

# Diabetes

**Definition:** Respondents ever told by a doctor that they have diabetes, excluding women who were told this while they were pregnant.

## Prevalence of Diabetes

- South Dakota 6.9%
- Nationwide median 8.7%

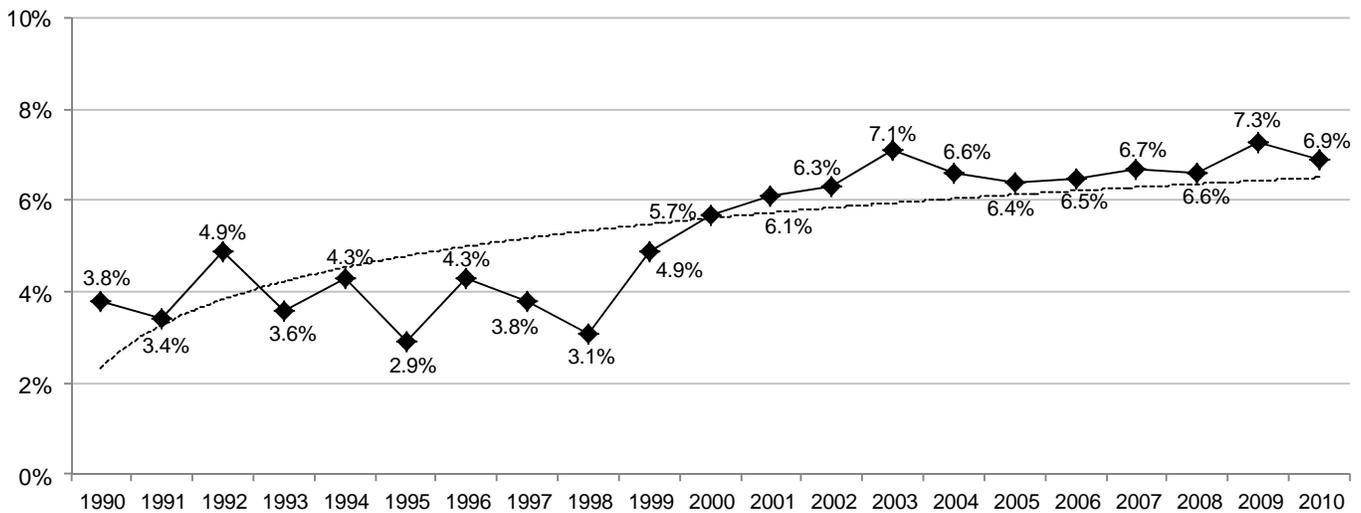
## Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for adults, ages 18 and over, who have diabetes.

## Trend Analysis

Since 1990, the overall prevalence of diagnosed diabetes has been increasing. This includes a low of 2.9 percent in 1995 and a high of 7.3 percent in 2009.

**Figure 15**  
**Percent of Respondents Who Were Told They Have Diabetes, 1990-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 1990-2010

**Table 12  
Respondents Who Were Told They Have Diabetes, 2010**

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
<b>Total</b>	<b>6,722</b>	<b>6.9</b>	<b>(6.2-7.6)</b>	<b>2,654</b>	<b>7.5</b>	<b>(6.5-8.8)</b>	<b>4,068</b>	<b>6.2</b>	<b>(5.5-7.1)</b>
<b>Age</b>									
18-24	211	0.6	(0.1-3.2)	102	1.0	(0.1-6.5)	109	0.1	(0.0-0.9)
25-34	581	1.3	(0.6-2.9)	242	0.5	(0.2-1.6)	339	2.2	(0.9-5.5)
35-44	782	3.6	(2.1-6.0)	309	4.1	(1.8-9.0)	473	3.0	(1.8-5.1)
45-54	1,291	6.3	(4.8-8.2)	547	7.8	(5.3-11.3)	744	4.8	(3.4-6.6)
55-64	1,466	11.4	(9.6-13.4)	618	12.7	(10.0-16.1)	848	9.9	(7.8-12.5)
65-74	1,169	14.0	(11.8-16.5)	468	15.6	(12.2-19.8)	701	12.5	(10.0-15.5)
75+	1,185	17.4	(14.9-20.2)	359	21.7	(17.2-26.9)	826	14.7	(11.9-17.9)
<b>Race</b>									
White	5,692	6.7	(6.0-7.5)	2,255	7.6	(6.5-8.9)	3,437	5.8	(5.0-6.7)
American Indian	785	12.2	(9.6-15.3)	301	8.9	(6.0-13.0)	484	15.1	(11.1-20.2)
<b>Region</b>									
Southeast	1,352	6.2	(5.0-7.7)	530	7.6	(5.6-10.3)	822	4.9	(3.6-6.5)
Northeast	1,441	6.4	(5.3-7.7)	564	7.2	(5.5-9.5)	877	5.6	(4.3-7.2)
Central	1,292	7.9	(6.3-9.9)	508	8.2	(5.7-11.8)	784	7.6	(5.8-10.0)
West	1,330	7.2	(5.9-8.6)	539	7.3	(5.5-9.6)	791	7.0	(5.5-9.0)
American Indian Counties	1,307	10.7	(9.0-12.7)	513	8.2	(6.0-11.0)	794	13.4	(10.9-16.4)
<b>Household Income</b>									
Less than \$15,000	659	13.9	(10.9-17.6)	230	10.8	(6.8-16.7)	429	16.7	(12.7-21.7)
\$15,000-\$19,999	421	10.7	(7.7-14.6)	152	10.0	(5.9-16.6)	269	11.2	(7.5-16.5)
\$20,000-\$24,999	564	11.2	(8.5-14.6)	217	10.7	(6.8-16.4)	347	11.7	(8.2-16.3)
\$25,000-\$34,999	773	9.7	(7.0-13.2)	336	10.4	(6.6-15.9)	437	8.7	(5.6-13.5)
\$35,000-\$49,999	1,007	7.3	(5.7-9.3)	425	6.2	(4.1-9.1)	582	8.5	(6.2-11.6)
\$50,000-\$74,999	1,027	4.5	(3.4-5.9)	438	6.3	(4.4-9.0)	589	2.6	(1.6-4.2)
\$75,000+	1,179	3.7	(2.7-5.1)	558	5.7	(4.0-8.2)	621	1.5	(0.8-2.6)
<b>Education</b>									
Less than High School	606	11.9	(8.4-16.7)	271	11.3	(6.5-18.9)	335	12.9	(9.2-18.0)
High School or G.E.D.	2,185	7.8	(6.6-9.1)	895	7.1	(5.6-9.1)	1,290	8.5	(6.9-10.5)
Some Post-High School	1,880	6.4	(5.3-7.6)	692	6.8	(5.2-9.0)	1,188	6.0	(4.7-7.6)
College Graduate	2,041	5.3	(4.3-6.5)	793	7.5	(5.7-9.7)	1,248	3.3	(2.5-4.5)
<b>Marital Status</b>									
Married/Unmarried Couple	4,052	6.3	(5.6-7.2)	1,737	7.7	(6.5-9.1)	2,315	4.9	(4.1-6.0)
Divorced/Separated	850	13.3	(9.9-17.5)	342	14.6	(8.9-23.0)	508	12.1	(9.1-16.0)
Widowed	1,064	15.8	(13.4-18.5)	165	15.5	(10.2-22.9)	899	15.9	(13.3-18.9)
Never Married	746	3.2	(2.2-4.7)	406	3.8	(2.2-6.2)	340	2.5	(1.6-4.0)
<b>Children Status</b>									
Children in Household	1,172	1.6	(0.9-2.8)	441	1.8	(0.7-4.5)	731	1.4	(0.8-2.3)
No Children in Household	401	2.6	(1.3-4.9)	211	1.9	(0.7-5.0)	190	3.6	(1.4-8.7)

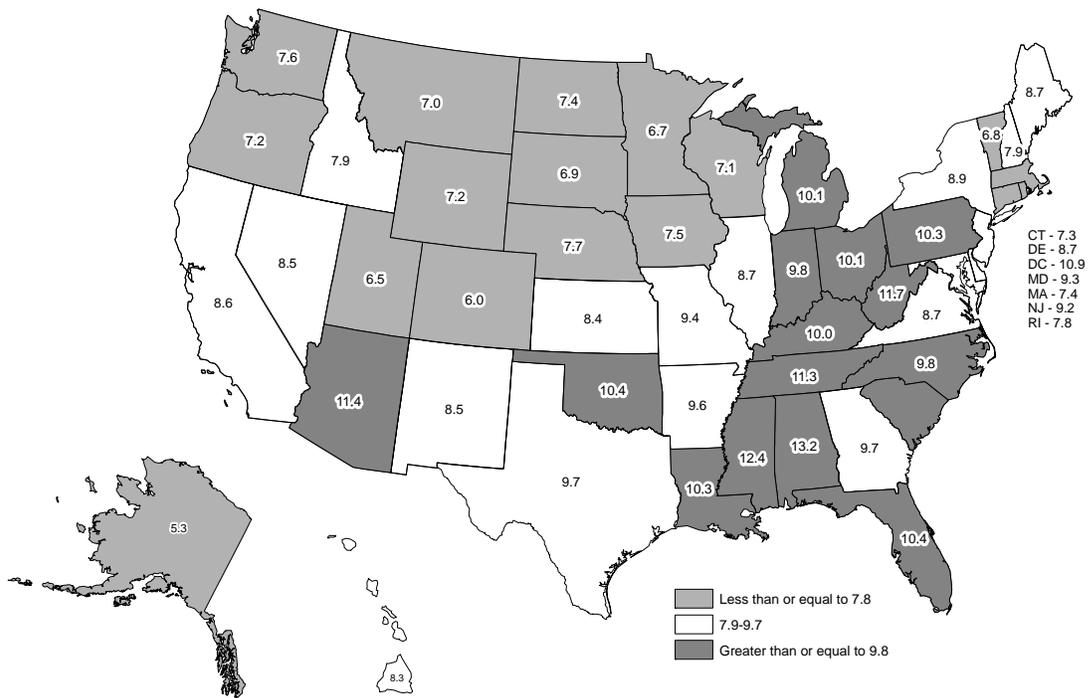
Note: \*Results based on sample sizes less than 100 have been suppressed

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

## National Statistics

The national median for respondents who have diabetes was 8.7 percent. South Dakota had 6.9 percent of respondents who have diabetes. Alaska had the lowest percent of respondents who have diabetes with 5.3 percent, while Alabama had the highest with 13.2 percent.

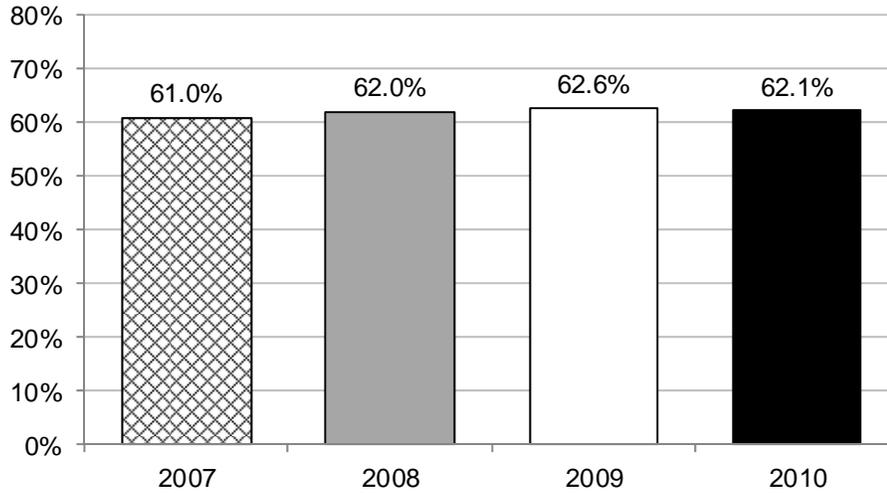
**Figure 16**  
**Nationally, Respondents Who Were Told They Have Diabetes, 2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

Figure 17, below, displays the percent of all respondents who had a test for high blood sugar or diabetes within the past three years. The majority of respondents for all four years stated that they had a blood sugar or diabetes test within the past three years.

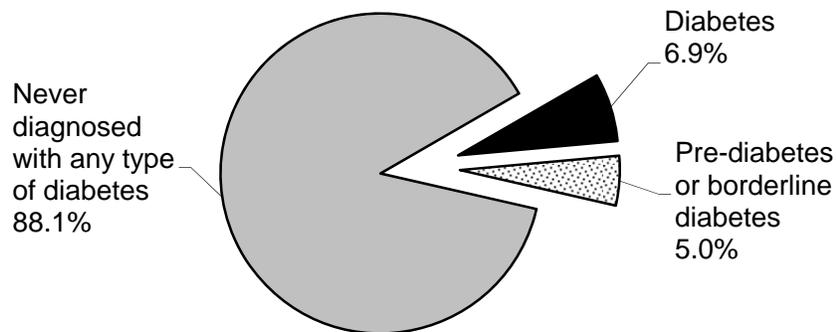
**Figure 17**  
**Respondents Who Have Had a Test for High Blood Sugar or Diabetes Within the Past 3 Years, 2007-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2007- 2010

Figure 18, below, displays the diabetic status of all respondents for 2010. The majority of respondents, 88.1 percent, stated that they have never been diagnosed with any type of diabetes.

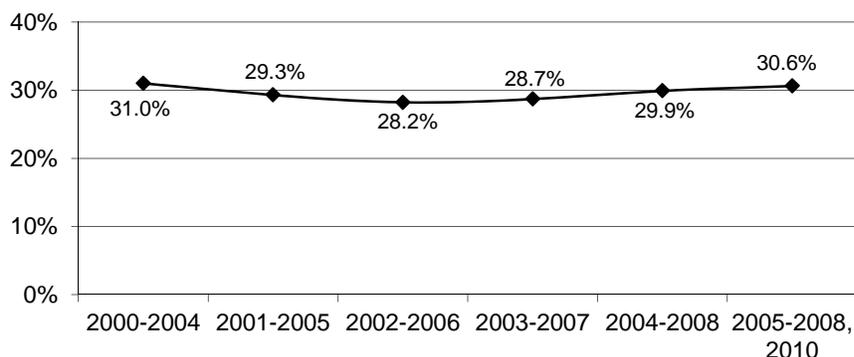
**Figure 18**  
**Respondents' Diabetic Status, 2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

Figure 19, below, shows the percent of respondents who are taking insulin for their diabetes. In recent years, the percent of respondents taking insulin has been increasing.

**Figure 19  
Respondents Who Are Taking Insulin, 2000-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Since 2000, the majority of respondents with diabetes stated that they check their blood for glucose or sugar, one or more times per day, as shown below in Table 13.

Survey Year	# Respondents	1+ times per day	Less than once a day
2005-2008, 2010	3,330	63.7%	36.3%
2004-2008	3,079	64.4%	35.6%
2003-2007	2,816	63.7%	36.3%
2002-2006	2,512	62.3%	37.7%
2001-2005	2,273	61.1%	38.9%
2000-2004	1,941	59.4%	40.6%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Since 2000, the majority of respondents stated that they check their feet one or more times per day as shown in Table 14. In the combined survey years of 2005-2008, 2010, 27.3 percent of the respondents stated that they check their feet less than once a day, an increase from 24.4 percent in 2004-2008.

Survey Year	# Respondents	1+ times per day	Less than once a day
2005-2008, 2010	3,288	72.7%	27.3%
2004-2008	3,050	75.6%	24.4%
2003-2007	2,785	78.0%	22.0%
2002-2006	2,475	78.7%	21.3%
2001-2005	2,239	78.6%	21.4%
2000-2004	1,909	76.5%	23.5%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Since 2000, the majority of respondents stated that they had seen a health professional for their diabetes two or more times a year as shown in Table 15. In the combined survey years of 2005-2008, 2010, 23.7 percent of the respondents stated that they had seen a health professional for their diabetes less than two times a year, an increase from 22.5 percent in 2004-2008.

Survey Year	# Respondents	2+ times	Less than two times
2005-2008, 2010	3,307	76.3%	23.7%
2004-2008	3,058	77.5%	22.5%
2003-2007	2,792	79.0%	21.0%
2002-2006	2,485	80.2%	19.8%
2001-2005	2,252	81.0%	19.0%
2000-2004	1,922	81.7%	18.3%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Since 2000, the majority of respondents stated they had a health professional check their hemoglobin A1c two or more times a year as shown in Table 16. *The Healthy People 2010 objective 5-12 is to increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least once a year.*

Survey Year	# Respondents	2+ times	Less than two times	Never heard of test
2005-2008, 2010	3,173	75.4%	22.8%	1.8%
2004-2008	2,927	75.0%	22.8%	2.2%
2003-2007	2,680	76.4%	22.0%	1.6%
2002-2006	2,384	76.7%	22.1%	1.2%
2001-2005	2,144	76.9%	21.7%	1.4%
2000-2004	1,816	75.9%	22.5%	1.6%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Since 2000, the majority of respondents stated they have had a health professional check their feet for sores or irritations as shown in Table 17. *The Healthy People 2010 objective 5-14 is to increase the proportion of adults with diabetes who have at least an annual foot examination.*

Survey Year	# Respondents	Yes	No
2005-2008, 2010	3,302	74.1%	25.9%
2004-2008	3,056	73.4%	26.6%
2003-2007	2,793	73.0%	27.0%
2002-2006	2,491	74.2%	25.8%
2001-2005	2,251	74.0%	26.0%
2000-2004	1,916	74.7%	25.3%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

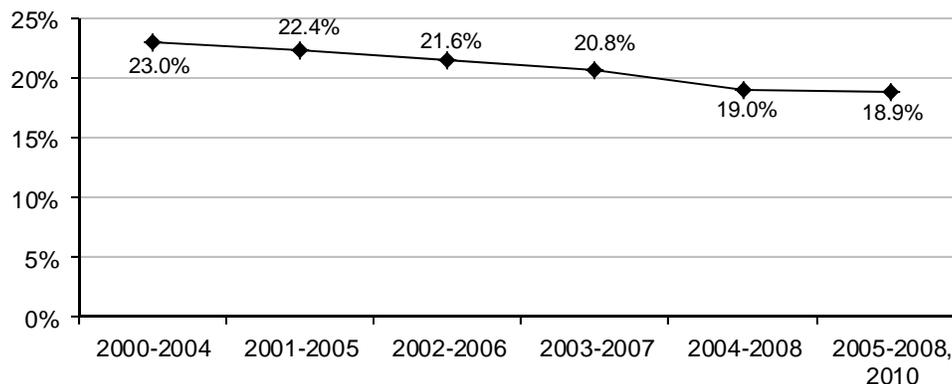
Since 2000, the majority of respondents have had an annual eye exam where their pupils were dilated as shown in Table 18. *The Healthy People 2010 objective 5-13 is to increase the proportion of adults with diabetes who have an annual dilated eye examination.*

Survey Year	# Respondents	Yes	No
2005-2008, 2010	3,347	74.2%	25.8%
2004-2008	3,094	75.1%	24.9%
2003-2007	2,827	75.0%	25.0%
2002-2006	2,512	75.5%	24.5%
2001-2005	2,272	76.6%	23.4%
2000-2004	1,951	77.3%	22.7%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Figure 20, below, shows the percent of respondents who were told that diabetes has affected their eyes or that they have retinopathy. Since 2000, this percent has been decreasing to a low of 18.9 percent in the combined survey years of 2005-2008, 2010.

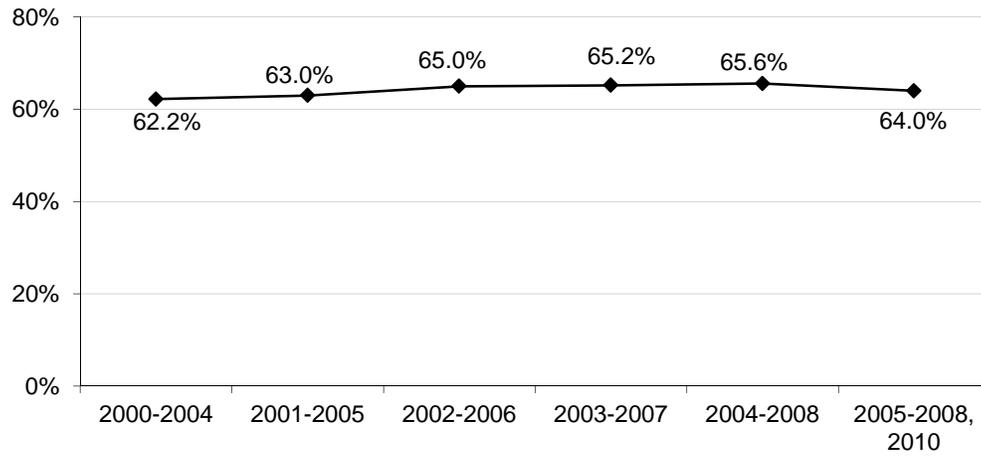
**Figure 20  
Respondents Told That Diabetes Has Affected Eyes or They Have  
Retinopathy, 2000-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010

Figure 21, on the next page, displays the percent of respondents that have taken a course or class on how to manage their diabetes. From 2000 to 2008, this percent had been increasing, however, in the combined survey years of 2005-2008, 2010, respondents that have taken a course on managing diabetes dropped to 64.0 percent. *The Healthy People 2010 objective 5-1 is to increase the proportion of persons with diabetes who receive formal diabetes education.*

**Figure 21**  
**Respondents Who Have Taken a Course or Class on How to**  
**Manage Their Diabetes, 2000-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2010