Many will tell you, "Just work safe."
That's not enough.

Let's ***make*** work safe. It's our right!

UNITED STEELWORKERS
USW
MÉTALLOS
www.usw.ca

Workers Health & Safety Centre
www.whsc.on.ca

Use This Book

If you have a job, you will benefit from this book.

If you are a new worker, new to the job, or new to Canada – this book is for you. The reason is that, because you are a new worker, you have the highest risk of injury or accident on your job.

This book is about four rights:

- ✓ The right to a safe and healthy workplace;
- ✓ The right to know the hazards you face;
- ✓ The right to be a part of correcting hazards;
- ✓ The right to refuse unsafe work.

This book will give you a strategy to address your concerns. It reviews your knowledge of health and safety rights and how they apply in your situation. This book helps you evaluate the key safety features of your job.

Are you getting the training you need?

For those new to Canada, we hope the information and techniques in this book will provide an orientation to safety at work—so you know when and where you can get the answers you need.

Know your rights and know the hazards. Your employer's responsibility is to address the hazard and give you the knowledge, training and tools to make your job safe.

Know who the employee health and safety representative is on your job.

Know who you can turn to for advice.

Ken Neumann
National Director for Canada
United Steelworkers

UNITED STEELWORKERS
USW
MÉTALLOS

Our Message in Context

History—Ours for the Making

Historically, workers led and continue to lead the struggle for change resulting in improved health and safety conditions in the workplace and by extension in the community. Activities of workers and their unions have focused on winning basic rights for workers and gaining a say in matters affecting health and safety—both through collective bargaining and through pressing for legislative reforms and their enforcement.

The Steelworkers union has played an important part in this struggle. For instance, Steelworkers employed in asbestos mines in Quebec and Newfoundland, once took the rare step of striking for better working conditions. Similarly 30 years ago, Steelworkers went on a wildcat strike for safer, healthier working environments at uranium mines in Elliot Lake, Ontario. Of particular concern to the strikers were exposures to radiation, silica dust and other toxic substances. The strike lasted three weeks. The unrelenting pressure of the miners, their union and Ontario's New Democratic Party (NDP) helped push forward the appointment of a Royal Commission examining the health and safety of mines.

With the help of the NDP and others in the labour movement the Steelworkers were able to turn a Royal Commission examining conditions in Ontario mines into a provincial law which today yet benefits workers in all sectors of the economy. A few years following their Ontario victory, Steelworkers helped secure similar legislation for workers employed in the federal jurisdiction.

Upon this foundation workers have since achieved many more legislated gains, gains that 25 to 30 years ago seemed impossible. They include:

- Designated substance control programs for some of the most dreaded toxins in the workplace;
- WHMIS, a national standard for communicating hazard information to workers;
- A National Day of Mourning for workers who have been injured, killed or made ill as a result of hazardous working environments;
- Sustained government funding for worker organizations like the Workers Health & Safety Centre, Occupational Health Clinics for Ontario Workers, Alberta Workers' Health Centre, and British Columbia Federation of Labour Occupational Health and Safety Education Resource Centre;
- Training for tens of thousands participating on health and safety committees;
- Adoption of some of the world's lowest occupational exposure levels for a host of toxic substances;
- Millions of dollars in compensation settlements for the victims of hazardous occupational exposures;
- Federal legislation, popularly known as the Westray Bill, that establishes criminal liability for workplace health and safety—legislation sparked by a tragedy of heinous proportion;
- Ergonomics and violence legislation for workers in many jurisdictions.

cont'd/.....

..... /cont'd

This isn't to say more improvements aren't necessary. Read on and you will learn how many jurisdictions are without specific laws governing a host of hazards. And for those laws we do have, we must remain vigilant. It is not uncommon for governments to take away rights. Winning them back can be an equally hard struggle. For instance most recently, the Steelworkers in British Columbia launched a health and safety campaign for workers in the forestry industry. Simply entitled, "Stop the Killing," this effort was responsible for the provincial government re-regulating forestry industry safety standards, rehiring laid-off inspectors, reviewing forest sector safety standards; appointing a forest industry coroner, and conducting two forestry- related inquests.

Bill C-45 (The Westray Bill)

On May 9, 1992, at the Westray coal mine near Stellarton, Nova Scotia, 26 miners died in an explosion created from a deadly mixture of coal dust, methane gas and criminal neglect. Valiant rescue efforts recovered the bodies of 15. For the families of the 11 men never recovered, the mine holds their most precious treasure, their loved ones.

The Nova Scotia government did not proceed with manslaughter and criminal negligence charges against the mine owners or senior officials. They believed there was little chance of conviction. However, many, including the families of the 26 miners and Justice K. Peter Richard who headed the public inquiry into the disaster, felt senior company officials should have been held to account. A devastated community and thousands of health and safety activists resolved there would be 'no more Westrays'. This said, they knew, as many families of workers know, employer disregard for worker health and safety can kill one worker at a time as easily as 26 at a time.

Twelve years later, an unceasing labour lobby led by the Steelworkers Union resulted in unanimous all party support for changes to Canada's Criminal Code. Known as the Westray Bill, Bill C-45 allows for corporations and senior officers to be held *criminally liable* for harm caused at work. The new law will force employers to consider more carefully the dangers to which they expose workers.

National Day of Mourning

In Canada, four workers are killed for every working day of the year. Thousands of others die from diseases caused by exposures to toxic substances in their workplaces. Thousands more are permanently disabled. Hundreds of thousands are temporarily unable to work because of workplace injuries.

To help raise public awareness of this suffering and ways to prevent it, in 1984 the Canadian Labour Congress first recognized April 28, as the National Day of Mourning. This date was chosen because it was on April 28, 1914 Canada's first workers' compensation legislation received its final reading in the provincial parliament of Ontario.

The Day of Mourning was acknowledged by Canada's Parliament in 1991 as a result of a private member's bill put forward by the New Democratic Party. The day's slogan, "Mourn for the Dead—Fight for the Living" encourages us all to recognize those who have lost their lives at work or suffered life-altering occupational injuries; but it also encourages us to recommit to preventing similar tragedies.

Today workers and their communities observe the Day of Mourning in more than 100 countries. This year we invite you, your family and friends to join us at events nation-wide. Further, we invite you to learn about how each of us can play a role in preventing workplace tragedies.

Many will tell you, "Just work safe." That's not enough.

Let's make work safe. It's our right!

Grant De Patie a 24-year-old service station attendant from Maple Ridge, British Columbia (B.C.), was working alone at an Esso station the night he was brutally killed in the spring of 2005. Grant was trying to prevent Darnell Pratt and his friends from getting away without paying for their gas. A drunken Pratt viciously struck Grant with a stolen car and dragged him under the vehicle for more than seven kilometres. Pratt was later sentenced to nine years in prison for manslaughter.

It can happen to you.

Although an extreme case, Grant De Patie's story is like many new or young worker experiences. New or young workers employed in retail stores, gas stations and other workplaces often work alone. As a result they are frequently the target of shoplifting, "gas and dashes," robberies, and violence—especially late at night.

Grant De Patie

But it doesn't have to be this way.

Grant's employer blamed Grant for his own death. He should have stayed inside. He shouldn't have tried to stop the car. He should have "worked safely." But Grant felt responsible and was trying to protect the company from theft.

The truth is Grant's employer let *him* down. It's not enough to expect someone to "just work safe." The employer had a legal responsibility to make the workplace safe for Grant and his co-workers.

As a result of Grant De Patie's tragedy, the B.C. government introduced a new law making it mandatory for motorists to pay before pumping gasoline in urban area gas stations between the hours of 10:00 p.m. and 6:00 a.m.

"Grant's Law," as it is called, is a Canadian first. For the first time employers in B.C. are now legally required to schedule two or more workers for any late night shift or ensure that a "lone" worker is physically separated from the public by a locked door or barrier during the late hours in any retail outlet such as a gas station, convenience store or all night fast food restaurant.

This new law is the result of a vigorous campaign spearheaded by Grant De Patie's family, the B.C. Federation of Labour, the United Steelworkers union (USW) and others, who along with community groups, helped raise public awareness of the need for action.

Tragedies such as this are a heart-breaking reality in communities across the country. In Canada 1,038 workers were killed on the job and some 307,814 were hurt or seriously injured at work in 2008. Ontario had 396 fatalities—the highest number of deaths in Canada, followed by 195 in Quebec and 166 deaths in Alberta. Of course these are the incidents that are reported to and accepted by compensation boards. Many claims are denied. Many more go unreported. In the case of occupational diseases like cancer the connection is never made to hazardous workplace exposures.

To avoid these tragedies, many like Grant De Patie's employer will tell you to just work safe. While it is always advisable to work safely, again, that alone isn't enough to protect you. Workers across this country have three basic rights to ensure they are protected:

- The right to know about workplace hazards and necessary control measures;
- The right to participate in solutions to workplace hazards, working through the joint health and safety committee in larger workplaces or worker representative in smaller workplaces ; and
- The right to refuse unsafe/dangerous work.

More information on workers' rights and the employer's responsibility to provide a healthy and safe workplace can be found later on in this booklet. However it is important to know up front these rights are only paper rights if they are not exercised.

How Do I Exercise My Rights?

The best way to effectively exercise your rights is to do so **collectively**.

In the workplace, you can exercise your rights by getting support from your co-workers, the joint health and safety committee (JHSC), worker representative or the union if there is one.

Remember, as a new or young worker you are standing on the shoulders of your more experienced fellow workers. You needn't go it alone. The work environment can be made safer with your combined efforts. There *is* safety in numbers after all.

Read on. Let's work together to make the workplace and the environment healthy and safe—it's our right.

Perspectives on Health and Safety

It is in everyone's interest to create a profitable and safe workplace—but what comes first is a matter of priority. When it comes to health and safety, employers and workers often have differing priorities. Workers, and certainly their unions, have always emphasized safer and healthier workplaces. For most employers though, the profit motive is most important.

How these employers approach workplace hazards helps illustrate this point. Employers in many cases choose first to purchase personal protective equipment (PPE) for individual workers rather than spend money on improving working conditions. They believe this "quick fix" is better for the bottom line.

Still others ignore the hazards altogether which results in serious injuries, illness and deaths. As noted above the number of these tragedies in Canada is staggering, but so too are the economic costs. The Ontario compensation board has estimated the average lost-time injury costs $98,000. Much of this is the direct cost of fines, prosecutions, premium hikes and stop-work orders, in addition to lost productivity. In this light worker and employer viewpoints needn't be so different after all.

Myth of the Careless Worker

Underlying the approach of many employers is the age-old "myth of the careless worker." In the eyes of these employers, accidents are caused exclusively by worker error. When it comes to young workers, these prejudices are even more pronounced.

Employers embrace the notion that young workers are to blame for their injuries or those of their co-workers because they are immature and believe they are invincible. In short, they "choose" to work unsafely. Nowhere in this belief-system is lack of proper training and supervision ever considered, much less a hazardous work environment.

This kind of employer expects workers young and old alike to duck, dodge, or jump out of the way, lift safely, wear their protective equipment/clothing and focus on the task at hand. In other words, workers must do anything to avoid hazards instead of the employer doing everything needed to eliminate or reduce dangerous conditions.

Instead of investigating the root cause of an illness or injury by identifying the hazards in the workplace and eliminating or reducing them, many employers use incentives such as pizza nights, free tee-shirts/jackets, or hockey tickets to "bribe" workers to "work safely" and/or to "snitch" on others who aren't working safely.

It's worth noting however, independent research has demonstrated the "myth of the careless worker" is unfounded—young workers too. Researchers from the Institute for Work and Health and the University of Toronto recently found that regardless of age being "new" on the job is the cause of many injuries. In fact, workers are four to six times more likely to be injured during the first month on a job than workers with more than one year experience.

Why are New and Young Workers at Risk of Injury?

As a new worker you have a high risk of injury because of inexperience, lack of training, and feeling too intimidated to say no when asked to do something you feel is unsafe. But again, the simple reason new workers are at high risk is because they are exposed to unsafe or unhealthy working conditions.

When it comes to new workers who are also young, a survey conducted by the Workers Health & Safety Centre (WHSC) found young workers report being exposed to more hazards than their older counterparts. Further, although all jobs can be dangerous, most injuries seem to take place in the service industry—where young workers start out as store clerks, cashiers, stock clerks, table servers or cooks.

The top five causes of injury are the following:

- Slips and falls (on slippery surfaces or from heights);
- Over-exertion (working in extreme heat without adequate breaks);
- Struck by an object (getting hit in the head by a falling object);
- Toxic effects from chemicals (passing out from fumes from the exhaust pipe of a vehicle);
- Burns (getting burned from flying grease from a deep fryer).

The five most common injuries are:

- Sprains and strains (including back injuries);
- Soft tissue injuries (cuts, punctures, bruises);
- Bone fractures;
- Inflammation of joints;
- Burns or scalds.

Laws to Help Protect You

As noted above, workers and unions like the United Steelworkers have long worked to win laws to help protect you and others in the workplace. Federal, provincial and territorial health and safety laws set out several legal rights and responsibilities. Health and safety laws are made up of acts, regulations, guidelines, standards, and codes. For instance, in Ontario, the *Occupational Health and Safety Act* is the basic authority that governs the health and safety of most workers. In British Columbia it is the *Occupational Health and Safety Regulation* that governs. In Alberta there is an *Occupational Health and Safety Code* that replaced their health and safety regulations in 2004. Similar to the regulations, the *Code* is a legally enforceable set of specific rules that workplace parties must follow.

Health and safety laws in whatever form they take give certain duties and responsibilities to employers, supervisors and workers. Any one of these individuals can be penalized if they do not fulfil their legal obligations. However, it is the employer who has the ultimate responsibility for making sure you and your co-workers are healthy and safe.

Employers Duties

Employers must comply with occupational health and safety laws and their regulations. They have a general duty to take every reasonable precaution to ensure the health and safety of workers.

Although the specific language may differ by province, generally the employer has the following duties and responsibilities:

- Ensure equipment, materials and protective devices and clothing are provided and maintained in good condition;

- Ensure equipment, materials and protective devices provided by the employer are used as prescribed;
- Inform workers, supervisors, foremen and so on about any hazards in the handling, storage, use, disposal and transport of any article, device, equipment or biological, chemical or physical agent in the workplace;
- Provide information, instruction and supervision to a worker to protect the health and safety of the worker;
- Appoint a competent person as supervisor;
- Consult and cooperate with the joint health and safety committee or health and safety representative regarding the duties and matters with which the committee is charged under the law;
- Prepare and review a written occupational health and safety policy and program, and post it in a conspicuous location in the workplace;
- Provide to joint health and safety committee or health and safety representative the results of any reports in the employer's possession on health and safety;
- Carry out such training programs for workers, supervisors and committee members as may be prescribed.

The employer must respond to joint committee recommendations and co-operate with anyone carrying out their duties (e.g. inspectors) as per the occupational health and safety law. Most importantly, the employer must comply with the law and any regulations made under it.

Supervisors Duties

Employers must appoint **competent** people as supervisors. Competent people are trained in the work, knowledgeable about potential or actual dangers in the workplace, and familiar with the law. Like employers, supervisors must take "every reasonable precaution" to protect the health and safety of workers. Although the specific language may differ between provinces generally speaking supervisors have the following duties and responsibilities.

- Ensure a worker complies with the *Act* and regulations;
- Ensure any equipment, protective devices or clothing required by the employer is used or worn by the worker;
- Advise a worker of any potential or actual health or safety dangers known by the supervisor; and
- If prescribed, provide a worker with written instructions about the measures and procedures to be taken for the worker's protection.

Workers Duties

As a worker, you also have several duties and responsibilities under the law. A worker must do the following:

- Work in compliance with the *Act* and regulations;
- Use or wear any equipment, protective devices or clothing required by the employer;
- Report to the employer or supervisor any known missing or defective equipment or protective device that may be dangerous;
- Report any known workplace hazard to the employer or supervisor;

- Not remove or make ineffective any protective device required by the employer or by health and safety legislation;
- Not use or operate any equipment or work in a way that may endanger any worker; and
- Not engage in any prank, contest, feat of strength, unnecessary running or rough and boisterous conduct. (Racing powered hand trucks, or seeing who can pick up the most boxes are examples of unsafe and unacceptable workplace conduct.)

Workers Rights

Just as important if not more so, again you have rights under the law. Let's look at these more closely now.

The Right to Know

As a worker, you have the right to know about the hazards present in your workplace and how these hazards can affect you. You usually learn about the hazards during health and safety training sessions and through on-the-job instructions. By law you are supposed to learn about chemical safety through WHMIS (Workplace Hazardous Materials Information System). This is an important part of your right to know.

WHMIS is a Canada-wide system that provides employers and workers information about the hazardous materials they work with on the job in order to protect their health and safety. WHMIS is the outcome of four years of consultation and negotiations among federal and provincial governments, industry and organized labour. Its rules apply in every province and territory, as well as workplaces covered by federal law.

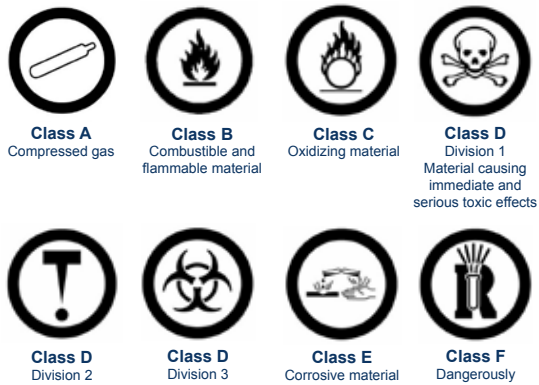
Known to many as the "right to know", this system provides users of hazardous materials with information by means of:

- Warning labels on containers of hazardous materials;
- Separate safety data sheets providing further detailed information (known as Material Safety Data Sheets or MSDS);
- Worker training on how to use this information.

Under WHMIS there are eight classes of hazards. They are: compressed gas; flammable and combustible material; oxidizing material; material causing immediate and serious toxic effects; materials causing other toxic effects; bio-hazardous infectious material; corrosive material; and dangerously reactive material. Each of the classes is represented by its own hazard symbol. As a worker you must receive training on the following:

1. The content of supplier and workplace labels;
2. Contents of the MSDS;
3. Procedures for safe handling, storage and disposal of the hazardous materials used or produced in that workplace;

WHMIS Hazard Symbols and Classes



4. Procedures for safe handling and disposal of hazardous materials contained or transferred in piping systems, tank cars, trucks or conveyors;
5. Procedures to be followed in case of fugitive emissions (e.g. escaping gas, fumes or vapour); and
6. Emergency procedures you should follow for all situations involving a hazardous material.

The Right to Participate

All workers have the right to take part in health and safety activities/issues in the workplace. You can participate by selecting worker members or becoming the worker selected for the joint health and safety committee or as the health and safety representative (not in all provinces).

Although it varies by province generally, a **joint health and safety committee** (JHSC) is required in workplaces with 20 or more workers (10 or more in Newfoundland). Workplaces with five or more workers (no minimum in Newfoundland) must have a worker health and safety representative. In Alberta a JHSC is required only if ordered by the Ministry of Labour.

Although the specifics may vary by province, generally the JHSC is made up of an equal number of worker and employer representatives and has the following rights and duties:

- The right to inspect the workplace and identify hazards;
- The right to make recommendations to the employer for the improvement of the health and safety of workers;
- The right to recommend to the employer the establishment, maintenance and monitoring of health and safety programs, measures, and procedures respecting the health and safety of workers;

- The right to obtain information from the employer on the identification of potential or existing hazards of materials, processes and equipment;
- The right to obtain information from the employer on health and safety experiences, work practices, and standards in similar or other industries of which the employer has knowledge;
- The right to information from the employer on any tests of equipment, machine, device, article, any biological, chemical or physical agent in or about the workplace;
- The right to be consulted about and have a designated representative present at the beginning of any testing;
- The right to designate a member of the committee to investigate fatalities or critical injuries;
- The right to be properly consulted on training for all workplace parties.

The Right to Refuse

Furthermore, you have the right and in some cases the duty to refuse unsafe work you believe could endanger you or another. According to the law you cannot be fired for refusing unsafe work, but if you refuse to work, there are specific procedures that you must follow. Visit the Steelworkers, Workers Health & Safety Centre, or Ministry of Labour web sites in your province for more information.

In addition to the three rights listed above, you also have the right to a workplace free from violence, harassment and discrimination. Human rights are health and safety rights.

Always remember if you are not sure if something is safe or healthy—ask your employer, or supervisor. No question is too dumb or too silly.

Most importantly, don't let anyone blame you for a situation you did not create.

Federal Legislation

The Canada Labour Code covers some jobs that aren't covered by provincial or territorial legislation. If you work in any of the workplaces on the list below, you need to get more information about federal health and safety laws. These include airlines, airports, atomic energy facilities, cable companies, out-of-province buses, trucking or courier companies, crown corporations, federal government departments, feed mills, grain elevators, railways, radio stations, shipping companies, telephone companies, and television stations. By and large federally-regulated workers enjoy rights similar to those of their provincial counterparts.

Where Laws Differ

Unfortunately not all provinces across Canada have the same protections. Some provinces provide added protection for workers in areas such as ergonomics, harassment, violence, working alone, exposure to cancer-causing substances *and significantly*, new worker training.

British Columbia, Saskatchewan, Manitoba and the Canada Labour Code each have **ergonomics** legislation. Under B.C. law, employers must consult with joint committees and affected workers in identifying, assessing and controlling the risk factors responsible for the development of musculoskeletal injuries. The employer must also provide related training.

In Saskatchewan, Manitoba and Ontario, employers are required by law to ensure workers are not exposed to **harassment** in the workplace. Workers must refrain from causing or participating in the harassment of another worker.

Quebec's *Labour Standards Act*, has a section to prevent and respond to psychological harassment (including bullying) in the workplace. The section outlaws "vexatious behaviour" that takes the form of repeated insults, vulgar remarks or gestures that are offensive, demeaning and undermine a person's self-esteem.

British Columbia, Saskatchewan, Manitoba, Nova Scotia, Ontario (effective June 15, 2010), and the Federal government all have specific workplace violence prevention legislation. Saskatchewan and B.C.'s legislation includes workplace bullying. B.C. and now Ontario, lead the way requiring employers to conduct risk assessments, establish policies and procedures and warn workers where potential dangers exist. Elsewhere, Manitoba has the *Workers Working Alone Regulation*, which applies to victimization through criminal violence. Alberta and again, B.C. also have **working alone** legislation.

To help reduce or eliminate the risk of cancer among their workers, British Columbia has recently revised their *Occupational Health and Safety Regulation*. The Regulation requires employers to **substitute all carcinogens** (cancer-causing substances) with less hazardous substances.

Finally, B.C. has also passed a new amendment making it mandatory for employers to **train all "new" or "young" workers** before they are allowed to start their new job.

The Steelworkers union is working hard with other unions and all interested in worker health and safety to extend these important rights to workers nation-wide.

Hazards Where You Work

No matter what job you do, hazards exist. A **hazard** is a condition, physical, chemical, or biological agent, or ergonomic stress with the potential for causing injury or sickness to a person, damage to equipment or structures, loss of material, or lessening of the ability of a person to perform a function.

Whether you work in a retail store, on a construction site, serve fast food, work in a day care centre, work in a hospital, stack boxes in a warehouse, cut lawns, work in an office, or work on an assembly line there is always an element of risk. As a new or young worker it's important to know what the hazards are and what your rights are in the workplace.

There are all kinds of workplace hazards. Some cause an immediate injury like slipping and falling on a greasy floor, or getting burned by a hot grill. Chemicals such as sulphuric acid or ammonia can also burn. Meantime, a fire or an explosion can cause serious injuries or death. These types of incidents are known as **acute exposures**.

Other hazards may injure you or make you ill over a period of time. For instance, certain hazardous chemicals can cause cancer or reproductive problems that don't show up until later in life. You can also injure yourself lifting boxes, stocking shelves or repeating actions over and over again, like scanning items at a checkout counter or hammering nails. These types of exposures are known as **chronic exposures**.

Regardless, hazards can be grouped into the following categories:

Physical

- Exposure to moving machine parts (e.g. unguarded meat cutter, conveyor belt);
- Noise and vibration (e.g. using a jackhammer, driving a bus, working in a factory, or a sawmill);
- Heat and cold (e.g. refrigerated room, hockey rink, automotive plant in summer, cutting lawns);
- Radiation (e.g. working with an X-ray machine);
- Dust and fibres (e.g. asbestos, wood dust, metal filings);
- Slips, trips and fall hazards (e.g. icy loading dock, greasy floors, debris, broken ladder, or falling trees).

Biological

- Exposure to bacteria, viruses (e.g. working in day care centre, hospital);
- Animal bites, insect stings (e.g. working outdoors in parks and recreation, work in a veterinary hospital);
- Medical waste (e.g. working in housekeeping in hospital setting, cleaning out garbage cans);
- Toxic plants (e.g. working in the florist department of grocery store);
- Mould, mildew, fungus (e.g. working in a gym, public swimming pools, campsite).

Chemical

- Exposure to harmful chemicals (e.g. mercury, lead, benzene);
- Vapours and fumes, (e.g. diesel exhaust from buses, cars, forklifts, welding fumes, toluene, or cleaning products);
- Gases (e.g. acetylene, propane, carbon monoxide);
- Flammable, combustible and explosive chemicals or other materials that can explode or ignite.

Ergonomic

- Repetitive movements, even light movements (e.g. typing, data processing, working as a cashier, twisting nuts or bolts, grading lumber, or piecework);
- Poor lighting or seating (e.g. dim lighting in a restaurant or bar, seats that aren't adjustable or made of material that doesn't breathe);
- Poorly-designed workstations (e.g. reaching over your head to work on a car, twisting around to move a box from a skid/cart to a shelf/table);
- Poorly-designed tools, and controls on machinery and consoles (controls that are located far from reach, tools that force you to bend your wrists like a torque or screwdriver).

Psychological

- Threat of violence or abuse from irate clients/customers (e.g. working in a store, or a fast food restaurant, hospital, office);
- Harassment from employer or other workers (e.g. co-workers teasing or spreading gossip about you, your boss making inappropriate comments to you);
- Unreasonable production expectations (e.g. assembly work, piece work);
- Shift work/hours of work (e.g. working days, afternoons or nights in a factory, call centre, or 24-hour store, constantly working overtime or working double shifts);
- Working alone (e.g. in a variety store, or gas station, or as a receptionist in an office);
- Poorly-designed work organization (e.g. piece work, split shifts, working alone in a dangerous area, electronic monitoring).

Also worth mentioning are confined spaces, machine hazards, and a further exploration of workplace violence, as they have been the cause of numerous tragedies for many young workers.

Confined Spaces

Confined spaces are encountered in a variety of work environments. They are defined as "a space in which because of its construction, location, contents or work activity the accumulation of a hazardous gas, vapour, dust or fume or the creation of an oxygen-deficient atmosphere may occur."

These areas are often designed to store a product (grain silo), enclose materials or processes (sewer or septic tank) or transport substances (tanker truck). As such, they are not usually considered a regular work area.

A worker may enter a confined space to perform a specific task such as construction, maintenance, inspection, emergency repairs, or routine servicing or cleaning. Once inside the confined space workers are exposed to a variety of hazards depending on the construction and type of materials being used. It is critical to recognize, assess and control these hazards especially since conditions change rapidly. The following are examples of the types of hazards that may be encountered in a confined space:

- Oxygen deficiency;
- Toxic atmosphere;
- Electrical hazards;
- Lines and systems (not properly disconnected and blanked off can cause leaks and leave workers trapped, burned, drowned or smothered);
- Noise and vibration;
- Poor visibility and slippery walking/ working surfaces;
- Temperature extremes and humidity (excess humidity can create slippery surfaces and make it difficult to breathe).

Workers who enter confined spaces and get into trouble are often unattended. Often too when a co-worker attempts a confined space rescue, he or she ends up dying alongside their co-worker.

Machine Hazards

Eighteen year-old Lindsay Santos' dreams and aspirations ended suddenly one afternoon at the West Fraser Sawmill in Fraser Lake, northern British Columbia While sweeping up the planer (equipment used to dress or size rough sawed lumber), the broom handle she was using caught in a conveyor belt behind her, instantly pulling Lindsay towards open rollers. When she was discovered, frantic efforts took place on-site to revive her. But it was too late. Lindsay Santos died within days of returning to college.

Brett Anderson, a 21 year-old maintenance worker in Edmonton, Alberta, experienced a similar tragedy. Brett was adjusting the tracking of a conveyor belt on an industrial wood grinder. He was working underneath the equipment just below the grinder's drive shaft. While performing his task, Brett became entangled in the rotating drive shaft. Like Lindsay, he too was dead by the time he was pulled out. Although the equipment manual specified that the wood grinder must be shut down before starting any maintenance work, company procedures were to keep the drive shaft and conveyor belt running while making final adjustments to ensure the tracking remained true.

In the mining industry there is a pull cord along the length of the conveyor belts to stop them in an emergency. Unfortunately, for Lindsay and Brett their employers had not considered installing a similar safety device.

Across the country there are many fatalities resulting from machine guarding and lockout violations—too many of these deaths are of young workers. Critical injuries, including a number of amputations, continue to rise.

Machines are potentially hazardous for a number of reasons. They almost always include moving parts that may accidentally come into contact with a worker's body and they incorporate other hazards such as hydraulic and pneumatic systems, electrical circuits, hot exhausts and/or surfaces and toxic chemicals.

Mechanical hazards can occur in three areas:

1. *The point of operation:* This is where work is performed on the material. It includes such actions as cutting, shaping, boring and drilling. At this point machine parts are often sharp, may be moving very quickly and may operate under great force.
2. *Power transmission parts:* All components of the mechanical system that transmit energy to the part of the machine performing the work. These components include flywheels, pulleys, belts, connecting rods, couplings, cams, chains, cranks and gears.
3. *Other moving parts:* All parts of the machine that moves while the machine is working. These include reciprocating, rotating, feed mechanisms and transverse moving parts.

Violence

We live in a violent society. Sadly, much of this violence is spilling into the workplace. But, violence comes in many forms both physical and emotional. Not only does it include physical assault, it also takes the form of harassment, discrimination, racism and bullying. We consider these workplace hazards too. Like other workplace hazards they cause undue hardship and often result in illness or injury that can have long-lasting effects.

While anyone can become the victim of a workplace assault, the risks are much greater in certain industries and occupations. These include taxi drivers, health care workers, teachers, social service workers, retail workers, bank tellers and public transit workers to name a few. Young workers and women specifically, face increased risk of violence on the job. This is because so many women and young workers are concentrated in the high-risk occupations mentioned above.

For instance, in September 1983, 18-year-old Barbara Turnbull was left paralyzed after she was shot by robbers while working at night as a clerk in a Mississauga, Ontario convenience store. The robbers escaped with $200.00.

Another young retail worker, 19-year-old Yancy Meyer from Antigonish, Nova Scotia, was working the night shift at the local convenience store. At about 1:00 a.m. a stranger entered the store and attacked Yancy. He was stabbed three times. He died later that evening.

Brigitte Serre a 17-year-old from Montreal, Quebec, was found slain in a back room of a gas station where she was working alone on her first overnight shift.

Generally the risk of workplace violence includes the following:

- Working with members of the public;
- Handling money, valuables or prescription drugs;
- Carrying out inspections or enforcement duties;
- Providing service, care, advice or education;
- Working where alcohol is served;
- Working alone, or in small numbers;
- Working in isolated or low traffic areas (e.g. washrooms, storage areas);
- Working in community-based settings (e.g. public health nurse, social workers);
- Having a mobile workplace (e.g. public transit, taxicabs);
- Domestic problems that follow us into the workplace.

The design and layout of the work environment can also have a significant effect on the risk of violence. Poor lighting and obstacles can isolate workers making them more vulnerable to attacks. Open access to workplaces or inadequate security can also expose workers to potentially dangerous situations.

Good news. These hazards can be controlled.

The employer is responsible for ensuring a healthy and safe workplace. In order to accomplish this workplace hazards must first be identified.

Once a hazard is identified the following steps should be followed in order of priority.

1. First, try to eliminate the hazard from the workplace.
2. Implement appropriate engineering controls (such as modifying existing equipment) to keep the hazard away from the workers.
3. Introduce administrative controls that alter the way the work is done (safe work procedures, training).
4. Supply personal protective equipment (PPE) for workers to reduce their chance of injury.

Types of Controls

When looking for an appropriate control measure generally speaking the farther a control is from the source of the hazard, the less desirable or effective it will be in protecting the worker.

There are three types of controls:

- The most desirable are controls at the source of the hazard (e.g. controls that will eliminate, substitute, or isolate the hazard);
- Next are controls along the path between the hazard and the worker (e.g. ventilation, barriers);
- The least desirable are controls applied directly at the worker (e.g. administrative controls such as job rotation and personal protective equipment worn by the worker to reduce the chance of injury).

Controls At The Source

Controlling a hazard at its source either eliminates it from the workplace altogether or isolates it from the worker. It is by far the best method of control and the only one acceptable for dangerous substances that cause cancer (known as carcinogens).

Elimination

Control at the source requires a basic restructuring of the work process. It may involve purchasing new equipment, adding safety features to existing machinery, or the complete elimination of a hazardous step in the production process such as using automation/robots to do tasks which may be dangerous for workers.

Musculoskeletal injuries can be eliminated by applying ergonomics and designing the workplace to fit the worker. Adjusting the workstation, tools and equipment to fit the worker eliminates or reduces the repetitiveness, awkwardness and force associated with a task which can cause injuries over time. Chairs, desks, tables,

stools, containers should all be adjustable so that workers of all sizes, heights and reaches can work comfortably without stress or strain to the body. There are also ergonomically-designed keyboards and hand tools to decrease the muscular effort needed to maintain a comfortable working position.

Substitution

The substitution of safer substances or processes for hazardous ones is also a form of control at the source. For example, in some health care establishments nurses and other staff have substituted latex rubber gloves (which some people are allergic to) with gloves made from a substance known as neoprene (which doesn't cause allergies). In some manufacturing industries cutting fluids made from petrochemicals and used to clean the grinding tools and machinery have been replaced with vegetable oils, which are by far much safer. Solvents and degreasers also derived from hazardous petrochemicals have been substituted with those made from citrus fruits, corn alcohol, sugar fermentation and soybean oil. Similarly, manufacturers are making paint strippers from citrus fruits, black liquor (a by-product of paper milling), crystallized wheat starch, walnut hulls and ethanol fermentation.

CAUTION

Not all substitutes are safe.

Some substitutes or processes may themselves be hazardous. Therefore employers must take special care to ensure when substituting one substance or process for another the new substance or process itself is safe. For instance, toluene is often used in the place of benzene as a solvent to clean machinery however, toluene is toxic as well, although it is not as dangerous as benzene.

Many industries, including those in education and hospitality, make use of hazardous cleaners we often use in our homes as well. Be sure to read the labels of these seemingly benign substances. Avoid those with ingredients such as the carcinogen perchloroethylene and reproductive toxins like xylene, toluene or 2-butoxyethanol. Other ingredients to avoid include: trisodium nitrilotriactetate, silica, and ethoxylated nonyl phenol. There are many safer substitutes on the market. There are also simple alternatives using commonly available kitchen products. To learn more about cleaning hazards and their substitutes check out **www.leas.ca** and **www.greenpeace.ca/e/resource/green**.

Isolation or Enclosure

Control is also provided at the source by isolating or enclosing the hazardous process. Closed vat systems in the chemical industry have reduced exposures to many carcinogens. For hazardous substances that must be handled such as in a laboratory, glove boxes equipped with local ventilation systems can be used. This allows mixing and pouring of chemicals with minimal risk to the worker. Using a controlled environment cab/small room for workers to sit or stand in and perform tasks remote from a dangerous environment is another example of isolation. For example, the ticket wicket in a theatre encloses the cashier from irate or potentially dangerous members of the public.

In a hospital setting placing patients with communicable diseases in isolation (separate room) is yet another example of control at the source.

Lockout

Yet another control at the source is the use of lockout procedures. The term "lockout" refers to methods, devices and procedures for preventing the sudden and uncontrolled

release of energy from a system, machine or piece of equipment. Workers like you can be injured when machinery starts up while performing repairs, or when power is restored after a power outage. Today, with computer-operated equipment, some systems can start and stop in even more unpredictable ways. This is hazardous when you are trying to install, service, do maintenance or repair a piece of machinery or equipment. It is during these operations especially that lockout methods, devices and procedures must be used.

BEFORE you attempt to perform any of the previously mentioned operations it is important to make sure all forms of energy in a machine or system have been isolated or controlled, thereby ensuring no one is exposed to any active or moving part of the machine or piece of equipment you are working on.

This means making sure the main energy supply to the machine/equipment is physically cut off. Most effectively this requires disconnecting the main energy source and making it impossible for the machine/equipment to be accidentally re-energized. Other controls must also be used to neutralize all stored energy remaining in the system. Some of these methods include:

- Using a chock or wedge to prevent unexpected movements of parked vehicles;
- Waiting for hot equipment to cool or rotating parts to stop;
- Bleeding off valves or lines of residual liquid or pressurized materials.

Depending on the type of equipment and the energy it contains, there are a variety of lockout devices that can be used. For example, **personal locks** are commonly assigned to an individual worker for his or her use only—the essential principle is one worker, one lock, and one key.

However, the best lockout devices alone will not prevent serious injury. For a lockout system to be effective, a detailed written policy and accompanying set of lockout procedures should be communicated in writing and reinforced through **specific training**. The policy should also clearly identify when lockout procedures should be used, who is qualified and who has the authority to perform lockouts.

REMEMBER

If you are authorized to have your own personal locks, there should only be one existing key for each lock and you should be holding it.
Do not give it to someone else to hold.
Make sure you verify the system has been neutralized before you begin your task.

Confined Space Entry

Federal and provincial laws set out specific minimum safety requirements for working in a confined space. Many workplaces however go beyond these minimum standards to establish confined space entry programs tailored to their workplaces. Since each confined space is unique, procedures for working, entering and exiting safely are crucial and must be tailored to the space itself.

Training must also be provided—not only to the workers, but also to supervisors, attendants, standby persons and rescue personnel. Training must include rescue drills as well.

Any confined space entry procedures should equally apply for the protection of all workers—whether they are regular employees or employed by an outside contractor.

Make sure to ask your supervisor about the confined space entry program in your workplace.

Controls Along The Path

Controls along the path are situated between the source of the hazard and the worker.

Local and general or dilution ventilation systems are examples of controls along the path. Local ventilation systems include fixed hoods in laboratories or on soldering benches, movable hoods and ducts in welding operations and spray booths. A properly designed and maintained ventilation system can be extremely effective in controlling the spread of toxic substances in the air of the workplace.

Machine guarding is a control "along the path" that prevents worker contact with moving machine parts (e.g. meat cutting machine, conveyor belts). Guards may completely or partially enclose moving parts, or shut off the power when a worker enters a dangerous area. Other guards such as Plexiglas shields over stationery grinders may prevent fragments of material from reaching the face or body.

Various presses may require the worker to use both hands to operate power controls; this arrangement is supposed to ensure the worker's arms are out of danger.

Portable barriers or screens may provide protection against energy hazards such as heat, noise, electricity, sunlight and some forms of ionizing radiation. Reflective shielding may protect workers near furnaces and boilers. Line workers and electrical mechanics must be provided with rubber line hoses, blankets and other barriers to prevent contact with live equipment. Lead screens should be used to protect workers from stray radiation where fixed or portable X-ray equipment is used.

REMEMBER

To *never use* an air hose to clean machinery because it spreads the hazard from the machine to the air you breathe. Air hoses can also pose an injection hazard if they are used to clean the skin. Wet methods can be used to control dusts in grinding and drilling operations. They are particularly suitable for mining, crushing, blasting and grinding operations where adequate ventilation is extremely difficult to achieve.

General housekeeping measures are also examples of controls "along the path". They include proper cleaning, the disposal of wastes and the cleanup of spills. Vacuum cleaners should be used instead of brooms or mops whenever possible; like a properly functioning ventilation system, they remove the substance from the workplace, allowing none of it to spread throughout the air.

Controls At The Worker

Controls applied at the worker such as personal protective equipment (PPE) and administrative controls are the least effective because the hazard is still present in the workplace.

Personal Protective Equipment

Most safety legislation in Canada acknowledges PPE should only be used in special circumstances and for limited periods of time. It is a **last resort** to protect workers from exposure to physical dangers, chemicals, radiation and other workplace hazards until other control measures can be introduced.

Personal protective equipment should only be used in exceptional circumstances such as where no engineering control is possible, where exposure to the substance is for brief periods only (e.g., during maintenance operations), and in emergencies (e.g. leaks, fires, and so forth).

Examples of personal protective equipment are as follows:

- Hard hats, helmets, safety boots/shoes;
- Gloves (e.g. steel mesh gloves for cutting meat, neoprene gloves used in health care, insulated work gloves, plastic gloves for handling food etc.);
- Safety goggles/glasses (e.g. to protect against chemical splashes or flying wood chips);
- Respirators (e.g. to filter out toxic air);
- Safety vests (e.g. neon-coloured to stand out while doing road work);
- Face masks (e.g. cotton masks for painting, or for use in hospital);
- Fall-arrest safety belts and vehicle safety belts;
- Coats (laboratory coats, insulated freezer coats);
- Personal hearing protection (ear plugs, headsets).

No matter what job you do always remember to "dress the part." Wear clothing that is appropriate for the job you are doing, or the climate you are working in.

Unfortunately, outfitting new or young workers with protective gear is all too often the first approach to controlling workplace hazards. Again, the employer may feel personal protective equipment is cheaper and easier to provide than engineering changes, local ventilation, or sound absorption enclosures. However, among other considerations, PPE can create additional hazards.

Most protective devices are uncomfortable and they can make it difficult to perform the job. For example wearing bulky gloves might make it difficult to handle tools or perform work that takes fine motor skills and dexterity. If you are wearing ear plugs or a respirator you won't be able to hear conversation around you on the job adding to the stress and alienation of the workplace and acting as a safety hazard if someone is shouting to warn you of danger.

An asthmatic worker may have serious difficulty trying to breathe through a respirator. A face mask may not fit properly creating a leak, which allows toxic substances to get into the mask and your lungs. Safety goggles can fog up in cold environments and obscure or distort side vision, thereby increasing the risk of accidents.

The following guidelines will help to ensure the safe use of personal protective devices.

- Your employer should provide written procedures specifying the use and care of protective devices. You are responsible to review these procedures and make sure you follow them (without taking short cuts).

REMEMBER

By placing the emphasis on personal protective devices your employer shifts the focus of concern from the workplace to the worker, and blames the victim rather than the source of the workplace hazards for injuries and illness.

- Personal protective devices should be issued to workers on an individual basis (i.e. you should have your own ear-plugs and your own safety boots etc.) and fit-tested to ensure their usefulness.
- Equipment should be regularly inspected for wear and damage and defective equipment must be replaced. All broken equipment must be professionally repaired.
- PPE needs regular cleaning and maintenance, especially where toxic substances are used. Some may require disinfecting between shifts.
- Storage facilities should be provided for PPE and specialized devices should be kept in a protected area.
- Workers who need special clothing for protection against toxic substances should have a double locker system to avoid contamination of their own clothes. You shouldn't wear your work clothes home.

Sound familiar? Don't forget— safe work is your right.

Administrative Controls

Another form of control at the worker is administrative controls. This includes such things as:

- **Worker training:** Your employer should establish a health and safety training program for all workers (including new and young workers) that will cover hazards and their possible health effects, the proper use and testing of equipment, limitations of the equipment and cleaning and maintenance;
- **Work/rest regimen** will control worker exposure to extreme temperatures or to toxic substances;
- **Pay rate system** (piece work or being paid by the load causes stress and overexertion);
- **Job rotation** (moving workers from one task to another can decrease their exposure to repetitive work but also exposes more workers to the hazard).

Controlling Violence

In many instances controlling hazards requires a multi-pronged approach. Consider for instance the issue of workplace violence. An effective prevention program should have management commitment and a written policy. The policy should define what is meant by workplace violence and state what behaviour (e.g. violence, intimidation, bullying, harassment etc.) is considered inappropriate and unacceptable in the workplace. If violent incidents do occur, workers should know how to respond and where to go for assistance and support. This includes incidents of domestic violence.

Proper control measures include:

- Keeping minimum funds in cash register (install a locked drop safe);
- In gas stations implementing a pay-before-you-pump rule after 10:00 p.m.;
- Increasing exterior lighting, eliminating hidden corners, and adding protective barriers (e.g. bullet-proof enclosures);
- Installing communications and security systems (e.g. surveillance cameras, radios, pagers and emergency telephones);
- Assigning at least two workers in high-risk areas, especially at night;
- Providing support for victims (direct and indirect) of workplace violence (e.g. crisis response, medical attention and counselling);

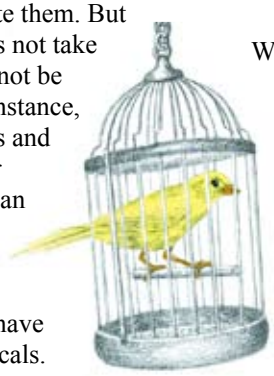
- Mandating detailed reporting and investigation procedures for all violent incidents or near misses;
- Inspecting the workplace regularly and assessing potential risk factors.

Control measures may apply to the entire workplace or to specific areas and high-risk occupations. Once established, these measures should be reviewed regularly in consultation with the joint committee to assess and ensure effectiveness.

Hazards Where You Live

Hazards found in the workplace often make their way into the communities where we live. Many people think the way to safeguard our environment is to put air scrubbers on the top of workplace smoke stacks or treatment systems on outgoing water pipes. But these protections don't always work and they do nothing to protect the people inside the workplaces.

Others think the way forward is to simply clean up spaces after we pollute them. But this is very expensive and does not take into account the harm that cannot be undone. Many chemicals for instance, make their way into our bodies and environment and stay there for years. As we discussed some can make us, and all living things, very sick.



In the last 50 years, scientists have developed thousands of chemicals. In Canada there are more than 23,000 of these chemicals registered for production and use. Many of these are used in our workplaces and found in the products we commonly use or consume. Most have never been tested for their impact on human health or environmental damage. Even those known to damage human health, including many cancer-causing chemicals are allowed for use in workplaces and to varying degrees in consumer products.

A new study on body burdens was recently conducted by Mount Sinai School of Medicine in New York, in collaboration with the Environmental Working Group and Commonwealth. Researchers found 167 chemicals, pollutants and pesticides in the blood and urine of nine adult Americans who volunteered to submit to these measurements. None work with chemicals on the job and all lead healthy lives. Of these toxins in their bodies, almost half have been linked to cancer and birth defects or development delays. Others have been linked to similarly serious disease and disorders which scientists find troubling.

Unfortunately, chemicals don't stay in the location they are used. Our planet's water and air streams often transport chemicals far from their source. This is why parts of Canada's far north are so polluted and why many inhabitants are experiencing serious health effects.

Workers— Canaries for Our Communities

We have learned much of what we know about chemicals and their hazards from workers. Over the years scientists have observed that workers have become ill and many others have died as a result of working with chemicals. As a result of their research on workers scientists have made the link between chemicals and many different illnesses like cancer.

Back in the 19th century coal miners would take canaries in cages with them into the mine to warn them of the presence of hidden toxic gases. The miners would place the cage on the end of a long pole which they would hold in front of them as they went to work underground. When the canaries stop singing the miners knew the levels of gas were

dangerously high and they would quickly get out of the mine. Unfortunately, the warning often came too late and hundreds of miners lost their lives in fires and explosions.

Drawing upon our heritage as the "miners union" the Steelworkers have adopted the canary as a powerful symbol of the dangers in the workplace. This symbol represents the union's continuing commitment to protecting the lives of working people and is a reminder that "prevention is about removing hazards and not just about warnings."

Today workers are the "canaries" for our communities. We are the first ones exposed to toxic chemicals and we are the first ones to die of exposure to those chemicals. When workers start to die of cancer in large numbers within a community it usually is a sign of things to come in the general population.

According to the World Health Organization, 90 per cent of cancers are environmental. But most environmental contaminants started off in someone's workplace. Cleaning up our workplaces will go a long way towards stopping cancers before they start.

Good Jobs, Clean Environment, and a Safer World

Better working conditions and a healthier environment cannot be won without the support of courageous and committed union and community activists. In 1989 the Steelworkers Union first passed a policy recognizing the importance of the environment. We called upon union activists to make the connection between hazards at work and environmental damage. At that time we launched our energy conservation program. Over the years, the Steelworkers Union and others from the labour and environmental community has lobbied employers to reduce toxic emissions and conserve materials too. We understand the phrase "reduce, recycle and reuse" must also apply to workplaces. While reducing household waste is important, where we really need to reduce waste is upstream in factories or workplaces. Moreover, we need to start thinking out of the box, blue or not, altogether.

Green Jobs

To this end, workers and their unions, scientists, environmentalists and others are now taking a closer look at what they manufacture and how they manufacture it. The possibilities are only limited by our imaginations. If we can make products in safer ways and from safe materials, then everyone benefits. We call this way, or rather the jobs it creates, *green jobs*. The word and the colour "green" are symbolic for how people can live and work in harmony with the environment.

Imagination and determination have already created several green industries in Canada and around the world. Here is a brief list of just some industries that have created green jobs. By the time you are ready to work full-time there will be several more. Who knows, maybe one day you will invent one.

- The building and construction industry are creating thousands of green jobs retrofitting buildings for energy efficiency. Better yet when designing new buildings they are starting to take advantage of the earth's natural systems. South facing buildings with large windows can maximize opportunities for passive solar heating. Buildings fitted with ground source heat pumps draw upon the earth's geothermal properties. In the winter, they take heat from down in the ground and carry it into a building to warm air or water. In the summer, an

earth energy heat pump takes heat from inside a building and carries the heat down into the ground. Finally, it is worth noting the green potential of many building materials.

- In the energy sector there is equally exciting potential. Green, renewable energy sources abound. But it has been estimated that combined with energy efficiency, wind, solar, biomass, or energy from plants, can fulfil Canada's energy needs.

- Fuel cell technology is also revolutionizing many industries. A fuel cell works like a battery, but does not run down or need recharging. It will produce power as long as fuel—hydrogen, is supplied. Hydrogen is the third most abundant element on the earth's surface, where it is found primarily in water and organic compounds. When burned as a fuel, or converted to electricity, it joins with oxygen to again form water. As such, it is a clean form of energy. Hydrogen fuel cells can be used to power buildings and vehicles. They are useful as back ups to solar and wind power. When the sun isn't shining or the wind isn't blowing we can use stored hydrogen generated from fuel cells. Some hospitals are using fuel cells in remote locations. General Electric is selling home units now. Vancouver and Chicago each have fuel cell buses on the road. And Whistler, B.C. will use the world's first fleet (20 vehicles) of hydrogen buses in time for the Olympic Games in 2010. The large car manufacturers have sample cars on the road too. Mining companies are also looking to replace diesel-powered equipment with equipment powered by fuel cell technology.

- As noted above, there are many safer substitutes to hazardous chemicals. Green chemists have begun to use plants rather than petrochemicals to produce carpets, fabrics and plastics too.

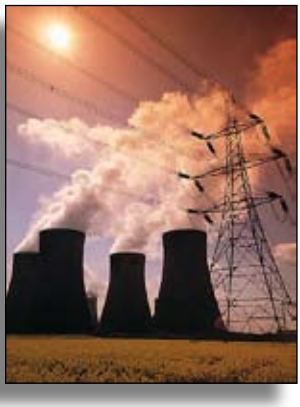
- Electrical and electronic manufacturers are also considering how to conserve materials and the energy they embody by taking back products at the end of their life and reusing their parts. Thinking ahead they also build their products so that when they do take them back they can easily take them apart and reuse parts. Xerox is one example of this model. This company takes back at least three quarters of the equipment it sells. Xerox estimates they keep 1.2 billion pounds of electronic waste out of garbage dumps. When they do, they also save $2 billion.

- Finally, municipalities are responding to worker and citizen demands for safer environments by managing green spaces with natural pest management systems instead of pesticides, and maintaining our water supply with chlorine reduced practices, such as ozonization and UV lights.

Just Transition

Costs associated with the transition to a new economy—one that promotes clean or green jobs however, must not rest solely on the backs of workers or their communities who just happen to be employed in polluting industries. When the gasoline additive tetraethyl lead was banned in Canada for

instance, there wasn't a living, breathing human being who said this wasn't best for our environment and our health, particularly the health of children. But in the process 2,000 petrochemical workers from Sarnia Ontario paid a heavy price as a direct result of the ban. Many remained unemployed years later.



To help address situations like this, organized labour, supported by others, is calling for government "just transition" policies and action. Essentially, "just transition" is about fairness and environmental justice. It is about quality employment in an economy based on sustainable production. It is based on the principle that workers should not bear the brunt of economic change in the face of environmental necessity. If left to their own devices some workers would be the only losers in the pursuit for an eco-friendly economy.

The Steelworkers and others have developed policies supporting transition measures to help protect workers who face major industrial change and restructuring initiated in the name of sustainability and environmental protection. It includes elements like retraining, income security and re-employment in alternative industries and ventures.

Toxics Laws

Many of the smarter material choices and "green chemistry" examples we mentioned earlier would move ahead faster if laws were in place to encourage them. Unfortunately Canada lags behind other jurisdictions when it comes to managing toxic substances. Nonetheless, the following examples demonstrate the art of the possible.

European Union

The European Union is phasing out toxic substances in auto, electric and electronic production. Among other chemicals , laws prohibit the use of lead, mercury, cadmium and chromium in these items. But one of the most substantive developments in this area is new European Union legislation entitled ***Registration, Evaluation, and Authorisation of Chemicals or REACH***. This initiative attempts to remedy the prevailing policy failure that allowed tens of thousands of chemicals to be used without adequate knowledge about their environmental or public health effects.

Enacted in December 2006 REACH has the potential to trigger cleaner technologies and safer products globally. Already many companies in Europe and North America have started phase-outs of certain high concern chemicals. As of June 1, 2007 chemicals covered by this new regulation are not allowed to enter the European market without compliance to REACH regulations.

Individual members of the European Union have gone farther still, adopting specific legislation banning commercial production and use of carcinogens. **Sweden** passed one of the more progressive laws in 2001. Their sustainable chemical policy requires all new chemicals proposed for use must be accompanied by evidence that they do not propose carcinogenic risk.

United States

The United States has also taken a broad approach to chemical management with implementation of pollution prevention and toxics use reduction initiatives. The federal ***Pollution Prevention Act*** of 1990 requires pollution be prevented at the source with engineering and administrative practices that reduce both toxics use and releases.

The first specific piece of legislation in this area, however, was the ***Toxics Use Reduction Act*** **(TURA)** established in Massachusetts in 1989. This law is designed to encourage reduction in the amount of toxics used and generated as a result of an industrial process or operation. It is currently the preferred mechanism for complying with all legislation governing worker and environmental health and applies to companies with 10 or more full-time workers manufacturing 25,000 pounds or more of a "reportable" toxic substance. Unlike the federal Toxics Use Inventory, TURA requires companies to report on toxics use and not toxics release. Central to TURA is a facility-based plan to reduce toxics.

Closer to home

In a bid to promote these ideas the Steelworkers union joined forces with the ***Toronto Cancer Prevention Coalition.*** Created by the Toronto Public Health, labour unions and other community partners, the Coalition (North America's largest municipal cancer coalition) seeks to change policy and standards to eliminate the underlying causes of cancer in Toronto. To accomplish this, the Coalition developed an action plan (blueprint) to eliminate major risk factors for cancer and monitor the progress of these actions. One of their working groups is the Occupational and Environmental Carcinogens Working Group. Among other things, this working group successfully fought for and won a by-law banning the cosmetic use of pesticides and a ***community right-to-know by-law*** for the City.

A community right-to-know by-law is the community's right to access a broad range of information related to environmental and human health and safety. It encompasses a community's right to access information on chemical releases into the environment, a consumer's right to know about harmful product contents and a worker's right to know about the health effects of workplace chemicals.

While a "worker's right to know" is established legally in Ontario, the "right to know" about the environment is an evolving concept. Worker representatives believe public access to details on the use, storage, transportation and disposal of chemicals is essential to both understanding and preventing human and environmental health risks for all who live and work in a community. But prevention through toxic use reduction is truly the ultimate goal of such initiatives.

Progress in this area is slowly being made. In the fall of 2007, after much pressure from environmental groups, labour unions and others, the Ontario government announced their intention to develop toxics reduction legislation. On June 3, 2009, Ontario passed the long-awaited ***Toxics Reduction Act***. Modelled after Massachusett's TURA, this legislation is the first of its kind in Canada. The new law strives to prevent pollution and protect human health and the environment by reducing the use, creation and release of toxic substances and to better inform Ontarians of toxic substances in their communities.

It is accompanied by ***Ontario Regulation 455/09*** which came into effect on January 1, 2010. The new regulation provides specific requirements for companies to

reduce toxic substances in the workplace including the development of a ***Toxic Substance Reduction Plan***.

The new legislation is the result of rigorous campaigns and coalitions such as the ***Take Charge of Toxics*** campaign, initiated by a coalition made up of the Steelworkers, Canadian Cancer Society, the Toronto Cancer Prevention Coalition and others.

In May of 2008 another significant alliance was signed between the Steelworkers union and the ***Environmental Defence*** (an environmental group whose mandate is to protect the environment, and human health in Canada). The USW and the ED agreed to work together as advocates for working people and for the environment in the following key areas:

- global trade,
- the use of toxic substances in commercial products,
- the creation of green manufacturing jobs, and
- the development and implementation of strategies to address climate change and protect sustainable resources.

The Steelworkers have also joined forces with the Sierra Club (a grassroots environmental organization) and others to form the ***Green Blue Alliance***. The Green Blue Alliance unites more than six million labour union members and environmental activists who are fighting for good jobs, workers' rights, clean energy and a green economy.

USW "Get the Lead Out" Campaign

Steelworkers are also involved in the *"Get the Lead Out"* campaign to protect workers and their children from exposure to products containing lead.

Lead can cause a variety of health problems including learning disabilities, stunted growth, kidney damage, bad/criminal behaviour, memory loss, infertility, and in extreme cases, death.

Many of the products containing lead are imported from countries outside of North America such as China. The *"Get the Lead Out"* campaign raises public awareness about these toxic imports and encourages workers to take political action against current trade policies which allow these products into the country.

What Can You Do? Talk about it. Silence can kill.

It may sound like a horrible burden to think you have to worry about your health and safety at work along with everything else that you have to do. Again, our message is that you don't have to do it alone. By making it a point of discussion with your friends and with the people that you work with, you create the possibility of doing something to solve the problem and that's in everyone's best interest. No matter what your age, starting a new job creates new hazards and concerns. You can help us make a world of difference. Consider the following ways forward.

- **Insist on your rights.** When you start a new job, you need to ask more than just the hours of work and rate of pay. You need to ask your new employer the following:

- What are the hazards on the job?
- How will you protect me from the hazards?
- What is your policy on workplace violence and harassment?
- Will I get training for the job I'm going to do?
- Will I get health and safety training?
- Will I have supervision?
- Who can I talk to about health and safety?

If your prospective employer refuses to answer these questions, look for a job elsewhere. You deserve better.

- Once on the job, if it feels unsafe, it likely is. **Refuse unsafe work**. (Use the wallet card provided by the Steelworkers and WHSC to help guide you through this process.)

- In addition to raising concerns with friends and co-workers, be sure to raise your concerns with worker health and safety representatives in your workplace. Remember, your worker representative helps ensure your right to participate in workplace health and safety matters.

- Talk to your parents (express your concerns, let them know what you do at work and the types of hazards that are present there);

- Talk to your school guidance counsellor or the teacher in charge of the co-op program about your working conditions.

- Visit **www.pollutionwatch.org** to learn about environmental challenges in your community.

- Write a letter to your MP, MPP or MLA expressing your concerns for strong enforcement of occupational health, safety and environmental laws, and respectfully suggest they develop more creative laws to safeguard both. For a complete listing of your representatives and sample letters visit **www.usw.ca**.

- Get involved in your school or community to promote safer workplaces and a cleaner/greener environment. There are many organizations that could use your help. For a list of places to start visit **www.whsc.on.ca**.

- Think about the purchases you make. Buy products from non-toxic materials and where possible, recycled materials. Try not to buy everything you want. Try sharing things, rather than buying the same thing for everyone in the family.

- Attend the Day of Mourning ceremony in your community on April 28.

Far too many young workers are dying or becoming injured on the job. It could happen to you.

Many will tell you, "Just work safe." That's not enough. By law, the employer must take every precaution reasonable to ensure your health and safety, that includes making improvements to the working conditions.

Throughout this booklet we also learned that you have basic rights to ensure that you return home from the workplace healthy, safe, and whole. But these rights are only effective if you exercise them.

The good news is you don't have to exercise these rights alone. You stand on the shoulders of your friends and co-workers.

Together, let's *make* work safe.
Safe work is our right. It's the law.

We Can Help

The United Steelworkers represents workers in many dangerous occupations across the country, including steel making, forestry, mining and smelting. We also represent workers in hospitals, universities, warehouses, assembly lines and many other workplaces. Our members know firsthand the hazards of the workplace and the importance of rights to protect all workers.

United Steelworkers has a proud tradition of fighting for occupational health and safety. We bargain strong health and safety provisions in our collective agreements and we lobby governments to improve health and safety legislation.

If you'd like more information on our union or how to become involved, contact a Steelworkers' office in your area or visit one of our websites. (See below.)

United Steelworkers,
Canadian National Office
234 Eglinton Avenue East, Suite 800
Toronto, ON M4P 1K7
Tel: (416) 487-1571 ◆ Fax: (416) 482-5548
Website: www.usw.ca

United Steelworkers, District 3 Office
(Alberta, British Columbia, Manitoba, Saskatchewan, North West Territories, Nunavut, and Yukon)
300 – 3920 Norland Avenue
Burnaby, British Columbia V5G 4K7
Tel: (604) 683-1117 ◆ Fax: (604) 688-6416
Website: www.usw.ca/district3

United Steelworkers, District 5 Office
(all of Quebec)
565 boulevard Crémazie estbureau 5100
Montreal, Quebec H2M 2V8
Toll Free: 1-800-361-5756
Tel: (514) 382-9596 ◆ Fax: (514) 382-2290
Website: www.usw.ca/district5

United Steelworkers, District 6 Office
(Ontario, and Atlantic Provinces)
200 Ronson Drive, Suite 300
Etobicoke, Ontario M9W 5Z9
Tel: (416) 243-8792 ◆ Fax : (416) 243-9573
Website: www.usw.ca/district6

Workers Health & Safety Centre is a unique worker driven and worker inspired health and safety training organization. Working from six locations, we offer training and information services to workers and their representatives in every sector of the economy and every region of Ontario. All focus on controlling, or better yet, eliminating workplace hazards at their source. When we do so, we go a long way towards protecting both worker and community health.

For the last 18 years the Workers Centre has also proudly offered health, safety and environmental awareness programs aimed at young workers and students. For more information contact us at:

Workers Health & Safety Centre
15 Gervais Drive, Suite 802
Toronto, ON M3C 1Y8
Toll free from anywhere in Ontaro: 1-888-869-7950
Tel: (416) 441-1939 ◆ Fax: (416) 441-1043
Website: www.whsc.on.ca

Other Resources

On the World Wide Web there are hundreds of websites dedicated to providing occupational health and safety information. The following sites are a good place to start. For more extensive lists be sure and visit **www.usw.ca** and **www.whsc.on.ca**.

CanOSH Young Workers
This is a webpage providing links to a series of occupational safety and health (OSH) resources for young workers and or individuals who are new to the workforce.
www.canoshweb.org/en/young_workers.html

Canadian Centre for Occupational Health and Safety (CCOHS)
CCOHS promotes a safe and healthy work environment by providing information and advice about occupational health and safety.
www.ccohs.ca/

Federal Labour Standards (Canada Labour Code Part III)
This webpage provides information on employment standards such as statutory holidays, minimum wage etc. for workers under federal jurisdiction.
www.hrsdc.gc.ca/eng/labour/employment_standards/federal/index.shtml

The National Institute for Occupational Safety and Health (NIOSH)
NIOSH is a U.S. federal agency which is part of the Center for Disease Control and Prevention (CDC). This agency is responsible conducting research and making recommendations for the prevention of work- related injuries, illnesses and deaths.
www.cdc.gov/NIOSH

Provincial &Territorial Ministries of Labour (Employment Standards)
This webpage provides links to each province and territory's employment standards for such things as statutory holidays, hours of work, minimum wage etc. for provincial and territorial workers.
www.hrsdc.gc.ca/eng/labour/employment_standards/ministries.shtml

WorkSmart Ontario
This is an official website developed by the Ontario Ministry of Labour for new and young workers. The website contains information on occupational health and safety hazards, legislation and worker rights. It also covers employment standards, and job search issues.
www.worksmartontario.gov.on.ca/scripts/default.asp?contentID=2-0-0&mcategory=health

WorkSafeBC Safety at Work- Young Worker Information
The Safety at Work centre is an online resource for workers under 25 years-old. It provides health and safety information for workers, employers, unions, educators, parents, and youth community groups.
www2.worksafebc.com/Topics/YoungWorker/Home.asp

Young Worker Awareness Website
This website is for new and young workers and contains information on occupational health and safety as well as a young worker hotline number.
www.youngworker.ca/en

Notes

A Final Note on the Cover Art and It's Artist

Art featured on our cover was created by the very talented Canadian illustrator, Tracy Walker. Tracy has supported many projects of the Workers Health & Safety Centre over the past 10 years. She studied both fine art and illustration and worked as a book designer before settling on a career as an illustrator. A few years ago the WHSC commissioned Tracy to paint a piece of art that would give visual expression to their purpose statement. Entitled, *One World, One Voice* this piece has struck a chord with all who have viewed it.

Similarly, we hope Tracy's art commissioned for this cover also strikes a chord with you. We share it to remind you that as a new worker you stand on the shoulders of your fellow workers and all of us who care deeply about occupational health and safety. Your voice is supported by this collective, and the work environment is made safe with the combined efforts of the group. In short, there is safety in numbers.

The art included elements that reflect various occupations represented by the United Steelworkers Union—steel mill workers, forestry workers, office workers, manufacturing workers, workers in call centers, care providers (helping hands) and so on.

Further, the art includes the scales of justice as the foundation to the worker pyramid or triangle. Triangles generally symbolize strength. The workers and scales together are meant to symbolize the fact employers must live up to their legal responsibilities and workers and their representatives must exercise their legal rights if we are to achieve safer, healthier work. Also included are a few symbols that reflect our end goal of work "made safe"—the universal symbol for health care, a miners hard hat and a test tube containing a leaf to signify the hope of green chemistry.

United Steelworkers,
National Office
234 Eglinton Ave. E., Suite 800
Toronto, ON M4P 1K7
Tel: (416) 487-1571
Fax: (416) 482-5548
www.usw.ca

Workers Health and Safety Centre
15 Gervais Drive, Suite 802
Toronto, ON M3C 1Y8
Toll free: 1-888-869-7950
Tel: (416) 441-1939
Fax: (416) 441-1043
www.whsc.on.ca