Environmental Hazards

Policy

"The anesthetic gases and vapors that leak into the surrounding room during medical procedures are considered waste anesthetic gases. Health care professionals who work in hospitals, operating rooms, dental offices and veterinary clinics, are potentially exposed to waste anesthetic gases and are at risk of occupational illness. The waste anesthetic gases and vapors of concern are nitrous oxide and halogenated agents (vapors) such as halothane, enflurane, isoflurane, and desflurane. Some potential effects of exposure to waste anesthetic gases are nausea, dizziness, headaches, fatigue, and irritability, as well as sterility, miscarriages, birth defects, cancer, and liver and kidney disease, among operating room staff or their spouses (in the case of miscarriages and birth defects). Employers and employees should be aware of the potential effects and be advised to take appropriate precautions."

OSHA Waste Anesthetic Gases

OSHA Reproductive Hazards

Selected inhalation anesthetic agents are thought to be hepatotoxic and, as a result, an anesthetist may on occasion develop a sensitivity to agents which is reflected in abnormal liver function studies. In addition, studies performed in the past have suggested an association between sustained exposure to an anesthetic environment and an increased incidence in abortions, birth defects, and certain types of malignancies for both male and female personnel. While no cause-and-effect relationship has been established, consideration should be given to these findings in choosing anesthesia as a specialty.

Most hospitals have installed anesthetic gas exhaust systems for minimizing risk to operating room personnel. All clinical affiliates have scavenging systems for waste gases. It has not been established whether any risks to personnel are eliminated by these exhaust systems.

Anesthesia caregivers are frequently exposed to blood products, body secretions and contaminated syringes and needles. All students must strictly adhere to universal precautions when involved in patient care involving potential contact with mucous membranes, secretions or open wounds. Gloves, protective eye wear and masks are available at each anesthetizing site and must be worn. Proper regard for and performance of aseptic technique is mandatory to protect both patients and anesthesia caregivers. All students must have current vaccinations including those for Hepatitis B or have appropriate titer levels. If a student experiences a needle stick with a contaminated needle they should:

1. Notify the Clinical Coordinator
2. Seek medical attention per the clinical site's policy
3. Complete required hospital forms
4. Notify the Program Director

5. Related medical expenses accrued by the student, not covered by the student's health insurance, are the responsibility of the student.

Anesthesia personnel are also frequently exposed to x-rays during operative procedures. Lead aprons and thyroid shields are available at each anesthetizing site and must be worn during fluoroscopy and x-ray procedures. Radiology dosimeters to monitor the level of x-ray exposure may be properly worn.

Responsibility for accepting risks associated with this specialty rests with the individual who chooses to work within this environment, rather than with the institutions which take reasonable precautions to minimize potential hazards.

CDC Other Healthcare Worker Hazards

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