

# TAKE CHARGE OF YOUR **DIABETES**



## Healthy Ears

Did you know that diabetes can harm your hearing and your balance? The good news is you can take steps to hear well and reduce your risk of falls. You've already taken an important step by finding this guide!

### Tips to Keep Your Ears Healthy

- **Make an appointment with a health care provider called an audiologist (aw-dee-OL-uh-jist) to check your hearing and balance as soon as you are diagnosed with diabetes.**
  - Bring a list of your medicines and any illnesses and hospitalizations.
  - Your audiologist will look at your history and test results to help you prevent or deal with ear problems.
  - Your audiologist can tell you ways to protect your hearing and balance. For example, you can:
    - Wear ear protection around loud noises like lawn mowers, leaf blowers, and chain saws.
    - Not clean your ears with objects like cotton swabs, pencils, or paper clips.
    - Eat a healthy diet. You can work with a dietitian or diabetes educator to create a healthy eating plan.
  - Ask your doctor or pharmacist if any of your medicines could harm your hearing. Share this information with your audiologist.



- **Visit your audiologist right away if you:**
  - Hear ringing or other noise in your ears or head.
  - Have problems hearing or maintaining your balance.
  - Become dizzy, fall, or feel worried you could fall.
  - Have a sudden change in how clearly you can understand what people are saying.
  - Have trouble understanding what people are saying because of background noise.
  - Feel like people are mumbling when they talk to you.

**Regular exams help your audiologist find and treat ear problems early to protect your hearing and balance. Find a provider in your area at the [American Academy of Audiology website](http://www.audiology.org).**



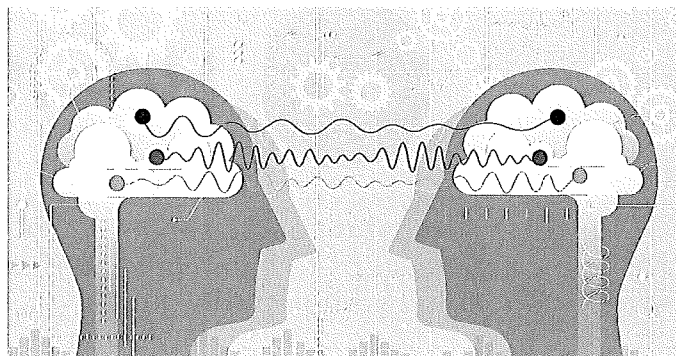
**Centers for Disease Control and Prevention**  
National Center for Chronic Disease Prevention and Health Promotion

## How Can Diabetes Harm Your Ears?

- Diabetes damages small blood vessels in your inner ear and your vestibular (ve-STIB-yuh-ler) system, which is the part of your inner ear that helps with balance.
- Diabetes can make it harder for signals related to hearing and balance to get to your brain.
- Hearing loss is more common in people with diabetes.
- You are more likely to fall if you have diabetes because of damage to your vestibular system.

## What Are the Signs of Balance Problems?

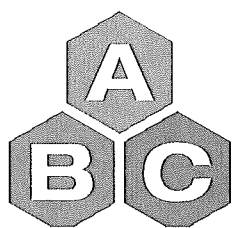
- Feeling dizzy or lightheaded.
- Feeling like your head is spinning.
- Falling or feeling like you may fall.



## What You Should Know About Hearing Loss

- Hearing loss can make you appear confused or as if you are not paying attention.
- Uncorrected hearing loss can make you feel depressed or anxious.
- Family and friends may be aware of your hearing loss before you are.
- Hearing loss affects how you communicate at work, with family, and with your health care team.

## Manage your ABCs



Ask your health care team to help you set and reach goals to manage your blood sugar, blood pressure, and cholesterol and stop smoking—also known as the ABCs of diabetes.

- **A1C (a measure of your average blood sugar over 3 months):** The goal set for many people is less than 7% for this blood test, but your doctor might set a different goal for you.
- **Blood pressure:** High blood pressure causes heart disease. The goal is less than 140/90 mmHg for most people but check with your doctor to see what your goal should be.

- **Cholesterol:** LDL or “bad” cholesterol builds up and clogs your blood vessels. HDL or “good” cholesterol helps remove the “bad” cholesterol from your blood vessels. Ask your doctor what your cholesterol numbers should be.
- **Smoking:** If you smoke or use other tobacco products, take steps to quit. Call 1-800-QUIT-NOW (1-800-784-8669) for support.

**Teach your family about your diabetes and the ABCs so they can help you.**

## Join the millions of Americans learning to manage their diabetes:

Ask your health care provider to refer you to diabetes self-management education and support (DSMES) services to help you manage your diabetes. Search for “[Find a Diabetes Education Program in Your Area](#)” to go to a website that lists programs recognized by the American Diabetes Association or accredited by the Association of Diabetes Care & Education Specialists.

Visit [CDC’s Diabetes website](#) for information on how to manage your diabetes and live your healthiest life.



# Chronic Disease and Co-morbidity with Hearing Loss

## Diabetes

- High blood glucose causes tiny blood vessels in the inner ear to break, disrupting sound reception.
- Mechanisms related to neuropathic or microvascular factors, inflammation, or hyperglycemia causes an association between diabetes and hearing loss.
- Up to 30% of adults with diabetes will experience hearing loss.

## Thyroid disease

- Hypothyroidism (under active thyroid) causes hearing loss that may be conductive, sensorineural or mixed in nature, although it is primarily sensorineural.
- Most losses are flat, bilateral, symmetrical with no vestibular involvement.
- Hearing loss may increase with severity of hypothyroidism.

## Chronic Kidney disease

- The kidney and blood supply in the inner ear share physiologic, ultrastructural and antigenic similarities.
- CKD shows a higher prevalence of hearing loss among older adults.
- Diabetes is the cause of 44% of the cases of chronic renal disease.

## Cardiovascular disease

- Inadequate blood supply and trauma to inner ear blood vessels can contribute to hearing loss.
- Hearing loss appeared in almost 80% of the people who had suffered from a cardiovascular disease.
- A stroke is a vascular trauma in the brain affecting the nervous system, motor and thought processes. Strokes can decrease hearing on the affected side of the brain.
- Broad research has shown negative influence of impaired cardiovascular health on both peripheral and central auditory systems.

## Alzheimer's / Dementia Neurology

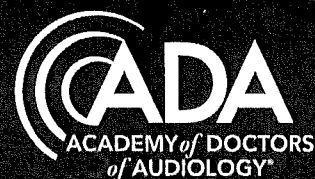
- Significantly higher % of people with ALZ may have hearing loss than normally aging peers.
- Research has shown that use of hearing aids has helped to reduce ALZ-related problems.
- Study at John Hopkins University reported patients with hearing loss had up to 5X higher risk of dementia than patients with no hearing problems.



## Mission

The Academy of Doctors of Audiology is dedicated to the advancement of practitioner excellence, high ethical standards, professional autonomy and sound business practices in the provision of quality audiologic care.

To find an Audiologist in your area, visit the ADA website at: [www.audiologist.org/audiologist-directory](http://www.audiologist.org/audiologist-directory).



*The Power to Practice*

Academy of Doctors of Audiology

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## Referral for Audiology Services

Name:

Address:

Phone:

Email:

### AT RISK MEDICAL FACTORS FOR HEARING LOSS

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Diabetes                 | <input type="checkbox"/> Allergies/sinus          | <input type="checkbox"/> Arthritis                |
| <input type="checkbox"/> Renal problems           | <input type="checkbox"/> Cardiovascular problems  | <input type="checkbox"/> Noise exposure           |
| <input type="checkbox"/> Hypothyroidism           | <input type="checkbox"/> Pain in ears             | <input type="checkbox"/> Sudden change in hearing |
| <input type="checkbox"/> Tinnitus                 | <input type="checkbox"/> Head trauma              | <input type="checkbox"/> Dizziness/vertigo        |
| <input type="checkbox"/> Complaint of not hearing | <input type="checkbox"/> Failed hearing screening | <input type="checkbox"/> Cancer                   |
| <input type="checkbox"/> Other _____              |   |   |

### AT RISK MEDICATIONS FOR HEARING LOSS

### OTOTOXIC MONITORING REQUEST:

- |  |                                   |
|--|-----------------------------------|
| <input type="checkbox"/> Aminoglycoside antibiotics  | <input type="checkbox"/> baseline |
| <input type="checkbox"/> Loop diuretics              | <input type="checkbox"/> 1 month  |
| <input type="checkbox"/> Cancer chemotherapy         | <input type="checkbox"/> 3 months |
| <input type="checkbox"/> Salicylate analgesics       | <input type="checkbox"/> 6 months |
| <input type="checkbox"/> Hormone replacement therapy |                                   |
| <input type="checkbox"/> Other _____                 |                                   |

\*EVALUATE HEARING FOR MEDICAL MANAGEMENT PURPOSES\*

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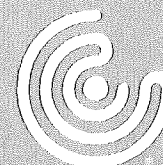
Signature (MD, DO, NP)

Print Name

Date

NPI





# WAIT, WHAT?

If your phone calls sound like this, CaptionCall can help. A captioning service lets you hear and read what someone is saying. And there's no cost for people with hearing loss that need captions to use the phone effectively.

## Request CaptionCall or the CaptionCall iPhone® App

Contact:

**Amanda Cox**

980-301-2581

acox@captioncall.com

Promo Code: 1653450



[www.CaptionCall.com](http://www.CaptionCall.com)

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Life is Calling