

Eye Care Among Adults with Diabetes in Florida, 2001-2003



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Diabetes can harm vision and even cause blindness. Diabetes inhibits the body from using sugar properly, which can affect the blood vessels (arteries and veins) in the eyes. Diabetic retinopathy is an eye disease most common among people with diabetes. Diabetic retinopathy harms the blood vessels in the retina, which may result in blurry vision. The longer one has diabetes, the more likely one will get diabetic retinopathy. There are often no signs in the early stages of diabetes; vision will not change much and often there is no pain. Unless they undergo an eye exam, most people are unaware that they have eye damage. However, severe vision loss can usually be prevented if treated early and appropriately. The best time to treat diabetic eye disease is before the onset of symptoms. To detect or prevent eye-related complications, an annual eye exam is recommended for those with diabetes.¹

The focus of this report is the prevalence of: 1) having an annual eye exam² and 2) having been told that diabetes has affected the eyes³ among adults with diagnosed diabetes⁴ in Florida. Combined data used for this analysis are from the 2001-2003 Florida State Behavioral Risk Factor Surveillance System (BRFSS) surveys and are based on a sample size of 15,871 respondents, of whom 1,335 reported being told by their doctors that they have diabetes.

Prevalence of adults with diagnosed diabetes who had an eye exam within the past year.

Among adults with diagnosed diabetes, 77.2 percent report having had their eyes examined within the past year. Significant differences in the prevalence of having had an exam are observed among adults with diabetes by age and marital status. Adults ages 18 to 44 are significantly less likely to have had an eye exam (63.6 percent) than are those ages 45 to 64 (78.2 percent) and those age 65 and older (80.7 percent). (See Figure 1.)

Adults who are not currently married are significantly less likely to have had an eye exam within the past year (70.8 percent) than are married adults (80.8 percent). No significant differences in having had an eye exam were observed by sex, race/ethnicity, education, or income. (See Table 1.)

Prevalence of adults with diagnosed diabetes who have been told by a doctor that diabetes has affected their eyes.

Among adults with diagnosed diabetes, 25.2 percent have been told by a doctor that diabetes has affected their eyes. Significant differences were observed by income and by race/ethnicity. Adults with an annual income of less than \$25,000 are significantly more likely to have been told their eyes were affected (34.7 percent) than were adults with an annual income from \$25,000 to \$50,000 (19.9 percent) and adults with an annual income exceeding \$50,000 (15.1 percent). (See Figure 2.)

Non-Hispanic Whites were significantly less likely to have been told by a doctor that their eyes were affected by diabetes (21.6 percent) than were non-Hispanic Blacks (36.8 percent). No other significant differences were observed among adults who reported being told that their eyes were affected by diabetes. (See Table 2.)

Figure 1: Prevalence of Having Had an Eye Exam in the Past Year Among Adults with Diabetes, Florida, 2001-2003

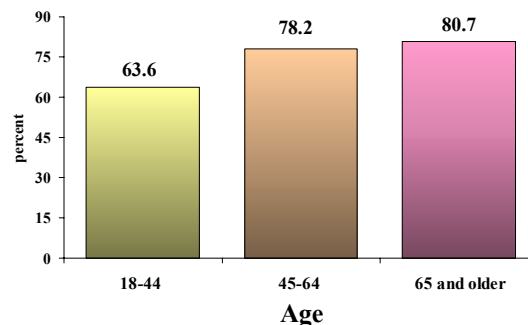
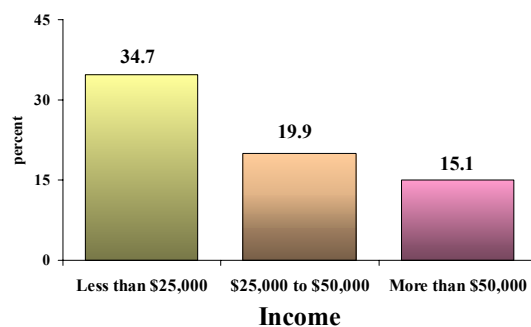


Figure 2: Prevalence of Having Diabetes Affect the Eyes Among Adults, Florida, 2001-2003



Conclusion: Among adults with diabetes, those ages 18-44 and those not married are significantly less likely to have had an eye exam within the past year than are those ages 45 and older and those who are married. Non-Hispanic Blacks and adults with annual incomes less than \$25,000 are more likely to have been told their eyes were affected by diabetes than were Non-Hispanic Whites and those with annual incomes exceeding \$25,000. The higher prevalence of diabetes retinopathy among subpopulations reflects poor management of diabetes.

The Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS survey is a telephone survey of civilian, non-institutionalized adults (age 18 and older) with telephones, designed to monitor trends in risk behaviors related to preventable chronic diseases and conditions. Respondents are asked about health status, including diabetes and blood pressure; health behaviors, such as nutrition, physical activity, tobacco, and alcohol use; use of screening services, such as mammography; and access to health insurance and health care.

The BRFSS data are weighted. Because the BRFSS is a random survey, the results from the county survey are slightly different than results from the state survey. For more information about the Florida BRFSS, please visit our web site at http://www.doh.state.fl.us/disease_ctrl/epi/brfss/index.htm. For more information about the strengths and limitations of the BRFSS, please visit The Centers for Disease Control and Prevention web site at www.cdc.gov/brfss/.

¹ For more information about diabetes and eye care, please visit the National Diabetes Information Clearinghouse (NDIC) web site at http://diabetes.niddk.nih.gov/dm/pubs/complications_eyes/.

² Having an annual eye exam among adults with diabetes was assessed by the following question, "When was the last time you had an eye exam in which the pupils were dilated?"

³ The prevalence of adults whose eyes have been affected by diabetes was assessed by the following question, "Has a doctor ever told you that diabetes has affected your eyes, or that you had retinopathy?"

⁴ Diabetes was assessed by the following question, "Have you ever been told by a doctor that you have diabetes?"

*Confidence intervals for Tables 1 and 2 are constructed utilizing the Statistical Analysis Software (SAS) 9.1 version.

Table 1: Prevalence of having had an annual eye examination among adults with diabetes, Florida, 2001-2003

	Adults with Diabetes		
	%	95% CI*	
All	77.2	74.1	80.2
Sex			
Male	78.1	73.8	82.4
Female	76.1	71.8	80.5
Age Group			
18-44	63.6	53.8	73.3
45-64	78.2	73.5	82.9
65+	80.7	76.5	84.9
Race/Ethnicity			
White, non-Hispanic	76.6	73.1	80.1
Black, non-Hispanic	77.5	68.9	86.2
Hispanic	79.4	70.6	88.2
Marital Status			
Not married	70.8	65.6	76.0
Married	80.8	77.1	84.5
Education			
Less than high school	70.1	61.8	78.5
High school, GED	75.2	69.7	80.7
More than high school	80.6	76.6	84.6
Annual Household Income			
Less than \$25,000	71.8	66.4	77.2
\$25,000—\$50,000	81.2	75.9	86.6
More than \$50,000	81.5	74.9	88.0

Table 2: Prevalence of adults with diabetes who have been told by a doctor that diabetes has affected their eyes, Florida, 2001-2003

	Adults with Diabetes		
	%	95% CI*	
All	25.2	22.0	28.4
Sex			
Male	26.0	21.2	30.7
Female	24.4	20.2	28.6
Age Group			
18-44	24.7	15.7	33.7
45-64	26.4	21.0	31.9
65+	24.6	20.4	28.8
Race/Ethnicity			
White, non-Hispanic	21.6	18.3	24.9
Black, non-Hispanic	36.8	26.4	47.2
Hispanic	26.0	16.2	35.8
Marital Status			
Not married	29.3	23.7	34.8
Married	23.0	19.1	26.8
Education			
Less than high school	35.1	26.2	44.0
High school, GED	23.9	18.6	29.2
More than high school	22.6	18.2	27.0
Annual Household Income			
Less than \$25,000	34.7	28.6	40.7
\$25,000—\$50,000	19.9	14.9	24.9
More than \$50,000	15.1	9.3	20.9

For more information about the BRFSS survey, please contact:

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