

## On Occupational Health and Safety

### Graveyard shifts may raise disease risk, studies say

By Martin Mittelstaedt  
Globe and Mail Update - April 12, 2010

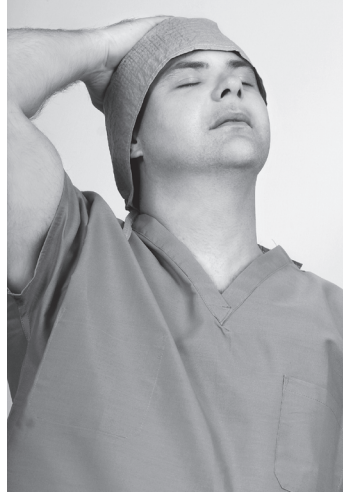
#### *Studies focus on the drop in body's melatonin levels among those exposed to high levels of light at night*

Shift work has long been a necessary and unpleasant part of modern life, with more than a quarter of the Canadian work force estimated to be on the job during non-traditional hours in the evenings and overnight.

Those working these shifts often experience disrupted sleep patterns, fatigue and other minor ailments. Now, evidence is mounting that so-called graveyard shifts may be aptly named because they're an under-recognized health hazard, increasing a person's risk of developing cancer, heart disease and other life-threatening illnesses.

Although researchers do not know exactly why shift work is dangerous to health, they're focusing on one unusual culprit: exposure to light at night, and its possible disruption of the body's production of melatonin, a key hormone that tells every cell in the body whether it is day or night.

Experts on the effects of shift work gathered in Toronto yesterday, and the possible role of melatonin, often dubbed the vampire hormone because people produce it only in darkness, emerged as a likely suspect in the hunt for explanations on why working at night holds more risks than doing identical work during the day.



of the epidemiology department at the University of Washington School of Public Health in Seattle, and one of the experts.

Many of the key U.S. and international researchers on the health impacts of shift work were at the meeting, which was organized by the Occupational Cancer Research Centre, division of Cancer Care Ontario, and Toronto's Institute for Work and Health.

Several occupational groups have a high prevalence of shift work. About half of health-care employees experience shift work, for instance, as do nearly two thirds of police and security guards.

Among the recent findings is that long-term shift work causes increases in breast, colorectal and uterine cancer risk ranging from 35 per cent to 79 per cent in women, according to Eva Schernhammer, an assistant professor of medicine at the Harvard Medical School in Boston, who has helped track the incidence of cancer in a large group of U.S. nurses.

She said 16 studies have now been conducted on breast-cancer risk and shift work, and most of them have been suggestive of some kind of association, particularly among those who've experienced night and evening employment for long periods, such as 20 years or more.

Although there isn't as much research on men, two studies have detected an elevated prostate cancer risk in males who work non-traditional shifts. There is also emerging research linking shift work to elevated risk of cardiovascular disease, Dr. Schernhammer said.

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There is "increasing evidence that regular and prolonged work at night may result in adverse health effects including breast and other forms of cancer," observed Scott Davis, chairman

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# Rural Safe Work Groups a Success

Six groups throughout rural and northern Manitoba have just completed participating in a project to improve their workplace health and safety programs.

The Rural Safe Work Groups were based in the Northern, Parkland, Southern, Eastern and Interlake regions. Members of the groups included health and safety committee members, safety managers and safety professionals from different workplaces in each region.

Over the last two years the groups have used video conferencing and web based education to help members provide health and safety education, share best practices and solve common problems. There were a total of 124 participants in the project. About 95% of the participants reported that their health and safety knowledge, skills and abilities have increased due to this project. Approximately 93% of the participants indicated they also improved their workplace's health and safety program as a result of this project.

According to one participant,

**“These sessions are valuable and provide very good information. I have been contacted to share information with other sites as a result of these meetings. The project is encouraging sharing between companies in the area. This is a good thing.”**

The Occupational Health Centre helped to form and facilitate the Safe Work Groups in each region and provided the needed education. The project was funded by the Workers Compensation Board of Manitoba.

## Upcoming Events

### **Workers Compensation Board of Manitoba**

presents the following one-day free courses twice a month to December 2010  
WCB Basics & WCB Return to Work Basics  
To register call 954-4501 or  
email [bmarchan@wcb.mb.ca](mailto:bmarchan@wcb.mb.ca)  
For more information go to  
[www.safemanitoba.com](http://www.safemanitoba.com).

### **Workplace Safety & Health Division**

presents the following one-day free courses at various locations throughout Manitoba  
***Chemical & Biological Hazard Control  
Inspecting Your Workplace  
Investigating Workplace Incidents  
Musculoskeletal Injury Risk Assessment  
SAFE Committee Basics  
Safety and Health Program Development  
Supervisor & SAFE Work***  
For more information go to:  
[www.safemanitoba.com](http://www.safemanitoba.com)

### **Health Work & Wellness Conference 2010**

September 29 - October 2  
Vancouver, B.C.  
Phone: 1-877-805-0922 or 1-604-605-0922  
Fax: 1-604-689-4486  
E-mail : [workwell@healthworkandwellness.com](mailto:workwell@healthworkandwellness.com)  
Web: <http://healthworkandwellness.com>

Occupational Health Centre presents

### **Our Chemical Exposure**

**A public presentation by** Sandra Madray,  
Chemical Sensitivities Manitoba  
October 5, 2010 - 9:00 a.m. - 10:00 a.m.  
Room 103 - 275 Broadway  
For more information contact 926-7909

Dr. Davis says researchers have found it “exceedingly difficult” to determine exactly what it is about shift work that makes it a potential health threat. Traditional explanations have focused on how shifts cause sleep disruption and stress.

Melatonin has emerged as a possible factor because exposure to light at night tricks the body into thinking it is daytime, reducing production of the hormone, which has been found to have potent anti-cancer properties.

Melatonin is made in the brain’s pineal gland. Using clues from the amount of light entering the eyes, the gland normally begins increasing production of melatonin in the early evening as it gets dark.

Production peaks around 2 a.m. in the darkness of the overnight hours and then falls off around sunrise. In shift workers, the daily pattern is much more muted, and melatonin synthesis can be cut to nearly nothing in very bright office settings.

The main role of melatonin is fine-tuning the body’s circadian, or 24-hour, rhythms of drowsiness and internal temperature. It’s best known as the anti-jet lag pill used by people who travel across many time zones to get back into sync with the different sleeping hours in their new surroundings.

A U.S. researcher, David Blask of Tulane University School of Medicine in New Orleans, has conducted studies of human breast-cancer tumours implanted into rodents and found their growth rate is regulated in part by melatonin levels.

When melatonin levels drop, “tumour growth rates increase dramatically,” Dr. Blask says. “During the night, tumours go to sleep.”

In one experiment, Dr. Blask pumped blood from women who had been exposed to strong light at night - and therefore had low amounts of melatonin - into

tumours, causing the malignancies to grow rapidly. When melatonin-rich blood was used, tumour growth fell to negligible levels.

There may be another possible health hazard with night shifts that is also connected to light. People who work shifts may not be exposed to enough sunlight during the day.

Dr. Davis said there is speculation that shift workers may be short of vitamin D, the so-called sunshine vitamin, because they typically sleep during the day. Most of the vitamin D that people have in their bodies they make themselves in bare skin exposed to strong summer sunlight. Insufficiencies of vitamin D have also been linked to several cancers and heart disease.

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## did you know...?

**About 220 workers in Canada and the United States die every year from heat stress on the job.**

**Scientists tell us the worst is yet to come. A study by Toronto Public Health and Environment Canada predicts heat-related deaths will double by 2050 and triple by 2080 as a result of global warming.**

**I want to help!**

I will support the Occupational Health Centre to help Manitobans protect their health and safety at work.

Name \_\_\_\_\_

Address \_\_\_\_\_

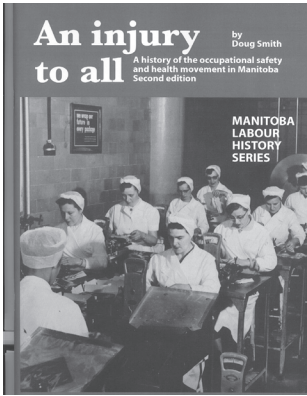
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Please make your cheque payable to the  
MFL Occupational Health Centre  
102-275 Broadway  
Winnipeg, Manitoba R3C 4M6



## Newly Released



### **An injury to all: A history of the Occupational Safety and Health Movement in Manitoba**

**Second edition 2010  
by Doug Smith**

The newly released second edition of this booklet documents how we have dealt with workplace injuries and illness in Manitoba over the last 130 years. The second edition now includes a section on the years “1990 and onwards: Health and Safety in the age of globalism”. The booklet provides a history of the occupational safety and health movement in Manitoba from the perspective of working people. It is a valuable resource to anyone interested in the struggles and gains of Manitoba’s labour movement and specifically in the political and social context of workplace health and safety.

The newly incorporated section covers changes to the workers compensation system, the rise in recognition of repetitive strain injuries, and the challenges of vulnerable workers such as youth, immigrants and Aboriginal workers in Manitoba.

The booklet was updated to commemorate the 25th Anniversary of the Occupational Health Centre. Booklets are available through the Occupational Health Centre for \$10/booklet. Contact Tiffany Pau at 926-7909 or email at [tiffany.pau@mflohc.mb.ca](mailto:tiffany.pau@mflohc.mb.ca)



Do you have an article, information or story about workplace health and safety that you want to share?

We reserve the right to edit. Send your newsletter contributions for “Focus on Occupational Health and Safety” to Karen Hamilton at [khamilton@mflohc.mb.ca](mailto:khamilton@mflohc.mb.ca) or fax: 956-0848

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**The MFL Occupational Health Centre (OHC) is a community health centre focused on promoting the health of Manitoba workers. We are a non-profit, charitable organization funded by the Winnipeg Regional Health Authority and by donations from individuals and unions. We are committed to working with all Manitobans who are interested in creating safer and healthier workplaces.**

**The OHC provides the following services to Manitobans:**

- **medical services to help you find out if your job is making you sick**
- **education and assistance to workplace health and safety committees to identify and resolve health and safety problems.**
- **special initiatives with immigrant and Aboriginal communities**
- **information and library services, Monday to Friday from 9 am to 5 pm**

**Healthy Workplaces Healthy Workers Healthy Communities**