

Adult Hearing Loss

Hearing loss is a common problem among older individuals. Approximately 25% to 40% of adults older than 65 years have some degree of hearing loss, and it is estimated that 40% to 66% of people 75 years or older have hearing loss. Hearing loss is the third most common chronic health condition among older Americans after high blood pressure and arthritis. The July 4, 2007, issue of *JAMA* includes an article about hearing loss caused by a particular kind of tumor. This Patient Page is based on one previously published in the April 16, 2003, issue of *JAMA*.

TYPES OF HEARING LOSS

There are two major forms of hearing loss: conductive and sensorineural. A clinical examination by an **otolaryngologist** (a doctor specializing in the ears, nose, and throat) and a hearing test by an **audiologist** (an expert in hearing testing and hearing aids) can determine the type of hearing loss.

Conductive hearing loss is usually due to abnormalities in the middle or external ear such as a punctured eardrum, presence of fluid in the middle ear, or accumulation of **cerumen** (ear wax) in the external ear canal.

Sensorineural hearing loss is usually caused by damage to the tiny hair cells inside the inner ear that are crucial for picking up sound vibrations and translating them into nerve impulses. These impulses are relayed to the brain, which interprets them as sound. Sensorineural hearing loss accounts for about 90% of hearing loss in adults. Patients with sensorineural hearing loss often have a hard time filtering out background noises and so may have difficulty following conversations. Other symptoms include **tinnitus** (ringing in the ears). Limiting exposure to loud noise can minimize hearing loss related to aging. Ear protection, such as ear plugs, should be worn to dampen sound if loud noise is unavoidable. Sensorineural hearing loss that occurs with aging (presbycusis) or that occurs from noise damage usually occurs in both ears and is gradual.

If the pattern of sensorineural hearing loss is not typical, a magnetic resonance imaging (MRI) study may be performed to determine if a tumor or other disease requiring specific treatment is causing the hearing loss. Otherwise, treatment may involve the use of sound amplification devices like hearing aids. In cases of severe sensorineural hearing loss, a surgical procedure called **cochlear implantation** may be suggested. This procedure allows sound vibrations to bypass the hair cells and directly stimulate the nerve that transports sound signals to the brain.

Sources: National Institute on Deafness and Other Communication Disorders, American Academy of Otolaryngology–Head and Neck Surgery, American Academy of Audiology, American Speech-Language-Hearing Association.

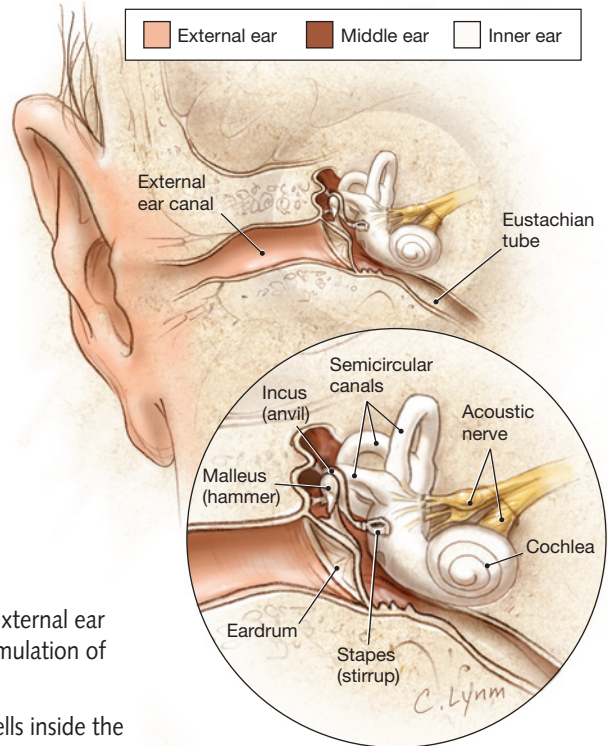
Sharon Parmet, MS, Writer

Cassio Lynn, MA, Illustrator

Richard M. Glass, MD, Editor

The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, call 203/259-8724.

Anatomy of the Ear



FOR MORE INFORMATION

- American Academy of Otolaryngology–Head and Neck Surgery
www.entnet.org
- American Speech-Language-Hearing Association
www.asha.org
- American Academy of Audiology
www.audiology.org/consumer

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. Many are available in English and Spanish.

JAMA
COPY FOR
YOUR PATIENTS