**Hearing Aids: The Brain Connection**

At the core of almost every rehabilitation program for people with hearing loss is the use of amplification. The goal of hearing aid amplification is to improve a person's access to sound. Depending on the degree and configuration of the individual's hearing loss, the hearing aid is tasked with increasing sound levels at different frequency regions to ensure that incoming speech frequencies are reaching the ear. However, signal detection at the level of the ear does not guarantee perception. A perceptual event is dependent on not only the integrity of the signal at the level of the ear, but also how that sound is coded and integrated using multiple networks in the brain. This ear-brain system starts with sound leaving the hearing aid and then entering the peripheral (ear) central (brain) systems...

**HEARING LOSS LINKED TO OSTEOPOROSIS**

Last month, HealthDay News reported that although the reason for the connection isn't clear, osteoporosis and sudden, temporary hearing loss often occur together, a new study from Taiwan finds”.  
According to the U.S. National Institute of Arthritis and Musculoskeletal and Skin Diseases, more than 40 million Americans have osteoporosis or are at risk for the condition. Much more has to be done in regard to the linkage found but clearly, anyone with osteoporosis who is suffering a hearing loss should schedule an appointment with an EMT as soon as possible.

The summary of the study follows:

“A team led by Dr. Kai-Jen Tien, of the Chi Mei Medical Center in Tainan City, looked at more than 10,000 Taiwan residents diagnosed with the bone disease osteoporosis between 1999 and 2008. The researchers then compared them with nearly 32,000 people without the condition.

By the end of 2011, people with osteoporosis had a 76 percent higher risk of developing sudden deafness -- an unexplained, rapid loss of hearing that typically occurs in one ear.

This type of hearing loss can occur all at once or over several days and is often temporary. According to background information from the researchers, about half of people who experience sudden hearing loss will regain their hearing, and about 85 percent of people who are treated for the condition recover some hearing.

The study was published recently in the Journal of Clinical Endocrinology & Metabolism.  
Whatever the connection, ‘a growing body of evidence indicates that osteoporosis affects not only bone health, but the cardiovascular and cerebrovascular systems,’ Tien said in a journal news release.

Sudden hearing loss may simply ‘be another broader health problem connected to osteoporosis,’ Tien said.  
While the study couldn't prove cause-and-effect and the reasons for the link remain unclear, the study author theorized that heart risk factors, inflammation and bone demineralization may each contribute to the association between weakening bones and quick loss of hearing”..

SOURCE: Journal of Clinical Endocrinology & Metabolism, news release, April 16, 2015