

Health and Safety Hazards for City Bus Drivers

"The job of operating public transit vehicles in urban centers may be among the most stressful and unhealthy of modern occupations" say two prominent medical researchers.¹

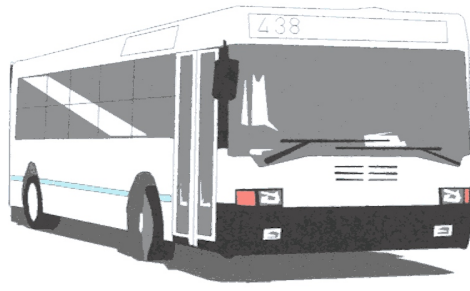
Stress and Work Design

Dozens of studies conducted over the last four decades in cities on almost every continent show that city bus drivers, when compared to workers in other jobs, are more likely to experience

- death from heart and blood vessel disease
- heart and blood vessel-related conditions such as chest pain and high blood pressure
- digestive disorders
- musculoskeletal problems, especially of the back, neck and shoulders

Bus drivers frequently report tension, mental overload, fatigue and sleeping problems. Bus drivers also have more frequent absences from work and of longer duration than workers in other occupations. A large proportion of the work absences are attributable to stress-related disorders such as digestive problems and anxiety. Bus drivers retire earlier and at a younger age than other civil servants. Early retirement is usually accompanied by disability. The main health problems leading to disability are related to the back, tendons and joints, mental illness, and heart and blood vessel disease.

Stress is believed to play a significant role in causing two of the diseases (heart and blood vessel disease and digestive disorders) found in excess in bus drivers. Typically, stressful jobs are those which have high psychological demands and little decision-making control, in combination with low social support on the job. Bus driving is a classic example of a stressful job. Bus drivers must respond to multiple demands over which they have little control. The main tasks of a bus driver are to drive safely, keep on schedule, and treat passengers in a professional and courteous



manner. Yet two of these tasks are inherently contradictory — maintaining the schedule and serving the public. In order to accomplish one, the other may have to be compromised. Traffic congestion is another stressor which enters this equation.

Social support helps protect individuals experiencing stress. Bus driving interferes with social support in two ways. The job itself is solitary with little chance for face-to-face contact between coworkers. The work schedule disrupts family and social life.

How buses are designed and how work is scheduled may account for musculoskeletal problems associated with driving a bus. Musculoskeletal problems include back, neck, and shoulder problems. Muscle cramping, pressure points and poor circulation in the legs and buttocks are other examples. Long term exposure to whole-body vibration and impact while driving over bumps in the roads and rough road surfaces can result in low back problems.

Work Factors Associated with Stress-related Health Problems

- traffic congestion
- constant time pressure
- little or no input into how work is organized or implemented
- disorderly passengers
- threat of physical assault and crime
- work schedule interference with home life and leisure activities
- social isolation on the job

Work Design Factors Associated with Musculoskeletal and Other Problems

- poor design of the driver's cab and hard to reach or poor layout of vehicle controls
- steering wheel placement not adjustable and too small or large in diameter
- shortcomings in the design of the seat such as no adjustable springs/suspension, no lumbar support and no height adjustability
- sitting for long periods of time
- holding a pedal down for long periods of time
- awkward working position
- inadequate rest breaks

Other Hazards

Stress and musculoskeletal problems are not the only problems bus drivers face. Motor vehicle accidents are a serious safety hazard faced by bus drivers. Heavy traffic and bad weather increase the risk of accidents. These hazards are increased if the vehicle is not properly maintained. Examples of poor maintenance of vehicles includes faulty brake systems, headlights or windshield wipers. Slipping on the bus floor, outside of the bus or on the steps are examples of other safety hazards.

There may be temperature problems in the bus — excessive heat in the summer or poor heating and blasts of cold air in the winter. Glare from sunlight may result in eyestrain. Noise can be a source of annoyance, distraction and fatigue. It may interfere with the driver's ability to concentrate or get auditory cues from the traffic on the road.

Bus drivers breathe in vehicle exhaust when readying the bus for service in the garage, from their own bus engine, and from surrounding traffic. Bus drivers are exposed to communicable diseases such as the common cold from the public. Another type of exposure may occur via skin contact with contaminated objects when cleaning the bus or during cleanup of body secretions or fluids in an emergency situation. The exposure of greatest concern is when the skin is punctured by a contaminated object such as a discarded needle.

Reducing Work Hazards

Research supports a number of measures to reduce work hazards for city bus drivers. Measures include

- reduce traffic congestion (bus lanes, signal priority)
- reduce passenger inquiries (automated information systems)
- enhance driver security (alarm systems, emergency procedures)
- reduce social isolation on the job (schedule breaks in central locations)
- reduce fatigue and interference with personal life (improve work schedules)
- improve social aspects of work (supportive style of leadership)
- improve ergonomic design of buses (seat design, steering wheel design)

What You Can Do

If you have a work-related health and safety concern

- talk to your union Health and Safety Committee representative. Your representative should be involved in identifying workplace hazards and recommending solutions to reduce or eliminate workplace hazards.
- talk to your supervisor about the problem.
- contact the City of Winnipeg Employee Occupational Safety and Health Unit or Employee Assistance Program
- contact one of these government agencies
 - Manitoba Labour Workplace Safety and Health Branch 945-3446 — *to make a health and safety complaint*
 - Manitoba Workers Compensation Board 954-4321 — *to report a work-related injury or illness*

Show this fact sheet to your own doctor and discuss your personal cardiac risk profile. Your doctor or the Manitoba Heart and Stroke Foundation can provide information for decreasing your risk for heart and blood vessel disease.

If you need more information contact the

MFL Occupational Health Centre, Inc.
102-275 Broadway
Winnipeg, Manitoba R3C 4M6
Phone: (204) 949-0811
Fax: (204) 956-0848
Toll Free: 1-888-843-1229 (Manitoba only)
Email: mflohc@mflohc.mb.ca
Website: www.mflohc.mb.ca

June 1998