

## Screening for Hearing Loss in Older Adults: Recommendation Statement

► See related Putting Prevention into Practice on page 129.

This summary is one in a series excerpted from the Recommendation Statements released by the U.S. Preventive Services Task Force (USPSTF). These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF Web site at <http://www.uspreventiveservicestaskforce.org/>.

A collection of USPSTF recommendation statements reprinted in *AFP* is available at <http://www.aafp.org/afp/uspstf>.

### Summary of Recommendation and Evidence

The U.S. Preventive Services Task Force (USPSTF) concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for hearing loss in asymptomatic adults 50 years or older (*Table 1*). **I statement.**

This recommendation applies to asymptomatic adults 50 years or older. It does not apply to persons seeking evaluation for perceived hearing problems or for cognitive or affective symptoms that may be related to hearing loss. These persons should be assessed for objective hearing impairment and treated when indicated.

### Rationale

**Importance.** Age-related sensorineural hearing loss is a common health problem among adults 50 years or older. Hearing loss can affect social functioning and quality of life.

**Detection.** Convincing evidence shows that screening tools can reliably and accurately identify adults with objective hearing loss. Clinical tests used to screen for hearing impairment include testing whether a person can hear a whispered voice, a finger rub, or a watch tick at a specific distance. Perceived hearing loss can be assessed by asking a single question (for example, “Do you have difficulty with your hearing?”) or with a more detailed questionnaire, such as the Hearing Handicap Inventory for the Elderly—Screening Version (HHIE-S). A handheld screening instrument consisting of an otoscope with a built-in audiometer can also be used.

**Benefits of detection and early treatment.** Because of a paucity of directly applicable trials, evidence is inadequate to determine whether screening for hearing loss improves health outcomes in persons who are unaware of hearing loss or who have perceived

hearing loss but have not sought care. One good-quality study showed that hearing aids can improve self-reported hearing, communication, and social functioning for some adults with age-related hearing loss. This study nearly exclusively evaluated white male veterans with moderate hearing loss and moderate to severe perceived hearing impairment, more than one-third of whom had been referred for evaluation of hearing problems; as such, these findings were of limited applicability to a hypothetical asymptomatic, screened population. The only randomized trial that directly evaluated the effect of screening for hearing impairment—rather than the effect of treatment alone—was not primarily designed nor had sufficient statistical power to detect differences in hearing-related function. The USPSTF concludes that the evidence is inadequate to assess the benefit of screening and early treatment in an unselected screening population.

**Harms of detection and early treatment.** Because of a lack of studies, evidence to determine the magnitude of harms of screening for hearing loss in older adults is inadequate; however, given the noninvasive nature of both screening and associated diagnostic evaluation, these harms are probably small to none. Adequate evidence shows that the harms of treatment of hearing loss in older adults are small to none.

**USPSTF assessment.** The USPSTF concludes that evidence is lacking, and the balance of benefits and harms of screening for hearing loss in adults 50 years or older cannot be determined.

### Clinical Considerations

#### PATIENT POPULATION

This recommendation applies to asymptomatic adults 50 years or older, but not to persons seeking evaluation for perceived hearing

problems or for cognitive or affective symptoms that may be related to hearing loss. These persons should be assessed for objective hearing impairment and treated when indicated.

**RISK ASSESSMENT**

Aging is the most important risk factor for hearing loss. Presbycusis, a gradual, progressive decline in the ability to perceive high-frequency tones due to degeneration of hair cells in the ear, is the most common cause of hearing loss in older adults. However, hearing loss may result from several contributing factors, such as a history of exposure to loud noises or ototoxic agents, including occupational exposures; previous recurring inner ear infections; genetic factors; and certain systemic diseases, such as diabetes mellitus.

**SCREENING TESTS**

Available tests include physical diagnostic tests, such as the whispered voice, finger rub, and watch tick tests; single-question or longer patient questionnaires; and handheld audiometers. All are relatively accurate and reliable tools for identifying objective hearing loss. In addition, self-administered questionnaires, such as HHIE-S, can identify adults with perceived (or subjective) hearing difficulty. Not all adults with perceived hearing difficulty have objective hearing loss.

**TREATMENT**

Before a person receives a hearing aid, diagnosis of objective hearing loss should be confirmed with a pure-tone audiogram. Fair evidence from studies in highly selected populations shows that hearing aids can improve self-reported hearing, communication, and social functioning for some adults with age-related hearing loss.

**SUGGESTIONS FOR PRACTICE REGARDING I STATEMENT**

*Potential preventable burden.* Finding objective hearing loss indicates eligibility for a hearing aid but does not convincingly identify persons who will find the devices helpful and wearable and will use them. One subgroup analysis of a randomized controlled trial found that in older adults who did not have self-perceived hearing loss at study entry, screening and receipt of a free hearing aid did not increase use after one year compared with an unscreened control group (and overall use was low, at 0 to 1.6 percent).<sup>1</sup> However, health-related quality of life is improved for some adults with moderate to severe hearing loss who use hearing aids compared with those who do not.<sup>2</sup>

*Cost.* The cost of screening varies according to the test.

**Table 1. Screening for Hearing Loss in Older Adults: Clinical Summary of the USPSTF Recommendation**

Population	Asymptomatic adults 50 years or older
Recommendation	No recommendation Grade: I (insufficient evidence)
Risk assessment	Increasing age is the most important risk factor for hearing loss. Other risk factors include a history of exposure to loud noises or ototoxic agents, including occupational exposures, previous recurrent inner ear infections, genetic factors, and certain systemic diseases, such as diabetes mellitus.
Screening tests	Various screening tests are used in primary care settings to detect hearing loss in adults, including: Clinical tests (e.g., whispered voice, finger rub, or watch tick tests) Single-item screening (for example, asking “Do you have difficulty with your hearing?”) Multiple-item patient questionnaire (for example, Hearing Handicap Inventory for the Elderly—Screening Version) Handheld audiometer
Interventions	Hearing aids can improve self-reported hearing, communication, and social functioning for some adults with age-related hearing loss.
Balance of harms and benefits	There is inadequate evidence to determine the balance of benefits and harms of screening for hearing loss in adults 50 years or older.

NOTE: For the full recommendation statement and supporting documents, go to <http://www.uspreventiveservicestaskforce.org/>.

USPSTF = U.S. Preventive Services Task Force.

The cost of a questionnaire consists of the time required of the patient and clinician. In-office clinical techniques (whispered voice, finger rub, or watch tick tests) and audiometry are quick to perform; however, handheld audiometers have up-front equipment costs. Diagnostic confirmation of a positive screen is typically done with a pure-tone audiogram, which requires a soundproof booth and trained personnel to administer the test, and takes approximately one hour to complete. The cost of a hearing aid is a barrier for many older adults because it is not covered by Medicare or many private insurance companies.

This recommendation statement was first published in *Ann Intern Med*. 2012;157(9):655-661.

The “Other Considerations,” “Discussion,” and “Recommendations of Others” sections of this recommendation statement are available at <http://www.uspreventiveservicestaskforce.org/uspstf/uspshhear.htm>.

The U.S. Preventive Services Task Force recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

**REFERENCES**

1. Yueh B, et al. Long-term effectiveness of screening for hearing loss: the Screening for Auditory Impairment—Which Hearing Assessment-Test (SAI-WHAT) randomized trial. *J Am Geriatr Soc*. 2010;58(3):427-434.
2. Mulrow CD, et al. Quality-of-life changes and hearing impairment. A randomized trial. *Ann Intern Med*. 1990;113(3):188-194. ■