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OCCUPATIONAL
HEALTH & SAFETY

September 2011, Volume 34, Number 3

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Membership on the Occupational Health & Safety magazine advisory board is open to any resident of Alberta with knowledge and experience in health and safety, and an interest in communicating health and safety information to the public. Anyone who is interested in joining the board should submit a letter of application to the managing editor of the magazine. The board meets three times a year in Edmonton. Board members do not receive remuneration or reimbursement for expenses related to meetings. See “Contacting the Editor,” below.

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CALGARY STAMPEDE FLOAT PAVES THE WAY FOR WORK SITE SAFETY

Dressed head-to-toe in safety equipment, employers, government workers and safety association members manoeuvred the Work Safe for Life float through Calgary’s streets on July 8, 2011. They carried a message of workplace safety to thousands of onlookers at the Stampede Parade.

Volunteers donated more than 600 hours to transform a school bus into a parade entry that gives an important message: stop, think and act. The words adorned the float, reminding Albertans to check for hazards in the workplace. The float received honorable mention in the judging.

Workers from the construction, glass installation, oil and gas, and food service industries accompanied the float while demonstrating safe work practices.

Thank you to the many industry and safety association partners that contributed to the Work Safe for Life float.

For more information and photographs, please see our Work Safe for Life Float page on Facebook.
YOUNG WORKER SAFETY TAKES A STEP IN THE RIGHT DIRECTION
NO STOP-WORK OR STOP-USE ORDERS, BUT NOT ALL WORK SITES UP TO PAR

A month-long inspection campaign that focused on young workers (ages 15 to 24) indicates a commitment to workplace health and safety by employers and their staff. Young workers were the focus of this initiative because they are Alberta’s future and are just starting their working lives.

Unlike the two previous focused inspection campaigns on commercial construction and powered mobile equipment, including forklifts, Employment and Immigration issued no stop-work or stop-use orders during the young worker campaign. These results mean that of the 118 initial inspections, there was no indication of immediate danger. However, 181 orders were issued for other violations. Three-quarters of these were related to first aid and other training requirements, emergency preparedness, dealing with harmful substances and hazardous material, or a lack of proper hazard assessments. Thirty-six of the inspections resulted in no observed violations.

“These results are a step in the right direction,” says Thomas Lukaszuk, Minister of Employment and Immigration, when comparing data with previous focused inspection campaigns. “However, as a former teacher I would hesitate to issue a passing grade just yet. There is still work to do as these numbers clearly indicate.”

The campaign visited 107 work sites in two industry sectors: food convenience stores and restaurant and takeout food services.

In addition to conducting work site inspections for occupational health and safety compliance, officers also spoke with staff about any employment standards issues they may have, including being paid properly and on time. There were no issues identified.

The next inspection campaign, focused on residential construction, is to occur in the fall of 2011.

Occupational health and safety focused inspection projects are designed to raise the profile of known workplace hazards, promote a sustained increase in employers achieving compliance and enforce legislated standards.

The Occupational Health and Safety Focused Inspection Project; young workers findings are available at employment.alberta.ca/newsroom.

ALBERTA’S LOST TIME CLAIM RATE HITS 20-YEAR LOW

Alberta’s lost time claim rate is at its lowest level in 20 years of data gathering. The 2010 lost time claim rate is 1.41 claims for every 100 full-time jobs. This rate compares to 1.53 per 100 full-time jobs in 2009 and 4.13 per 100 in 1991. The lost time claim rate has been in steady decline for 10 straight years.

The disabling injury claim rate, which includes injured workers who are able to perform modified work, also decreased to 2.67 per 100 full-time jobs in 2010. It was 2.79 per 100 in 2009 and 3.34 per 100 in 2008.

“We’ve certainly come a long way over the last two decades,” says Employment and Immigration Minister Thomas Lukaszuk. “However, as far as we’ve come, there’s still a long way to go. We won’t rest until the rate is zero.”

The provincial fatality rate increased almost 24 per cent to 78 fatalities per million full-time jobs in 2010. There were 136 workplace-related fatalities in 2010, up from 110 in 2009 and down from 165 in 2008. Of the 136 fatalities, 43 were workplace incidents, 31 were motor vehicle incidents and 62 were occupational disease. The number of occupational disease fatalities is among the highest ever recorded.

For reports on occupational fatalities and on occupational injury and disease lost time claims and claim rates, please visit employment.alberta.ca/ohs-stats.
LETTER TO THE EDITOR

I read the article by Lee Craig in the May 2011 edition of Occupational Health & Safety magazine. This article brings up the hazards present when a worker does not have adequate sleep. Though the article was written specifically addressing sleep disorders, I feel it should have included other causes for inadequate sleep.

One thing not discussed in this article pertains to shift work management and worker scheduling. It is not uncommon to see extended workdays such as overtime because of manpower shortages and other business pressures.

These extended workdays present two possible fatigue impairment scenarios. The first is acute fatigue impairment caused by the time awake on the day of the extended work. The second is the chronic fatigue impairment that accumulates as a result of the reduced opportunity to sleep between the end of one workday and the start of the following workday. The article mentioned at 20 hours awake, the impairment is equivalent to a blood alcohol content of 0.08 per cent. At 17 hours awake, this is equated to 0.05 per cent blood alcohol content, worthy of a 24-hour licence suspension in Alberta and legally impaired in B.C. Working through that 17th hour is not uncommon, especially in overnight shifts.

This second issue worsens when employees work multiple extended workdays in a row. The ability to be safe in the workplace gradually decreases as a work week progresses. This is due to an accumulated sleep debt, which over time accelerates how quickly impairment due to fatigue will develop after waking.

Another common cause of worker fatigue is social and family pressures, which may prevent workers from getting adequate rest. Workers may elect to participate in activities rather than get sleep. Even people working normal business hours may fall prey to this. Workers may often volunteer to work overtime as well. The biggest problem here is that people are generally inaccurate in evaluating their personal level of fatigue.

There is no doubt in my mind that fatigue poses a significant hazard in the workplace. Some employers are creating exposure to fatigue hazards through shortages in manpower or poor scheduling practices. Some workers are choosing not to get adequate sleep.

These hazards can be reduced by developing better scheduling practices (providing employees adequate opportunity to rest between workdays), by ensuring adequate manpower for the work being carried out (reducing the requirement for overtime) and by holding employees accountable to be properly rested when they show up at work. Contingency plans to recover from unscheduled overtime should also be developed to allow some flexibility when unforeseen events occur.

Jean-Pierre (J.P.) Mainville
Director of Safety/Security
Morningstar Air Express Inc.
Edmonton

NEW BOARD MEMBERS SOUGHT FOR OH&S MAGAZINE ADVISORY COMMITTEE

Occupational Health & Safety magazine’s voluntary advisory board is looking for two new members: one from the health-care industry and one from the oil and gas industry. The interested parties must be residents of Alberta and have knowledge and experience in health and safety. Meetings are held three times a year in Edmonton.

Board members do not receive remuneration or reimbursement for expenses related to meetings. The magazine works to prevent workplace injuries and illnesses in Alberta.

If you are interested and would like to contribute to the board, please submit your application to

Brent McEwan, Executive Director
Occupational Health and Safety
E-mail: brent.mcewan@gov.ab.ca
Fax: 780-644-1508

IF YOU’RE INTERESTED IN SHARING OPINIONS OR COMMENTS ABOUT WORKPLACE HEALTH AND SAFETY ISSUES, PLEASE CONTACT THE MAGAZINE’S EDITOR THROUGH THE OHS CONTACT CENTRE, 1-866-415-8690 (OR 780-415-8690, IF YOU ARE IN THE EDMONTON AREA), OR E-MAIL WHS@GOV.AB.CA.
NEW BUILDING FOR EDUCATION AND TRAINING FACILITY

The official grand opening of the Edmonton Education and Training Facility of the Alberta Construction Safety Association and the Manufacturers’ Health and Safety Association was held in March 2011. The facility is at 225 Parsons Road SW, Edmonton.

Photos by Dean Skoubis of Avonlea Photography, Edmonton
10 YEARS AND BUILDING

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ALBERTA HEALTH & SAFETY CONFERENCE AND TRADE FAIR

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October 24–26, 2011

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e-mail whs@gov.ab.ca

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To be notified by e-mail of all new Occupational Health and Safety website postings, sign up for a FREE subscription service through employment.alberta.ca/SFW/2984.html.

Alberta Government Library
To review the large selection of occupational health and safety information materials available through the Alberta government, go to employment.alberta.ca/1706.html.

To borrow books and periodicals, either contact your local library and make your requests through the inter-library loan system or visit the Alberta Government Library:

Telus Plaza North Tower Site
P.O. Box 1360
15th Floor, 10025 Jasper Avenue
Edmonton, AB T5J 2N3

Library phone 780-427-8720
Library fax 780-422-9694

To borrow DVDs and videos, make your requests through the inter-library loan system or visit the government library’s 107th Street Site:

3rd Floor, 10030 - 107 Street
Edmonton, AB T5J 3E4

Library phone 780-427-4671

To reach either of the above numbers toll-free in Alberta, dial 310-0000 followed by the area code and phone number.

Occupational Health and Safety is an Alberta Employment and Immigration program that falls under the jurisdiction of Minister Thomas Lukaszuk.
Minister unveils revised employer review process

Over the past year, Employment and Immigration Minister Thomas Lukaszuk has identified a number of initiatives for achieving greater accountability for occupational health and safety in Alberta. One of those initiatives has been a revision of the employer review standard, which establishes the process for taking action with Certificate of Recognition holders that experience difficulties with health and safety at their work sites. After an extensive province-wide consultation, a revised employer review process was introduced on July 1, 2011.

Under the new process, employers may face an immediate review of their COR under the following circumstances:

- they experience an on-site fatality, serious injury or incident
- two or more stop work orders are issued within a 12-month period
- ongoing OH&S officer activity indicates possible issues with their health and safety systems

An employer will not be eligible for Partnerships in Injury Reduction rebates during an employer review.

“We are strengthening the COR program, so that Albertans can be confident that COR holders don’t just have a safety program on the books, they have a program on the job site,” said Lukaszuk. “Companies have always had to work hard to earn their COR. Now we are ensuring that they have to work to keep it.”

Employers that are required to participate in the employer review process will be expected to develop an action plan to address deficiencies in their health and safety systems. A representative from the PIR program will meet with these employers to help guide the development of their action plans, set timelines and determine deliverables. If the action plan is successfully completed, the employer will retain its COR. If the action plan is not successfully completed, the employer’s COR may be cancelled.

A COR holder that experiences a second fatality, serious incident or injury, or additional stop work orders for imminent danger within a 24-month period will be required to complete a full external audit. The company may also be required to complete an action plan. It will have its COR cancelled if it fails to pass the audit with a score of at least 80 per cent overall or if it fails to successfully complete the action plan (if required).

If an employer’s COR is cancelled, it will forfeit its PIR refund for that calendar year. As well, if a COR holder is charged under the Occupational Health and Safety Act, the Workers’ Compensation Board-Alberta will withhold any refunds for that year pending the outcome of the case. The withheld refund will be forfeited if the employer is convicted.

The employer review process will also apply to employers that have held CORs for four years or more and that have been included in the Employer Injury and Illness Prevention Program for four years or more. Employers that have knowingly misrepresented the reporting of workplace injuries, as required by the Workers’ Compensation Act, will also be subject to an employer review.

For further information about the revised employer review process, please visit employment.alberta.ca/SFW/14313.html. You can also contact your Certifying Partner. The list of CPs can be found at employment.alberta.ca/certifyingpartners.

Is that COR valid?

All Certificates of Recognition have an expiry date printed on the lower right corner of the copy. Because more project owners and employers require contractors to hold a valid COR to either bid for or perform work, the incidence of altered, modified and expired CORs being submitted in bid packages has increased. Information on a COR can be verified quickly and easily by visiting www.employment.alberta.ca/corholders.

Partnerships in Injury Reduction is a non-regulatory, province-wide injury prevention program sponsored co-operatively by government, labour and industry. The program offers:

- tools to implement a health and safety management system
- guidance in applying for a Certificate of Recognition (COR)
- potential for premium rebates from the Workers’ Compensation Board-Alberta

For more information, call the Partnerships Hotline at 1-866-415-8690 or visit employment.alberta.ca/whs-partnerships/.
Between February 1 and May 31, 2011, five companies were convicted under the Occupational Health and Safety Act.

Watts Project Inc.
On June 23, 2007, a backhoe operator suffered serious injuries, including the loss of his right arm, while working on a rotating drill pipe. On April 27, 2011, Watts Project Inc. pleaded guilty to one count, contrary to Section 212(1) of the OH&S Code, for failing to ensure the health and safety of workers. Watts Project Inc. was sentenced to pay a fine of $2500, including the victim fine surcharge. It was also ordered to pay $72,500 to the University of Alberta’s OH&S Certificate Program to facilitate online delivery of two courses. One of those courses, Risk Management and Communication, has particular application to the circumstances of this case.

West Fraser Mills Ltd.
On April 22, 2007, an operator was crushed and held against a concrete pillar by a finger assembly that had retracted while he was under the machine performing a maintenance procedure. On April 18, 2011, West Fraser Mills Ltd. pleaded guilty to one count, contrary to Section 189 of the OH&S Code, for failing to take all reasonable steps to ensure the equipment was restrained. West Fraser Mills Ltd. was sentenced to pay a total penalty of $75,000: a fine of $5000; a victim fine surcharge of $750; and a payment of $65,000 to the Alberta Workers’ Health Centre.

Eco-Industrial Business Park Inc.
On August 22, 2009, it was determined by OH&S that several workers had potentially been working in areas of a building containing asbestos. It is not possible to determine if any of the workers were exposed to asbestos, but the hazard of asbestos fibres becoming airborne was present in some areas of the work site. On March 8, 2011, Eco-Industrial Business Park Inc. pleaded guilty to one count, contrary to Section 3(3) of the OH&S Act, for failing as prime contractor to ensure compliance with the OH&S Act and Regulation at the work site. Eco-Industrial Business Park Inc. was sentenced to pay a total penalty of $35,750: a fine of $5000; a victim fine surcharge of $750; and a payment of $30,000 to the Alberta Workers’ Health Centre.

AT Plastics Inc.
On December 31, 2008, a worker operating a plastic extruder caught his hand in a feeder, which resulted in the amputation of three fingers and a thumb. On February 22, 2011, AT Plastics Inc. pleaded guilty to one count, contrary to Section 15(1) of the OH&S Regulation, for failing to ensure the worker was trained in the safe operation of the extruder. AT Plastics Inc. was sentenced to pay a total penalty of $70,750: a fine of $5000; a victim fine surcharge of $750; and a payment of $65,000 to purchase laboratory equipment and fund an entrance bursary for the OH&S program at NAIT.

Syncrude Canada Ltd.
On December 31, 2008, a process operator clearing ice from a pipe rack at the Mildred Lake Processing Facility was fatally injured when he was struck by a large mass of falling ice. On February 17, 2011, Syncrude Canada Ltd. pleaded guilty to one count, contrary to Section 189 of the OH&S Code, for failing to take all reasonable steps to protect the worker from the potential hazard of falling ice. Syncrude Canada Ltd. was sentenced to pay a fine of $10,000 and a victim fine surcharge of $1500. It was also ordered to pay $365,000 to Keyano College. Of this amount, $265,000 is for the development and implementation of a safety module about hazard assessments, awareness and control in relation to winter conditions and ice formation for the Process Operators, Power Engineering and Occupational Health and Safety programs. The remaining $100,000 will establish student bursaries for these programs in memory of the worker.
Every day in Canada two to three workers die from workplace causes, according to Andrew Cooper of the Canadian Society of Safety Engineering. The CSSE wants to prevent these fatalities. It has been working with health and safety professionals and the Canadian public for over 60 years to improve workplace safety.

“Our slogan is, ‘Nothing happens, every day.’ ‘Nothing’ means that nobody is injured on the job, people have a great day at work, they go home to their friends, families and loved ones and they come back to work the next day,” says Cooper. He is the Edmonton-based vice-president and treasurer of CSSE.

Part of the CSSE’s mandate is to bring these health and safety professionals together to learn from each other, says Cooper. With 4500 members in 34 chapters across the country, the CSSE provides education, professional development, certification and networking opportunities for members.

“We create local, regional, national and international opportunities for a health and safety practitioner or professional to have real impact,” says Cooper. “Together, we form that group, that body, that consciousness of the practice of the health and safety profession across the country.”

The CSSE works in partnership with the federal minister of labour, the Canadian Standards Association and other regulatory bodies to share expertise, to provide support and to actively participate in shaping best practices and occupational health and safety standards, both regionally and nationally.

“If I need Alberta-specific information, I have access to 1679 members who have leading-edge, current knowledge of what is happening in that province,” says CSSE president Peter Sturm, who works in Toronto. “We are a body of health and safety professionals and our focus is on networking and education, but also the promotion and the advancement of the profession.”

Engaging members and keeping them connected can be a challenge in such a large organization and across such a vast geographical area. CSSE has a number of events and initiatives to create new relationships and expand on existing partnerships.

The CSSE is the lead organization in the North American Occupational Safety and Health Week, held each year in the first week of May. Throughout the week, health and safety professionals across the continent celebrate and raise awareness of the importance of injury prevention.

The annual CSSE national conference, named “Collaboration, Collective Wisdom” in 2011, will be held in Whistler, B.C., on September 18 to 21. It will bring 500 to 700 members and others together to share the latest advancements in occupational health and safety.

“First and foremost, our focus is on our members,” says Wayne Glover, CSSE executive director, who lives and works on Salt Spring Island in B.C. “We spend a lot of time building resources for health and safety practitioners. We connect experts across the country and around the globe through virtual practice groups. We offer an extensive professional development program that includes a Certified Health and Safety Consultant designation.”

Overall, the CSSE’s aim is to provide the necessary skills for people to succeed in their roles as health and safety practitioners.

Christi Retson-Spalding is a communications consultant.

RESOURCES

WEB LINKS

www.csse.org
The Canadian Society of Safety Engineering home page

canadiansafetyblog.com
Canadian Safety Blog, by Andrew Cooper

www.naosh.ca
The home page for NAOSH Week

www.awcbc.org/en/nationalworkinjuriesstatisticsprogramnwisp.asp
National Work Injury Statistics Program, from the Association of Workers’ Compensation Boards of Canada
Dust, fumes and smoke hazards are quite often controlled through the use of respiratory protective devices. However, respiratory protection comes in a variety of forms, each with its own level of protection. How do you ensure you have the right type of respiratory protective device?

To start, the employer determines whether respiratory protective equipment is required (Part 18 of the OH&S Code). This determination would happen during the Hazard Assessment process (Part 2) coupled with the employer’s requirement to assess potential worker exposure under Part 4, Section 21 and Part 18, Section 244.

The selection of respiratory protection is based on the exposure data collected as required under Section 21. Additional selection criteria can be found in Section 247, which cites CSA Standard Z94.4-02, “Selection, Use and Care of Respirators.”

The next step involves compliance with Section 250, which requires the creation of an effective facial seal. Worker comfort does not always mean a good seal; a fit test is needed to determine whether the respiratory device is appropriate for the wearer and establishes an adequate facial seal.

A fit check is a separate step that needs to be done each time a respiratory device is put on in order to ensure that the device is seated properly. The fit test and fit check are not interchangeable. It is quite often that a fit check is being used as a fit test, but that is unacceptable.

These steps are by no means the complete process for selecting and using respiratory protective equipment. Employers must comply with all the requirements specified in Sections 244 to 255 in the OH&S Code. Here is more information about respiratory protective equipment:


Respirators are the easy way to protect workers, but even the easy way has requirements that need to be followed.

David J. Sperling is an officer with OH&S Compliance.

The legislative provision that allows our courts to impose creative sentences is one of the hallmarks of Alberta’s sentencing regime. Section 41.1 of the OH&S Act gives the court the discretion to direct an offender to make a payment to a third party for the purpose of enhancing workplace safety initiatives and training. This sentencing tool allows the court to impose a penalty that is specifically designed to reduce the recurrence of the sort of incident that brought matters before the court in the first place.

So what happens when a creative sentence goes unpaid?

The recent case of R. v. Steve’s Oilfield Services (Edson) Ltd. is instructive. One of the company’s workers was seriously injured when he was run over by a skid steer. The company entered a guilty plea for failing to ensure that the skid steer was serviced, adjusted, maintained or repaired in accordance with the manufacturer’s specifications.

Steve’s Oilfield Services (Edson) Ltd. was sentenced to pay a fine of $5000 plus a victim fine surcharge of $750. Under Section 41.1(1)(b) of the act, it was further directed to pay $95,000 to a first response organization by December 10, 2010. The company paid the fine and surcharge in full, but only $5000 of the creative sentence.

A new charge was laid under Section 41(1) of the act for failing to comply with an order issued pursuant to the act. Steve’s Oilfield Services (Edson) Ltd. was convicted following trial. It has now been ordered to pay a fine of $100,000 on top of the money already paid. It was granted no additional time to pay.

While the beneficiary of the creative sentence did not receive the full payment intended by the court, the additional fine makes it clear that failing to comply with a court order has significant consequences.

Brian Caruk is Acting Chief Crown Prosecutor with Regulatory Prosecutions, Alberta Justice.
Workplace injuries can be devastating to workers and their family and friends. While the physical limitations and hardships are understandable to most people, the mental health effects are often overlooked. For some people, changes in mental health seem to be an expected initial reaction to injury, similar to other traumatic life events. For others, however, mental health symptoms are persistent and are associated with significant impairment. “Depression is the mental health disorder most often associated with disabling physical injuries,” says Dr. Cam Mustard, president of the Institute for Work and Health in Toronto. “You’re not sleeping; the pain is intolerable; it affects your ability to focus and think clearly.”

Dr. Mustard says Canadians receive excellent care for musculoskeletal injuries. He is less confident about care for cognitive issues associated with an injury. “The clinical professions are only just beginning to realize that there is a cognitive as well as physical aspect to injuries that also needs treatment.”

Depressive symptoms are pervasive
Research from the Institute for Work and Health indicates that depressive symptoms are pervasive among workers disabled by musculoskeletal disorders. Those types of injury, which usually develop over time rather than from a sudden incident, make up over 70 per cent of all lost time claims in Canada.

“Doctors don’t seem to be aware of the burden these injuries put on people.”
—Dr. Cam Mustard, Institute for Work and Health

“At the start of the study, 30 days after the disabling injury, about 40 per cent of participants had high depressive symptom scores,” says Dr. Mustard. “That compares to about 10 to 20 per cent if we tested the general working population. As we followed people forward to six months, depressive symptoms reduced, as we might expect, but 25 per cent of the study group still scored high.”

The Institute for Work and Health study, published in the Canadian Journal of Psychiatry, followed a group of about 600 workers who suffered disabling musculoskeletal disorders. None of the workers had been diagnosed with depression in the year prior to their injury. Dr. Mustard says mental health issues often go undiagnosed in people with physical injuries because
health-care providers aren’t looking for them. “In our study, only 20 per cent of subjects reported to us, when asked, that their physicians had screened them for depressive symptoms,” says Dr. Mustard. “Doctors don’t seem to be aware of the burden these injuries put on people.”

Physician behaviour isn’t the only reason for low diagnosis rates, says Dr. Mustard. The study researchers also identified ways a patient might contribute to under-diagnosis. These ways include an unwillingness to disclose problems and delays in seeking help because of poor self-awareness of depressive symptoms. Also, because people are more likely to consult a physician for injury-related physical issues than for mental health issues, they may discuss their physical and pain-related symptoms more.

**Linking mental and physical health**

“It’s hard to define just where mental health ends and physical health starts,” says Dr. Andre Masson, who works at WCB-Alberta’s Millard Health facility. He spends half his time working in the Traumatic Psychological Injury Program. That program started in 2009, and it treats clients for the psychological effects associated with severe work-related incidents.

Dr. Masson says people are often not sleeping because of pain. That lack of sleep can cause emotional reactions, such as anger and irritability, and it can have physical health effects, such as increased blood pressure. It can also delay rehabilitation and recovery from the initial injury.

“If you’re not feeling good, you’re not going to be optimistic about your recovery,” says Dr. Masson. “People often say to themselves, ‘Why should I bother doing this painful exercise when it’s not going to help anyway?’ People who don’t feel good are not as compliant about their physiotherapy.”

Dr. Mustard warns that the longer the disability continues, the greater the loss of optimism about the chances of recovery. “A disabling injury can affect our sense of optimism about our ability to recover and return to work.”

**Delays in physical recovery**

The ongoing presence of depressive symptoms affects rehabilitation. The Institute for Work and Health study found that among subjects who had not returned to work or who had tried to return but left work again by the six-month mark, almost one-quarter had high levels of depressive symptoms. That was more than double the rate among subjects who had returned to work and stayed.

“Longer durations of disability are seen among injured workers if they also exhibit mental health disorders,” says Dr. Mustard. The depressive symptoms can both contribute to and result from the longer period of disability and delayed return to work, he says.

Other studies examining the mental health aspect of occupational injury have shown that ongoing depressive symptoms after a workplace injury are also associated with recurrences of work absence and increased time receiving wage replacement benefits. Among injured workers who return to work, depressive symptoms may adversely affect their ability to work happily and effectively.

**Help is available**

Dr. Masson says sleep management is one of the psychological counselling services offered at Millard Health. Sleeping with pain is part of the problem, but Dr. Masson says sleep issues can also come from a change in daily routine. If a person isn’t working because of an injury they lose most of their daily schedule. Added to that may be a desire to stay in bed because of discomfort from the injury, says Dr. Masson. Most people need help managing changes in their routine so their sleep doesn’t suffer.

Psychological counselling can also help people with injuries deal with pain and pain-related problems. Dr. Masson says muscle relaxation training can reduce pain levels for some injuries, and other counselling can help with depression, anxiety and anger.

Anger, whether it’s a reaction to pain, lack of sleep or concerns about recovery, is an emotion that can directly involve an injured person’s family, says Dr. Masson. “They often lash out, unintentionally, at the people closest to them.”

**A family affair**

Some psychology programs at Millard Health include the patient’s family. “Many people don’t want to involve their families, but it usually works better when you do,” says Dr. Masson. “Your family might not understand what’s going on and not know how they can help. It’s good to get them involved, maybe just by accompanying the patient to a physiotherapy session so they can see what’s involved.”

He says workplace injuries involve innumerable mental health feedback loops. “If you’re spending less time with friends because of the injury, you don’t have their positive encouragement, so your optimism falls, your recovery lags and you are away even longer from your friends and co-workers. A whole lot of your social life ends if you’re not at work.”
Keep up workplace connections
Dr. Masson says a common complaint from injured workers is that nobody visited them at the hospital. He says it’s important to offset the decreased socializing and decreased workplace status the injury causes.

“Find a way to invite the person back into the workplace. Modified work is the most obvious method,” he says, but it’s important for it to be meaningful modified work.

According to Dr. Mustard, about 15 years of consistent findings show that if workers who are disabled by injury become disconnected from their workplace, they will be much less likely to return to work. He says employers should establish contact with injured workers early and frequently.

“Literally, we are saying within the first two or three days.” He says it is a great help if the worker is told the workplace is prepared to accommodate a return to work before the worker is fully recovered. This contact is especially beneficial when there was a good relationship between the worker and employer before the injury—when the worker wanted to be working and the employer valued that worker.

Don’t downplay injuries
Once you’re injured, most people automatically feel bad about the injury, says Dr. Masson. He says many workplaces display signs showing how long it’s been since the last workplace injury. It’s supposed to be a positive display, but after watching that number increase over the days, weeks and months, it becomes a source of guilt.

“Your injury is the one that stopped that magnificent record,” he says.

These feelings of guilt make injured workers susceptible to criticism from family, friends, co-workers or employers.

“Employers might have a tendency to tell the worker the injury is minor and that they’ll be back at work in no time,” says Dr. Masson. “The employer is thinking, ‘Somebody got injured on my watch. Was it my fault?’ One way of dealing with that is to downplay the injury.” But that impulse is harmful, he says.

“If you downplay their injury, they will instinctively try to demonstrate how serious it is.” Instead, it’s important to let the person know you understand they are in a difficult situation. At the same time, says Dr. Masson, you don’t want to tell them they’ll never get better.

“Validate their suffering without validating their disability.” Dr. Masson acknowledges it can be hard to do, but that approach will help a person’s recovery.

Roland Lines is a science editor and GIS technician.

RESOURCES
WEB LINKS
www.wcb.ab.ca/millard/
Millard Health (operated by WCB-Alberta) provides occupational rehabilitation and disability management services. Its treatment programs address the physical, psychological and vocational needs of its clients.

www.iwh.on.ca
The Institute for Work and Health is a not-for-profit research organization based in Ontario. Its research is aimed at protecting and improving the health of working people.

www.iwh.on.ca/at-work/56/depressive-symptoms
New research on mental health and injured workers shows depressive symptoms are linked to delayed work returns.

publications.cpa-apc.org/media.php?mid=827

Modified work duties can keep workers at their jobs after an injury. A quick return to work is beneficial for their mental health.
More than 85 per cent of the working population will experience back-related injuries. In Alberta, back injuries account for over 25 per cent of all WCB claims. Considering that your back supports you in every activity you do, it’s important to take good care of it.

When you are in ideal alignment, your back is in what’s called “neutral position.” You should always lift while in neutral position to prevent back pain and injury. To find the neutral position of your back, stand up and tuck your buttocks under you. Standing in this position, you should feel the curve in your lower back disappear. Next, thrust your chest out to the front and stick your buttocks out. You will feel the curve of your lower back increase. The neutral position is somewhere between the flat back posture and the excessively arched posture. It is how you want your back to feel while you are lifting.

When lifting in neutral position, it is essential to support your back with your abdominal muscles. While standing in a neutral position, press your fingers into your stomach. Tense up your abdominal muscles to make the front of your abdomen firm. This protective position should be used whenever you are lifting—it gets less awkward as you get used to using it. It might sound strange, but you should take the time to practice this protective position; you’ll be glad you did.

Now that you know how to lift with a neutral back that is supported by your abdominals, we’re going to throw some math in the mix. The revised National Institute for Occupational Safety and Health (U.S.) lifting equation provides a guideline for evaluating two-handed manual lifting tasks. The equation calculates the recommended weight limit, which is the weight of the load that nearly all healthy workers can lift over a substantial period of time (e.g., eight hours) without an increased risk of developing lower back pain. Under ideal lifting conditions, the recommended weight limit would be 23 kilograms. Under real working conditions, however, the six variables of the lifting equation reduce the weight limit below 23 kilograms. More information about this equation is available on the Canadian Centre for Occupational Health and Safety website (www.ccohs.ca).

It’s not only how much you lift or carry, but how you do it:

- Plan your lift: know where you are taking the item and ensure the path is clear so you can get there safely.
- Before lifting boxes and cases, check or test the weight so you can prepare to lift properly.
- Keep your head high, chin tucked in and back in the neutral position (while tightening abdominals).
- Place your feet approximately shoulder-width apart and maintain good balance and a solid base.
- Keep the item close to your body.
- Use your leg muscles to do the lifting, rather than bending at the waist.
- Lift smoothly without jerking.
- If you are straining to lift the item, get help.
- Turn your body as a unit and pivot to avoid twisting at the waist.

Employers should assess a work site for activities that may cause back injury and train workers on how to lift properly. Workers need to follow the training guidelines that their employers create for lifting. If you are looking for more information on lifting, the Alberta Occupational Health and Safety website has a number of bulletins and booklets on back care and lifting (employment.alberta.ca/SFW/13568.html#backcare).

Chiara Fritzler is an OH&S officer with Alberta Employment and Immigration.

Next time: The human factor.

REFERENCES


Why does winter always seem to catch us by complete surprise? One day we’re barbecuing in shorts and flip flops, and the next day we’re sheepishly scraping snow off the car with a credit card. In most cases, our lack of seasonal foresight is inconvenient rather than dangerous. On the job site, however, failing to get ready for winter’s stranglehold exposes workers to an increased chance of injury, sickness and even death.

Glen Leddy says assessments and preparation are two major components of working safely in winter. “First of all, we have to be aware that conditions are going to change,” says Leddy, who is the manager of the south region of the Alberta Construction Safety Association. “We need to make sure that when winter conditions hit we have plans to deal with them.”

He says winter challenges are as varied as the thousands of work sites around the province. “You have frost and snow accumulation, brittle metal, frozen machinery, ice fog, slippery walkways, extended darkness and frostbite,” says Leddy. “These conditions can change very quickly, so you have to keep watching and keep adapting to them.”

Many winter hazards are obvious—such as the drifting white gift from the sky—but some risks are invisible.
and deadly. “Space heaters and generators can be a big problem,” says Leddy. “You have to know where the exhaust is going so you don’t expose yourself or other workers to carbon monoxide.”

Carbon monoxide is an odourless, colourless and toxic gas. At low levels of exposure, it causes mild, often flu-like effects; at moderate levels it can cause chest pain, impaired vision and reduced brain function; at high levels it can be fatal.

“Numbness in your fingers or toes means that your nerves are not working properly. A few degrees colder and they will be frozen.”

—Gordon Giesbrecht, University of Manitoba

Leddy advises that when a crew needs to use any device that gives off harmful exhaust, the equipment should be installed or positioned by a trained and experienced worker.

According to Dr. Gerry Predy, senior medical officer of health for Alberta Health Services, a dipping thermometer can bring on health crises that might not occur to a similar harmful degree in warmer weather. “Some medical conditions can be worsened by working in the cold,” Predy warns. “Wheezing in people with asthma can sometimes be triggered by exposure to the cold. Asthmatics should ensure they take their medications as prescribed. If a worker has ongoing problems with exposure to cold air, he should consult a physician.”

Winter conditions—perhaps most notably the manual clearing of heavy snow—can also bring on potentially life-threatening problems. “People with coronary artery disease, or those at risk, can develop angina or even a heart attack if they exert themselves in the cold,” says Predy.

You might guess that a man called “Professor Popsicle” would drive an ice cream truck. Not so. Dr. Gordon Giesbrecht earned his chilly nickname from his research into the effects of cold on the human body. He is associate dean (academic) at the Faculty of Kinesiology and Recreation Management at the University of Manitoba.

Giesbrecht offers two tips for working safely in the cold. The first tip is to never accept numbness. “Numbness in your fingers or toes means that your nerves are not working properly,” he says. “A few degrees colder and they will be frozen.”

If you lose feeling in your digits and can’t get into a heated area, there is a foolproof (if not elegant) way to save your digits. “Pull your arms out of your sleeves and hug yourself inside your coat,” says Giesbrecht, “and stick your fingers into your armpits. If your fingers freeze in your armpits, frostbite is not your biggest problem.” This solution is less useful for frozen toes, but it underscores the importance of dealing promptly with numb digits.

Giesbrecht’s second tip deals with hypothermia, a potentially fatal lowering of the body’s core temperature. “Hypothermia in a work situation is going to be an extremely rare occurrence,” he says. “It could happen if you have a vehicle accident or get stranded in a remote area.”

He cautions that preparation is key to avoiding problems. “You should tell someone your travel plans, and always carry a survival kit that includes clothing, a sleeping bag and some food.” And if you become stranded, obey this renowned hypothermia researcher’s second tip; stay with your vehicle. “If you have proper winter clothing and a sleeping bag inside your vehicle, you can survive virtually any weather until help arrives.”

And speaking of help, nobody provides winter help quite like the Alberta Motor Association. Its shiny tow trucks are a sweet sight through the swirling snow for more than 30,000 stranded motorists every winter. Dan Huang, a communications specialist with AMA, says the association prepares both man and machine for the rigours of sub-zero roadside rescue.

“We make sure our roadside assistance teams have excellent winter uniforms, including jackets, coveralls, gloves, toques and boots,” says Huang. “We train them to recognize the dangers of over-exposure and to protect themselves by warming up when necessary.”

When your job includes winching cars out of drifts, towing frozen pickups or boosting dead batteries, your equipment has to be in top-notch shape. AMA trucks are outfitted with cold-weather gear, first aid kits, fire extinguishers, emergency lighting, heavy-duty batteries and aggressive tires. Perhaps more importantly, they are checked frequently to ensure against breakdown. (What could be more ironic than towing a tow truck?)

“Our trucks are inspected every 6000 kilometres,” says Huang, “and they get a major going-over every 30,000 kilometres. We understand that winter puts an added strain on people and machines, and we understand that preparation is the key to keeping everything running the way it should.”

As well, Huang says AMA tow truck drivers are in constant contact with the dispatch in the event they are in a difficult situation or need additional resources.

But chill out for a moment…is working outside the only way workers can suffer from the effects of cold? Certainly not, according to Diane Stinson, a Canadian certified professional ergonomist and president of HealthWorks Inc. in Calgary.
“Plenty of indoor workers are exposed to cold temperatures,” she says. “Order pickers in freezers or warehouses, or office workers in excessively air-conditioned offices, for example.”

Stinson says being cold is a contributing factor for musculoskeletal injuries such as tendonitis. “We notice a lot of concerns with cold people tensing up while keyboarding or using a mouse,” she says. “Cold restricts blood flow to the muscles, and that can eventually cause problems.”

Being aware of working conditions that contribute to injury is essential to staying healthy, says Stinson. “Exertion, repetition, extended duration, awkward work posture and excessive vibration can all contribute to MSI,” she says. “Being cold makes everything worse.”

Injury prevention can be deceptively simple, such as redirecting cold air vents away from yourself, or wearing a sweater. Stinson says management also has a role to play. “Administrative controls, such as limiting a worker’s exposure to cold, providing heat where needed and allowing frequent warm-up breaks, are very important.”

She recommends that employers and employees look at changing their working posture. The use of standing work stations is one possibility that is becoming more common.

So the bottom line when it comes to dealing with winter seems to be unanimous: get ready. If you take the snowbrush out of your garage and put it in your vehicle after your final barbecue of the year, you can save wear and tear on your credit card. The same goes for your work preparation. Denying winter will not make it go away. It will just make the first blast of awful weather that much harder—and potentially more dangerous—to deal with. Bundle up...it’s coming.

Wes Bellmore is a freelance writer living in Edmonton.
Snowcover adds to construction site hazards.
LIMITING THE EFFECTS OF THE COLD

Wearing appropriate clothing is fundamental to minimizing the risk of cold-related injuries, but proper equipment design and safe work practices also help.

**Equipment design:** Metal handles and bars should be covered by thermal insulating material for work below freezing. Also, machines and tools should be designed to be operated without removing mittens or gloves.

**Surveillance and monitoring:** Every workplace where the temperature may fall below 16°C should have a suitable thermometer to monitor temperature. If the temperature is below freezing, it should be monitored at least every four hours. Both air temperature and wind speed should be recorded in outdoor workplaces below freezing or indoors whenever the air speed exceeds 2 m/s (7 km/h).

**Emergency procedures:** Clearly outline procedures for providing first aid and obtaining medical care. At least one trained person per shift should be assigned to attend to emergencies.

**Education:** Workers and supervisors should be informed about proper clothing habits, safe work practices, physical fitness requirements, the symptoms of overexposure to the cold and emergency procedures in case of cold injury. Use a buddy system: look out for one another and be alert for the symptoms of hypothermia.

*Adapted from the Canadian Centre for Occupational Health and Safety (www.ccohs.ca/oshanswers/phys_agents/cold_working.html).*

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**PROFESSOR POPSICLE’S FOUR STAGES OF SENSATION IN FINGERS AND TOES:**

1. feeling cold
2. feeling pain
3. feeling numb (at this point you **MUST** take action to warm your digits)
4. feeling nothing

**PROFESSOR POPSICLE’S FOUR (FAULTY) REASONS STRANDED MOTORISTS LEAVE THEIR VEHICLES (AND RISK HYPOTHERMIA):**

1. They underestimate their distance from help.
2. They overestimate the distance they can walk.
3. They overestimate the length of time it will take for someone to find them.
4. They underestimate the length of time they can survive in their vehicle.

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**RESOURCES**

**WEB LINKS**

- employment.alberta.ca/documents/WHS/WHS-PUB_gs006.pdf
  - Best Practice: Working Safely in the Heat and Cold. A guide from the Government of Alberta

- www.ccohs.ca/oshanswers/phys_agents/cold_working.html
  - “Cold Environments: Working in the Cold,” from the Canadian Centre for Occupational Health and Safety

**IN THE ALBERTA GOVERNMENT LIBRARY**

[For contact information, please see page 8.]

- VHS
  - Hypothermia (VC 0125)
    - Hypothermia is the lowering of the body’s core temperature. This video discusses how to prevent, recognize and treat hypothermia. Although the setting in this video is water, the same principles also apply to cold weather. Produced by the U.S. Coast Guard and the University of Alaska Instructional Telecommunication Services.

  - Winter Safety (VC 0273)
    - This video is designed to help you avoid losing your fingers and toes to frostbite or your life to hypothermia.
OCCUPATIONAL FATALITIES
Investigated in Alberta

February 19 to May 31, 2011

Occupational Health and Safety investigates most work-related incident fatalities that fall under provincial jurisdiction. In general, OH&S does not investigate highway traffic, farm, disease or medically related fatalities. In many cases, investigation into the fatalities described here is continuing. Final investigation reports are filed at the Alberta Government Library site and can be reviewed there or at employment.alberta.ca/whs-fatalities.

A female worker clearing snow stopped the Caterpillar D6 bulldozer she was operating and stepped out of the cab and onto the machine’s tracks. The bulldozer moved forward, dragging her underneath and causing fatal injuries.

A 59-year-old male worker was on a crew using a heavy-duty tow truck winch to pull a trailer out of a ditch. The winch cable broke, swung back and struck the worker in the head. The worker was transported to hospital in serious condition and later died.

A 55-year-old male worker operating a fitting truck and the driver of a welding truck both stopped to clean mud from their tires. The worker was walking back to his fitting truck when the welding truck backed up and ran over him.

A 54-year-old male worker fell from a ladder in the warehouse in the back of a store. He struck his head and was pronounced dead at hospital.

A 49-year-old male worker was on a crew steaming a gas production line when there was a release of hydrogen sulphide gas. The worker was overcome by the hydrogen sulphide and died at the scene. Two other workers were also overcome and transported to hospital for treatment.

A 51-year-old male worker was on a quad when he was struck by a tree knocked over by a strong wind.

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<th>Year-to-date occupational fatalities investigated in 2011 [as of May 31]:</th>
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<td>Occupational fatalities investigated from January 1 to May 31, 2010:</td>
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<td>Total occupational fatalities investigated in 2010:</td>
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If you’re interested in sharing opinions or comments about workplace health and safety issues, please contact the magazine’s Editor through the OHS Contact Centre, 1-866-415-8690 (or 780-415-8690, if you are in the Edmonton area), or e-mail whs@gov.ab.ca.
The new distracted driving law is the right call for Alberta. And it’s in effect now.

When you’re behind the wheel, it applies to:

- Using a hand-held phone for talking, texting or e-mailing
- Operating electronic devices like video players and laptops
- Manually programming GPS units or portable audio players
- Reading or writing
- Personal grooming
- And more

The new law is in effect now and the fine is $172.00.

What are you doing behind the wheel?

Find out more BEFORE you get behind the wheel at saferoads.alberta.ca