

Waste Gasses: Exposure Limits

There is little literature regarding exposure limits for healthcare workers and anesthetic gasses. OSHA and NIOSH recommend scavenging systems and frequent air turnover via ventilation systems (including in PACU). I think the number to remember is **2ppm for the halogenated anesthetics and 25ppm for nitrous oxide.**

However it's worth noting that these recommendations come from a combination of a single study in the 1970s based on a small homogenous sample of dental students and the limits of scavenging systems from the era. Obviously this study did not involve any of the modern halogenated agents and the author has expressed concern over the widespread application of the paper's conclusions he has called "wrong"

Further Reading: Choukalaa C, Michelow M, Fitzsimons, M. Miller's Anesthesia. 9th ed. "Chapter 88: Occupational Safety, Infection Control, and Substance Abuse" pp 2775-2776

<https://www.osha.gov/waste-anesthetic-gases/workplace-exposures-guidelines>

DAVID L. BRUCE; Recantation Revisited. *Anesthesiology* 1991; 74:1160 doi:
<https://doi.org/10.1097/00000542-199106000-00038>