

# Child behavior associated with clinician sevoflurane exposure

November 22 2017

---



(HealthDay)—Negative behavior among children undergoing elective

ear, nose, and throat surgery is associated with higher mean and maximum sevoflurane concentrations in the anesthesiologist's breathing zone, according to a study published online Oct. 25 in *Pediatric Anesthesia*.

Jennifer Herzog-Niescery, M.D., from Ruhr-University Bochum in Germany, and colleagues described how child behavior affects the amount of waste sevoflurane in anesthesiologists' breathing zones. The authors recruited 68 children aged 36 to 96 months undergoing elective ear, nose, and [throat surgery](#). After oral midazolam premedication, patients obtained sevoflurane using a face mask. Ventilation was supported manually, and a venous catheter was placed. The concentration of inspiratory sevoflurane was reduced, and remifentanyl and propofol were administered before removal of the [face mask](#) and insertion of a cuffed tracheal tube. The anesthesiologist assessed the child's behavior toward the operating room personnel. Sevoflurane concentrations were determined in the anesthesiologists' breathing zone by continuous photoacoustic gas monitoring.

The researchers found that the mean and maximum sevoflurane concentrations ( $C_{\text{mean}}$  and  $C_{\text{max}}$ ) were  $4.38 \pm 4.02$  ppm and  $70.06 \pm 61.08$  ppm, respectively, in patients with positive behaviors and sufficient premedications. For children with negative behaviors and insufficient premedications, the  $C_{\text{mean}}$  and  $C_{\text{max}}$  were  $12.63 \pm 8.66$  ppm and  $242.86 \pm 139.91$  ppm, respectively.

"Negative [behavior](#) was accompanied by significantly higher mean and maximum sevoflurane concentrations in the anesthesiologist's breathing zone compared with children with positive attitudes. Consequently, the status of premedication influences the amount of sevoflurane pollution in the air of [operating room](#)," the authors write.

**More information:** [Abstract](#)

[Full Text \(subscription or payment may be required\)](#)

Copyright © 2017 [HealthDay](#). All rights reserved.

Citation: Child behavior associated with clinician sevoflurane exposure (2017, November 22)  
retrieved 15 December 2022 from

<https://medicalxpress.com/news/2017-11-child-behavior-clinician-sevoflurane-exposure.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.