



EYE ON THE ELDERLY

Screening for hearing loss, risk of falls: A hassle-free approach

Plain questions and uncomplicated testing can save you time and safeguard your patients. These tools will help.

Practice recommendations

- Simply asking elderly patients whether they have trouble hearing is an effective start to screening for hearing loss (SOR: **B**).
- Refer elderly patients with suspected hearing impairment for audiologic diagnosis and nonmedical rehabilitation treatment, including hearing aids (SOR: **B**).
- To assess a patient's risk of falling, review gait, balance disorders, weakness, environmental hazards, and medications (SOR: **A**).

Strength of recommendation (SOR)

- A** Good-quality patient-oriented evidence
B Inconsistent or limited-quality patient-oriented evidence
C Consensus, usual practice, opinion, disease-oriented evidence, case series

Do you have a hearing problem now? Have you fallen recently?" These 2 simple questions are the first step in assessing a patient's hearing status and risk of falls—a screening opportunity too often overlooked. Although family physicians are well qualified to address hearing loss and the risk of falls, screening elderly patients for these problems often seems like a lower priority than evaluating for serious, or potentially life-threatening, conditions. In a recent national survey of primary care physicians, most said they had little

time to screen for hearing loss or vestibular or balance disorders and did so only if patients broached the subject or showed clear evidence of risk.¹

Screening for hearing impairment in patients 65 years of age and older, with referral to appropriate specialists, ranked 15th among services deemed effective by the US Preventive Services Task Force and the Advisory Committee on Immunization Practices^{2,3}—outranking screening for osteoporosis, cholesterol, and diabetes.

There is no evidence favoring any particular screening procedure. As a result, physicians have considerable leeway in assessing elderly patients' functional ability and safety, including the risk of falls that may be precipitated by an impaired vestibular system and balance disorders.⁴

Screening for these problems need not be onerous. It can be accomplished as part of your continuity of care with long-standing patients or during the preventive care examination that Medicare offers newly enrolled patients. This review, and the screening tools and strategies that accompany it, will help you get started.

■ Hearing loss screening: Make it easier to do

Bilateral hearing impairment affects 1 in

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FIGURE 1

Hearing Handicap Inventory for the Elderly—Screening version (HHIE-S)

Name: _____ Date: _____

Instructions: The purpose of this questionnaire is to identify the problems your hearing loss may be causing you. Please answer Yes, Sometimes, or No for each question. *Do not skip a question if you avoid a situation because of a hearing problem. If you use a hearing aid, please answer according to the way you hear with the aid.* To obtain a total score, add up the Yes (4 points), Sometimes (2 points), and No (0 points) responses.

	YES (4)	SOMETIMES (2)	NO (0)
1. Does a hearing problem cause you to feel embarrassed when you meet new people?			
2. Does a hearing problem cause you to feel frustrated when talking to members of your family?			
3. Do you have difficulty when someone speaks in a whisper?			
4. Do you feel handicapped by a hearing problem?			
5. Does a hearing problem cause you difficulty when visiting friends, relatives, or neighbors?			
6. Does a hearing problem cause you to attend religious services less often than you would like?			
7. Does a hearing problem cause you to have arguments with family members?			
8. Does a hearing problem cause you difficulty when listening to TV or radio?			
9. Do you feel that any difficulty with your hearing limits or hampers your personal or social life?			
10. Does a hearing problem cause you difficulty when in a restaurant with relatives or friends?			

TOTAL HHIE-S SCORE*: _____

Source: Ventry IM, et al. *ASHA*. 1983.¹⁸ Reprinted with permission. Copyright 1983 by American Speech-Language-Hearing Association. All rights reserved.

*If your score is 10 or greater, you may benefit from additional hearing evaluation.

3 adults over 65 years of age⁵ and is the third most common chronic condition among the elderly,⁶ trailing only arthritis and hypertension. Documented problems associated with hearing loss include social isolation, depression and anxiety, loneliness, diminished self-efficacy, and stressful relationships with family, friends, and coworkers who may experience frustration, impatience, anger, pity, or guilt in trying to communicate with a person who has a hearing loss.⁷⁻⁹

The mental, emotional, and social consequences of untreated hearing loss negatively affect patients' health-related quality of life (HRQoL).^{8,10-15} Hearing loss also compromises patients' ability to interact with you and to understand—and follow—your recommendations.

Simplify screening. A recent study assessed 2 hearing screening methods used with older adults who also underwent audiologic evaluation as part of the biennial

examination for the Framingham Heart Study.¹⁶ It found that simply asking, “Do you have a hearing problem now?” effectively identified potential deficits. If you use the American Academy of Family Physicians' (AAFP) Medicare Initial Preventive Physical Examination Encounter Form,¹⁷ consider replacing its entry for hearing loss with this simple question (See “Medicare preventive exam: Where the AAFP encounter form falls short” on page 476).

We recommend that you pose the question to elderly patients or their family members during regular office visits. If the answer is Yes, immediately assess the patient's ability to understand conversational speech. If necessary, use an inexpensive amplification device to make it easier for you and your patient to communicate. Referral to an audiologist for a comprehensive evaluation may be indicated, as well.

CONTINUED

PATIENT HANDOUT

Are you having hearing problems?

Sensorineural hearing loss occurs when sensory receptors (hair cells) in the inner ear (cochlea) or hearing nerve pathways to the brain are damaged. It is usually permanent and cannot be treated medically or surgically, but hearing aids almost always help.

Hearing loss most commonly results from age-related changes in the inner ear. Other possible causes are excessive noise exposure, drugs that are toxic to the auditory system, certain viruses or diseases, head trauma, and genetic or familial disorders.

If you think you may have a hearing loss or are having difficulty communicating, tell your doctor immediately.

What are the signs that I may be losing my hearing?

You may:

- complain that people are mumbling
- continually ask people to repeat themselves
- avoid noisy rooms, social occasions, or family gatherings
- prefer the TV or radio louder than other people do
- have difficulty understanding people when you can't see their faces
- have trouble hearing at the movies or theater, your house of worship, or other public places
- have difficulty following conversations in a group
- become impatient, irritable, frustrated, or withdrawn.

Why can I hear people talk but not understand what they're saying?

Hearing loss not only reduces your ability to hear normally audible sound, it interferes with your ability to detect particular sounds. High-pitched consonants (such as *d*, *f*, *sh*, *s*, *t*, and *th*) become harder to hear than low-pitched vowels. The high-pitched consonant sounds carry the meaning of words and help us understand speech, but in normal conversation, they're softer than the less important low-pitched vowel sounds. So conversation may *sound* loud

enough, but the words may not be clear.

How is hearing loss diagnosed?

Audiologists—health care professionals who specialize in hearing—conduct a comprehensive evaluation to determine the degree and type of hearing loss and its effect on your ability to communicate in everyday life. The exam is conducted with special instruments in a sound-dampened room. Medical diagnosis of ear disease is performed by ear, nose, and throat doctors (also known as ENTs or otolaryngologists).

How often should I have a hearing test?

After age 50, you should have your hearing tested every 2 years. But it's important to request a hearing test immediately if you notice a sudden change in hearing, increased ringing in the ears (tinnitus), or dizziness.

How is hearing loss treated?

Hearing aids, which work better than ever because of digital technology, help many people. Your audiologist will talk to you about the different kinds of hearing aids available and what you can realistically expect when you use them. Together you'll decide which one is best for you.

People who use hearing aids report better personal relationships, an easier time communicating, improved mental health, and a greater sense of control over their lives.

Where can I get more information?

American Academy of Audiology
800-AAA-2336 <http://www.audiology.org>

American Academy of Otolaryngology, Head, and Neck Surgery
703-836-4444 <http://www.aaohns.org>

American Speech-Language-Hearing Association
800-638-8255 <http://www.asha.org>

FIGURE 2

Dizziness Handicap Inventory-Screening version (DHI-S)

Name: _____ Date: _____

Instructions: The purpose of this test is to identify difficulties that you may be experiencing because of dizziness or unsteadiness. Please answer Yes, No, or Sometimes to each question. **Answer each question as it pertains to your dizziness or unsteadiness problem only.** To obtain a total score, add up the Yes (4 points), Sometimes (2 points), and No (0 points) responses.

	YES (4)	SOMETIMES (2)	NO (0)
1. Because of your problem, do you feel depressed?			
2. Does walking down a sidewalk increase your problem?			
3. Because of your problem, is it difficult to concentrate?			
4. Because of your problem, is it difficult for you to walk around your house in the dark?			
5. Does bending over increase your problem?			
6. Because of your problem, do you restrict your travel for business or recreation?			
7. Does your problem interfere with your job or household responsibilities?			
8. Because of your problem, are you afraid to leave your home without having someone accompany you?			
9. Because of your problem, have you been embarrassed in front of others?			
10. Does your problem significantly restrict your participation in social activities, such as going out to dinner, movies, dancing, or parties?			

TOTAL DHI-S SCORE*: _____

*The higher the score, the greater the need for further evaluation.

Source: Jacobson GP, et al. *Am J Otol.* 1998.²⁹ Reprinted with permission.

A time-saving suggestion. You can save precious consultation time by having elderly patients complete a standardized self-assessment questionnaire such as the Hearing Handicap Inventory for the Elderly-Screening version (HHIE-S) (FIGURE 1) while they're in the waiting room.^{18,19} When hearing loss is identified, counsel the patient as appropriate and strongly recommend further audiologic testing and management.²⁰ The HHIE-S can help patients realize the social and emotional consequences of hearing loss, which may encourage them to seek assistance. But many won't do so without your recommendation.

Let patients know something can be done. Evidence shows that nonmedical management of sensorineural hearing loss, including the fitting of hearing aids, is critical in helping older adults improve communication and reduce psychosocial problems.^{10,21}

Recently, a task force of the American Academy of Audiology conducted a systematic review of the HRQoL benefits of amplification in adults.²¹ A meta-analysis revealed that hearing aids had at least a small effect on HRQoL, as measured by generic health instruments (eg, the Medical Outcomes Study Short Form-36), and medium-to-large effects when disease-specific hearing outcome measures (eg, the HHIE) were used. Hearing aids, combined with auditory rehabilitation, changed patients' perception of their handicap to a greater extent than amplification alone, particularly during the initial stage of adjusting to a device.^{22,23}

Preprinted forms can help educate patients about hearing loss and the benefits of amplification. The **PATIENT HANDOUT (ARE YOU HAVING HEARING PROBLEMS?)** explains the causes and symptoms of sensorineural hearing loss, as well as diagnosis, frequency of audio-

PATIENT HANDOUT

How to reduce your risk of falls

Injuries from a fall can range from bruises and cuts to more serious problems, like a broken hip. Fortunately, most falls can be prevented. If you've fallen recently or think you might have a balance problem, tell your doctor immediately.

Am I in danger of falling?

People fall more as they get older because of changes that come with age, such as poor vision, balance problems, weak muscles, and arthritis. Cluttered, poorly lit living quarters also increase the risk. You are more likely to fall if you:

- have fallen before
- don't get much exercise and have weakness in your legs
- are unsteady when you walk
- are taking medicines that can contribute to falls, such as sedatives or antidepressants, or take 4 or more different medications
- have medical problems such as Parkinson's disease, osteoporosis, heart disease, or low blood pressure—or if you have had a stroke.

How can I protect myself at home?

You can minimize the risk of falling at home by taking these steps:

- Keep the floors free of clutter. Remove things you can easily trip over, such as throw rugs, electrical cords, piles of paper, and clothing.
- Make sure you have good lighting throughout the house, and put night lights in your bedroom, bathroom, hallways, and stairs.
- Have railings installed in the bathtub and shower and around the toilet, and use nonskid mats in the tub and shower area.
- Keep items within easy reach in the kitchen.
- Put handrails on the stairs. (Using bright paint or strips of tape on the railing will make it easier to see.)
- Wear shoes with firm, nonskid soles. Don't wear house shoes, such as flip-flops or loose slippers, or shoes with heels higher than 1 inch.

What else can I do to protect myself?

- Get your eyes checked regularly. Wear your glasses as prescribed, and clean them often to improve visibility.
- Stay active and exercise often to keep your muscles and bones strong. Ask your doctor about weight-bearing exercise, and what you can do to improve your balance.
- Eat a healthy diet, with plenty of calcium and vitamin D. Limit consumption of alcoholic beverages (have no more than 2 drinks a day).
- Take care of your feet. If they hurt, tell your doctor.
- Ask the doctor whether you need a cane or other walking aid.
- Have your doctor go over all your medicines to see if you're taking anything that can make you dizzy or sleepy.
- Get up very slowly. When you're getting out of bed, sit on the side for a few minutes before you stand up. Getting up too quickly can make you feel dizzy or lose your balance.
- If you live alone, get an emergency alert system that you can wear around your wrist or neck and press to call for help if you fall and can't reach the phone.

Where can I get more information?

American Geriatrics Society

212-308-1414

<http://www.americangeriatrics.org>

National Center for Injury Prevention and Control

770-488-1506

<http://www.cdc.gov/ncipc/falls/#PDF>

National Institute on Aging

<http://www.niapublications.org/engagepages/falls.asp>

U.S. Consumer Product Safety Commission

<http://www.cpsc.gov/CPSC/PUBS/701.html>

Sources: Rao SS. *Am Fam Physician*. 2005⁴; Tremblay KR, et al. Colorado State University. 2005.³⁴

Medicare preventive exam: Where the AAFP encounter form falls short

The American Academy of Family Physicians' (AAFP) Medicare Initial Preventive Physical Examination Encounter Form¹⁷ does not fully address hearing screening. Unlike the Depression Screen and Functional Ability/Safety Screen sections, which require Yes or No responses to questions, the section covering hearing merely presents the term "Hearing Evaluation," followed by a space for recording information.

Although the form clearly states that a Yes response to any question about depression or function/safety should trigger further evaluation, there is no such recommendation for further evaluation of hearing. Thus, some practitioners short on time may overlook hearing screening entirely, and some elderly patients with sensorineural hearing loss may not receive appropriate education, counseling, or referral.

Furthermore, the second page of the AAFP form that is given to patients and makes recommendations for scheduled follow-up does not even mention hearing or the risk of falling. That's why it's important to remember to cover these areas with your elderly patients—and why you may want to ask the questions, "Do you have a hearing problem now?" and "Have you fallen recently?"

FAST TRACK

The DHI-S form to assess falls risk is a 10-item questionnaire that can be completed in fewer than 5 minutes.

logic evaluations, and treatments.

■ Falls risk: Make use of assessment tools

Each year, approximately 30% to 40% of elderly adults living independently fall, and the incidence increases with age.⁴ Falls frequently cause injuries, such as hip fractures, and reduce HRQoL.²⁴ Strong evidence supports the efficacy of a multifaceted approach for identifying and reducing risk of falls in this patient population.^{25,26} A review of more than 3000 falls indicated that about one-third were the result of accidents or environmental hazards, and nearly another third were caused by gait problems, balance disorders, or weakness.²⁷

Means of determining risk of falls. As with hearing assessment, you can gauge older patients' risk of falls during routine visits or annual exams. For patients' first Medicare visit, the AAFP Medicare pre-

ventive exam encounter form¹⁷ includes 2 items in the "Functional Ability/Safety Screen" section that cover the leading causes of falls. Item 1 asks, "Was the patient's Timed Up & Go test unsteady or longer than 30 seconds?" This simple test requires patients to stand from a sitting position, using their arms for support; walk a few paces, turn around, and return to their chair to sit. The test is sensitive to, and specific for, identifying elderly people living independently who are at risk of falls.²⁸

The Dizziness Handicap Inventory—Screening version (DHI-S) (FIGURE 2),²⁹ is a 10-item patient self-assessment questionnaire that takes fewer than 5 minutes to complete. You can also use the DHI-S to supplement the Timed Up & Go test in judging a patient's postural control.

Possible reasons for poor performance on the Timed Up & Go test are vestibular dysfunction or other balance disorders that require a careful evaluation. Cross-checking the "Medications, supplements, and vitamins" list in the "Medical/Social History" section of the Medicare encounter form may reveal use of a drug or multiple drugs (particularly likely if the patient sees different physicians) that commonly contribute to falls.³⁰

Patients' descriptions of "Past personal illnesses and injuries," also covered in the encounter form, or their accounts of situations that provoked dizziness, may help you identify the presence of a disorder such as benign paroxysmal positional vertigo, which increases the risk of falls.³¹

In weighing whether to treat such a disorder yourself or to refer, keep in mind that the evidence strongly supports the efficacy of referring patients to otolaryngologists or audiologists for further diagnosis and treatment.³² Vestibular rehabilitation is effective for elderly patients with stable but symptomatic and uncompensated central deficits.³³

Item 3 on the AAFP Medicare encounter form¹⁷ probes for hazards in the home, asking: "Does your home have rugs in the hallway, lack grab bars in the

bathroom, lack handrails on the stairs or have poor lighting?” Strong evidence supports the efficacy of a home hazard assessment and modification in preventing falls. However, during the brief time allotted for an office visit, asking patients to recall and describe every potential hazard in their homes is impractical. The **PATIENT HANDOUT (HOW TO REDUCE YOUR RISK OF FALLS)** details the causes of falls in older people and preventive measures that patients or their families may be able to implement at home. ■

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Disclosure

The authors reported no potential conflicts of interest relevant to this article.

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FAST TRACK

Can your patient stand from a sitting position, walk a few paces, turn around, and return to her chair in 30 seconds?