

The T-Coils Are Coming

By Dennis A. Colucci, AuD, MA

Depending upon the type and degree of hearing loss, patients have various difficulties hearing at movie theaters, stage performances, worship services, and lectures. Users of hearing aids and cochlear implants may struggle to hear when watching television, listening to their MP3 players, or talking on the telephone. Many of them cannot hear when there is background noise, regardless of the technology.

For some patients, especially seniors or the technologically challenged, the complexities of assistive listening devices are formidable, and their successful use is unrealistic. Solutions to hearing loss should not mean having an extra job managing gizmos. In my experience, if the hearing aid characteristics are optimized, connectivity devices eventually go by the wayside—convenience rules!

The relationship between the use of hearing aids (and other devices) and depression has been clearly demonstrated (*Geriatr Gerontol Int* 2012;12[3]:440-445). Furthermore, Andrea Ciorba and colleagues reported that only 39 percent of elderly subjects with hearing loss considered their health to be very good or their global quality of life to be excellent, compared with 68 percent of those without hearing loss (*Clin Interv Aging* 2012;7:159-163).

Without ease of use and greater transparency, the goal of reducing the mental burden connected with hearing loss cannot be furthered. Telecoil (t-coil) availability is the best way to provide accessibility in a number of venues. (For more information, visit www.hearingloop.org).

SEIZING THE OPPORTUNITY

The use of t-coil-ready hearing aids and cochlear implants presents an opportunity to help patients engage in situations where they ordinarily underperform or that they avoid altogether. Induction loop systems magnetically transmit sound to hearing aids and cochlear implants with t-coils.

Benefits include binaural hearing, the elimination of room acoustic effects and of background noise from hearing aid microphones, immediate access, and the absence of a need for extra gadgets.

Bill Diles, MA, a nationally known looping advocate, has looped over 2,100 homes for patients in his community. From his experience, he states, “Home looping is a very elegant solution for providing patients with clear and direct

Stay Tuned

For another perspective on hearing loops, read the article by Linda S. Remensnyder, AuD, on the role loops and aural rehabilitation play in patient-centered care—coming to an upcoming issue of *HJ*.



sound from their television, telephone, MP3 player, and other devices, and there is nothing to charge or wear. When patients go to looped public venues, they are equipped with the ability to hear in places where they typically struggle.”

Modern looping systems come in a variety of packages that make t-coil use very attractive. For example, looping a room is no longer the only option. Loop pads for chairs and auto seats, ear hook and neck loops, and a new t-coil-accessible phone (rated T3 or T4 to meet Federal Communications Commission [FCC] requirements) can make a surprising difference, providing clearer hearing without disturbing background noise.


The t-coil map, like other hearing aid programs (do not use auto-T), will need verification and validation.

Volume control use may be helpful; however, the audiologist should be aware that the sensitivity of a loop system, distance from the induction coil, amplifier gain/output, and the frequency response of the map are all variables that influence system noise and clarity.

For example, if there is too much gain below 125 Hz, fluorescent lights, generators, motors, and some electronics that emit a strong electromagnetic signal will introduce a 60-Hz buzz.

To make the proper adjustments, use a neck loop, room loop with a personal amplifier, or FM device with ear-probe microphone to make those modifications easier to accomplish. (Mueller HG III, Hall JW III. *Audiologists' Desk Reference*. Volume II: Audiologic Management, Rehabilitation, and Terminology. San Diego, Singular Publishing Group; 1998.)

Once the device is properly fitted, I use music and recorded speech to confirm clarity and comfort.

T-coils have definite advantages over alternative connectivity devices and a place in the hearing loss market. 



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