

PUBLIC AWARENESS OF DIABETES

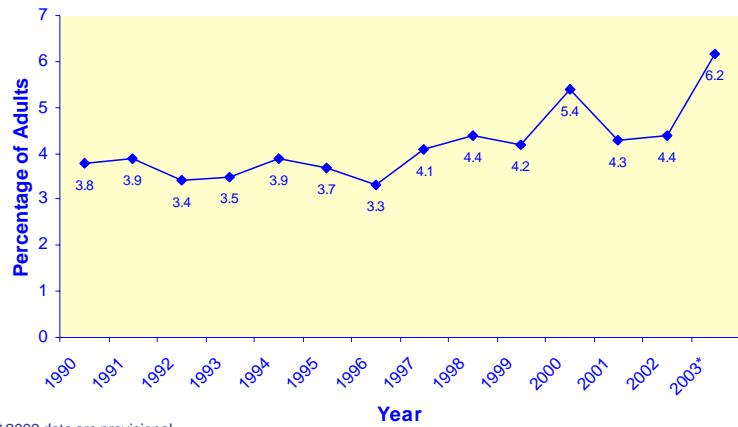
Diabetes is a serious disease with potentially devastating consequences, placing a tremendous burden on the health care system. The percentage of adults who reported they had diabetes has increased more than 60% since 1990 (Figure 1). There are two major types of diabetes: type 1 is an autoimmune disease occurring when the pancreas does not produce insulin; and type 2 is when insulin is produced but is used ineffectively. About 90% of all people with diabetes have type 2, and approximately one third of those (40,000 Utahns¹) are undiagnosed, thereby delaying early interventions and treatment that could prevent serious complications. Because so many symptoms of diabetes may be attributed to other conditions, diagnosis is often made only when serious complications become evident. Lack of recognition of the risk factors, signs, and symptoms makes diabetes awareness an area of significant public health concern.

The number of people at risk for diabetes has increased at an alarming rate in recent years both nationally and in Utah. Several factors account for this increase, including the aging of the population, decreasing levels of physical activity, growth in the proportion of the population belonging to racial or ethnic minority groups, and rising obesity rates. In the past 13 years, the percentage of Utah adults who were obese nearly doubled from 9.3% in 1990 to the current rate of 17.9% (Figure 2). The growing reliance on fast foods and “super-sizing” has played a substantial role in obesity rates.²

Unfortunately, there are some serious gaps in the public’s awareness of the seriousness, warning signs, and risk factors for diabetes. Findings from at least one national survey suggest that about half of Americans cannot name complications of diabetes such as renal failure, blindness, and amputation.³

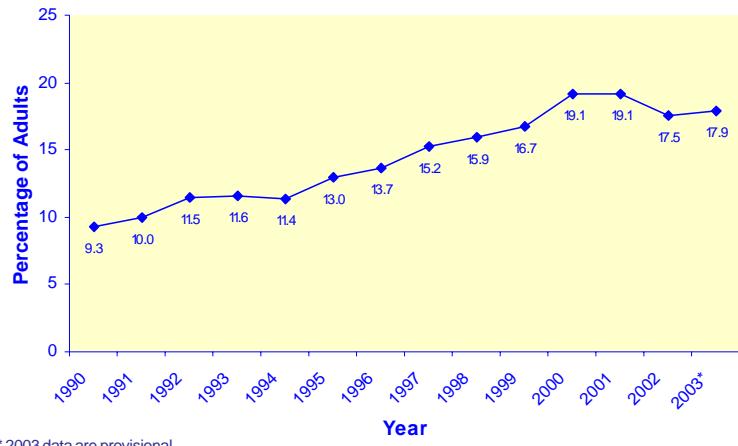
Healthy People 2010 Objective 5-4 delineates an important goal: to reduce the proportion of individuals with diabetes who remain undiagnosed. Achieving this goal requires alerting the public to the risk factors, signs, and symptoms of diabetes. The Utah Diabetes Prevention and Control Program (DPCP) awareness campaign tracks gaps in public awareness and assesses perceptions of risk. The goals of the awareness

Figure 1. Percentage of Utah Adults Who Reported Being Told by a Doctor That They Have Diabetes, Utah BRFSS 1990-2003



* 2003 data are provisional.

Figure 2. Percentage of Utah Adults Who Were Obese, BRFSS 1990-2003



* 2003 data are provisional.

campaign are two-fold: 1) to alert Utahns at high risk for diabetes on the importance of being screened; and 2) to encourage participation in behaviors that prevent diabetes from developing.

The DPCP wanted to assess the effectiveness of a recent statewide public awareness campaign. Information was collected on the diabetes-related knowledge and level of awareness among Utah adults who had not been diagnosed with diabetes. Survey questions were added to the statewide Behavioral Risk Factor Surveillance System (BRFSS) survey for a period of three-months (n=961). Results of those data are summarized in this Brief.

HP2010 Objective 5-4: Increase the proportion of adults with diabetes whose condition is diagnosed.

The American Diabetes Association (ADA) recommends that, unless more frequent screening is indicated, providers screen their patients every three years once they reach age 45.⁴ Over half of all Utah adults without diabetes who participated in the BRFSS survey had had at least one blood test for diabetes, and the likelihood of having been tested increased with age (Figure 3). Over 54 percent (54.4%) of adults aged 18 to 44 had had at least one blood test. This percentage rose to 74.5% among adults aged 45 to 64, and to 82.6% for adults 65 and older. (These percentages include women who were screened for diabetes during pregnancy.) Despite the ADA recommendation, over one fourth of the respondents between ages 45 and 64 reported they had never been tested.

Nearly seven in ten (69.1%) Utah adults believed diabetes to be a very serious condition (Figure 4). Just over one in five (21.5%) recognized diabetes as a serious condition, and less than one in ten considered diabetes to be somewhat serious or not serious, 6.4% and 3.0%, respectively.

One question in the survey asked respondents to list risk factors they believe cause diabetes. The predominant five risk factors stated are shown in Figure 5. Over one third (38.0%) of respondents knew genetics was a risk factor for developing diabetes. The second most commonly stated risk factor was obesity, with about one third (34.9%) of respondents reporting this risk factor. Poor diet was the third most frequently reported risk factor (29.9%). Only 13.2% mentioned lack of exercise as a risk factor for developing diabetes. Thus, the high proportion of respondents who were aware that diabetes is serious, noted above, was not matched by an equally high recognition of specific risk factors. Perhaps the most striking finding from the survey was that one fourth of the respondents (25.0%) could not name a single risk factor.

Warning Signs of Diabetes

The DPCP promotes awareness of the warning signs of diabetes as part of its campaign. Everyone should know the warning signs of diabetes: increased hunger and thirst, fatigue, increased urination, weight loss, blurred vision, and sores that are slow to heal.⁵ Responses were generally concentrated among five signs and symptoms as shown in Figure 6. The three most frequently cited signs or symptoms of diabetes in this survey were

Figure 3. Percentage of Utah Adults Without Diabetes Who Have Had at Least One Blood Test for Diabetes by Age Group, Utah BRFSS 2002

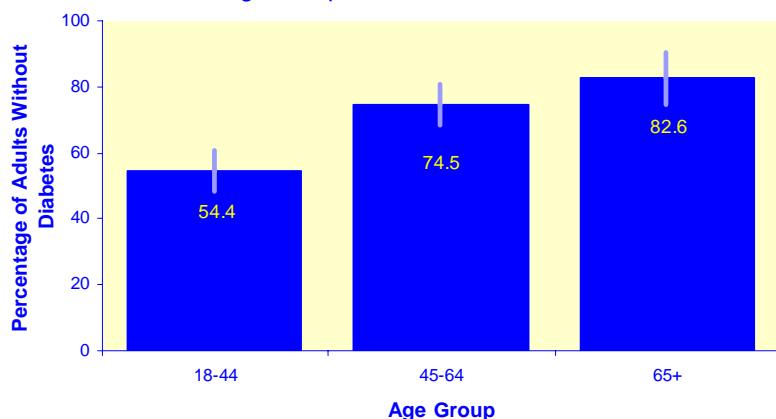


Figure 4. Percentage of Utah Adults Without Diabetes by Perception of Seriousness of Diabetes, Utah BRFSS 2002

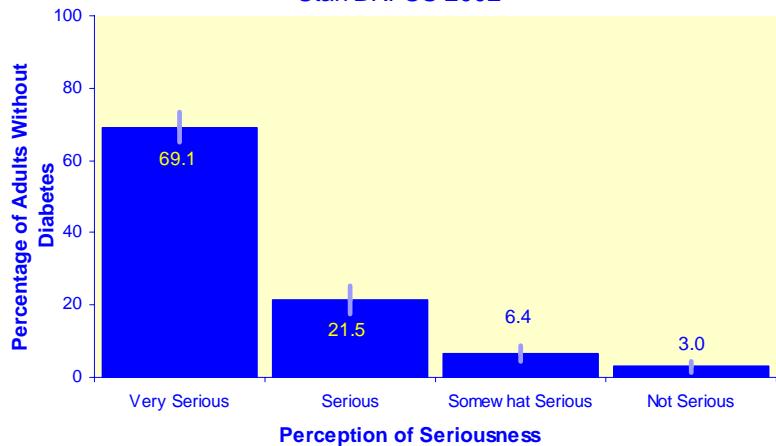
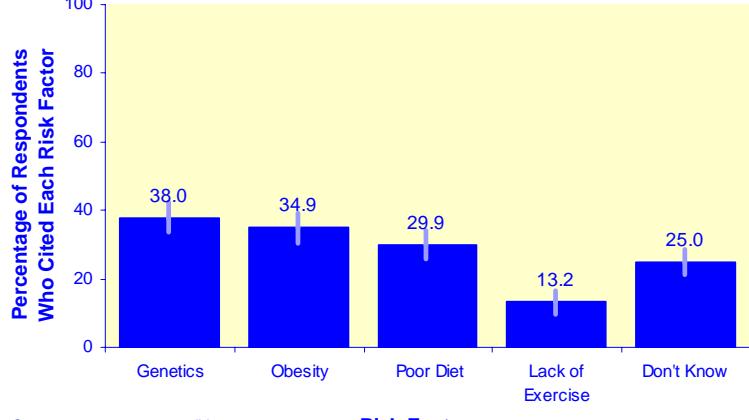


Figure 5. Public Perceptions of Risk Factors for Diabetes, Utah Adults Without Diabetes, Utah BRFSS 2002



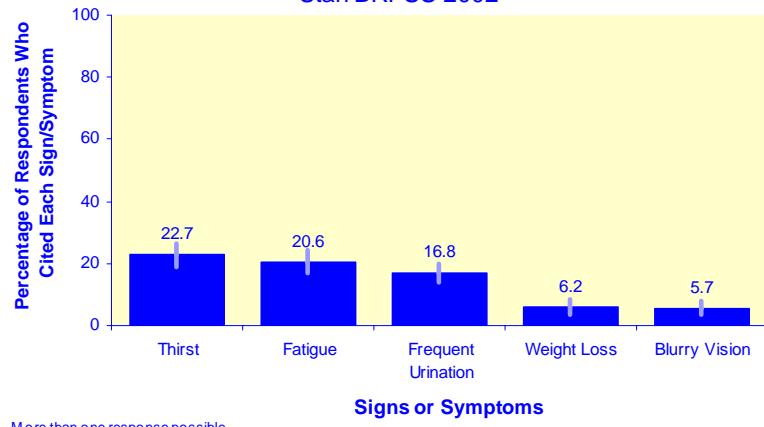
Note: Despite the fact that "eating sugar" is not by itself a risk factor for developing diabetes, nearly 15% of respondents believed that it was (not shown).

thirst (22.7%), fatigue (20.6%), and frequent urination (16.8%). Weight loss, a common occurrence at the onset of type 1 diabetes, was stated by about one of 17 (6.2%) respondents, and blurry vision by about one in 20 (5.7%) respondents. Another 3.9% of respondents stated “other vision problems” as a sign or symptom of diabetes. (The specific vision problem stated was not available [data not shown]).

Implications

In sharp contrast to the overwhelming majority of Utah adults who believe diabetes is a very serious disease, most are unaware of the specific risk factors. Very few are fully aware of the signs or symptoms of diabetes. The diabetes epidemic will lead to an enormous burden on the health care system unless there are wide-scale efforts aimed at diabetes prevention that include information on the risk factors and warning signs. Early detection can lead to interventions that could help to prevent coronary heart disease, peripheral vascular disease, and stroke, which are all associated with diabetes. These data suggest that those public health efforts specifically aimed at enhancing the public's awareness of the seriousness of diabetes need to be even more closely linked to programs highlighting risk factors for diabetes as well as specific signs and symptoms of diabetes and preventive measures.

Figure 6. Public Perceptions of Signs/Symptoms of Diabetes, Utah Adults Without Diabetes, Utah BRFSS 2002



References

1. The number for undiagnosed diabetes was derived by applying NHANESIII rates of diagnosed and undiagnosed diabetes to the 1996 Utah Health Status Survey age- and sex-adjusted distribution of the population with diabetes.
2. Prentice AM and Judd SA. Fast Foods, Energy Density and Obesity: A Possible Mechanistic Link. *Obesity Review*. 2003. 4(4):187-94.
3. Huge Gap in Diabetes Knowledge. (2001, January). *Diabetes Interview*, Vol. 10 (1) p. 23
4. American Diabetes Association (2003). “Screening for Type 2 Diabetes.” Clinical Practice Recommendations. 2003. *Diabetes Care* 26 (Supp. 1):S21-S24. See also http://care.diabetesjournals.org/cgi/content/full/26/suppl_1/s21
5. U.S. Department of Health and Human Services (2002, May). “Am I at Risk for Diabetes?” Small Steps/Big Rewards. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases NIH Publication No.02-4805. Copies are available at www.niddk.nih.gov under “Health Information.”

In Summary:

- The percentage of Utah adults who reported being told by a doctor that they have diabetes has increased 60% since 1990.
- The percentage of Utahns at risk for diabetes because of obesity has also increased dramatically in recent years.
- A majority of Utah adults who do not have diabetes considered it to be a very serious medical condition.
- A quarter of Utah adults aged 45 to 64 years without diabetes reported never being screened for diabetes.
- Many Utah adults without diabetes cannot name the most common risk factors and symptoms for diabetes.

For information about diabetes please see the Utah Department of Health Diabetes Prevention and Control Program web site at health.utah.gov/diabetes.



Office of Public Health Assessment
Center for Health Data
P.O.Box 142101
Salt Lake City, UT 84114-2101

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The Utah Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing effort by the Utah Department of Health in conjunction with the U.S. Centers for Disease Control and Prevention (CDC) to assess the prevalence of and trends in health-related behaviors in the non-institutionalized Utah adult population aged 18 years and older. The survey is supported in part by funds from Cooperative Agreement No. U58/CCU800572 from the CDC. Data are collected monthly from a random telephone sample of adults living in households with telephones. Utah has participated in the BRFSS continuously since 1984.

The BRFSS questionnaire is modified each year by the CDC in collaboration with participating state agencies. The questionnaire has three parts. The first part is a core set of questions that is asked by all states. The second part consists of a series of topical modules developed by the CDC. States have the option of adding modules as they wish. Utah has used several of the CDC modules. The final part of the questionnaire consists of questions designed and administered by individual states to address issues of local concern. These have been revised annually in Utah to maximize the survey's ability to address the needs of Utah's health programs.

Participants in the Utah BRFSS are asked about a wide variety of behaviors such as seat belt use, exercise, tobacco and alcohol consumption, health services utilization and basic demographic information. Participation in the BRFSS is completely anonymous and voluntary. Prior to analysis, BRFSS data are weighted so that the findings can be generalized to the Utah adult population. The Utah Department of Health would like to thank the citizens of Utah who have participated in this survey.

For more information about the Utah BRFSS, contact the Utah BRFSS Coordinator at the Utah Department of Health at (801) 538-6434. You may also visit the Utah Department of Health's website, at: <http://health.utah.gov/ibisph>.