

# A Case of Amplified Misophonia?

By Dennis A. Colucci, AuD, MA

Patients who have long-standing hearing loss—with or without tinnitus, recruitment, or mildly reduced uncomfortable loudness levels (UCLs)—may have difficulty adjusting to new amplification.

In such situations, the normal course of action is to provide a therapeutic regimen that gradually develops gain and output expansion to include the use of compression and noise reduction, while supporting adaptation and neuroplasticity with sound therapy and directive counseling. However, when the patient cannot adapt and a severe reaction to suprathreshold sound or sound types ensues, a sound sensitivity disorder such as misophonia or hyperacusis should be considered.

Although sound sensitivity disorders frequently appear in combination, misophonia is unique. In people with the condition, certain types of sounds trigger an emotional response, even if hearing sensitivity and UCLs are within normal limits.

The reaction ranges from irritation to aggression, including discomfort, disgust, anger, depression, anxiety, and outbursts. According to Gabriela M. Ferreira, MD, and colleagues, misophonia may be a result of an underlying psychological etiology (*Ann Clin Psychiatry* 2013;25[4]:271-274), and the assistance of a cognitive behavioral therapist may be necessary.

The sound of nails scraping on a chalkboard bothers most of us, but, for the patient with misophonia, this sound becomes incomprehensibly intolerable. Misophonia triggers can be body sounds made by others, such as lip smacking, chewing, heavy breathing, or nasal sounds, or environmental sounds, such as typing, scraping, nail clipping, pen clicking, or footsteps (*PLoS One* 2013;8[1]:e54706).

In patients who have long-standing high-frequency hearing loss and need amplification, misophonia may rear its ugly head, and a hearing aid return for credit is imminent unless actions to treat the disorder are part of the process.

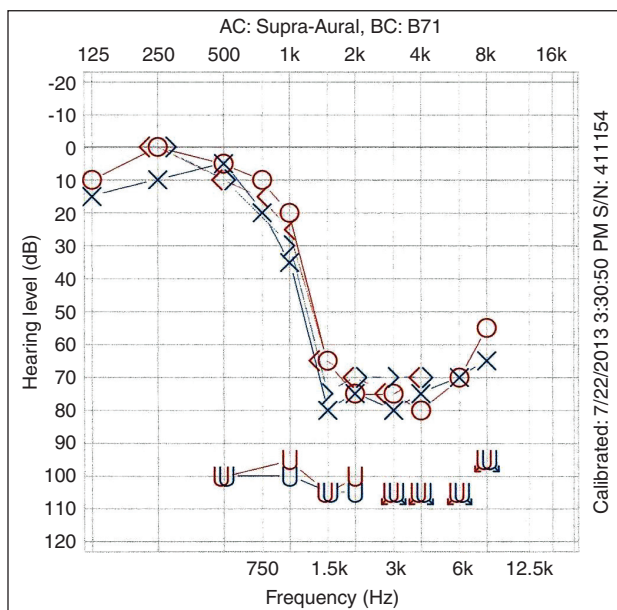
The therapeutic goal for these patients is to use cognition and experience to influence the subconscious brain and limbic system, making the triggering sounds unimportant or neutral. One way to accomplish this objective is having the patient mimic the body sounds he or she dislikes in order to learn control and acceptance. More training on this topic is available from the Tinnitus Practitioners Association.

## HEARING LOSS WITH RECRUITMENT

A case in point is that of an 80-year-old patient with habituated tinnitus who seeks help with communication and control over his exceptionally loud voice. The Abbreviated Profile of Hearing Aid Benefit (APHAB) reveals only slight hearing



Dr. Colucci is a clinical and forensic audiologist in private practice in Laguna Hills, CA.



The patient's audiogram and UCL measures showed these results

difficulty, even though the bilateral, severe high-frequency sensorineural hearing loss has gone untreated for many years.

The cause of the hearing loss is age plus noise exposure from dental and farm equipment. UCLs are within normal limits, but recruitment is evident. Profiling the patient reveals a cooperative professional willing to work on developing better hearing, with a type-A personality.

Once the patient is fitted, speech becomes clearer, but issues of sound annoyance and dislike ensue. He cannot tolerate high-frequency sounds, such as clicking, tapping, and lip smacking. Most importantly, he dislikes hearing the spoken /s/, /t/, /ch/, and /sh/ sounds.

Counseling, sound therapy, mimicry instructions, sound blending, and various coping strategies are repeatedly reviewed. Prescriptively, the hearing aids are programmed for multiple scenarios with graduated gain, bandpass filtering routines, controlled output and compression, noise reduction, directionality, and volume control.

After six months of therapy, the patient stops using the hearing aids and sound devices, claiming that the release from discomfort and annoyance is much more enjoyable than hearing.

Although this is an extreme example, applying amplification to patients with significant long-standing hearing loss who are uncharacteristically reactive to specific sounds may be a case of amplified misophonia. Anecdotally, removing the hearing aids and working with noise generators and sound therapy before reintroducing the hearing aids may be an alternative avenue for patient management. Certainly, more research is needed in this area. [\[1\]](#)