

The Villages Health®

AUDIOLOGY PATIENT NEWSLETTER
November 2022

Diabetic Risks. Be In the Know.

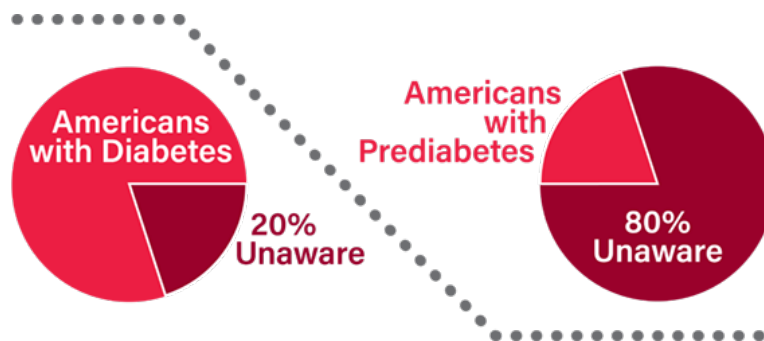


What is a well-respected entity with 250 staff members, professional society of 16,000 healthcare professionals and network of 565,000 volunteers devoted to raising awareness of diabetes pervasiveness, preventative factors and quality of life detriments?

The [American Diabetes Association](#), known as the **ADA**.

Above and beyond their 24/7/365 commitment to improving quality of life for all associated, every November, the ADA leads national advocacy efforts during Diabetes Awareness Month. This imperative reflects CDC estimates that 1.4 million new cases of diabetes were diagnosed in 2019 along with these astonishing statistics:

- 37.3 million Americans have diabetes, with 20% being unaware of it
- 96 million American adults have prediabetes, with 80% being unaware¹

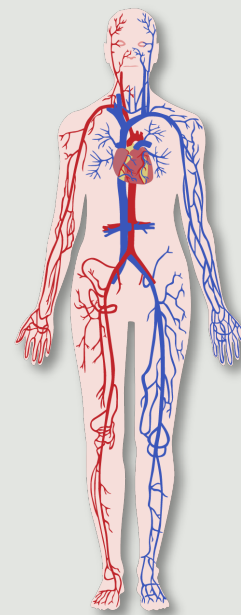


Literally, from head to toe, from eyes to feet, **Diabetes Mellitus (DM)**, commonly known as Diabetes, is a chronic disease which can manifest itself in unhealthy ways.

“To put it simply, you have Diabetes Mellitus when too much sugar is circulating in your blood stream. Sugar,

also known as glucose, is an important and necessary fuel for our bodies. So necessary, that both the liver and the kidneys produce it naturally; however, we get the most sugar from the foods we eat.”²

To better understand damaging flows, we rediscover our cardiovascular system’s intricacies, as represented here ➤



Did You Know the average heart pumps 2000 gallons daily? Can you picture seeing 2000 of 1 gallon milk jugs on your next grocery store visit?



As the heart functions, approximately 60,000 miles (twice around the earth) of miniscule blood vessels, the smallest ones measuring 5 micrometers, about **1/3 the size of a strand of human hair**, circulate blood throughout your body.

- Arteries, away from your heart.
- Veins, back towards your heart.
- Capillaries, connecting arteries and veins.

Type 2 diabetes is dysfunction in how our body regulates and uses sugar (glucose) as fuel. This chronic disease results in excess sugar circulating through the bloodstream. When the pancreas does not produce proper amount of insulin to regulate sugar movement, cells may take in less sugar than normal. As a result, **elevated sugar levels** may damage circulatory, nervous and immune systems.

“What is necessary to change a person is to change awareness of himself.”

—Abraham Maslow

With many aware how circulatory issues affect heart health, it is also essential to understand they can negatively impact **cochlear anatomy, nerve signals and auditory function**. Research indicates high blood sugar levels can harm the inner ear's small blood vessels and nerves, diminishing hearing abilities.

Pearls of Wisdom™ from peer-reviewed research on DM indicates:

- *“The high dependance on glucose as the source for its high energy consumption makes the cochlea a target of damage in DM.”³*
- *“The auditory system requires glucose and high-energy utilization for its complex signal processing. This suggests that the cochlea may also be a target organ for the ill effects of hyperglycemia.”⁴*
- *“Intuitively, diabetic patients with retinopathy should have more hearing loss, given the similarity of the microvascular blood supply of the ear to that of the eye.”⁵*

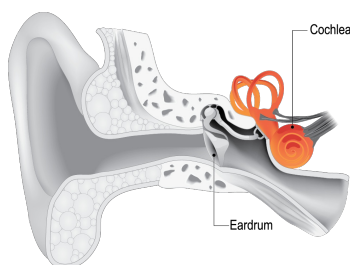
1 <https://www.cdc.gov/diabetes/library/spotlights/diabetes-facts-stats.html#print>

2 <https://drc.ucsf.edu/types-of-diabetes/type1/understanding-type-1-diabetes/basic-facts/what-is-diabetes-mellitus/>

3 Xipeng LI, Ruiyu LI, Meng LI, Yanzhuo Z, Kaosan G, Liping WU. Effects of diabetes on hearing and cochlear structures. Journal of Otology, 2013 Vol.8 No.2.

4 Frisina ST, Mapes F, Kim S, Frisina DR, Frisina RD. Characterization of hearing loss in aged type II diabetics. Hear Res. 2006;211(1-2):103-113.

5 Kakarlapudi V, Sawyer R, Staecker H. The effect of diabetes on sensorineural hearing loss. Otol Neurotol. 2003;24(3):382-386.



With inside views of the cochlea impossible, we cannot see anatomical impacts of DM on auditory organs, however we can see how **Diabetic Retinopathy distorts vision**. Clearly, negative impacts on sensory acuities are measurable, with Diabetes causing increased risk of hearing loss.



While we take your hearing care seriously, a little laughter goes a long way.

Good Humor, Healthy Hearing



“These Foods Get on My Nerves”

When reputable research speaks volumes, **we should listen up.** To the point, *“In contrast to diabetic retinopathy, hearing impairment is not a well-documented complication of diabetes mellitus. Therefore, it would be preferable to perform audiometry, as part of the routine annual evaluations of glycemic control undertaken by all diabetic patients.”*⁶

Do you have diabetes or a family history that increases risks of diabetes-related hearing loss? With daily challenges of having diabetes or caring for loved ones who do, effective communication is crucial. As patients typically learn about this systemic disease’s impact from primary care providers, endocrinologists, eye doctors or podiatrists, more should benefit from sound advice that in the know hearing care experts provide.

As dedicated Whole Person Care practitioners, we encourage you to make well-informed decisions about how diabetes may negatively affect you or loved ones. While excess blood sugars are harmful, treat yourself to **proactive evaluations** that ensure Joys of Hearing this holiday season and beyond. Altogether, let’s **Give Thanks** for precious sounds!



OUR CLINICS WILL BE CLOSED
THURSDAY & FRIDAY
NOVEMBER 24 & 25

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Schedule an appointment for you or your loved ones.
(352) 674-1799



The Villages
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Audiology Department

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