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## Why Hearing is a Surprising Porthole into Preventive Health Care



What does **the ear** have to do with chronic conditions like diabetes, cardiovascular disease, or our mental health and cognition?

In the past a hearing test simply told us how well a person could hear. But we now know there is a remarkable link between our hearing and chronic conditions such as diabetes, cardiovascular disease, and cognitive decline. The ear can serve as an early warning system for metabolic changes in the body, signaling the presence of chronic diseases. With chronic conditions on the rise and accounting for a significant portion of healthcare costs, this connection holds immense potential for prevention and cost control.

18.2M

US Citizens have diabetes and that number is rising rapidly.

41M

Americans are at risk of developing pre-diabetes.

1 in 2

adults in the US have a chronic condition.

1 in 4

adults in the US have two or more chronic conditions

By recognizing the role of the auditory system in monitoring overall health, we can revolutionize how we think about preventive healthcare. The stria vascularis, a vital component of the ear, acts as a gatekeeper, safeguarding the cochlea while allowing necessary energy and blood supply. However, its cells can deteriorate in the early stages of chronic conditions, even **before** symptoms manifest. Audiologists, equipped with the ability to detect these changes, become the first line of defense and invaluable allies in combating chronic diseases.

Let's explore a few key chronic conditions and their relationship to hearing health:

### Cardiovascular Disease

Cardiovascular disease ranks among the top causes of death for individuals aged 18–64. Employers bear significant costs, with four of the top ten most expensive conditions falling under this category. Hearing loss, specifically low-frequency hearing loss, often precedes clinical symptoms associated with cardiovascular conditions. **Early detection through annual hearing screenings can mitigate the impact** of these conditions on both individuals and organizations.

### Diabetes

Diabetes affects over 18 million Americans, and, much like hearing loss, many remain unaware of their condition. Those diagnosed with diabetes experience significantly higher medical expenses and losses in productivity, but did you know they're also 2X more likely to have hearing loss? Pre-diabetics are 30% more likely to suffer from hearing loss. Diabetics also have 70% higher vestibular dysfunction (balance) with a 39% higher incidence of falls. Annual hearing screenings and education can help serve as an early warning system for diabetics, while working to conserve their hearing and improve vestibular function.

### Cognitive Decline & Dementia

Hearing loss has been associated with cognitive decline and has a strong correlation with dementia. **Research shows that even mild hearing loss doubles the risk of dementia, while a moderate loss triples it.** Addressing hearing loss in midlife is the largest modifiable risk factor for dementia. For employers, this presents an opportunity to prioritize employee hearing health. Annual hearing screenings enable early prevention or intervention, helping employees maintain cognitive function and overall well-being.

### Falls & Safety

Even people with mild hearing loss are **3X more likely to have an accidental fall**. For every 10 dB of hearing loss, the risk of fall increases by 140%. Fall related expenses are costly, **accounting for over \$50 billion USD annually**. Vestibular disorder is extremely common, as 1 in 5 between ages 18–64 experience dizziness, having lead to avoidance behavior.

**Those who have hearing loss are more likely to have low employment rates, lower work productivity, and high healthcare costs.**

### How Employers Can Help

Incorporating accessible and affordable virtual hearing preventive care makes early detection and intervention feasible, leading to improved health outcomes and cost savings. Hearing health should be a cornerstone of healthcare, benefiting employees, employers, and the economy and society at large. By acknowledging the intricate link between hearing and chronic conditions, we can transform the way we approach healthcare and make significant strides in prevention, while also supporting those in need with better access to care and solutions that help preserve their quality of life.

## The only comprehensive hearing care solution: Tuned

Available as a standalone employer sponsored benefit, Tuned offers the only comprehensive hearing benefit designed to support employees of all ages across the entire hearing spectrum - from loss prevention to support and intervention.



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