

Summaries for Patients are a service provided by *Annals* to help patients better understand the complicated and often mystifying language of modern medicine.

The full report is titled “Diabetes and Hearing Impairment in the United States: Audiometric Evidence from the National Health and Nutrition Examination Surveys, 1999 to 2004.” It is in the 1 July 2008 issue of *Annals of Internal Medicine* (volume 149, pages 1-10). The authors are K.E. Bainbridge, H.J. Hoffman, and C.C. Cowie.

Does Diabetes Affect Hearing?

What is the problem and what is known about it so far?

People with diabetes have difficulty extracting and storing energy from food. As a result, sugar levels in the blood increase. Over time, high blood sugar levels can damage small blood vessels in the body. Parts of the body most affected by damage to small blood vessels are the eyes, kidneys, and nerves of the body. The inner ear is not usually thought to be affected by diabetes. However, hearing depends on small blood vessels and nerves similar to those in other parts of the body that are affected by high blood sugar levels. Some people think diabetes might cause ear damage. If diabetes caused damage to the ear, people with diabetes could be more likely to have hearing problems than people without diabetes.

Why did the researchers do this particular study?

To see whether people with diabetes are more likely to have hearing loss.

Who was studied?

5140 adults who participated in a national study of health in the United States.

How was the study done?

The researchers tested participants' hearing. At the same time, they collected information about participants' health and medicines, diabetes, and other conditions that could cause hearing problems. They then compared how common hearing loss was in people with and without diabetes.

What did the researchers find?

Hearing loss was much more common in people with diabetes. The hearing loss did not seem to be caused by other conditions that could cause the loss, such as loud noises, certain medicines, or smoking.

What were the limitations of the study?

The participants told the researchers whether they had diabetes or other conditions that could cause hearing loss. It might have been more reliable to have measured diabetes and the other conditions directly. Also, the researchers did not try to distinguish among different types of diabetes.

What are the implications of the study?

People with diabetes are more likely to have hearing loss and might benefit from having their hearing checked.

Summaries for Patients are presented for informational purposes only. These summaries are not a substitute for advice from your own medical provider. If you have questions about this material, or need medical advice about your own health or situation, please contact your physician. The summaries may be reproduced for not-for-profit educational purposes only. Any other uses must be approved by the American College of Physicians.