

Hours of Work:

a timely issue

Fatigue kills! This is the slogan of an ongoing worldwide campaign by road transport drivers to raise awareness on the issue of hours of work.

In Canada, it is estimated there are on average, some 43,000 collisions involving big trucks that kill or injure 12,000 people each year. The U.S. averages 5,000 deaths and 100,000 injuries a year involving heavy truck crashes. According to the U.S. National Transportation Board, driver fatigue may be a factor in 30 to 40 per cent of these serious truck accidents.

This fatigue is caused in large part by the thousands of hours transport drivers spend behind the wheel without adequate rest. Current regulations in Canada allow transport drivers to work between 60 and 70 hours a week. Many drivers with the employer's full knowledge are working even longer hours than the current regulation allows.

Shockingly, Transport Canada is looking at increasing the hours of work from 60 to 84 hours a week. They have formed a Standing Committee on Transport made up of representatives from government, trucking associations and others to study the issue and make recommendations. If the Committee recommends increased hours of work Canada's truck drivers will be forced to work more hours than any other drivers in the world.

Hours of work are not just an issue for transport drivers though. A recent U.S. study found that hospital nurses whose shift exceeds 12.5 hours are three times more likely to make a medical error—such as giving the wrong medication or the wrong dose—than nurses who work 8.5 hours or less. Researchers also found that the error rate increases similarly after a nurse puts in more than 40 hours a week, regardless of the length of the shifts. Canadian nurses work similar hours with overtime becoming the norm.

What is the scope of the problem?

Statistics Canada's Labour Force Survey reports the number of people working overtime has doubled over the last 18 years. In some industries overtime has increased while the number of jobs has stagnated or declined. The total overtime worked is over 20 million hours a week, which divided by a 40-hour workweek is the equivalent of 500,000 full-time jobs.

Worker representatives are vehemently opposed to excessive work hours because of the inequitable distribution of work. They feel that instead of forcing workers to work overtime employers need to make more fulltime positions available so more workers can be gainfully employed. Unions are campaigning and negotiating for shorter workweeks as a way to prevent layoffs and promote a better balance between work and family life.

According to an International Labour Organization (ILO) study on hours of work, workers in the U.S. and Canada work more hours than their European counterparts who are logging in fewer and fewer hours on the job each year. France recently, introduced legislation limiting the workweek to 35 hours.

The study found that even with shorter workweeks and longer vacations European countries are keeping pace with the U.S. in terms of efficiency and productivity.

In Ontario, it is estimated that over 466,000 workers worked 50 or more hours in a single week in 2003. These types of work hours can lead to fatigue and increased risk of physical injury. This is due in part to reduced alertness, a decrease in decision-making ability and a reduced ability of workers to react when they are overtired. In fact, researchers at Stanford University report that fatigued individuals have a reduced ability to react, similar to that of someone impaired by alcohol.

Extended working hours also result in increased exposure to workplace hazards such as toxic chemicals and noise. Not only do excessive work hours expose workers to hazardous work environments it also affects the environment outside of work.

Many individuals such as author Anders Hayden whose book, *Sharing the Work, Sparing the Planet* advocate less hours of work as a way to conserve our natural resources and preserve the ecology through less waste and less consumerism. If we consume less material goods there will be no need for businesses to open twenty-four hours a day, everyday forcing workers to work non-standard work schedules which takes them away from their families and poses potential health and safety hazards.

What are non-standard work schedules?

In addition to excessive work hours, as much as 30 per cent of Canada's workforce are engaged in non-standard or "shift" working hours. Non-standard hours disrupt family and social life, which causes stress and emotional suffering. Those who work at night face other risks still, because they are also disrupting their circadian rhythm (the body's natural time clock).

There are various types of non-standard work hours. They include:

- fixed shifts (e.g. permanent nights);
- rotating shifts;
- extended-workdays; and
- split shifts.

Not surprisingly, most workers prefer to work a standard shift. However, this choice isn't always available to them. Many industrial occupations operate 24 hours a day. Those involved in occupations providing essential services such as health care, police services or emergency response are also required to work non-standard schedules.

What are the health effects of these schedules?

Working non-standard hours creates many health problems for workers such as sleep disorders and digestive problems. A good portion of these health effects is tied to the circadian rhythm—or its disruption.

The "circadian rhythm" (internal clock), governs the way our body functions on a daily basis. It affects such functions as body temperature, blood pressure and hormone levels. Our internal clock is guided by environmental time cues such as day and night, light and dark, months, and seasons. The most important cue is light, which continually resets the body's clock each day.

During the daylight hours, the body wants to be awake—physically and mentally alert and active. Our daytime metabolism is most efficient at breaking nutrients down and transforming them into energy. At night digestive systems and metabolic rates decrease, physical activity declines and mental faculties are sorted out. While this is happening, our body craves sleep.



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Attempts to change the circadian rhythm can disrupt tissue repair and growth, affect breathing and alter the way organs function. The more often we disrupt the circadian rhythm, the more acute these problems become. The damage to the body can be severe.

Short-term health effects of working non-standard hours include:

- heartburn/indigestion;
- constipation/diarrhea;
- sleep loss/fatigue;
- insomnia/jet lag;
- depression/mood swings;
- irritability/nervousness; and
- loss of appetite.

Lack of sleep, inadequate eating habits, physical and mental fatigue, social isolation and family problems are all stressors experienced by shift workers. Stress also causes a higher susceptibility to common ailments such as flu, colds and headache. Instead of adapting to the stressors, the body's reactions may in fact, worsen over time.

Long-term associated health effects include:

- heart problems;
- duodenal ulcers;
- rheumatoid arthritis; and
- weight problems.

Shift work presents some additional problems for women workers. Menstrual cycles may be disrupted, causing irregular, painful or missed menstrual periods. As well, shift work may affect hormones. In fact, one study makes the link between light at night and breast cancer.

Pregnancy can also be affected by non-standard work hours. Shift and night workers tend to have a lower than average childbirth rate. One study of shift workers also found a higher than average rate of miscarriages resulting from associated stresses on body systems.

What are the associated safety risks?

Although there is some debate about when accidents most frequently occur, there is ample evidence linking non-standard hours of work to serious workplace accidents. Studies show that serious accidents happen more frequently between 2:00 a.m. and 6:00 a.m. In fact, the rate of fatigue-related truck accidents between 4:00 a.m. and 6:00 a.m. is 10 times as high as during the standard workday.

From late afternoon to early morning the body's motor reflexes slow down, reaction to visual stimuli declines and the ability to concentrate is reduced. All these factors increase the possibility of a serious accident.

What is the law?

Canada does not have any legislated restrictions on the amount of overtime a person can work. In fact, overtime is legally mandatory in most Canadian jurisdictions. There are only two exceptions.

Employment Standards Act

Hours of work are addressed in Ontario's Employment Standards Act, 2000. Section 17 of the Act, which deals with limits on hours of work, currently allows employees to work up to 60 hours a week without approval from the Ministry of Labour (MOL). All that is required is written agreement from the employee.

However, on April 26, 2004, Labour Minister Chris Bentley introduced proposed amendments to the Act that will among other things require employers to obtain prior approval from the MOL as well as a written agreement from the employee if they require the employee to work more than 48 hours in a week.

As of July 1, 2004, employers who fail to pay overtime pay and/or require employees to work more than eight hours daily or 48 hours weekly (or limits previously set by the employer) are subject to a fine of \$300.00 plus a "victim fine surcharge". The fine comes in the form of a ticket that may be issued by an employment standards officer. For more specific information visit the Ontario Ministry of Labour website at <http://www.labour.gov.on.ca>

Other Jurisdictions

Unlike Ontario, the workweek is 40 hours in British Columbia, Saskatchewan, Manitoba, Quebec and Newfoundland. It is 44 hours in Alberta and New Brunswick. In Nova Scotia and Prince Edward Island it is 48 hours.

What control strategies are available?

The most effective way to control a hazard is at its source. In other words, eliminate non-standard hours from work schedules or simply decrease the number of hours of work per week.

Work Organization

Many unions have been successful in negotiating a shorter workweek or altering the existing schedule to make it more healthy and convenient for workers. For example, workers can arrange to start the day shift an hour later; implement shorter night shifts; or increase break periods on non-standard shifts. Also, shifts should rotate forward. A day shift should be followed by an afternoon shift, followed by a midnight shift. Rotate repetitive jobs to reduce fatigue.

Increase time off after a night shift. Rotate repetitive jobs to reduce fatigue.

Workplace Design

A well-designed tool, adequate lighting, good indoor air quality and a well-designed workstation can all help reduce the overall demands of a particular job. These measures in turn, will decrease fatigue and stress.

What can workers do in the meantime?

While the joint health and safety committee works toward implementation of proper control measures the following are some interim coping strategies for affected workers.

- Keep a regular eating schedule. This does not mean eating like you are a day worker when you are on nights. It means establishing a routine that is appropriate for the shift you are on. This way you can control the body's internal clock.
- Maintain a balanced and nutritious diet. Avoid a high protein, high fat meal just before going to bed.
- Limit intake of stimulants like caffeine and sugar.
- Set aside at least one meal or activity per day with family or friends to avoid social isolation.
- Maintain the same sleep/work/leisure time sequence on days off regardless of the shift worked.
- Sleep in a dark room to simulate nighttime.
- Practice relaxation techniques that can reduce stress.

NOTE: The Workers Health & Safety Centre has a three-hour program on Hours of Work. For more information contact a regional office near you.



RESOURCE LINES

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