



Diabetes

A drain on U.S. resources

Diabetes affects just 6 percent of the U.S. population—16 million people—but more than 1 of every 10 U.S. health care dollars is spent on diabetes.¹ The prevalence of diabetes is increasing. By 2025, over 20 million Americans are expected to have diabetes.² The population with diabetes uses more health care services and is less productive than the population without diabetes.

DIABETES IS THE MOST COSTLY CHRONIC DISEASE

■ The total cost of diabetes in 1997 was \$98 billion—\$44 billion in direct medical costs and \$54 billion in indirect costs.

■ One of every four Medicare dollars pays for the health care of people with diabetes.

■ The average lifetime cost of care for a person diagnosed with diabetes at age three is \$600,000 (1998 dollars).

SOURCE: Juvenile Diabetes Foundation. (1998). *Diabetes Facts*. Available at <http://www.jdfcure.org>.

Some people with diabetes are able to control their condition and lead an active life. On the whole, however, people with diabetes are faced with many challenges.

- The population with diabetes is less healthy than the population without it.
- Adults with diabetes experience more limitations in their daily activities compared to adults without diabetes.
- Adults with diabetes are more likely to become depressed than adults without it.

Health care service use is high for people with diabetes

High health care service use by the population with diabetes is not surprising given that diabetes can lead to serious complications, including amputations, blindness, cardiovascular disease, kidney disease, and nerve and blood vessel damage.

Some 24 percent of individuals with diabetes report that they were hospitalized in the past year, compared to just 6 percent of individuals without the condition. The population with diabetes visits a physician more than twice as many times a year as the population without diabetes. Diabetes ranks second to hypertension as the condition for which the greatest number of people visit a physician.³ The population with diabetes spends over 3 million days in the hospital and makes over 15 million visits to health care providers each year.⁴

WHAT IS DIABETES?

Diabetes is a chronic condition caused by the body's inability to create or effectively use its own insulin, a hormone necessary to convert food into glucose, which the body needs for energy. Without enough insulin, glucose or sugar levels become too high. As a result, permanent damage to the blood vessels can occur, along with other complications. Type 1 diabetes, known as insulin-dependent diabetes, is usually diagnosed in childhood. Type 2 diabetes, known as non-insulin dependent diabetes, is most often diagnosed in middle-age.

■ African Americans account for 18 percent of the population with diabetes, but just 13 percent of the general population. African Americans are more likely than whites to develop diabetes.

More women than men have diabetes

Women comprise a slightly larger proportion—54 percent—of the population with diabetes than in the general population—51 percent. Among the elderly, however, diabetes strikes slightly more men than women.

Diabetes is more common among the elderly and nonwhites

Diabetes affects people of all ages and ethnic groups. The burden of diabetes, however, is particularly heavy among the elderly and nonwhites (see Figure 1).

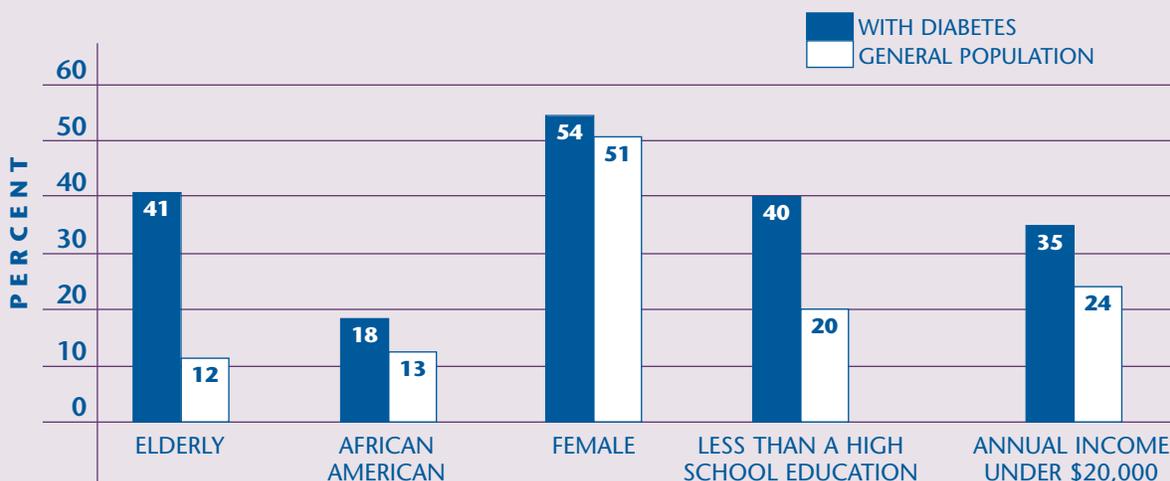
■ Some 41 percent of the population with diabetes are elderly. The elderly account for only 12 percent of the general population, however. The elderly population has higher rates of diabetes than the younger population.

People with less education and income are more likely to develop diabetes

Some 40 percent of adults with diabetes have less than a high school education, compared to only 20 percent of the general population. Slightly over one-third of the population with diabetes have an annual income of less than \$20,000, compared to about one-quarter of the general population.

FIGURE 1

How Does the Population with Diabetes Compare to the General Population?



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

THE RISK AND COSTS OF DIABETES CAN BE MINIMIZED

Diabetes is largely hereditary. Some factors that also play a role in the development of diabetes can be modified, however. For example, a reduction in weight or an increase in physical activity may reduce the risk of diabetes.

Diabetes is the leading cause of new cases of blindness among adults age 20 to 74, but 90 percent of these cases are preventable through early detection and treatment.⁵ It is estimated that 1 year of blindness costs the U.S. government \$13,607 annually per person in Social Security benefits, lost income tax revenue, and health care expenditures.⁶

Most adults with diabetes control their condition

People with diabetes can control their condition through a variety of methods, including a special diet, weight loss, medications, and insulin injections. Among people age 51 to 61 with diabetes, for example, over half follow a special diet, are losing weight, or take medications orally (see Figure 2).

FIGURE 2
Proportion of People Age 51 to 61 With Diabetes Controlling Their Condition, by Treatment Method

Special Diet	78%
Weight Loss	57
Oral Medications	56
Insulin Injections	34

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

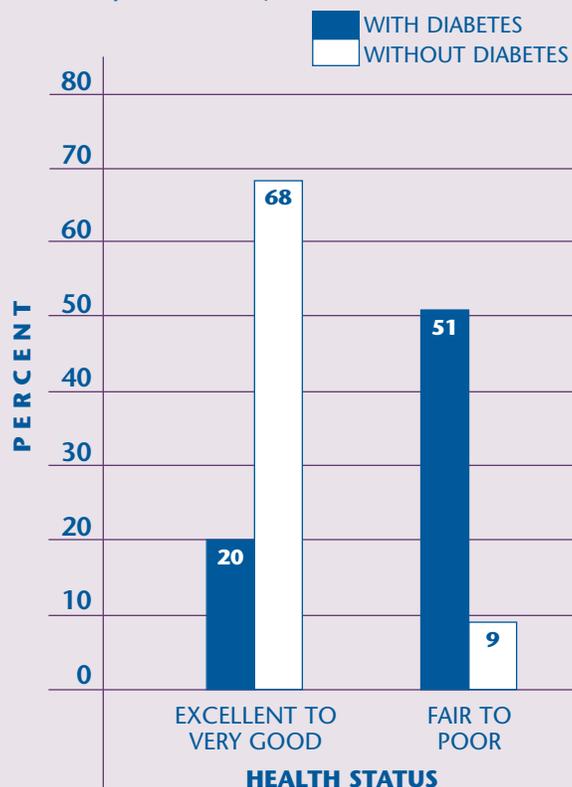
The population with diabetes is less healthy

Although the majority of the population with diabetes does attempt to control their condition, they are substantially less healthy than the population without diabetes. Some 51 percent of the population with diabetes are in fair to poor physical

health, compared to only 9 percent of the population without it (see Figure 3).

The life expectancy of people with diabetes averages 15 years less than that of people without diabetes.⁷

FIGURE 3
Self-Reported Physical Health Status



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

Adults with diabetes have more daily activity limitations

Regardless of age, adults with diabetes are more limited in their activities of daily living, or ADLs, such as bathing, dressing, eating, using the toilet, walking, and getting in and out of bed, than adults without diabetes. Among people age 51 to 61, for example, 27 percent of those with diabetes are limited in at least one ADL, compared to just 10 percent of those without the condition. And among people age 70 and older, 44 percent of those with diabetes, compared to 28 percent of those without it, are limited in at least one ADL.

Adults with diabetes are more likely to become depressed

Among adults age 51 to 61, the proportion of those with diabetes that reported four or more symptoms of depression in the past week is more than double that of those without diabetes—13 and 6 percent, respectively.

Among the population with diabetes, those who are depressed are less socially active than those who are not depressed. For example, only 6 percent of people age 51 to 61 with diabetes who are depressed volunteer in their communities, compared to 22 percent of those with diabetes who are not depressed. In addition, a larger proportion of depressed people age 51 to 61 who have diabetes are dissatisfied with various aspects of their life, compared to people of the same age who have diabetes but are not depressed (see Figure 4).

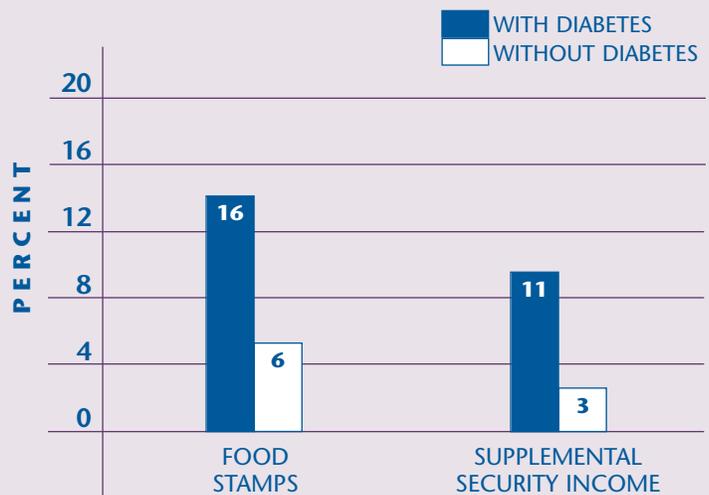
The interaction between diabetes and depression intensifies the severity of each condition, often leading to more complications and higher medical costs. Annual health care costs for people with diabetes who are also depressed averaged \$6,787 per person, compared to \$4,233 per person for people with diabetes who are not depressed.⁸

Adults with diabetes are less secure financially

The financial status of people age 51 to 61 with and without diabetes differs. For example, people with diabetes have less than half the amount of assets that people without diabetes have. And, a higher proportion of people with diabetes receives public assistance (see Figure 5).

FIGURE 5

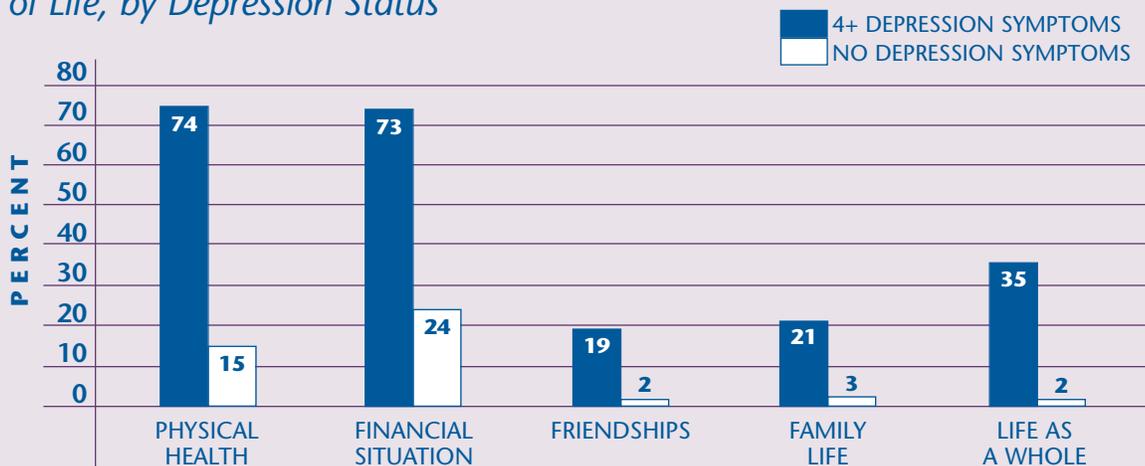
Proportion of Older Adults Receiving Food Stamps and Supplemental Security Income



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

FIGURE 4

Proportion of Older Adults with Diabetes Dissatisfied with Various Aspects of Life, by Depression Status

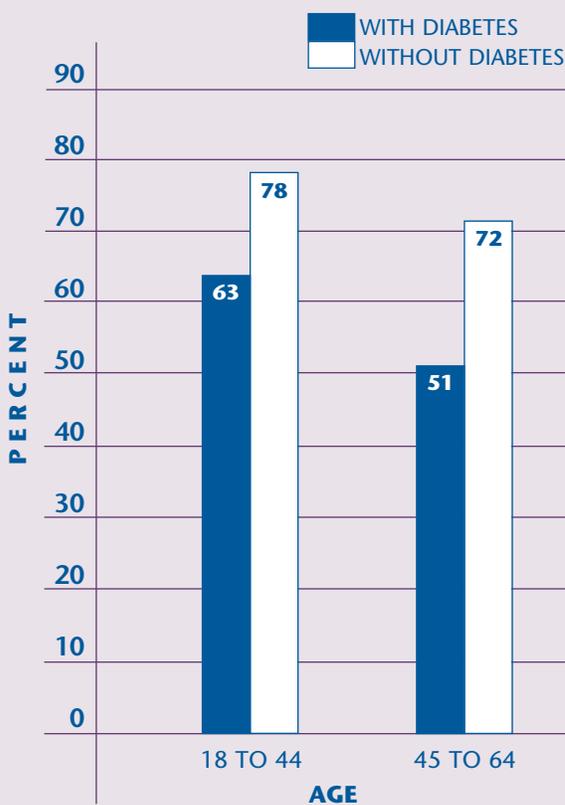


SOURCE: National Academy on an Aging Society analysis of data from the 1992 Health and Retirement Study.

Adults with diabetes are less likely to be employed

The majority of adults with diabetes are employed. However, a smaller proportion of adults with diabetes is employed, compared to adults without diabetes. Among adults age 45 to 64, for example, just over half—51 percent—of those with diabetes are employed, compared to almost three-quarters—72 percent—of those without diabetes (see Figure 6).

FIGURE 6
Proportion of Employed Adults



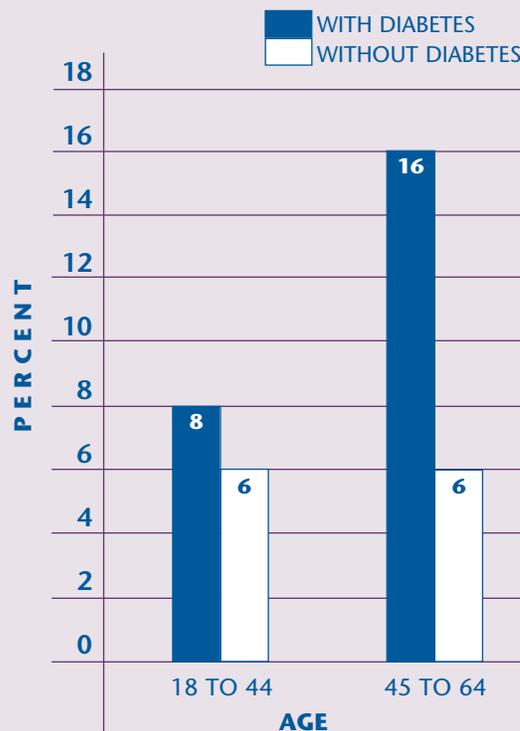
SOURCE: National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey.

Workers with diabetes earn less than half of what workers without diabetes earn

Among workers age 18 to 64, the median monthly earnings of those who are limited by their diabetes is \$796, compared to \$1,677 for those without diabetes.

FIGURE 7

Proportion of Workers Missing One Day or More of Work in a Two Week Period



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

Differences in earnings between those with and without diabetes may reflect differences in lost time at work. Among workers age 18 to 64, some 13 percent of those with diabetes, compared to only 6 percent of those without diabetes, report missing work. This disparity between workers with and without diabetes is even greater for older workers (see Figure 7). In addition, over 100,000 adults age 18 to 64 report that their diabetes caused them to miss one day or more of work in a two-week period. Over 14 million days of work are lost annually at jobs outside of the home due to diabetes.

Diabetes often limits the type and amount of work that can be done, and may also contribute to a complete withdrawal from the labor force. Almost 1 million people of working age who are not working report that diabetes causes limitations in their ability to work. Almost 80,000 workers were permanently disabled because of their diabetes in 1997.⁹

More adults with diabetes are retired

A larger proportion of the population with diabetes is completely retired (see Figure 8). Among those who are retired, some 21 percent with diabetes and 42 percent without wanted to retire.

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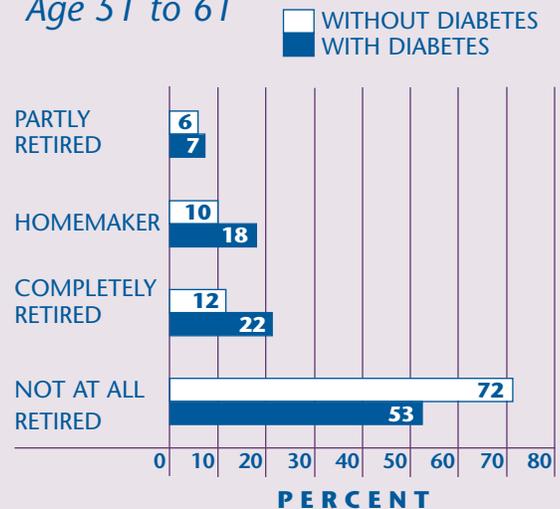
ABOUT THE PROFILES

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 Lee Shirey with assistance from Laura Sumner and Greg O'Neill. It is the sixth in the series. Previous *Profiles* include:

1. Chronic Conditions: A challenge for the 21st century
2. Hearing Loss: A growing problem that affects quality of life
3. Heart Disease: A disabling yet preventable condition
4. At Risk: Developing chronic conditions later in life
5. Arthritis: A leading cause of disability in the United States

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.

FIGURE 8
Retirement Status of Adults Age 51 to 61



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

ABOUT THE DATA

Unless otherwise noted, the data presented in this *Profile* are from four national surveys of the community-dwelling population in the United States. The 1994 National Health Interview Survey (NHIS) was conducted by the National Center for Health Statistics, and provides data for the entire population, including children. The Survey of Income and Program Participation (SIPP) is conducted by the U.S. Bureau of the Census. The 1993 Panel of the SIPP provides data for the population age 18 to 84. 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 data sets were sponsored by the National Institute on Aging and conducted by the Institute for Social Research at the University of Michigan.



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