



What do you see?

An introduction to some important principles in occupational health and safety

## A useful framework for health and safety activities



## **Italian Workers Model of OHS**

- "our health is not for sale": we won't delegate decisions about our health to others
- all hazards matter, especially how work is organised
- mapping all hazards gives an overview that workers don't usually have, and a common language with which to work with engineers and others
- group discussions about hazards (to identify and quantify) are as good as "experts" assessments
- OHS is not a technical issue, although it helps to know some technical things
- workers' experiences matter; only workers know the real job, so they must be involved in identifying and fixing hazards
- it's all about workplace democracy (work organisation is at the centre)







The men learned that their health belonged to them -- they were leasing their labour but not their health.

Emilien Clouthier, CSN strike leader, 1974 From: *Our health is not for sale*, NFB, 1978



In 1950, the World Health Organisation (WHO) and the International Labour Organisation (ILO) set out goals for work-related health activities.



#### The goals of occupational health are to:

- ✓ promote and maintain the highest degree of physical, mental and social well-being of workers
- ✓ prevent ill-health among workers caused by their working conditions
- ✓ protect workers from factors adverse to their health in their employment
- place and maintain workers in occupational environments adapted to their individual physiological and psychological conditions.



## Start with workers' experiences

(especially their bodies)

- Aches and pains
- Where "stress" shows up
- Other symptoms





### Workplace stressors have toxic effects



Adapted from *The anti-stress guide* by the Hospital Employees Union (2000). Available by going to http://www.heu.org, under health and safety, resources.

#### Strain (long-term) physical effects include ...

Sleep disorders, insomnia, fatigue, exhaustion

Headaches, tension, grinding teeth

Cardiovascular problems (e.g. high blood pressure, heart attacks, other changes to the heart and circulation system)

Chest pains/problems

Immune system problems, which make it easier to get sick

Asthma

Digestive system problems (eg. spastic colon, ulcers, impaired digestion, irritable bowel syndrome); weight gain or loss

Diabetes

Menstrual disorders

Sexual dysfunction

Joint and muscle pains; arthritis

Burnout



#### Strain (long-term) 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 (including "the union"), paranoia

Drug and alcohol abuse

Conflict with family and friends (sometimes violent), fights with co-workers and supervisors

Anger, frustration, envy

Depression, mood changes, constant negativity

Suicidal thoughts

Over-reaction, irrational behaviour

Job dissatisfaction

#### Long-term, less visible effects are well-known too

DEW: March/2010



## What's the problem?

# *It's the hazards, stupid!* (to quote someone else)







Stress (short-term effects) Stressors (the hazards) Toxic stress/Strain (long-term effects)



Work organisation matters --

## it has, it does and it will

The irregularity of employment and of income must be a fruitful source of disease.

For instance, while there is much enforced idleness, a tailor has often to perform "nine days' work in a week."

The insufficient sleep, the strain to the eyes, the lack of proper time to take meals or out-door exercise, and the prolonged confinement in unwholesome and over-heated workshops are naturally important factors in undermining the constitution of even the most fortunate among the journeymen tailors.

Report of the Lancet Special Sanitary Commission on 'sweating' among tailors in Liverpool and Manchester. The Lancet, April 14, 1888.



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# What's missing?

Some mainstays of semiconductor fabrication and electronics assembly:

- glycol ethers
- chlorinated HC solvents
- aromatic HC solvents
- epoxies
- compounds based on
  - arsenic
  - cadmium
  - chromium and nickel

# *How can you find symptoms and hazards?*

- Make things visible
- Use workers' rights
- Surveillance (health and hazards)





### Workers have rights to:

- ✓ a healthy and safe workplace
- ✓ know (about hazards and their effects)
- ✓ refuse (unhealthy or unsafe work)
- ✓ participate (in some places, e.g., on inspections, via committees)
- ✓ no harassment/retaliation

because ...

### **Employers have duties**



#### Source: Hazards or www.hazards.org/diyresearch/



But where are the people? Their experiences?







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WORK WORK

That's what prevention is based on. And that's where employers and workers need help.

### Solutions -- start with a vision



## **Prevention through** precaution:

The Wingspread Statement on the Precautionary Principle, in 1998, says:

Where an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public bears the burden of proof.

The process of applying the Precautionary Principle must be open, informed and democratic, and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.

(http://www.sehn.org/wing.html)



Avoid "paralysis by analysis" by acting to reduce hazards via the precautionary principle -- better safe than sorry (or reactionary)

## Protecting Public Health the Environment

Implementing, the resolutionary Principle

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 Take action to prevent harm, even if we are not sure about (all) the hazards.

- ✓ Shift the "burden of proof" to companies. Before it is sold, used or put on the market, make them prove that something will not harm people or the environment.
- ✓ Look at a lot of options or alternatives. Go for the non-toxic or least toxic.
- Increase public participation. Be democratic. Make sure that workers, consumers, and environmentalists are in all conversations and decisions about how to deal with chemicals and products.

### To implement the precautionary principle, assess, justify and account for all economic pros and cons

- Include distribution; and "secondary" benefits and costs
- Include effects of innovation and technological change, and social impacts of technology choices
- Product prices need to include full costs of production, use and disposal (the "polluter pays principle")
- This maximises efficiency, stimulates innovation and minimises environmental and health burdens
- Precautionary costs should not greatly outweigh the benefits; the proportionality principle

**"Misplaced certainty** about the absence of harm played a key role in delaying preventive actions in most of the case studies" (preface, *Late lessons from Early Warnings: the Precautionary Principle 1896-2000*) Adapted from a presentation by Dave Gee, European Environment Agency. Late lessons from early warnings: the precautionary principle 1896-2000



\* What happens if it's upside down (and you just limit the harm)? It falls over!

#### Cover all the ingredients for a healthy environment ...



## Support green chemistry, a framework that is ..



- asking "Is this chemical/product necessary for this task?"
- about prevention -- using the precautionary approach
- better recipes -- designing safer chemicals, products and processes for healthier people, communities and environments
- not having to say you're sorry (or making it less likely)



**Cradle-to-Cradle** is an innovative and sustainable industrial model that focuses on design of products and a production cycle that strives to produce no waste or pollutants at all stages of the lifecycle.

Braungart and McDonough Cradle-to-Cradle: Remaking the Way We Make Things (2002) It takes us to different ways of thinking about the design of materials and products and the chemicals that go into them

## Solutions are not strategies

(Clearly define the topic)		What's our goal or solution?			What resources can belo us?					
		To reach in 3 miths			;	Paper/res	earch	People and organi	zations	Money
	>	To reach in 6 mths				-				
	- -	To reach in 12 mths								
ŕ	Ho	v does our s	olution benefit		-					
	Us?	Unions?	Community? Family? Others?	Employer?		Barrie	ers? (What might stop us getting the so		lution?)	
th A				1997 <b>- 1997 - 19</b>	- ayın	at are they?	, mena	t can <u>we</u> do about them?	How can	others help us dea with them?
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# We need to work on solidarity/healthy solutions together



## We need to acknowledge power\* and deal with it



6. What fines these hazards? 6.2 Who are the "playas"? Player Why involve? Second-in-Take load off super, can make decisions charge (and Supervisor Make decisions Senior mgmt Case to sew man Shop stew Purse string JHSC union ACCN Strass Insuranceco (benefits) To prevent / leduce stressorst-COsts



Our words should be	Their words usually are
Prevention	Control
Hazard	Risk
Health and safety	Safety
Incident, Was injured/hurt;	Accident, "Hurt themselves"
Injury	Disease
<i>It's the hazards, stupid!</i> Fix the hazard, not the worker	Behaviour matters, dumb workers,
Employers are responsible for health and safety	It's everyone's responsibility
What are the (psychological) stressors/hazards?	Stress management



### What do you see?

- symptoms
- hazards
- finding them
- solutions
- strategies

Think hazards. Think big. Think solutions. Think tools. Think collective action.

Think about Pete Seeger's version of "Over the rainbow". 🔍



With thanks to Ken Geiser, University of Massachusetts Lowell, Toxics Use Reduction Institute, Lowell Center for Sustainable Production, and great thinker.

What are your questions?