



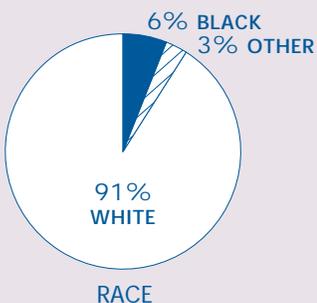
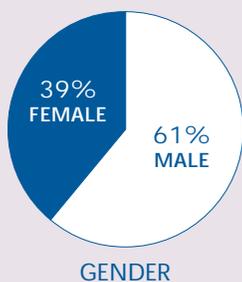
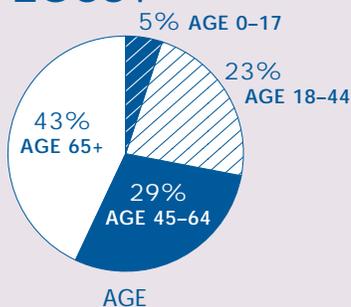
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# Hearing Loss

*A growing problem that affects quality of life*

Twenty-two million Americans—about 8 percent of the population—have impaired hearing, which may vary from mild loss of sensitivity to total loss of hearing. It is estimated that untreated hearing impairments cost the U.S. economy \$56 billion in lost productivity, special education, and medical care—an annual per capita tax of \$216.<sup>1</sup>

## WHO HAS HEARING LOSS?



SOURCE: *National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey of Disability, Phase I, 1994.*

More than 10 million Americans report that they have hearing loss, defined as difficulty hearing normal conversation. Hearing loss affects more than 4 million Americans age 65 and older, and almost 6 million Americans under age 65. Hearing loss can have a profound impact on an individual's emotional, physical, and social well-being. People with hearing loss are more likely to report symptoms of depression, dissatisfaction with life, reduced functional health, and withdrawal from social activities. Although most people with hearing loss can be helped with hearing aids, four out of five Americans with hearing loss do not use a hearing aid.

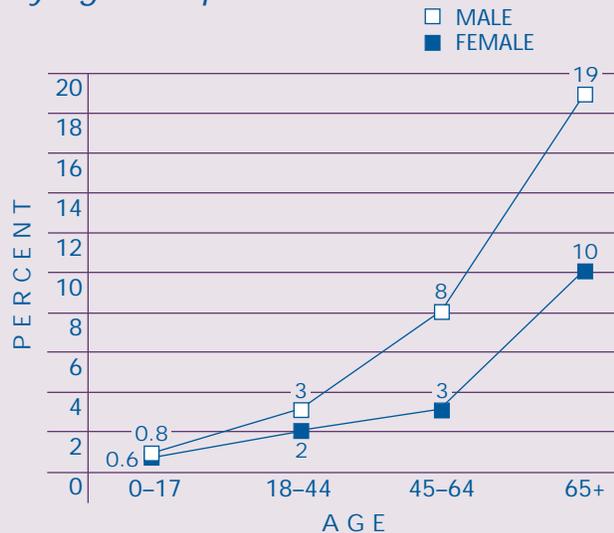
## Hearing loss is highly associated with aging

A large proportion of people with hearing loss—43 percent—are 65 years of age or older. By comparison, only 12 percent of the general population is 65 years of age or older. People age 65 and older are more likely than any other age group to have hearing loss. Older people are not the only ones with hearing loss, however. More than 5 million people age 18 through 64, and close to half a million children, have hearing loss.

## Men are more likely than women to have hearing loss

Some 60 percent of people with hearing loss are men. Only about half of the general population is male, however. Men of all ages are more likely than women to have hearing loss, but the gap widens after age 18 (see Figure 1).

FIGURE 1  
*Prevalence of Hearing Loss by Age Group and Gender*

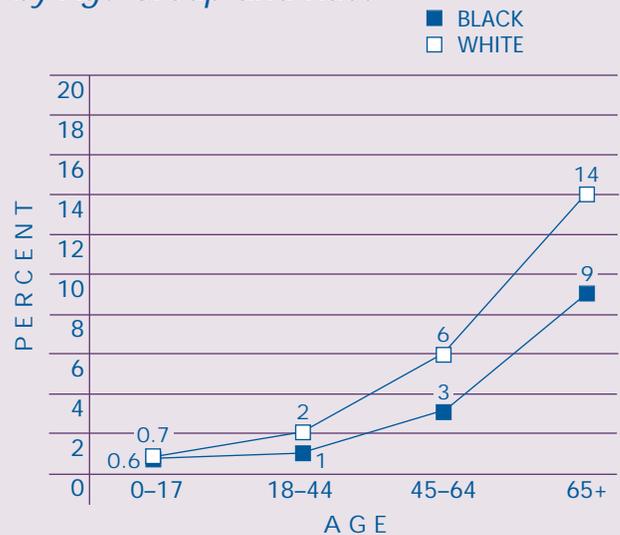


SOURCE: National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey of Disability, Phase I, 1994.

## Whites are more than twice as likely as blacks to have hearing loss

Whites are proportionately overrepresented among people with hearing loss. They comprise 91 percent of the population with hearing loss, but only 83 percent of the general population. Whites of all ages are more likely than blacks to have hearing loss, but the gap widens in the adult population (see Figure 2).

FIGURE 2  
*Prevalence of Hearing Loss by Age Group and Race*



SOURCE: National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey of Disability, Phase I, 1994.

## WHAT IS HEARING LOSS?

A number of conditions can lead to hearing loss. The most common condition causing hearing loss in adults is *presbycusis*, a gradual, age-related reduction in the ability to hear high-pitched sounds. The second most common condition, *noise-induced hearing loss*, is caused by one-time exposure to extremely loud sound, or by exposure to sounds at high decibels over months or years. Examples of potentially hazardous noise include sounds from powerful stereos and headphones, power tools, city and airport traffic, lawnmowers, and even hair dryers and vacuum cleaners. Both presbycusis and noise-induced hearing loss result in what is called *sensorineural hearing loss*, which occurs when the delicate hair cells in the inner ear that translate sound waves into nerve impulses are damaged either by aging or abuse. High-frequency sounds—consonants such as “S” and “F” and children’s and women’s voices—are usually the first to be lost. The major cause of hearing loss in children is ear infections. Hearing loss in children can also be caused by birth defects, illness, and injury.

## The prevalence of hearing loss decreases as family income and education increase

The prevalence of hearing loss at all ages decreases as family income increases. Overall, people with a family income of less than \$20,000 are more than twice as likely to have hearing loss as those with a family income of \$50,000 or more. In the adult population, the prevalence of hearing loss is also greater for those who are not high school graduates than for those who are. Although education levels are lower among older age groups, the relationship between education and hearing loss is similar for all age groups.

## Hearing loss is also a social loss

People with hearing loss are less likely to participate in social activities than people without hearing loss. For example, among people age 51 to 61, some 10 percent with hearing loss report that they did 100 hours or more of volunteer work in the past year, compared to 18 percent without hearing loss. Hearing loss can also affect an individual's emotional well-being. Among people

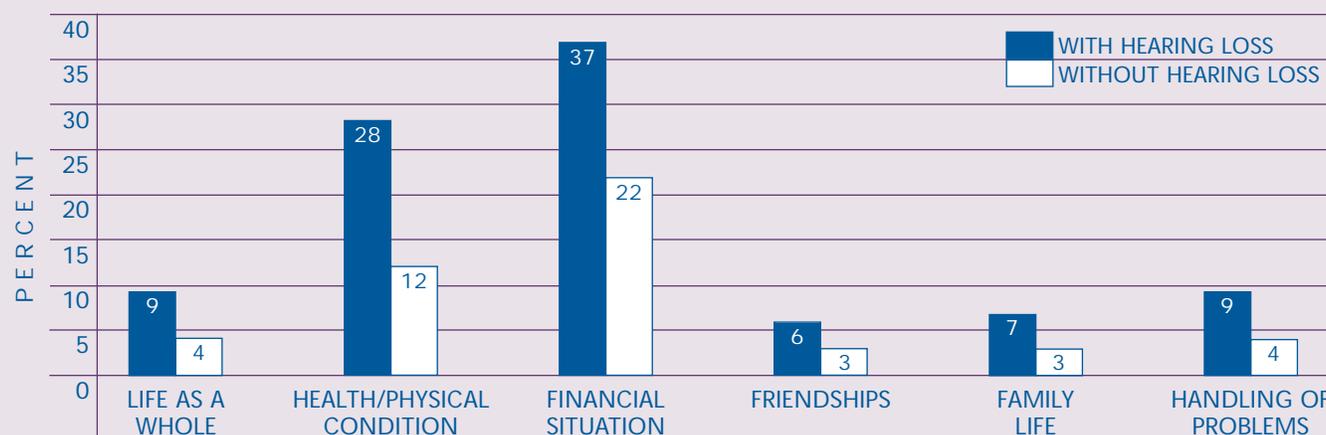
age 70 and older, 26 percent of those with hearing loss, but less than 15 percent of those without hearing loss, reported that they experienced four or more symptoms of depression during the past week.

People with hearing loss are less satisfied with their "life as a whole" than people without hearing loss. In particular, people with hearing loss express greater dissatisfaction with their friendships, family life, health, and financial situation than people without hearing loss (see Figure 3). Dissatisfaction with their financial situation is likely related to the fact that individuals with hearing loss are, in general, less well-off than individuals without hearing loss. For example, among people age 51 to 61, the median net worth for those with hearing loss is \$65,575, compared to \$102,000 for those without hearing loss.

For some people with hearing loss, loss of independence may be part of the reason they are dissatisfied with various aspects of life or unlikely to participate in social activities. For example, people of all ages with hearing loss are more likely to need help with instrumental activities of daily living, or IADLs, such as preparing meals, shopping, or handling money, than people without hearing loss. Among people age 70 and older, 22 percent with hearing loss report they need help with shopping, compared to 14 percent without hearing loss.

FIGURE 3

*Proportion of Older Adults Dissatisfied with Various Aspects of Life*



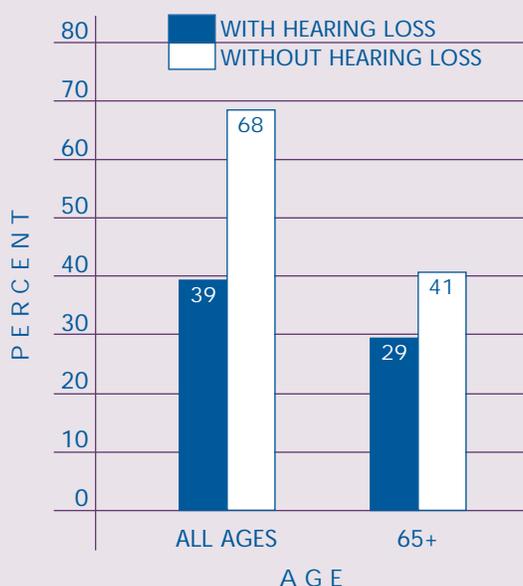
SOURCE: National Academy on an Aging Society analysis of data from the 1992 Health and Retirement Study.

## People with hearing loss are less healthy than others

Among the population with hearing loss, only 39 percent say they are in excellent or very good physical health, compared to 68 percent of those without hearing loss (see Figure 4). Nearly one-third of the population with hearing loss report being in fair or poor health, compared to only 9 percent of the population without hearing loss.

FIGURE 4

*Percent of Individuals Reporting Excellent or Very Good Health*



SOURCE: *National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey of Disability, Phase 1, 1994.*

## Labor force participation rates are lower for people with hearing loss

The majority of the working-age population—age 18 to 64—with hearing loss is employed, but hearing difficulties can affect the kind and amount of work they do, and whether they work at all. Labor force participation rates are lower for people with hearing loss than for others. Some 67 percent of the working-age population with hearing loss is employed,

## HEARING LOSS AND OCCUPATION

Compared to workers without hearing loss, workers with hearing loss are more likely to list their occupation as

- Farming
- Craft and repair
- Machine operator
- Transportation

and less likely to list their occupation as

- Administrative
- Professional
- Service
- Sales

compared to 75 percent of the working-age population without hearing loss. In addition, close to 13 percent of workers age 51 to 61 with hearing loss report that hearing loss limits the type or amount of paid work they can do.

## Retirement decisions may be influenced by hearing loss

Among people age 51 to 61, about 18 percent of those with hearing loss are completely retired, compared to just 12 percent of those who do not have hearing loss. Health status appears to be a strong factor in retirement decisions for people with hearing loss. For example, 70 percent of retired people with hearing loss, but only 44 percent without hearing loss, report that poor health was a very important factor in their decision to retire. In addition, only 23 percent of retired people with hearing loss say they wanted to retire, compared to 42 percent of people without hearing loss.

Satisfaction with retirement is also much lower for people with hearing loss than for those without hearing loss. Only 29 percent of people with hearing loss are very satisfied with their retirement, compared to 42 percent of those without hearing loss.

## A sonic boom?

Traditionally, statistics on hearing loss have shown seniors to be the most vulnerable age group. However, over the last three decades there has been a sharp increase in the number of younger Americans with hearing difficulties. From 1971 to 1990, hearing difficulties jumped 26 percent among those age 45 to 64, and 17 percent among those age 18 to 44.<sup>2</sup> A study of more than 5,000 men and women found an even sharper increase in hearing impairments for those age 50 and older, with rates of impairment increasing more than 150 percent from 1965 to 1994.<sup>3</sup> The increase in hearing loss has been attributed to environmental noise, which is present today at much higher levels than in the past. As baby boomers age, the number of people with hearing loss is expected to increase.

## Four out of five Americans with hearing loss do not use hearing aids

Although most people with hearing loss can benefit from using a hearing aid, more than 8 million Americans with hearing loss do not wear a hearing aid. Two out of three

Americans age 65 and older with hearing loss, and nine out of ten younger Americans with hearing loss, do not use hearing aids.

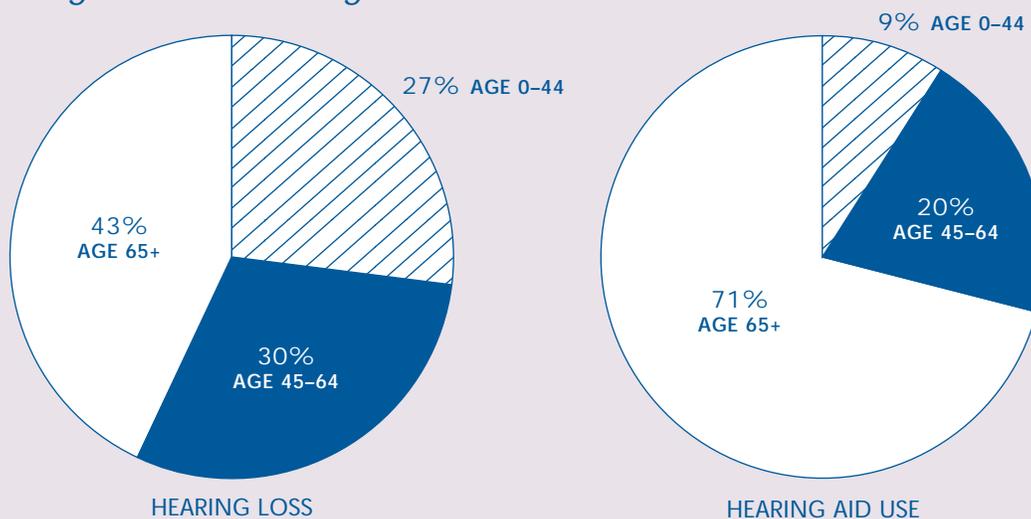
Among the population that wears hearing aids, less than 10 percent are under 45 years of age, although this age group accounts for some 27 percent of people with hearing loss. Most hearing-aid users—71 percent—are age 65 and older, although less than half of all people with hearing loss are 65 years of age or older (see Figure 5).

## Nonusers cite cost, poor performance, and stigma of wearing hearing aids

The National Council on the Aging commissioned a survey of 2,300 people age 50 and older with hearing impairments to examine barriers to wearing hearing aids. When asked to cite the reason or reasons why they do not wear a hearing aid, about one-half of the respondents cited the cost, and about one in five checked responses concerning vanity and the stigma of wearing hearing aids. However, the most common reasons cited were “my hearing is not bad enough” and “I can get along without one.” In fact, one-third of the respondents believed that “they (hearing aids) will not help with my specific problem.”<sup>4</sup>

FIGURE 5

### Hearing Loss and Hearing Aid Use



SOURCE: National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey of Disability, Phase I, 1994.

## Advances in hearing aid technology offer exciting possibilities for the future

New technology developed in the last few years can help most people with hearing loss achieve improved hearing. But the new digital hearing aids can cost several thousand dollars—compared to a few hundred dollars for the standard analog hearing aid—prohibiting many consumers from purchasing them. Most insurance plans do not have hearing-aid coverage, and Medicare does not cover hearing aids. As a result, the majority of hearing-aid users are still buying hearing aids manufactured using thirty-year-old technology with poor sound quality and only amplification adjustments. However, despite all the barriers to hearing-aid use, sales of hearing aids are booming. Ear specialists saw a surge in business after the announcement in 1997 that President Clinton was getting a hearing aid. Nearly 2 million hearing aids were purchased in 1997, almost 25 percent more than in 1996. According to the Hearing Industries Association, high performance digital hearing aids that analyze and respond to specific sounds are the fastest

growing segment of the market, although they accounted for only 9 percent of hearing-aid sales in 1999.<sup>5</sup>

1. Better Hearing Institute. (1999). *Facts About Hearing Disorders*. Available at <http://www.betterhearing.org>.
2. Ries, Peter W. (1994). *Prevalence and Characteristics of Persons with Hearing Trouble: United States, 1990-91*. National Center for Health Statistics, Vital and Health Statistics, Series 10, No.188.
3. Wallhagen, M.I., W.J. Strawbridge, R.D. Cohen, and G.A. Kaplan. (1997). "An Increasing Prevalence of Hearing Impairment and Associated Risk Factors Over Three Decades of the Alameda County Study." *American Journal of Public Health*; 87(3): 440-442.
4. The National Council on the Aging. (1999). *The Consequences of Untreated Hearing Loss in Older Persons*. Washington, D.C.
5. Data from the Hearing Industries Association as explained by Sergi Kochkin, M.D. (personal communication, June 1999).

### ABOUT THE *PROFILES*

This series, *Challenges for the 21st Century: Chronic and Disabling Conditions*, is supported by a grant from the Robert Wood Johnson Foundation. This *Profile* was written by Greg O'Neill with assistance from Laura Summer and Lee Shirey. It is the second in the series. The first *Profile* was:

#### 1. Chronic Conditions: A challenge for the 21st century

The National Academy on an Aging Society is a Washington-based nonpartisan policy institute of The Gerontological Society of America. The Academy studies the impact of demographic changes on public and private institutions and on the economic and health security of families and people of all ages.

### ABOUT THE DATA

Unless otherwise noted, the data presented in this *Profile* are from four national surveys of the community-dwelling population living within the United States. The 1994 National Health Interview Survey (NHIS) was conducted by the National Center for Health Statistics. The NHIS defines hearing impairment as a condition that ranges from slight trouble hearing in one ear to complete deafness in both ears. The 1994 National Health Interview Survey of Disability, Phase 1 (NHIS-D) defines hearing loss as difficulty hearing normal conversation. Wave 1 of the Health and Retirement Study (HRS) provides information for a population age 51 to 61 in 1992. Wave 1 of the study of Asset and Health Dynamics Among the Oldest Old (AHEAD) provides information about respondents age 70 and older in 1993 and 1994. The HRS and AHEAD measure hearing ability using a 5-point scale ranging from excellent to poor. Hearing loss is defined as self-ratings of fair or poor hearing ability. The HRS and AHEAD data sets were sponsored by the National Institute on Aging and conducted by the Institute for Social Research at the University of Michigan.



## NATIONAL ACADEMY ON AN AGING SOCIETY

1030 15th Street NW, Suite 250, Washington, DC 20005

PHONE 202-408-3375 FAX 202-842-1150

E-MAIL [info@agingsociety.org](mailto:info@agingsociety.org) WEBSITE [www.agingsociety.org](http://www.agingsociety.org)

