



Diabetes in Cleveland

2005-2006

March 2008

Data Brief

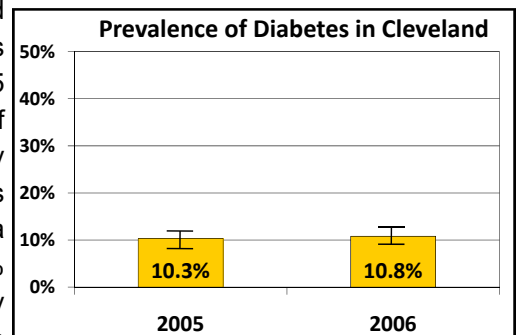
Report Contents

- The Prevalence of Diabetes in Cleveland
- Local, State and National Trends in the Prevalence of Diabetes
- Diabetes by Demographic Characteristics
- Diabetes Screening by Demographic Characteristics
- Risk Factors for Diabetes and Diabetes Complications
- Impact of Diabetes on Physical and Mental Health
- Diabetes Management

The Cleveland Behavioral Risk Factor Surveillance Survey is funded by Steps to a Healthier Cleveland.

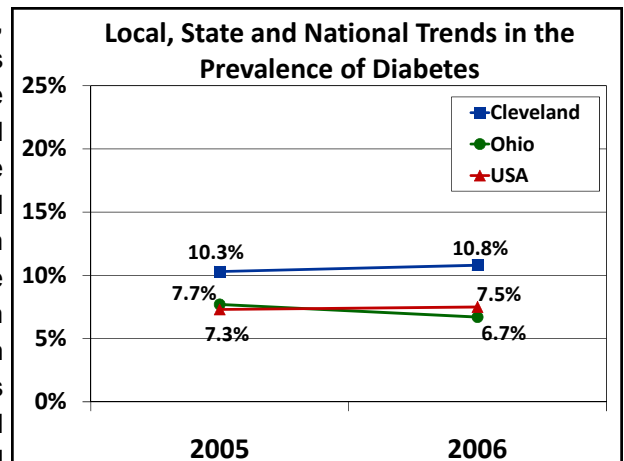
The Prevalence of Diabetes in Cleveland

Over the past two years, the self-reported prevalence of diabetes among Cleveland adults has remained relatively stable, at 10.3% in 2005 and 10.8% in 2006. The vast majority (96%) of Clevelanders with diabetes reported that they have Type II, or adult-onset diabetes as opposed to Type I, juvenile-onset diabetes (data not shown). According to the CDC, 90% to 95% of national diabetes cases are typically accounted for by Type II diabetes, thus the percentage of Type II cases in Cleveland falls just beyond this range¹. Moreover, the average age of diagnosis for Clevelanders was 46 years old (data not shown), falling within the national range where according to the CDC, nearly half of all adult diagnoses are reportedly between the ages of 45 and 59 years old².



Local, State and National Trends in the Prevalence of Diabetes

It is well documented that nationally, over the past decade, diabetes has been on the rise. Since 1995, the prevalence of diabetes in the U.S. and Ohio has nearly doubled, with the nation's prevalence reaching 7.3% and Ohio's prevalence reaching 7.7% in 2005. In 2006, the national prevalence remained fairly steady at 7.5%. In contrast, since peaking at 8.9% in 2003 (data not shown), Ohio's prevalence has steadily dropped, and in 2006, it stood below the national prevalence at 6.7%.

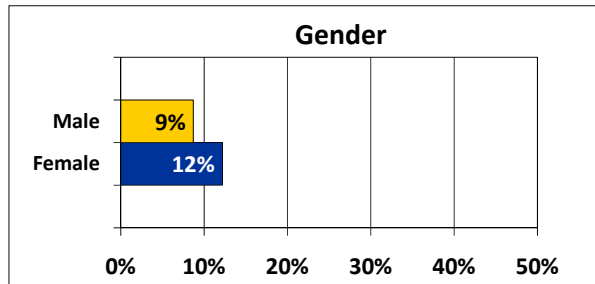


Regarding Cleveland, the prevalence of diabetes remained relatively stable at 10.3% in 2005 and 10.8% in 2006. More noteworthy is that the prevalence of diabetes in Cleveland stands 3% higher than the nation and 4% higher than the state. Diabetes prevalence is elevated in other comparable cities as well. In 2006, the prevalence of diabetes reached 12.3% in the Detroit-Livonia-Dearborn, Michigan Metropolitan Division and 8.0% in the Pittsburgh, Pennsylvania Metropolitan Statistical Area; other areas in and near Ohio also saw an elevated prevalence, with Youngstown-Warren-Boardman, Ohio-Pennsylvania at 11.2% and Akron, Ohio at 8.0% (data not shown).

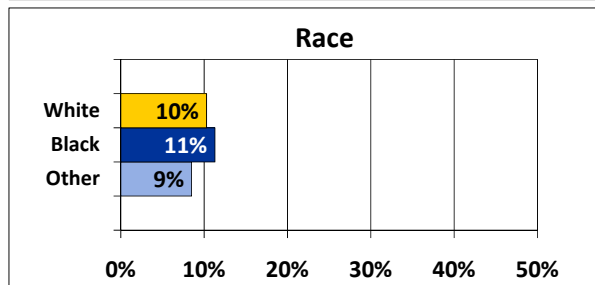


Diabetes by Demographic Characteristics, 2005-2006

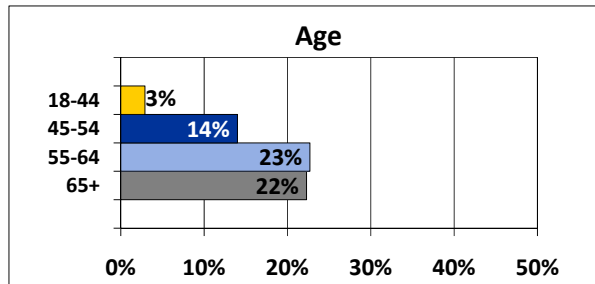
GENDER: State and national data (not shown) show that males and females report a similar prevalence of diabetes. In Cleveland, however, adult women reported a prevalence of diabetes that was 3% higher (12%) than men (9%).



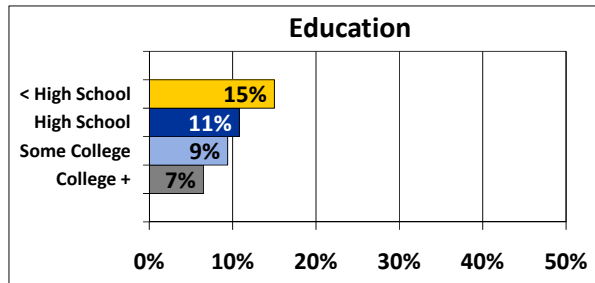
RACE: Black adults in Cleveland reported a prevalence of diabetes at 11%, followed by whites at 10%, and adults of other races/ethnicities (including Hispanics) at 9%. Though blacks are typically two times more likely than whites to have diabetes³, their reported prevalence in Cleveland was similar to whites. Hispanic adults were twice as likely than whites to have diabetes³; however, specific comparisons among these groups could not be made due to small sample sizes.



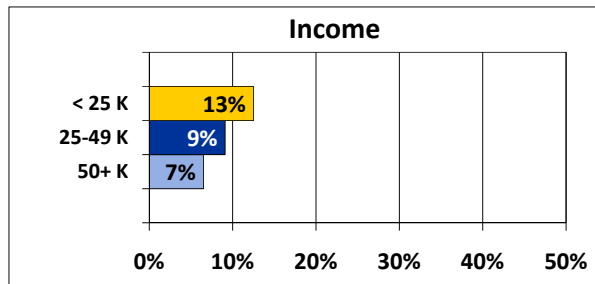
AGE: The prevalence of diabetes increases with age. In Cleveland, adults aged 18-44 reported a prevalence of diabetes of only 3%, followed by adults aged 45-54 who reported a prevalence of 14%. The prevalence of diabetes was highest among adults aged 55-64 and 65 and older, at 23% and 22% respectively.



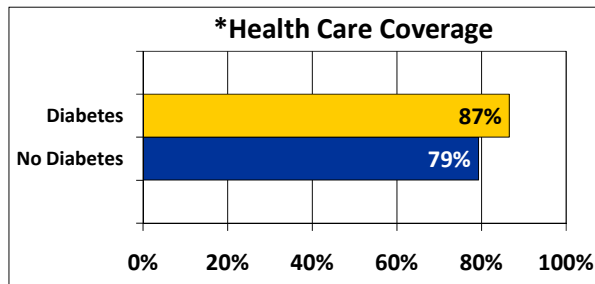
EDUCATION: Consistent with state and national data (not shown), the prevalence of diabetes in Cleveland decreased as education increased. Adults with less than a high school education reported the highest prevalence of diabetes at 15%, followed by adults with only a high school education at 11%. Adults with some college education and those with at least a college degree or more reported the lowest prevalence of diabetes, at 9% and 7% respectively.



INCOME: Like education, diabetes decreased as income increased. Adults reporting the least amount of income (< \$25,000) also reported the highest prevalence of diabetes (13%), followed by those making \$25,000 to \$49,000, who reported a prevalence of diabetes at 9%. Adults with an income of \$50,000 or more reported a prevalence of diabetes at only 7%. A similar trend is seen at the state and national levels (data not shown).



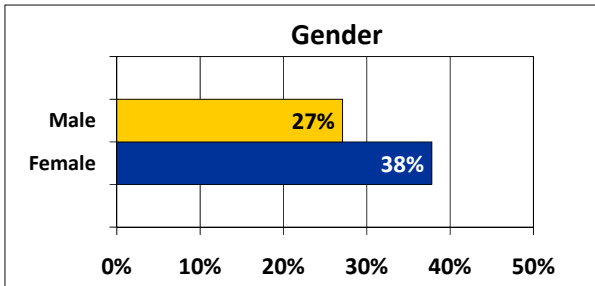
***HEALTH CARE COVERAGE:** Overall, 80% of Clevelanders reported having health care coverage (data not shown). However, more Cleveland diabetics (87%) reported having health care coverage when compared to non-diabetics (79%). Still, 13% of Cleveland diabetics did not report having health care coverage.



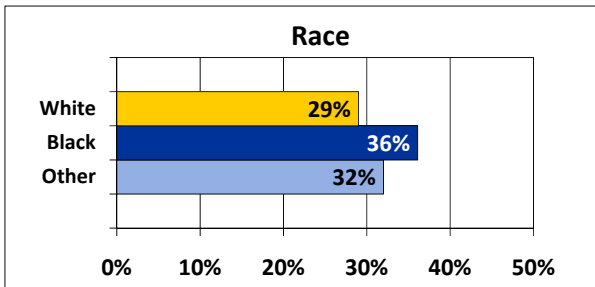
**The Health Care Coverage graph should be interpreted as the percentage of adults with and without diabetes who have health care coverage; all other graphs should be interpreted as the percentage of men, women, etc. who have diabetes.*

Diabetes Screening by Demographic Characteristics, 2005-2006

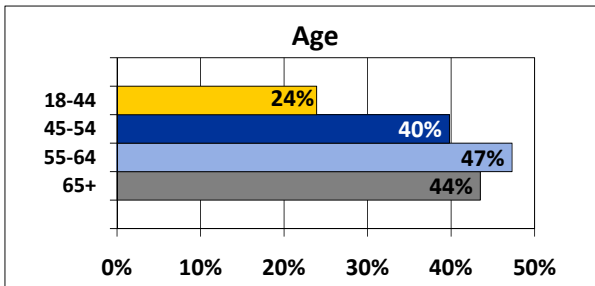
All adults, regardless of their reported diabetes status, were asked if they had a fasting glucose blood test to screen for diabetes, anytime in the past year. The following graphs show the demographic characteristics of those screened.



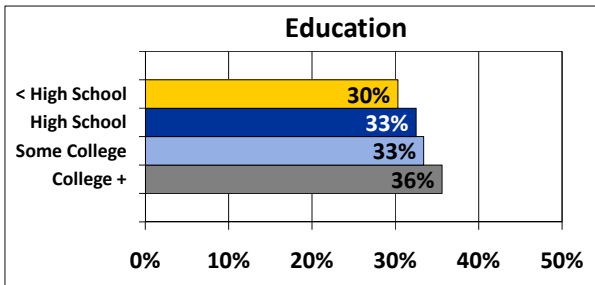
GENDER: A higher percentage of women than men in Cleveland were screened for diabetes in the past year (38% vs. 27%).



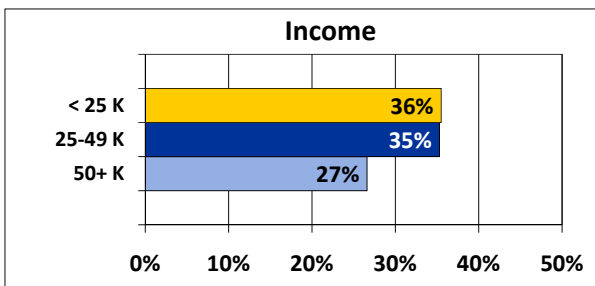
RACE: Black adults in Cleveland reported the highest percentage of diabetes screening in the past year (36%), followed by adults from other racial/ethnic groups (32%), and white adults (29%).



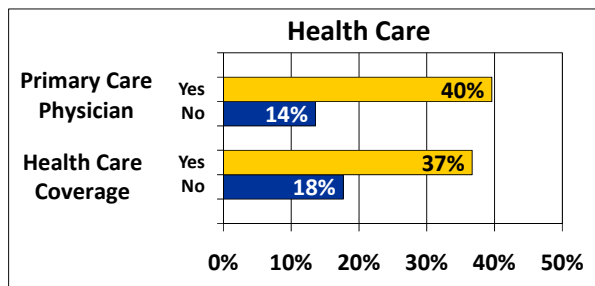
AGE: A large percentage of adults aged 45 and older were screened for diabetes in the past year, including 40% of those aged 45-54, 47% of those aged 55-64, and 44% of those 65 and older. In contrast, only 24% of adults aged 18-44 were screened for diabetes in the past year.



EDUCATION: Screening for diabetes increased with education. Adults with less than a high school education reported the lowest percentage of screening (30%), followed by adults with only a high school education and those with some college (both 33%). Adults with at least a college degree or more reported the highest percentage of screening (36%).



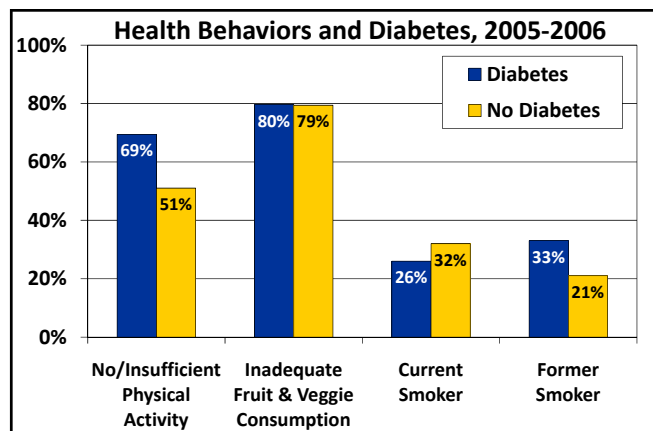
INCOME: In contrast to education, screening for diabetes decreased with income. A similar percentage of adults making less than \$25,000 and those making \$25,000 to \$49,000 reported being screened for diabetes in the past year (36% and 35% respectively). However, only 27% of those making higher incomes of \$50,000 or more reported being screened for diabetes in the past year.



HEALTH CARE COVERAGE: Both adults with a primary care physician and those with health care coverage were more than twice as likely to be screened for diabetes (40% and 37% respectively) than those without a primary care physician or health care coverage (14% and 18% respectively).

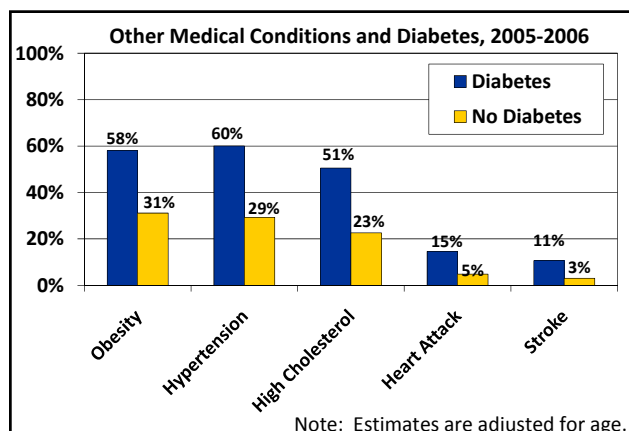
Risk Factors for Diabetes and Diabetes Complications

Health Behaviors



Various health behaviors can serve as either risk factors for diabetes or sources of complications for those who already have diabetes. Exercise and a healthy meal plan can help those with Type II diabetes control their blood glucose¹. However, nearly 70% of adults with diabetes in Cleveland reported little to no physical activity; in comparison, only half (51%) of adults without diabetes reported the same lack of activity. Regarding healthy eating, 80% of adults with diabetes reported inadequate fruit and vegetable consumption; adults without diabetes reported similar under-consumption, at 79%. Finally, smoking can cause an increase in morbidity and mortality among those with diabetes⁴. Although fewer adults with diabetes were current smokers (26%) as compared to those without diabetes (32%), more adults with diabetes had smoked at one time in their life (33%) as compared to those without diabetes (21%). Taken together, more adults with diabetes had ever smoked (59%) as compared to adults without diabetes (53%).

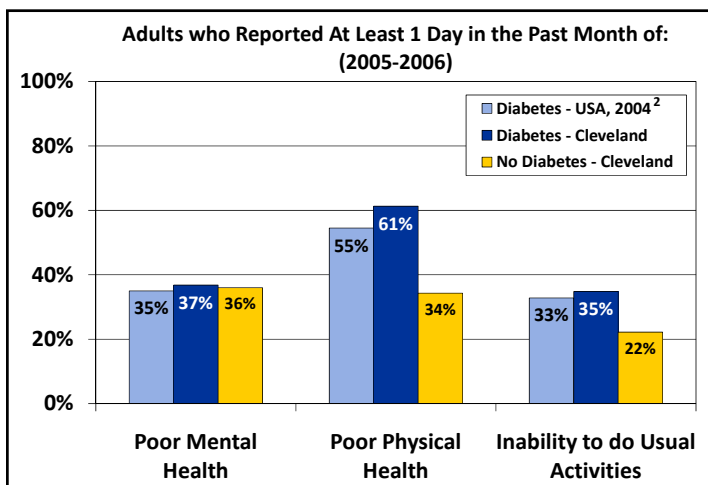
Medical Conditions



Many of the challenges surrounding the successful management of diabetes are a direct result of the co-morbid nature of the disease. Adults who are overweight or obese are at an increased risk for diabetes and related complications⁴. Additionally, diabetes is a major cause of heart disease and stroke, which account for nearly 65% of deaths among those with diabetes³. Related to these, hypertension, high cholesterol, and heart attacks persist as added threats for complications, morbidity, and mortality. Consistent with this, Cleveland adults with diabetes were over twice as likely than those without diabetes to also ever experience hypertension, high cholesterol, heart attack, and stroke; they were also nearly twice as likely to be obese.

Clevelanders with diabetes were more than twice as likely than those without diabetes to also ever experience hypertension, high cholesterol, heart attack, and stroke, all which add to the complexity of their disease.

Impact of Diabetes on Physical and Mental Health



In addition to particular medical conditions, diabetes can also largely impact how sufferers respond to general questions about their daily mental and physical health, and its impact on their ability to do their usual activities. When asked about their general health, Cleveland adults with diabetes reported similarly on their mental and physical health and interruption of daily activities as did adults with diabetes across the nation. Clevelanders also reported more days of poor physical health and an inability to do usual activities than did Cleveland adults without diabetes. Interestingly, however, Cleveland adults with diabetes reported similarly on their mental health as did Cleveland adults without diabetes.

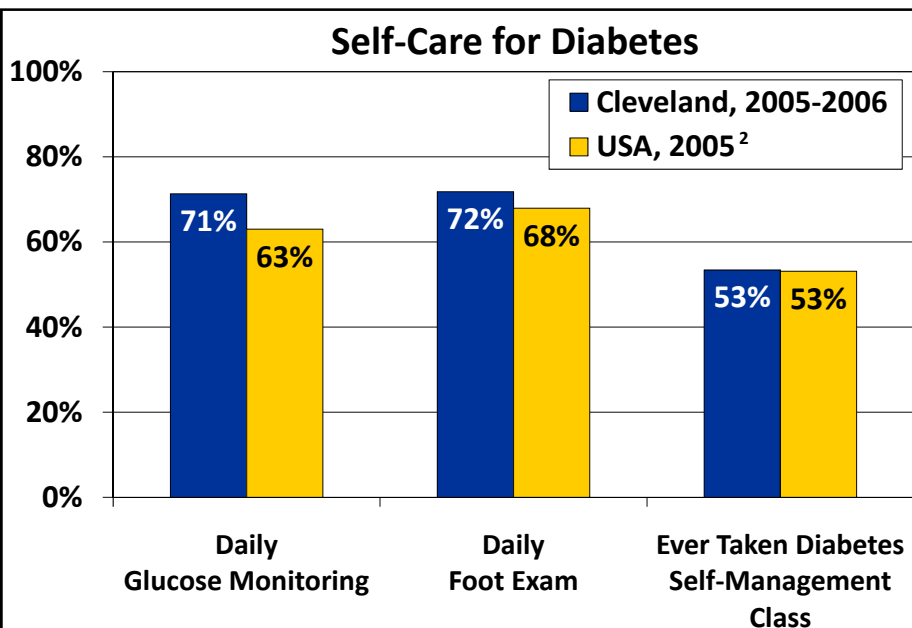
Diabetes Management

Self-Care

Adults with diabetes who optimize their own self-care can experience reduced risks for diabetes-related complications. Two important self-care routines include blood glucose monitoring and foot examinations¹.

When asked about their glucose monitoring, 71% of adults in Cleveland reported monitoring their blood glucose level at least once daily. This exceeds what was reported by adults with diabetes across the nation (63%). Regarding foot exams, 72% of Cleveland adults reported examining their feet for sores or irritations at least once daily. Again, this slightly exceeds what was reported by adults with diabetes across the nation (68%).

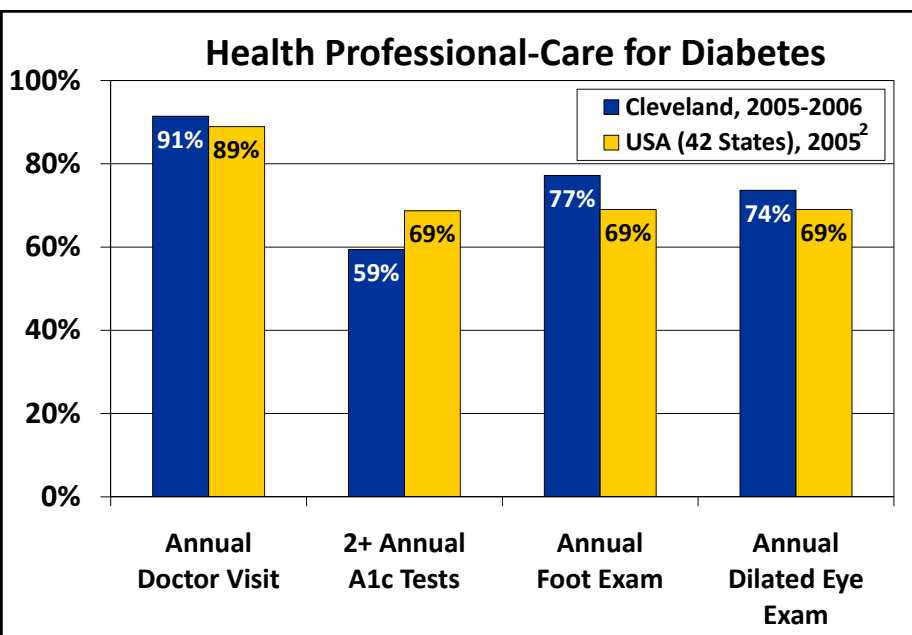
When asked if they had ever taken a course to learn about self-management of diabetes, adults in Cleveland responded identically to adults with diabetes across the nation; more than half (53%) reported ever taking a diabetes self-management course.



Health Professional-Care

In addition to self-care measures, adults with diabetes who seek routine care from a health professional and timely treatment for diabetes and diabetes-related complications can improve their overall prognosis in addition to their general experience with the disease. Routine care from a health-professional includes general checkups, A1c (“A one c”) tests (measuring average blood glucose over a three-month period), foot examinations, and dilated eye examinations¹.

The vast majority of Cleveland adults with diabetes reported having at least one annual checkup with a doctor, nurse, or other health professional (91%); similarly, the large majority of adults with diabetes across the nation also reported having at least one annual doctor visit (89%). Regarding A1c tests, only 59% of Clevelanders with diabetes reported having at least two annual A1c tests, compared to 69% of adults with diabetes across the nation. A larger majority, however, reported having at least one A1c test during the past year (78%, data not shown). Regarding annual foot and dilated eye exams, however, slightly more Clevelanders than adults nationally reported having at least one foot exam (77% vs. 69%) and at least one eye exam (74% vs. 69%).



Finally, many adults with diabetes regularly take pills or insulin as part of their prescribed treatment. In Cleveland, 42% of adults with diabetes reported taking diabetes pills, while 71% reported insulin use (data not shown).

Notes:

- Individuals who reported ever being diagnosed with gestational diabetes, pre-diabetes, or borderline diabetes were excluded from all analyses.
- Other cities used to make comparisons to Cleveland (see page 1) were chosen based on their similar socio-economic makeup, post-industrial status, weather conditions, and/or Midwestern location.
- All sample sizes are at least N=30.
- Confidence intervals are provided for overall diabetes prevalence; for confidence intervals for all other estimates, please refer to the data tables on the Center for Health Promotion Research website (www.case.edu/affil/healthpromotion) available in May 2008.

References:

1. Centers for Disease Control and Prevention. National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2005. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005.
2. Centers for Disease Control and Prevention: National Diabetes Surveillance System. Available online at: <http://www.cdc.gov/diabetes/statistics/index.htm>. Retrieved [September 10, 2007].
3. Centers for Disease Control and Prevention. Preventing chronic diseases: Investing wisely in health - Preventing diabetes and its complications. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005.
4. DeFiore-Hyrmer J., Duffy R., and Kim S. (2004 April). The Burden of Diabetes in Ohio, Columbus, OH: Chronic Disease and Behavioral Epidemiology, Ohio Department of Health.

Local Data Source: Cleveland Steps Behavioral Risk Factor Surveillance Survey (Steps-BRFSS), 2005-2006.

National/State/Comparison City Data Source: Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1995-2006. (See website: <http://apps.nccd.cdc.gov/brfss/>)

Methodology: The Steps-BRFSS is a point-in-time survey modeled after the CDC's state-based system of health surveys administered annually by each state. The BRFSS is conducted via telephone interviews of randomly selected adults from randomly sampled, telephone-equipped households. A total of 2,657 adults in Cleveland were surveyed between 2005 and 2006. All participants' answers were aggregated and weighted, based on Census population figures, so that the sample represents all Cleveland adults. For more information on the methodology, including the sample description, as well as variable definitions used in this report, please refer to the Cleveland Steps Behavioral Risk Factor Surveillance Survey Methodology Brief, available on the Center for Health Promotion Research website at: www.case.edu/affil/healthpromotion.

Funding Source: The Steps-BRFSS is funded by *Steps to a Healthier Cleveland*. Under the direction of the Cleveland Department of Public Health, *Steps to a Healthier Cleveland* is a city-wide program designed to engage Clevelanders to live longer, better, and healthier lives. A part of the U.S. Department of Health and Human Service's *Steps to a HealthierUS* (5-year) Cooperative Agreement, the local program is one of 40 funded communities nationwide implementing chronic disease prevention and health promotion efforts. The aim of this initiative is to reduce the burden of diabetes, overweight/obesity, and asthma, and to address the three related risk factors of physical inactivity, poor nutrition, and tobacco use. In order to help inform the direction of programmatic efforts and to evaluate their effectiveness, the Center for Health Promotion Research at Case Western Reserve University is responsible for managing the collection of local data via the Steps-BRFSS. For more information on *Steps* and the Cleveland Department of Public Health, please visit: <http://www.clevelandhealth.org/steps>.

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