

Anesthetic Waste Gas

Summary:

Halogenated agents are used with and without N₂O and have been linked to reproductive problems in women and developmental effects in their offspring*. A responsible approach to worker health and safety dictates that any exposure to waste and trace gases should be kept to the lowest practical level..

Air monitoring is one of the fundamental tools used to evaluate workplace exposure.

* OSHA Anesthetic Gases: Guidelines for Workplace Exposures

Your Right to Know

Exposure Risks

Effects of exposure to waste anesthetic gases include dizziness, feeling of being light-headed, nausea, fatigue, headache, irritability, and depression. Employee exposure to waste anesthetic gases may experience difficulty with cognitive, perception, and motor skills.

Exposure measurements taken in OR's during the clinical administration of inhaled anesthetics indicate that waste gases can escape into the room from various components of the anesthesia delivery system. Potential leak sources include tank valves, high and low pressure machine connections, connections in the breathing circuit, defects in rubber and plastic tubing, hoses, reservoir bags, and ventilator bellows and Y-connector.

In addition, certain anesthetic techniques, such as leaving the gas flow valves open and

vaporizers on after use, spillage of liquid inhaled anesthetics, and poorly fitting face masks or improperly inflated tracheal tube and laryngeal mask airway cuffs also can contribute to the escape of waste anesthetic gas into the atmosphere.

In general, the detection of halogenated anesthetic agents by their odor would indicate the existence of very high levels, as these agents do not have a strong odor at low concentrations.

Since there is limited data, occupational exposure limits for these agents have not been determined. Therefore, until more information is available, it is prudent to attempt to minimize occupational exposure.

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