

### New Standards of Medical Care for Individuals with Diabetes and Hearing Loss

The 2013 Standards of Medical Care from the American Diabetes Association have been revised based on new and stronger evidence. These guidelines recommend assessment and treatment for common diabetes-associated conditions, including hearing impairment.

#### Incidence

In the state of Kansas, about 8.5 percent of adults have been diagnosed with diabetes. An additional 120,000 adult Kansans have undiagnosed diabetes.<sup>1</sup> The prevalence of doctor-diagnosed diabetes is 14.8 percent for adults ages 55 to 64 years old and 19.4 percent for those 65 years old and older.<sup>2</sup>

Hearing loss is more than twice as common in people with diabetes than in people without the condition, according to an analysis of 13 studies performed by Japanese researchers. The researchers noted the study did not prove cause and effect, but suggested it is a good idea for diabetes patients to be screened routinely for hearing loss, just as they are for eye and kidney problems.<sup>3</sup>

#### Cause and Effect

Though it is unknown why hearing loss is more common among people with diabetes, many researchers believe that damage to the tiny blood vessels in the inner ear is the culprit. Researchers believe that over time, the high blood sugar levels that characterize diabetes may damage these small vessels, causing permanent damage to the delicate structures of the inner ear.

#### Standards of Medical Care from the American Diabetes Association

The 2013 Standards of Medical Care from the American Diabetes Association have been revised based on new and stronger evidence. These guidelines recommend assessment and treatment for common diabetes-associated



conditions, including hearing impairment. The standards cite a National Health and Nutrition Examination Survey analysis that showed hearing impairment is about twice as great in people with diabetes compared to those without, after adjusting for age and other risk factors for hearing impairment.

Research also suggests that by managing diabetes, people can help minimize potential diabetes-related hearing damage. Researchers at Henry Ford Hospital in Detroit found that women between the ages of 60 and 75 with well-controlled diabetes had better hearing than women whose diabetes was poorly controlled.<sup>4</sup>

While the Better Hearing Institute (BHI) urges individuals with diabetes to get their hearing tested, a recommendation from the individual's primary care physician can have great influence on the decision to do so.

#### The Audiologist's Role in Caring for Individuals with Diabetes

According to the BHI, the vast majority of people with hearing loss, including those

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with diabetes, can benefit from hearing aids. In fact, studies show that when people with mild-to-profound hearing loss use hearing aids, they experience decreased depressive symptoms, anxiety and emotional instability; significant improvements in quality of life and functional health status; and have significantly higher self-concepts compared to individuals with hearing loss who do not wear hearing aids. U.S. research also shows that the use of hearing aids reduces the risk of income loss, and that those who use hearing aids are twice as likely to be employed as their peers who do not use hearing aids.<sup>5</sup>

When referring a patient with diabetes for a hearing evaluation, an audiologist can carefully take the individual's overall health

into consideration, communicate the results of the examination to referring providers, and consult regarding recommendations.

It is important to note that today audiologists have many technologically advanced options to offer patients. For individuals resistant to the idea of wearing a hearing aid for cosmetic or other reasons, many hearing aids are nearly or completely invisible. They are available in a wide range of sizes, models and costs. For patients with diabetes, deep-fit, extended-wear devices, such as Lyric, may be contra-indicated. In these cases, special medical clearance is requested from the patient's physician. Hearing evaluations are typically covered by insurance. Hearing aid coverage varies by insurer.

**For more information on diabetes, hearing loss and how hearing aids may help, visit [www.diabetes.org/living-with-diabetes/seniors/hearing-loss/](http://www.diabetes.org/living-with-diabetes/seniors/hearing-loss/)**

**For more information about hearing aids, hearing loss, tinnitus, or dizziness/balance, visit [www.hearingyourbest.com](http://www.hearingyourbest.com).**

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### References

- 1 Based on the estimate that 40 percent of diabetes is undiagnosed; Cowie et al (2009). Full accounting of Diabetes and Pre-Diabetes in the U.S. Population in 1988-1994 and 2005-2006. *Diabetes Care* 32(2): 287-294.
- 2 Kansas Department of Health and Environment, 2009 Behavioral Risk Factor Surveillance System.
- 3 and 4 71st Scientific Sessions of American Diabetes Association, San Diego, June 24-28, 2011. Hirohito Sone, MD, PhD, Tsukuba University Hospital Mito Medical Center, Ibaraki, Japan. Pamela D. Parker, MD, A.T. Still University School of Osteopathic Medicine, Mesa, Ariz.
- 5 Better Hearing Institute, [www.betterhearing.org](http://www.betterhearing.org).

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