safety committees (Manitoba)	<a href="http://www.gov.mb.ca/labour/safety/committees.html">http://www.gov.mb.ca/labour/safety/committees.html</a> <a href="http://www.gov.mb.ca/labour/safety/guidelines.html">http://www.gov.mb.ca/labour/safety/guidelines.html</a>	Workplace Safety and Health Division, Manitoba Labour and Immigration has a guideline for committees, forms for minutes and more. Check out both sites if you want most of their committee materials.
<i>Joint health and safety committee workbook</i>	<a href="http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/jointoch.pdf">http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/jointoch.pdf</a>	British Columbia WCB's website has many things that are useful for committees. This is one of them.
Mapping – body and workplace/hazard	<a href="http://www.hazards.org/diyyresearch/index.htm">http://www.hazards.org/diyyresearch/index.htm</a>	Hazards magazine has examples and instructions about body and workplace mapping from around the world, including Canada. Also see <i>Barefoot Research</i> in the general resources section of this guide.
Occupational health committees and .. representatives	<a href="http://www.labour.gov.sk.ca/safety/fast/committees_reps/index.htm">http://www.labour.gov.sk.ca/safety/fast/committees_reps/index.htm</a>	Saskatchewan's health and safety law is like Manitoba's, and was the first of its kind in Canada. This site takes you to resources for committees and health and safety reps.
<i>Occupational health and safety resource guide</i>	<a href="http://www.wcb.mb.ca/pdf/OHSGuide2005.pdf">http://www.wcb.mb.ca/pdf/OHSGuide2005.pdf</a>	Manitoba Workplace Safety and Health Division prepared this guide to Manitoba organizations with health and safety resources and/or services. Includes list of consultants who can help in different ways.
Ontario Worker Safety & Insurance Board (WSIB)	<a href="http://www.wsib.on.ca/wsib/wsbsite.nsf/public/Prevention">http://www.wsib.on.ca/wsib/wsbsite.nsf/public/Prevention</a>	The Ontario government's workers' compensation board certifies joint health and safety committee members, prescribes training topics, etc. Check out "Programs" at this site for more details.



Resource	Find it at:	Source/comments
SOBANE (Screening, Observation, Analysis and Expertise)	<a href="http://www.sobane.be/">http://www.sobane.be/</a> <a href="http://www.md.ucl.ac.be/hytr/new/fr/index.html">http://www.md.ucl.ac.be/hytr/new/fr/index.html</a>	A practical approach to investigating health and safety issues, developed in Belgium. Based on involving workers and front-line supervisors to check out and solve problems before bringing in “experts”. Materials originally in French and Dutch. Go through both sites to find English materials in sometimes-hidden places.
Training providers list, Manitoba	<a href="http://www.gov.mb.ca/labour/safety/pdf/training/trainingnorlist.pdf">http://www.gov.mb.ca/labour/safety/pdf/training/trainingnorlist.pdf</a>	The Manitoba Workplace Safety and Health Division’s list of joint committee trainers who have gone through the Division’s courses.
<i>Your rights as a local union health and safety representative</i>	<a href="http://www.cupe.ca/www/HealthYouCanDo/4206">http://www.cupe.ca/www/HealthYouCanDo/4206</a>	Canadian Union of Public Employees (CUPE) puts out a lot of practical health and safety materials. For example, see their <i>Enough!</i> guideline about committees; it’s not available on line, but can be ordered from the Manitoba office: 204-942-0343 or <a href="mailto:cupemb@mts.net">cupemb@mts.net</a> .
<b>Environment and public health (also see Chemical hazards)</b>		
Canadian Environmental Law Association (CELA)	<a href="http://www.cela.ca">http://www.cela.ca</a>  130 Spadina Avenue, Suite 301, Toronto, Ontario M5V 2L4 Tel: 416-960-2284 Fax: 416-960-9392	A non-profit, public interest organization established in 1970. Uses the law to protect the environment and advocate environmental law reforms. Also a free legal advisory clinic. Materials from its educational and law reform projects are found in the Reports and Publications section of the site.
Canadian Health Network	<a href="http://www.canadian-health-network.ca">http://www.canadian-health-network.ca</a>	Produced by the Public Health Agency of Canada and others, the Network has links to and information about environmental, health and safety and other public health issues. Available in French or English.



Resource	Find it at:	Source/comments
Clean Production Action	<a href="http://www.cleanproduction.org">http://www.cleanproduction.org</a>	International organisation, based in Montreal. Deals with extended producer responsibility, green chemistry, “clean production” and more. Clean production is about developing systems that don’t waste materials or energy while paying attention to other environmental issues. Working to ban brominated fire retardants, found in many products.
<i>Working your way to a green office. A guide to creating an environmentally friendly office</i>	<a href="http://www.ns.ec.gc.ca/udo/office/office.html">http://www.ns.ec.gc.ca/udo/office/office.html</a>	Environment Canada’s site lists information about everything from paper to conserving water. Also see the main website for information about the precautionary principle and other environmental/health and safety issues.
Environmental Defence Canada	<a href="http://www.environmentaldefence.ca">http://www.environmentaldefence.ca</a>	A national environmental organisation. Includes the <i>Toxic Nation project</i> , in which the blood of Canadians is tested for harmful chemicals.
Mining Watch Canada	<a href="http://www.miningwatch.ca">http://www.miningwatch.ca</a>	Miningwatch Canada is a pan-Canadian initiative that helps co-ordinate public interest responses to environmental health mining issues. Participates in the international campaign to ban asbestos.
Rachel’s	<a href="http://www.rachel.org">http://www.rachel.org</a>	U.S. foundation produces several weekly e-based lists including <i>Rachel’s News</i> and <i>Rachel’s Precaution Reporter</i> , and a database about organisations working on the environment and health-related issues. Lots of information about the precautionary principle and efforts to introduce environmental and health and safety changes.
Sierra Club of Canada	<a href="http://www.sierraclub.ca">http://www.sierraclub.ca</a>	Developing diverse, well-trained grassroots network working to protect the integrity of global ecosystems. One priority is the toxic chemicals.





Resource	Find it at:	Source/comments
Towards Tomorrow	<a href="http://towardtomorrow.org/">http://towardtomorrow.org/</a>	Has a great links page, with everything from the 12 principles of green chemistry to climate change and environmental justice.
United Nations Environment Programme	<a href="http://www.unep.fr/pc/sustain/10year/SCP_Resource_Kit.htm">http://www.unep.fr/pc/sustain/10year/SCP_Resource_Kit.htm</a> (for the <i>Resource kit</i> ) <a href="http://lcinitiative.unep.fr/">http://lcinitiative.unep.fr/</a> (Life Cycle Initiative)	Lots of useful materials, including a <i>Resource Kit on Sustainable Consumption &amp; Production</i> and a Life Cycle Initiative programme. Available in several languages.
<b>Ergonomics</b>		
Ergonomics	<a href="http://www.ccohs.ca/oshanswers/ergonomics/">http://www.ccohs.ca/oshanswers/ergonomics/</a>	The CCOHS page with lots of answers for ergonomic issues, whatever the workplace.
Ergonomics and musculoskeletal injuries (aka RSIs, MSIs)	<a href="http://www.cdc.gov/niosh/topics/ergonomics/">http://www.cdc.gov/niosh/topics/ergonomics/</a>	NIOSH has lots of materials about musculoskeletal disorders/injuries (MSDs/MSIs, aka RSIs) and ergonomic hazards. Includes Health Hazard Evaluations (HHEs) about specific problems, guidelines, the NIOSH <i>Lifting equation</i> and other materials. (The equation is a technical tool to figure out how much can be lifted in a particular situation.)
Ergonomics (and an ideas bank)	<a href="http://www.lni.wa.gov/Safety/Topics/Ergonomics/default.asp">http://www.lni.wa.gov/Safety/Topics/Ergonomics/default.asp</a>	The Washington State Department of Labor and Industries has done a lot in this field, including a “no lift” law in health care. Check out the ideas bank and the reports by industry/ sector, in particular. Also see their <i>Quick tips for lifting</i> .
Ergonomic resources for Manitoba workplaces	<a href="http://www.gov.mb.ca/labour/safety/ergonomic.html">http://www.gov.mb.ca/labour/safety/ergonomic.html</a>	Manitoba’s Workplace Safety and Health Division has an on-line version of their guideline about ergonomic programmes, and related materials, along with links to other organisations/resources.



Resource	Find it at:	Source/comments
<i>Ergonomic checkpoints</i>	Canadian orders for ILO materials are possible through Renouf Books in Ottawa, on line at <a href="http://www.renoufbooks.com">http://www.renoufbooks.com</a> .	From the ILO. Illustrated easy-to-use manual is an extremely useful tool designed to improve working conditions. Each of the 128 checkpoints helps users look at various workplaces and identify practical solutions.
<i>Floppy Ergonomist</i>	<a href="http://www.osh.dol.govt.nz/order/catalogue/138.shtml">http://www.osh.dol.govt.nz/order/catalogue/138.shtml</a>	Occupational Safety and Health Service of the Department of Labour, New Zealand. The 'Floppy Ergonomist' is interactive software to help VDU/VDI users avoid discomfort.
<i>Is job rotation the answer?</i>	<a href="http://www.cre-msd.uwaterloo.ca/kr_workshops.html">http://www.cre-msd.uwaterloo.ca/kr_workshops.html</a>	Job rotation is not always a good solution. This site has "videos" from a workshop about the pros and cons of job rotation as an answer to ergonomic problems. Innovative and sometimes-academic, it includes practical experiences and stories.
Lifting guidelines	Start with <a href="http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&amp;db=PubMed&amp;list_uids=12671202&amp;dopt=AbstractPlus">http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&amp;db=PubMed&amp;list_uids=12671202&amp;dopt=AbstractPlus</a> Also search for "Straker AND lifting"	Leon Straker is a physiotherapist who's studied lifting issues, especially picking up things from the floor or low spots. His recommendations, backed by studies, fly in the face of typical "proper lifting" instructions.
Office ergonomics (especially computers)	<a href="http://www.office-ergo.com">http://www.office-ergo.com</a>	In particular, check out <i>Current versus conventional wisdom</i> about computer and office ergonomics. Lots of practical advice about setting up work stations. Also see the main site's document about checklists.
Participatory ergonomics	<a href="http://www.iwh.on.ca/sr/wi_part_ergo.php">http://www.iwh.on.ca/sr/wi_part_ergo.php</a>	Involving workers in a meaningful way improves solutions. The Institute for Work & Health developed guidelines about participatory ergonomics, based on studies and their experiences. There is a general report and a more "scientific" one. Lots more "out there" about this topic, from many viewpoints (e.g. the B.C. health agency's review of studies, found at <a href="http://www.ohsah.bc.ca/462/2052/">http://www.ohsah.bc.ca/462/2052/</a> ).





Resource	Find it at:	Source/comments
Prevent musculoskeletal disorders (MSDs)	<a href="http://www.wsib.on.ca/wsib/wsibsite.nsf/public/PreventMSD">http://www.wsib.on.ca/wsib/wsibsite.nsf/public/PreventMSD</a>	The Ontario Ministry of Labour and Workplace Safety Insurance Board (WSIB) prepared documents after consultations with employers, unions and others in the province. The first two are the <i>MSD Prevention Guideline for Ontario</i> and the <i>Resource Manual for the MSD Prevention Guideline</i> . A toolbox is just out and other materials from both organizations are on the same site.
<b>Physical hazards (from energy sources)</b>		
Heat and humidity issues	<a href="http://www.whsc.on.ca/whatnews2.cfm?autoid=193">http://www.whsc.on.ca/whatnews2.cfm?autoid=193</a>  Also go to <a href="http://www.ohcow.on.ca">http://www.ohcow.on.ca</a>	<p>The first site is a video about recognising and dealing with heat and humidity problems. Uses a sensible approach developed by a Canadian hygienist. View or download on line with a high-speed connection.</p> <p>Also see the <i>Heat stress guide</i>, <i>Heat stress wheel</i> and poster at the OHCOW site. Calculate the humidex in your workplace by going to <a href="http://www.ohcow.on.ca/menuweb/heat_stress_calculator.htm">http://www.ohcow.on.ca/menuweb/heat_stress_calculator.htm</a>.</p>
Indoor air	<a href="http://www.orebroll.se/uso/page_17918.aspx">http://www.orebroll.se/uso/page_17918.aspx</a>	<p>Figuring out indoor air quality issues can be difficult. This internationally-recognised tool from Finland has instructions and back-up materials. The MM-40 comes in versions for general offices and schools. The webpage has more information about the tool and how to use it.</p>
Noise calculator	<a href="http://www.ohcow.on.ca/menuweb/noisecalculator.xls">http://www.ohcow.on.ca/menuweb/noisecalculator.xls</a>	Calculate noise levels and figure out what kinds of solutions might work with this practical tool from the Occupational Health Clinics for Ontario Workers.



<b>Resource</b>	<b>Find it at:</b>	<b>Source/comments</b>
Noise control. A guide for workers and employers	<a href="http://www.nonoise.org/hearing/noisecon/noisecon.htm">http://www.nonoise.org/hearing/noisecon/noisecon.htm</a>	Originally produced in Sweden, it was adapted by the US Department of Labor in 1980. Still a very practical illustrated guide to preventing and reducing noise levels at work.
Physical agents	<a href="http://www.ccohs.ca/oshanswers/phys_agents/">http://www.ccohs.ca/oshanswers/phys_agents/</a>	CCOHS resources about this topic. Topics include work in hot and cold environments, lasers, microwaves, noise, cell phone radiation, vibration and radon. Also includes office temperature comfort issues.
<b>Stressors, work organization hazards (including violence)</b>		
The Anti-bullying law: the Quebec experience	<a href="http://bullyinginstitute.org/bbstudies/SoaresQuebec.pdf">http://bullyinginstitute.org/bbstudies/SoaresQuebec.pdf</a>	Angelo Soares from the Université de Québec a Montréal ( <a href="http://www.er.ugam.ca/nobel/r13566/">http://www.er.ugam.ca/nobel/r13566/</a> ) studies workplace stressors. This paper was presented at the international Work & Stress conference in 2006. Also see the Bullying Institute's other materials.
A Call to action. Women's health at work & violence in the workplace	<a href="http://www.cwhn.ca/resources/workplace/violence.html">http://www.cwhn.ca/resources/workplace/violence.html</a>	From the Canadian Women's Health Network, a national organization with Manitoba roots.
Bullying/injustice at work and heart disease	<a href="http://www.bullybusters.org/advocacy/justiceheart/justiceheart.html">http://www.bullybusters.org/advocacy/justiceheart/justiceheart.html</a>	See the results of a study and the story at Bullybusters, an on-line resource about this form of workplace violence.
Enough workplace stress: organising for change	<a href="http://cupe.ca/www/113/stressguideline">http://cupe.ca/www/113/stressguideline</a>	The Canadian Union of Public Employees' document is a tool for action. It contains concepts, solutions and strategies that can lead to meaningful change in workplaces.



Resource	Find it at:	Source/comments
<i>Enough workplace violence</i>	Canadian Union of Public Employees. Contact the regional office nearest you (check the phone book), or the Manitoba office at 204-942-0343 or <a href="mailto:info@cupemb.mts.net">info@cupemb.mts.net</a> .	The union's materials about violence at work are based on work it's done since the mid-1980s about violence in public sector jobs. Includes surveys, reporting forms, policies, and a guideline.
Graham Lowe Group	<a href="http://www.grahamlowe.ca/">http://www.grahamlowe.ca/</a>	Lowe and his partners provide consulting, research and knowledge-transfer services designed to create high quality jobs and workplaces. Source of lots of useful papers and information about stressors and how to prevent them in many settings. Emphasis on developing healthy organizations.
Job stress network	<a href="http://www.workhealth.org">http://www.workhealth.org</a>	Source of information about job strain, blood pressure and other cardiovascular effects of stress and links to international work on the topic. Tends to be academic, but give it a try. Check out "job strain" and look in the "What's new" area.
New York Committee for Occupational Safety and Health (NYCOSH)	<a href="http://www.nycosh.org/workplace_hazards/workplace_violence.html">http://www.nycosh.org/workplace_hazards/workplace_violence.html</a> <a href="http://www.nycosh.org/workplace_hazards/stress.html">http://www.nycosh.org/workplace_hazards/stress.html</a>	Resources about violence and work-related stress ( <i>Job stress links and news, including post-traumatic stress disorder and sexual harassment</i> )
<i>Preventing stress at work</i>	<a href="http://www.eurofound.eu.int/ewco/health/stress/index.html">http://www.eurofound.eu.int/ewco/health/stress/index.html</a>	European Foundation for the Improvement of Living and Working Conditions prepared this series of materials. Includes the <i>European Working Conditions</i> surveys.
<i>Psychosocial issues</i>	<a href="http://www.ccohs.ca/oshanswers/psychosocial/">http://www.ccohs.ca/oshanswers/psychosocial/</a>	Another (perhaps inaccurate) name for work organization hazards or stressors, this part of the CCOHS site includes harassment, post-traumatic stress disorder, absenteeism, burn-out, substance and alcohol abuse, workplace violence, workplace health and wellness programs, EAPs (employee assistance programs), prevention programs, etc.



Resource	Find it at:	Source/comments
Time-related issues	<a href="http://www.timeofday.org">http://www.timeofday.org</a>	Take back your time is a major U.S./Canadian initiative to challenge the epidemic of overwork, over-scheduling and time famine that now threatens our health, our families and relationships, our communities and our environment.
TUC Stress MOT	<a href="http://www.tuc.org.uk/h_and_s/tuc-5579-f0.cfm">http://www.tuc.org.uk/h_and_s/tuc-5579-f0.cfm</a>	The two-part document lets users look at both symptoms and their causes, based on the UK's MOT or car safety programme. It's an innovative and practical way to approach this topic.
Violence on the job	<a href="http://www.cdc.gov/niosh/injury/traumaviolence.html">http://www.cdc.gov/niosh/injury/traumaviolence.html</a> and a video's at <a href="http://www.cdc.gov/niosh/docs/video/violence.html">http://www.cdc.gov/niosh/docs/video/violence.html</a>	NIOSH's materials about preventing violence at work.
Violence, bullying and harassment in the workplace	<a href="http://www.eurofound.eu.int/ewco/reports/TN0406TR01/TN0406TR01.htm">http://www.eurofound.eu.int/ewco/reports/TN0406TR01/TN0406TR01.htm</a>	The European Foundation for the Improvement of Living and Working Conditions put this out in 2004. Only available electronically.
Workload incident report form	<a href="http://www.heu.org/index.cfm?act=doc&amp;doc_ID=19">http://www.heu.org/index.cfm?act=doc&amp;doc_ID=19</a>	Material developed by the B.C. Hospital Employees Union (HEU) about a topic that's becoming a more common hazard.

