

2013 Diabetes and Smoking Data Summary

Smoking may increase the risk of diabetes^{1,2} and diabetes complications, including cardiovascular disease-related mortality³⁻⁵, coronary artery disease⁶, stroke⁷, nephropathy⁸, neuropathy⁹, and retinopathy¹⁰. Diabetics who smoke have an increased prevalence of peripheral artery disease, which can lead to lower extremity amputations.¹¹

Smoking among diabetics decreases blood glucose control and increases insulin resistance.¹²⁻¹⁴ Additionally, tobacco use increases hemoglobin A1C levels, an indicator of chronically-elevated blood glucose.¹⁵

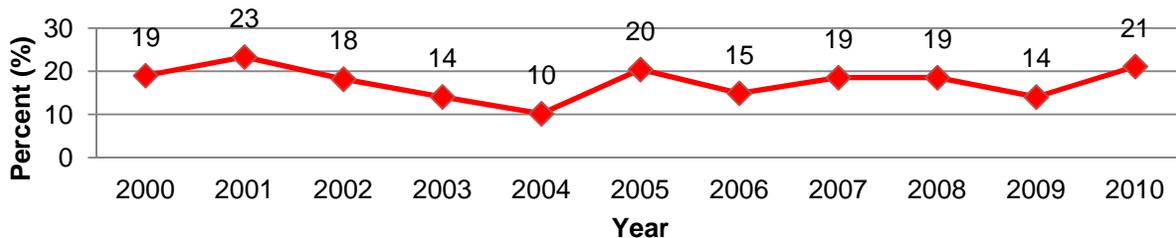
SMOKING AMONG ADULT GEORGIA DIABETICS

Healthy People 2020 has the objective of reducing the national prevalence of current cigarette smokers to 12.0%.¹⁶ In 2011, of the approximately 10.2% (734,200 persons) of Georgia adults that had been diagnosed with diabetes, **16.8% (123,000 persons) were current smokers.** (Table 1)

| | Percent % (95% CI) | Estimated Number of Diabetics |
|----------------|-----------------------|-------------------------------|
| Current Smoker | 16.8 (14.1, 20.0) | 123,000 |
| Former Smoker | 34.6 (31.2, 38.2) | 253,400 |
| Never Smoked | 48.6 (45.0, 52.2) | 355,600 |

Time Trend

Figure 1. Prevalence of Smoking among Georgia Adult Diabetics by Year, 2000-2010



Data Source: Behavioral Risk Factor Surveillance System (2000-2010)

- Although the prevalence of adult Georgia diabetics who currently smoke had significant fluctuations between 2000 and 2010, the difference in the prevalence of adult Georgia diabetics currently smoking in 2010 was not significantly different than the smoking prevalence in 2000



2013 Diabetes and Smoking Data Summary

Geography

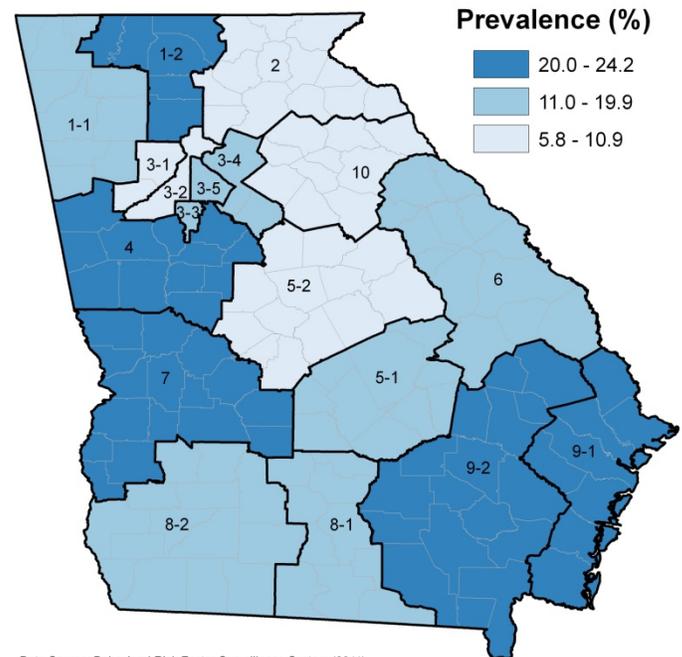
The following Public Health Districts had the highest prevalence of adult diabetics who currently smoked cigarettes in 2011 (Map 1):

- 4 (LaGrange) at 24.2%, or 14,300 persons
- 9-2 (Waycross) at 23.3%, or 12,300 persons
- 1-2 (Dalton) at 22.5%, or 7,800 persons
- 7 (Columbus) at 21.6%, or 7,500 persons
- 9-1 (Savannah) at 21.3%, or 9,000 persons

The following Public Health Districts had the lowest prevalence of adult diabetics who currently smoked cigarettes in 2011 (Map 1):

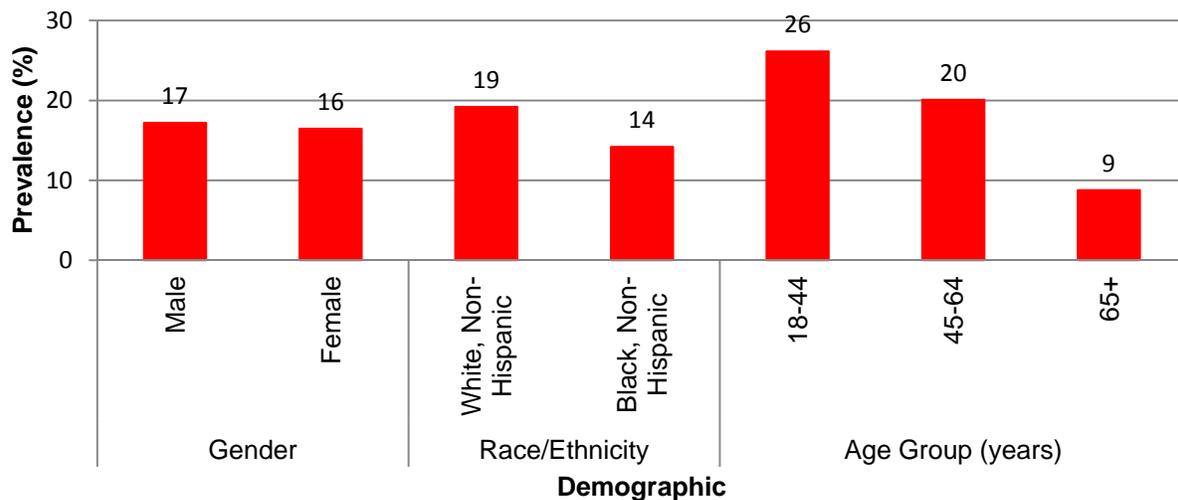
- 10 (Athens) at 5.8%, or 2,000 persons
- 2 (Gainesville) at 9.5%, or 4,700 persons
- 3-2 (Fulton) at 9.7%, or 4,000 persons
- 5-2 (Macon) at 9.7%, or 4,200 persons
- 3-1 (Cobb-Douglas) at 10.9%, or 4,300 persons

Map 1. Prevalence of Currently Smoking among Adult Diabetics, by Health District, Georgia, 2011



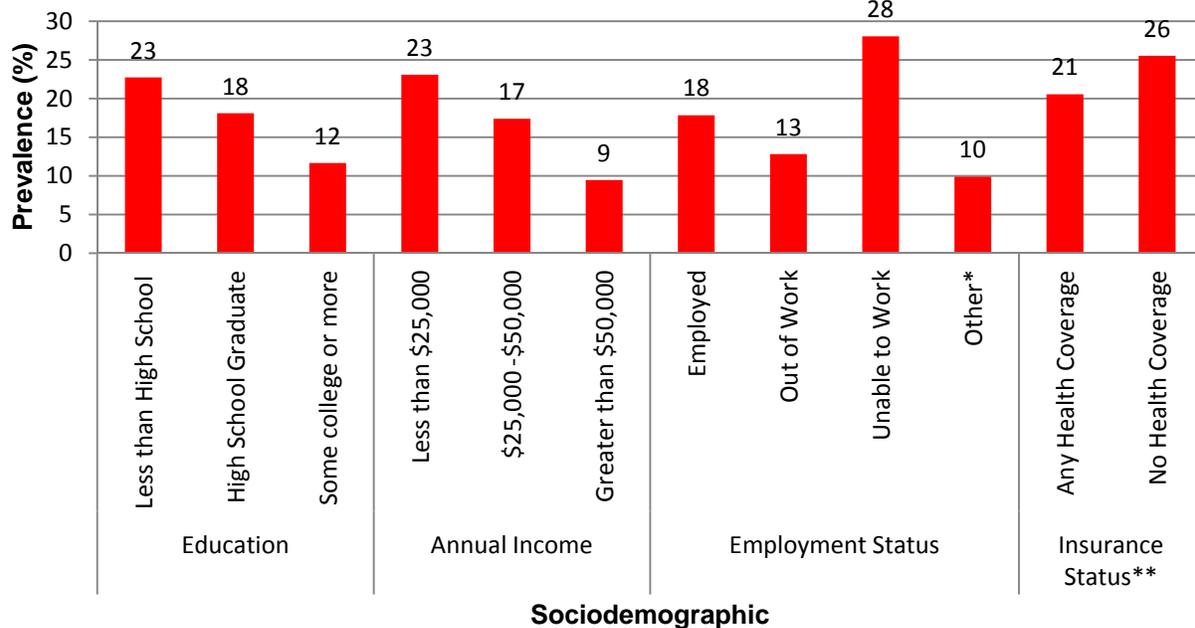
Demographics

Figure 2. Prevalence of Smoking among Adult Diabetics by Demographic, Georgia, 2011



- There were no significant differences in the prevalence of smoking among adult Georgia diabetics by gender or race/ethnicity. (Figure 2)
- Adult diabetics that were 18-44 years old (26%; 29,900 persons) or 45-64 (20%; 69,000 persons) years old had **3 and 2.3 times** the prevalence of currently smoking than adult diabetics 65 years of age or older, respectively.

Figure 3. Prevalence of Smoking among Adult Diabetics by Sociodemographic, Georgia, 2011



*Other Employment Status includes homemakers, students and retired individuals
 **Adult diabetics 65 years of age and older were excluded
 Data Source: Behavioral Risk Factor Surveillance System (2011)

- Adult diabetics that had not graduated from high school (23%; 45,900 persons) had a **95% greater prevalence** of smoking than diabetics that had some college or more (12%; 202,100 persons). (Figure 3)
- Adult diabetics with annual incomes less than \$25,000 (23%; 74,200 persons) and incomes of \$25,000-\$50,000 (17%; 29,300 persons) had a **144% and 84% greater prevalence** of smoking, respectively, than diabetics with annual incomes greater than \$50,000 (9%; 12,100 persons).
- Adult diabetics that were employed (18%; 37,600 persons) did **not have a significantly different prevalence** of smoking than diabetics who were out of work (13%; 5,100 persons), unable to work (28%; 49,700 persons), or with other (10%; 29,600 persons) employment statuses.
- There was **not a significant difference in the prevalence** of smoking among adult Georgia diabetics by insurance status.

REFERENCES

- ¹Rimm E, Manson J et al. "Cigarette smoking and the risk of diabetes in women." *American Journal of Public Health* 83: 211-214, 1993.
- ²Rimm E, Chan J et al. "Prospective study of cigarette smoking, alcohol use, and the risk of diabetes in men." *British Medical Journal* 310: 555-559, 1995.
- ³Moy C et al. "Insulin-dependent diabetes mellitus mortality: the risk of cigarette smoking." *Circulation* 82: 37-43, 1990.
- ⁴Sowers J. "Diabetes Mellitus and cardiovascular disease in women." *Archives of Internal Medicine* 158:617-621, 1998.
- ⁵Stamler J et al. "Diabetes, other risk factors, and 12-year cardiovascular mortality for men screened in the Multiple Risk Factor Intervention Trial." *Diabetes Care* 16:434-444, 1993.
- ⁶Meigs J et al. "Metabolic Control and prevalent cardiovascular disease in non-insulin diabetes mellitus (NIDDM): the NIDDM patient outcomes research team." *American Journal of Medicine* 102: 38-47, 1997.
- ⁷Tuomilehto J et al. "Diabetes Mellitus as a risk factor for death from stroke: prospective study of the middle-aged Finnish population." *Stroke* 27: 210-215, 1996.
- ⁸Sawicki P. "Smoking is associated with progression of diabetic nephropathy." *Diabetes Care* 17: 126-131, 1994.
- ⁹Sands M. "Incidence of distal symmetric (sensory) neuropathy in NIDDM: the San Luis Diabetes Study." *Diabetes Care* 20: 322-329, 1997.
- ¹⁰Muhlhauser I et al. "Cigarette smoking and progression of retinopathy and nephropathy in type 1 diabetes." *Diabetic Medicine* 13(6): 536-543, 1996.
- ¹¹Norman PE. "Peripheral Arterial Disease and Risk of Cardiac Death in Type 2 Diabetes: The Fremantle Diabetes Study." *Diabetes Care* 29(3): 575-580.
- ¹²Solberg LI et al. "Diabetic Patients who Smoke: Are They Different?" *Annals of Family Medicine* 2(1), 2004: 26-32.
- ¹³Targher G et al. "Cigarette Smoking and Insulin Resistance in Patients with Noninsulin-Dependent Diabetes Mellitus." *Journal of Clinical Endocrinology and Metabolism* 82(11), 1997: 3619-3624.
- ¹⁴Rönnemaa T et al. "Smoking Is Independently Associated With High Plasma Insulin Levels in Nondiabetic Men." *Diabetes Care* 19(11), 1996: 1229-1232.
- ¹⁵Clair C et al. "Relationships of Cotinine and Self-Reported Cigarette Smoking with Hemoglobin A1c in the U.S." *Diabetes Care* (34), 2011: 2250-2255.
- ¹⁶U.S. Department of Health and Human Services. "Healthy People 2020." (Available at: <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>)