

Letters to the Editor

RE: “OPERATING ROOM SOUND LEVEL HAZARDS FOR PATIENTS AND PHYSICIANS”

To the Editor: I would like to thank Dr. Fritsch et al. (1) for their paper compiling the volume of various elements to which patients and physicians are exposed in the operating room.

The numbers reported for using a mallet and chisel must have been from using a metal-head mallet. A reduction in volume can be achieved by using mallets with a plastic insert (Fig. 1), which markedly reduces the volume of the mallet striking a chisel while not impairing the performance of the chisel.

Regarding drilling, in the only in vivo study of which I am aware, Holmquist (2) demonstrated that in patients undergoing mastoidectomy under local anesthesia, a patient may perceive as much as 128 dB from drilling with a 2-mm cutting burr on the mastoid cortex.

It is certainly in all of our interests to minimize the risk of noise-induced injury to hearing. Thank you to Dr. Fritsch et al. for presenting this important information.



FIG. 1. Mallet head with plastic insert (Item No. J09 RH1541; V. Mueller, McGraw Park, IL, USA).

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REFERENCES

1. Fritsch MH, Chacko CE, Patterson EB. Operating room sound level hazards for patients and physicians. *Otol Neurotol* 2010;31:715–21.
2. Holmquist J, Oleander R, Hallén O. Perioperative drill-generated noise levels in ear surgery. *Acta Otolaryngol* 1979;87:458–60.

RESPONSE TO “OPERATING ROOM SOUND LEVEL HAZARDS FOR PATIENTS AND PHYSICIANS”

In Reply: I am writing a response letter to the editor to expand on some of the points made in: Fritsch MH, Chacko CE, Patterson EB. Operating Room Sound Level Hazards for Patients and Physicians. *Otol Neurotol* 2010;31:715–21.

I am grateful for the additional information and references regarding patients incurring acoustic trauma specifically from drilling during mastoidectomy!

There is surely variability in the degree of acoustic energy generated by different drill and burr types, speeds, and mallet heads. We can all agree that significant noise levels often are reached in the operating room.

This author now performs most mastoid surgeries using ear plugs. At first, the decrease in acoustic input from the equipment allowing for the surgeon’s audio-manual coordination was missed. However, within a few cases, essential sounds were re-recognized in their new “lite-noise” forms, and the procedures regained their same levels of efficiency. Now, after a day of mastoidectomy cases while using ear plugs, an appreciable improvement of surgeon acoustic well-being is subjectively noticed.

The first step toward a solution is to realize and accept that there is the insidious problem of noise exposure. Thereafter, with time, hopefully both patients and caregivers will enjoy the benefits of decisions for equipment design and protections to decrease noise in the operating room.

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REFERENCE

1. Fritsch MH, Chacko CE, Patterson EB. Operating room sound level hazards for patients and physicians. *Otol Neurotol* 2010;31:715–21.