



SAFE WORK



No. 225
July 2003

Health Hazards in the Funeral Industry

INTRODUCTION

People who work in the funeral industry may be exposed to a number of health hazards. Workers, employers and business owners need to be aware of these hazards in order to be able to take adequate precautions. The purpose of this Bulletin is to provide some information about the hazards in the industry, so that staff in these workplaces can implement and use appropriate control measures.

KEY HEALTH HAZARDS

- **Formaldehyde Exposure:** Formaldehyde is an ingredient in embalming and preservation chemicals. A potential exposure to formaldehyde-containing solutions or powders can occur through inhalation, direct skin, or eye contact. The health effects of formaldehyde include eye and skin irritation, dermatitis, respiratory irritation and sensitization, and possible cancer. Formaldehyde is currently classified as a suspected human carcinogen by the American Conference of Governmental Industrial Hygienists. Control measures to reduce inhalation exposure include the use of an adequate ventilation system (described later in this Bulletin), performing preparation procedures so that the airflow from formaldehyde sources is away from the worker, and using appropriate work practices to minimize the amount of formaldehyde that is able to evaporate into the air. Control measures to reduce skin contact include the use of appropriate gloves and gowns, and skin hygiene (hand washing). Control measures to prevent eye contact include work practices to decrease the probability of splashes, wearing face and eye protection, and having an emergency eye wash system available.
- **Bloodborne Pathogen Exposure:** The embalming procedure requires the embalmer to work with large amounts of blood and body fluids. These can be potentially infectious. Exposure to blood can occur during many steps in the procedure and enter the body through contact with broken skin, by inhalation of aerosols, and by splashing into the eyes, nose or mouth. Embalming procedures place the embalmers at risk of exposure to the causative viruses for AIDS (HIV), Hepatitis B (HBV), and other bloodborne pathogens. Information on this topic is contained in a publication titled, "Integrated Post-Exposure Protocol Guidelines for Managing Exposures to Blood/Body Fluids". It is available on the internet at the following website address:
<http://www.gov.mb.ca/health/publichealth/cdc/fs/IPEP.pdf>

All embalmers should be immunized against Hepatitis B.

The embalmer may not know if a deceased person is contaminated with a pathogen. Therefore "universal precautions" are required to be used for all preparation procedures. Information on this topic is available in WorkSafe Bulletin number 161, (Managing Exposure to Human Blood/Body Fluids).

WHMIS & WSH ACT REQUIREMENTS

The WSH Act (W210), and the regulations under that Act apply to employers and workers in funeral homes. Employers are required to ensure, so far as is reasonably practicable, the safety, health and welfare at work of all his workers. Some of the actions to fulfill this requirement include the following:

- **Job Hazard Analysis:** each individual step in a job task or procedure is assessed or analyzed to determine the risk for generating an exposure from that step.
- The adherence to *Universal Precautions and Safe Work Practices*, which include:
 - **Personal Protective Equipment and Clothing:** disposable latex & chemical resistant gloves; respiratory protection (includes a respiratory protection program); goggles or face shield; protective clothing to be worn over street clothes; and head and shoe covers.

- *Safe Work Procedures* for: removal of human remains; transportation of human remains; embalming/preparation of human remains; dressing/casketizing/ cosmetizing of human remains; housekeeping; spill clean up and disposal; personal hygiene activities; handling of needles and other sharps; and disposal of waste materials.
- *WHMIS*: ensure that all chemicals are properly labeled, that Material Safety Data Sheets are available, and that education and training takes place to ensure that staff are knowledgeable about the hazards of the chemicals and the precautions that are required.
- A written *Inventory* of all hazardous chemicals.
- An *Eyewash Facility* is available and functional to ensure that health effects can be minimized if a splash or spill occurs.
- An *Emergency Response Plan* is prepared for a chemical spill, fire, and disposal of hazardous chemicals.
- A *First Aid Kit* is available for minor injuries.

VENTILATION

The most effective means of controlling airborne formaldehyde exposures in the embalming rooms is through the use of an adequate local exhaust ventilation system. The preferred method of capture is downdraft ventilation, which captures contaminant gases and vapours directly at the source. It is recommended that a professional engineer be consulted on a case-by-case basis to assess the most appropriate means of controlling exposures in the specific embalming room. Exposure determination by air monitoring ensures that personal exposures to formaldehyde are maintained below the current exposure limits.

Items to consider are:

- Variation in personal technique and work practices.
- Embalmer's position in relation to air flow in an embalming room.

A program of regular maintenance, including airflow checks and record keeping of the engineering controls installed in the embalming room, is required to ensure that the proper functioning of the controls is achieved at all times.

BUILDING CODE REQUIREMENTS

The Manitoba Building Code Regulation 164/98 applies to any new construction, any renovations or alterations to an existing building and is not retroactive. The authority having jurisdiction in an area administers the application of the Building Code. The Code requires a minimum of 15 cubic feet per minute of fresh airflow per person in reception areas, and 0.5 cfm per square foot of area in preparation rooms. For further information about the Building Code, contact the Office of the Fire Commissioner Office in Winnipeg, at 945-3322.

Compliance with the Building Code does not ensure that adequate ventilation is available to control chemical exposures. The general ventilation requirements necessary to control formaldehyde may exceed the Code requirements. The ventilation rates necessary to ensure that worker exposures are below the occupational exposure limit must be determined specifically for each location. The ventilation rate is dependent on the layout and process in each specific location. Some processes may require individual local exhaust ventilation, but even in these cases the general room ventilation also needs to be evaluated.