

Oregon Tobacco Prevention and Education Program

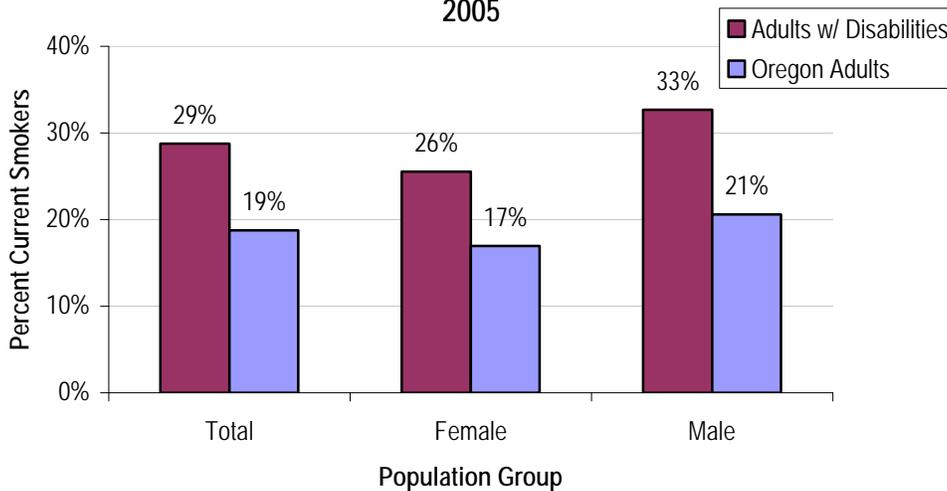
Oregonians living with disabilities

Data Report – 2007

According to the 2000 U.S. Census, 21 percent of Oregon adults (560,131 individuals) are living with disabilities.¹ For these purposes, “disability” refers to individuals that self-report activity limitations and/or the use of assistive equipment because of physical, mental or emotional problems.

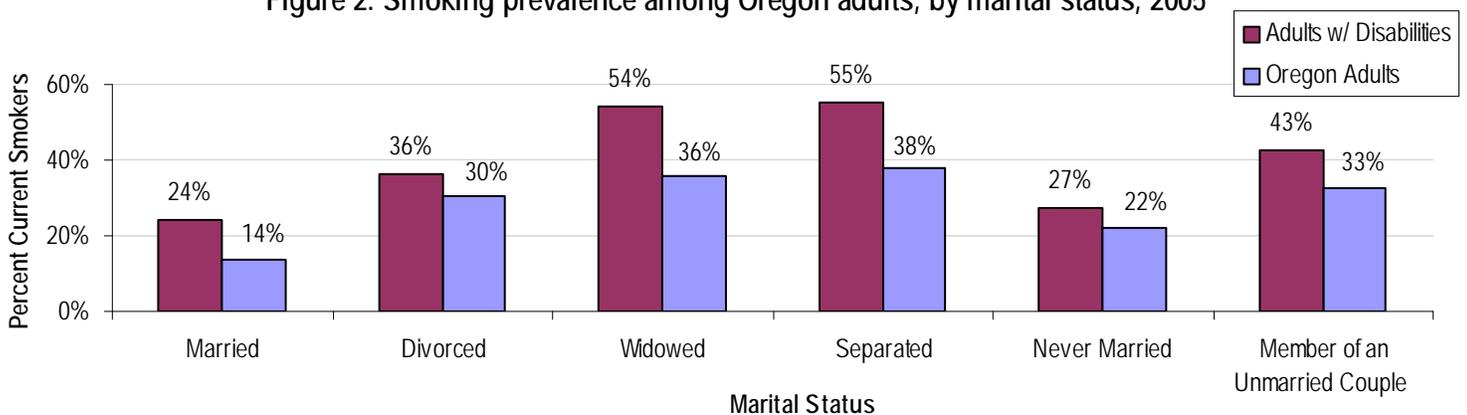
Adult smoking

Figure 1. Smoking prevalence among Oregon adults, by sex 2005



At 29 percent, the prevalence of smoking among Oregonians with disabilities is 53 percent higher than the overall Oregon population. Prevalence is highest among males with disabilities (33 percent).

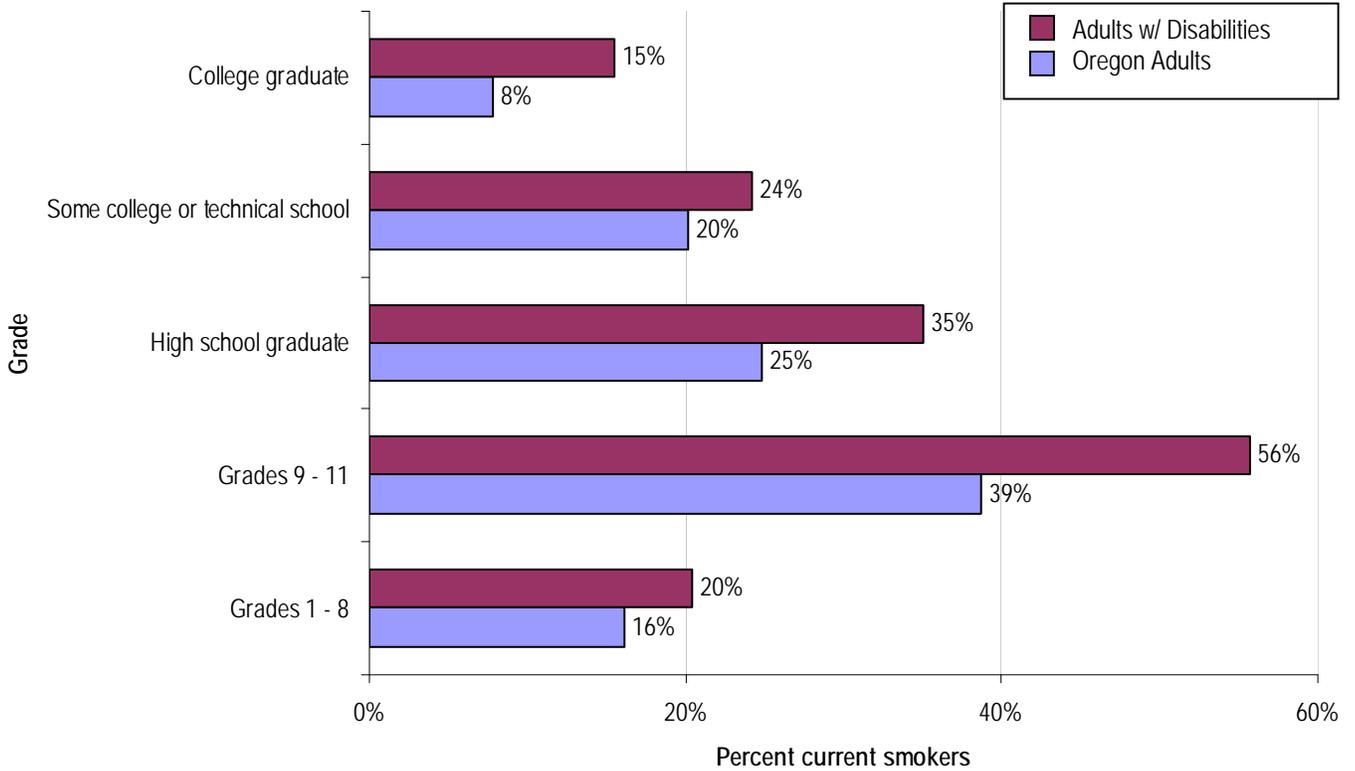
Figure 2. Smoking prevalence among Oregon adults, by marital status, 2005



Marital status appears to affect overall smoking prevalence among people living with disabilities. While being married and never married appear to offer some protective effect, individuals living with disabilities who are widowed or separated have the highest smoking prevalence, 54 percent and 55 percent respectively.

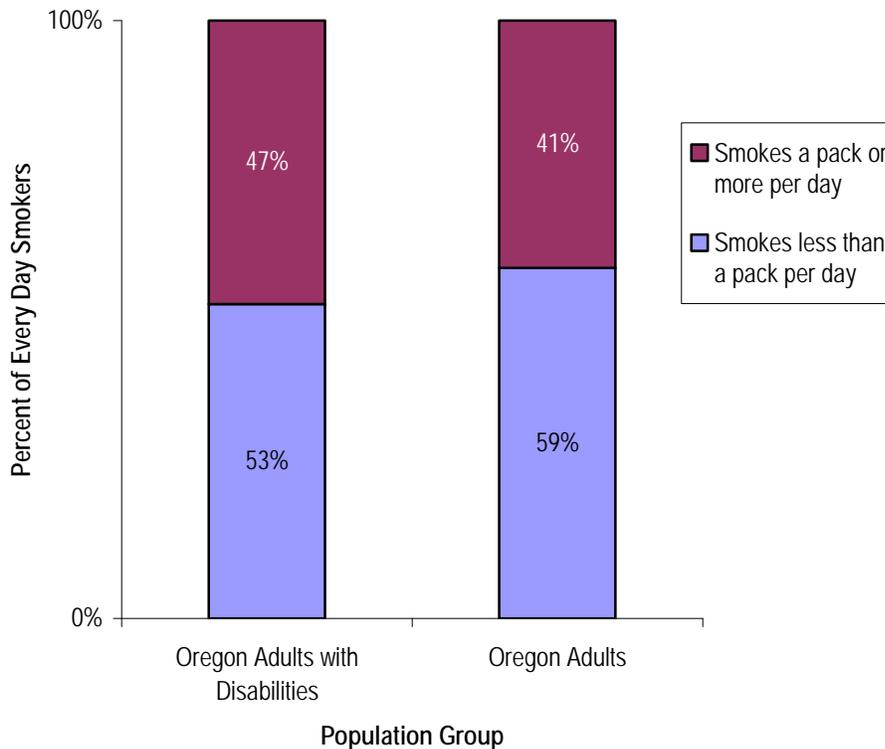
¹ The U.S. Census definition of **Disability**: A long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business.”

Figure 3. Smoking prevalence among Oregon adults, by highest year of school completed, 2005



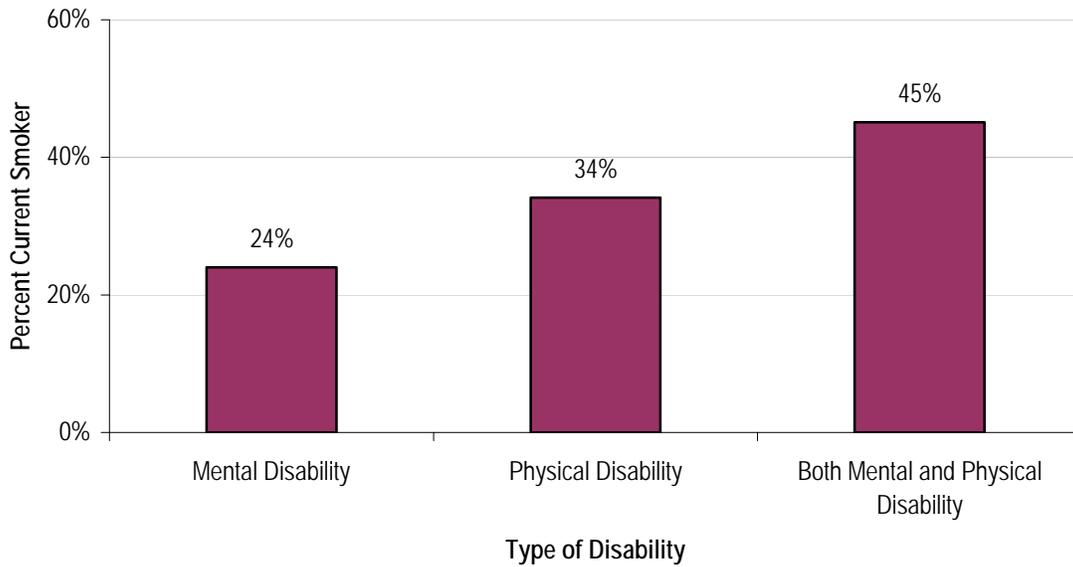
Adults who have not completed high school have the highest prevalence of smoking when compared to other educational categories. This is especially true for Oregon adults with disabilities who have completed grades 9 – 11, where prevalence is 56 percent.

Figure 4. Cigarette consumption among every day smokers, 2005



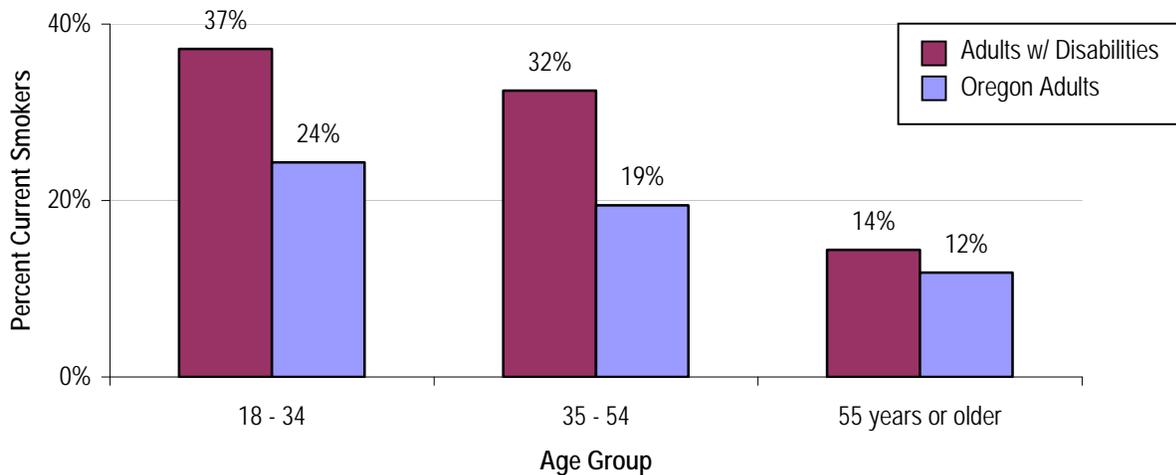
Not only do Oregon adults with disabilities have a higher smoking prevalence, but they also appear to smoke more cigarettes than the overall Oregon population. Forty-seven percent of Oregon adults with disabilities who smoke every day consume one or more packs per day.

Figure 5. Smoking prevalence among Oregon adults by type of disability, 2005



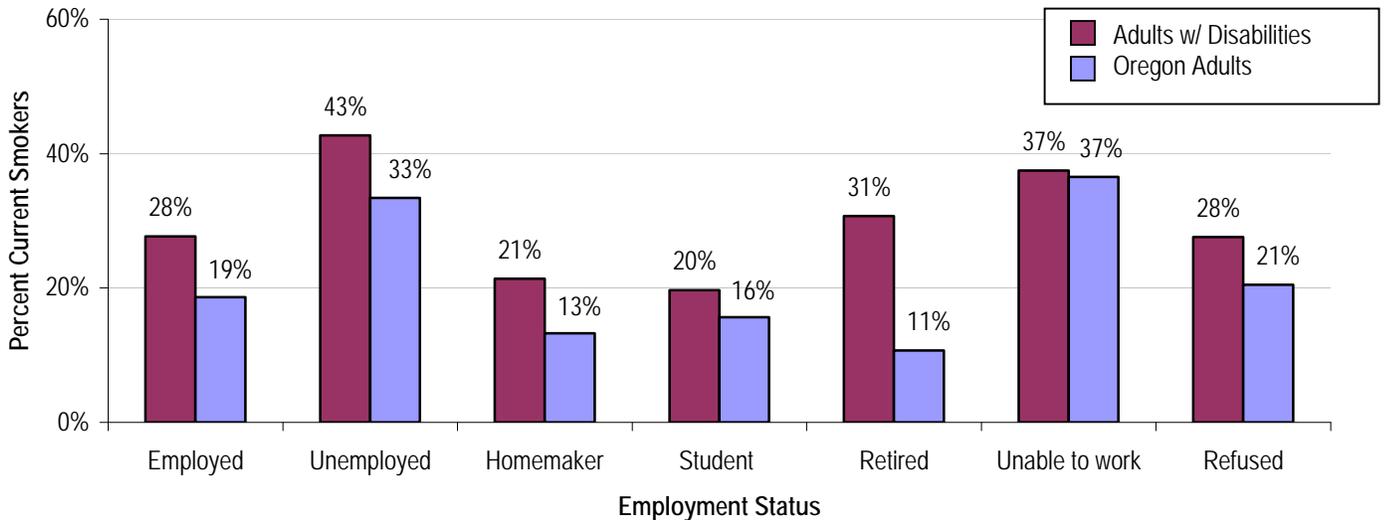
Mental disability refers to individuals that report trouble learning, remembering or concentrating because of an impairment. Physical disability refers to individuals who are limited in activities or have a health problem that requires the use of special equipment, but do not meet the criteria for mental disability. Individuals meeting the requirements for physical disability and mental disability are listed as both. Individuals with both mental and physical disabilities are 1.4 times more likely to smoke than the overall Oregon population.

Figure 6. Smoking prevalence among Oregon adults by age group, 2005



Similar to trends in the overall population, the prevalence of smoking among Oregon adults with disabilities declines as age increases. More than twice as many 35-54 year olds living with disabilities in Oregon smoke as compared to those who are 55 years and older.

Figure 7. Smoking prevalence among Oregon adults by employment status, 2005



While smoking prevalence is higher among Oregonians with disabilities than the overall population, *ability to work* does not appear to affect smoking prevalence. Unemployment status seems to affect prevalence, with 43 percent of unemployed Oregon adults with disabilities smoking.

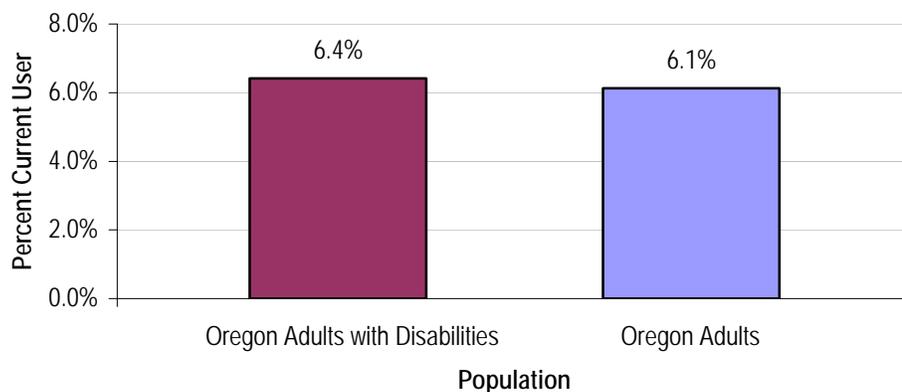
Adult quitting

Seventy-nine percent of adult smokers living with disabilities would like to quit smoking (2005).

Fifty-two percent of adult smokers living with disabilities stopped smoking for one day or longer in the last year because they were trying to quit smoking (2005).

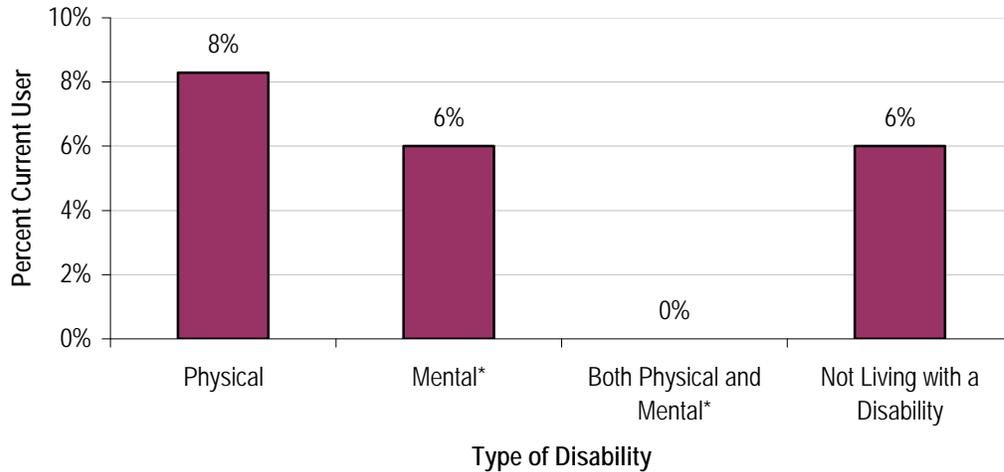
Male chewing tobacco use

Figure 8. Chewing tobacco prevalence among Oregon adult males, 2005



Oregon adult males living with disabilities do not have a significantly higher prevalence of using chewing tobacco than the general population of adult males in Oregon.

Figure 9. Male chewing tobacco prevalence among Oregon adults, by type of disability, 2005



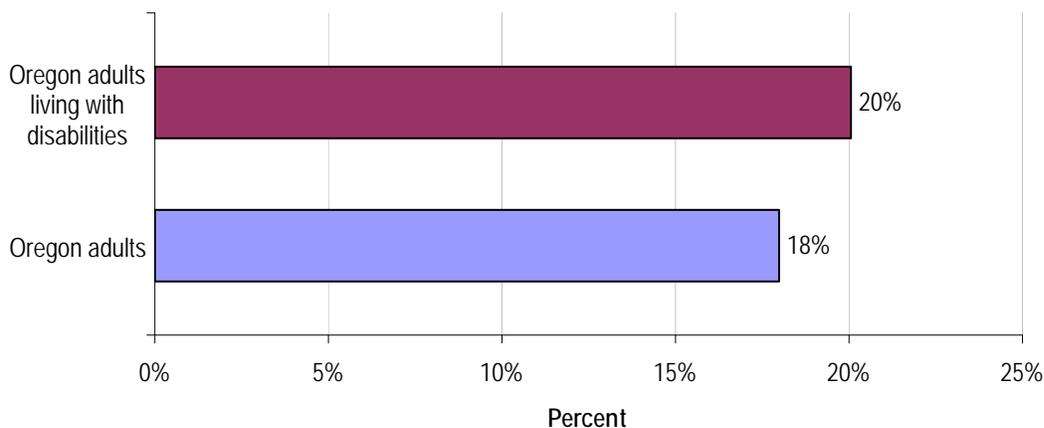
*Estimates for individuals living with mental disabilities or both mental and physical disabilities may not be statistically reliable due to small numbers of individuals actually using chewing tobacco within the population.

Male Oregonians living with *physical* disabilities have a higher prevalence of chewing tobacco use than male Oregonians with other types of disability or no disability at all.

Adult exposure to secondhand smoke

According to the 2006 Surgeon General’s Report – *The Health Consequences of Involuntary Exposure to Tobacco Smoke* – “There is no risk-free level of exposure to secondhand smoke: even small amounts of secondhand smoke exposure can be harmful to people’s health.”ⁱ

Figure 10. Exposure to secondhand smoke during a typical work week, 2005



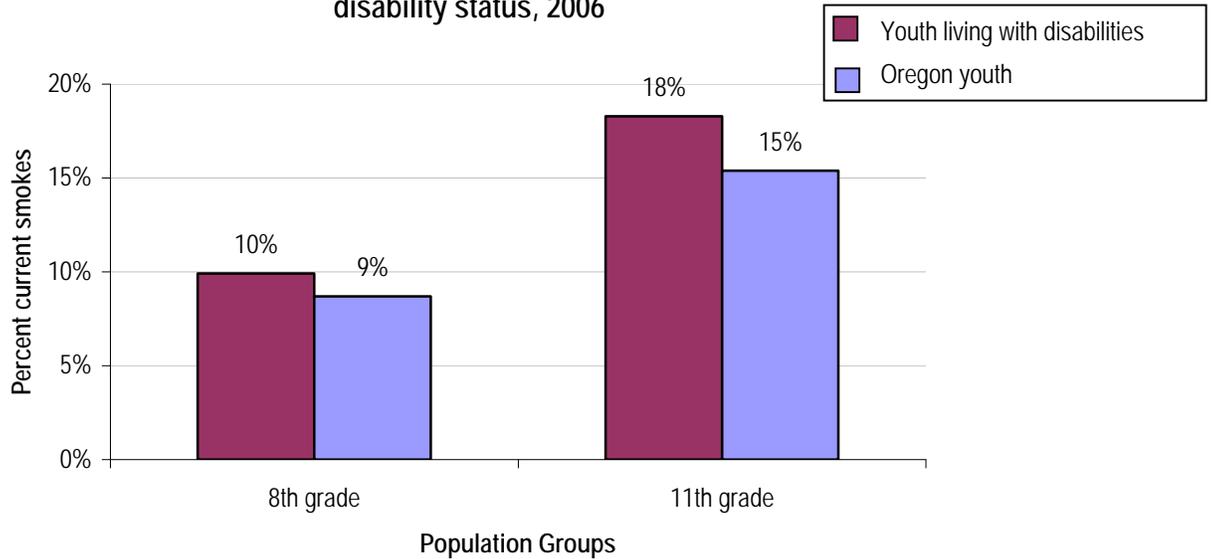
Among those employed for wages, secondhand smoke exposure at work seems to be comparable between Oregon adults and Oregon adults living with disabilities.

*Nonsmokers exposed to secondhand smoke at home or work increase their risk of developing heart disease by 25 to 30 percent and lung cancer by 20 to 30 percent.*ⁱ

Youth Tobacco Use

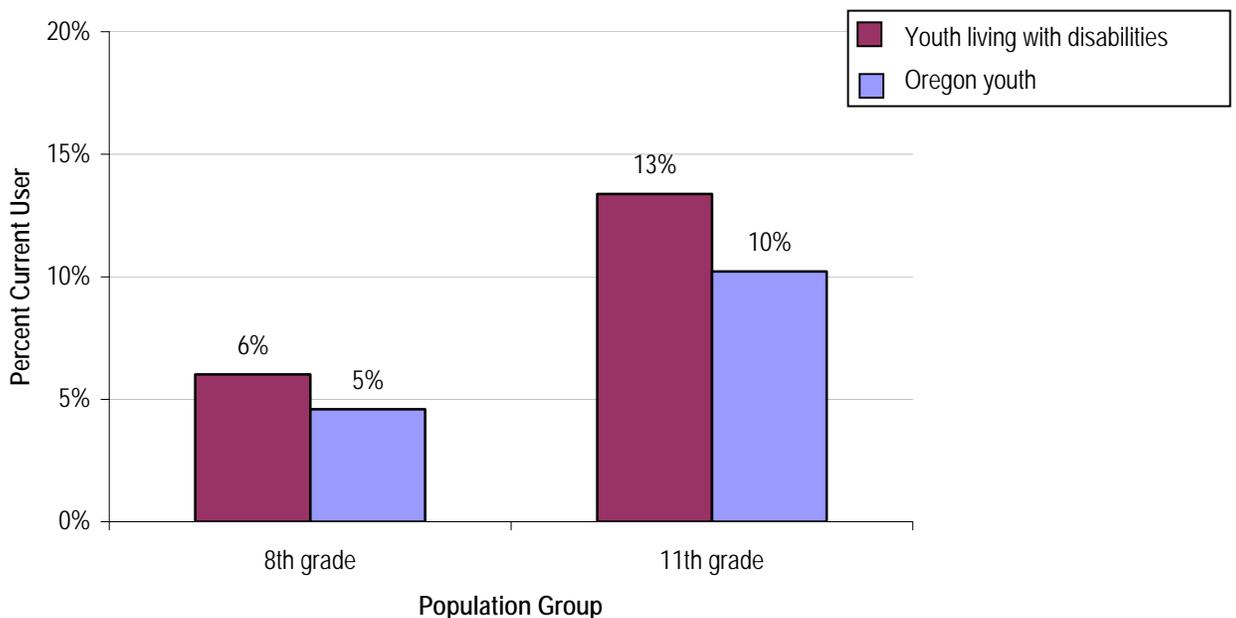
Thirty-two percent of 8th graders and 35 percent of 11th graders in Oregon have disabilities or special health needs. This includes youth with medical conditions, physical disabilities, sensory disabilities, emotional conditions, learning disabilities and/or youth with activity limitations due to any disability or long term health problem.

Figure 11. Smoking prevalence among Oregon youth by disability status, 2006



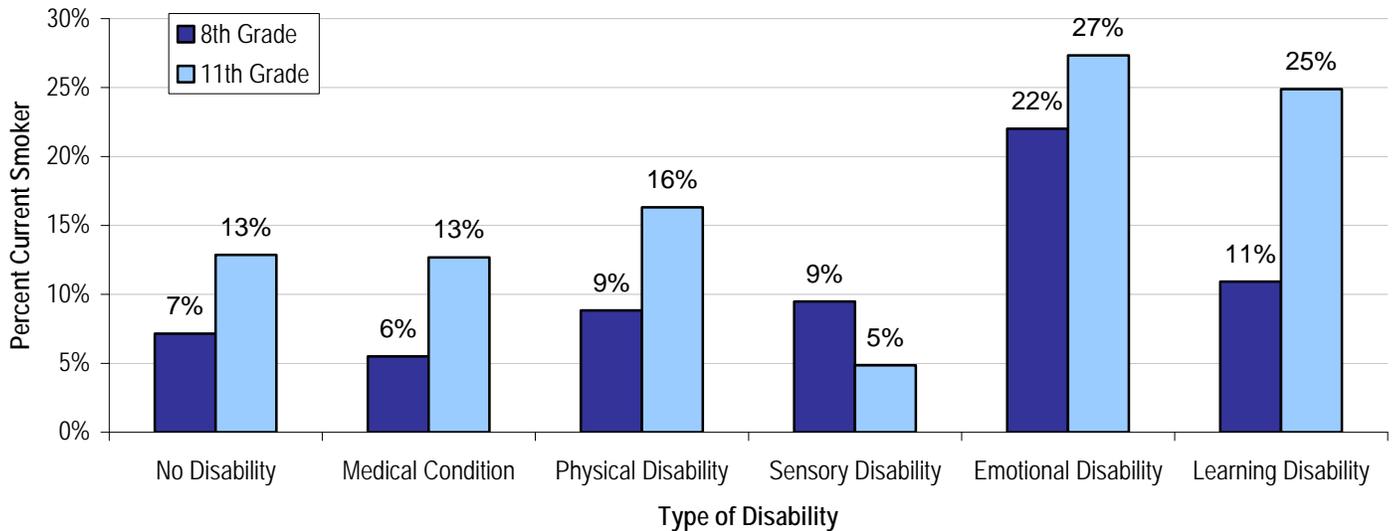
Smoking prevalence among youth living with disabilities is higher among 11th graders (18 percent) than 8th graders (10 percent).

Figure 12. Male chew prevalence among Oregon youth by disability status, 2006



Similar to cigarette smoking, Oregon youth living with disabilities have a higher prevalence of chewing tobacco use than overall Oregon youth. Thirteen percent of 11th graders living with disability chew tobacco as compared to 10 percent of all 11th graders in Oregon.

Figure 13. Youth smoking prevalence by type of disability, 2006

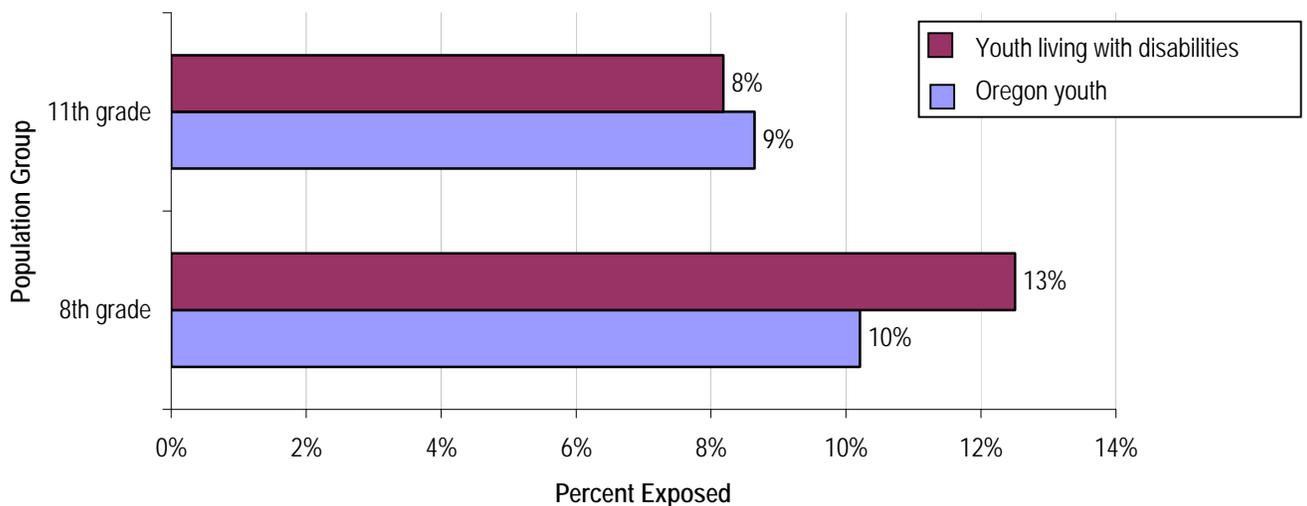


While overall prevalence of tobacco use is higher for Oregon youth living with disabilities, Figure 13 shows individuals with emotional or learning disabilities bear the highest burden of tobacco use. Individual respondents were allowed to select all that apply regarding the nature of their disability.

Youth exposure to secondhand smoke

Exposure to secondhand smoke in the home has been correlated with increased smoking prevalence among youth. Recent findings from the Global Tobacco Youth Survey indicate youth who never smoked are 1.4 to 2.1 times more likely to be susceptible to smoking if they were exposed to secondhand smoke in the home.ⁱⁱ

Figure 14. Youth exposure to secondhand smoke in the home by disability status, 2006



While 8th grade youth living with disabilities in Oregon are more likely to be exposed to secondhand smoke in the home than 8th graders in general, 11th grade youth living with disabilities in Oregon are less likely to be exposed to secondhand smoke in the home.

Smoking among Oregon adults living with disabilities who have lower income or have not finished high school

Smoking prevalence varies by societal factors. Both income and level of education completed have been associated with increased prevalence of smoking. Americans living below the federal poverty line are 40 percent more likely to smoke than those living at or above the federal poverty line.ⁱⁱⁱ

Figure 15. Smoking prevalence among Oregon adults, by economic status and military service, 2005

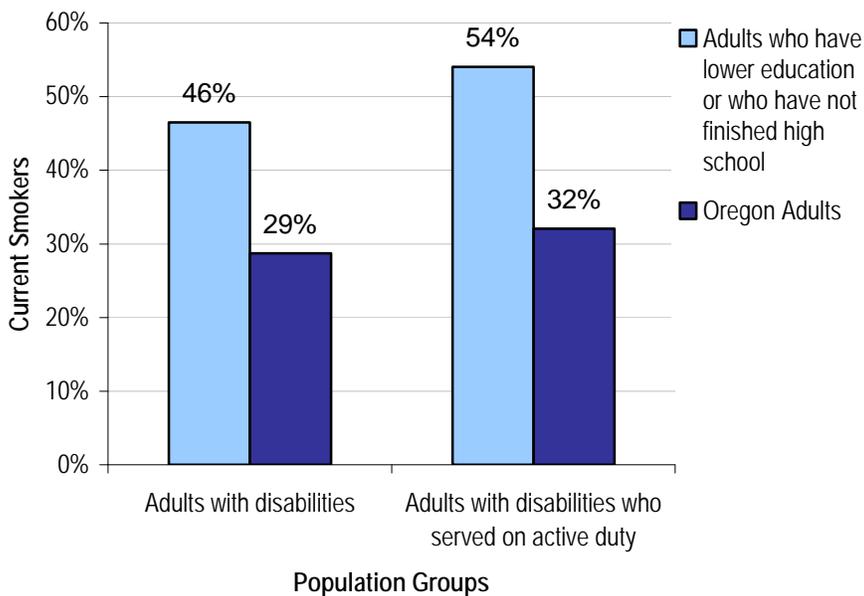
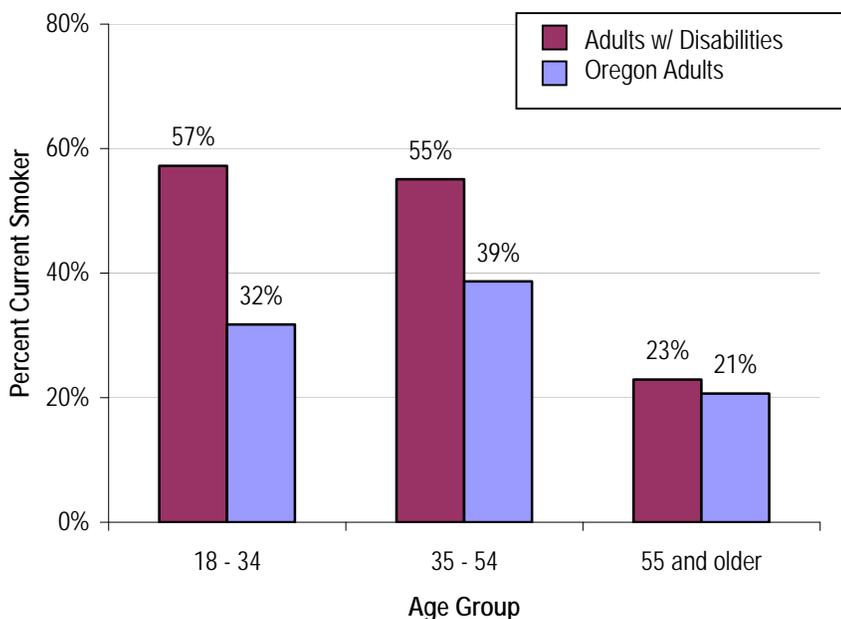


Figure 16. Smoking prevalence among adults who have lower income or have not finished high school, 2005



Oregonians living with disabilities who have incomes lower than the federal poverty line and have not completed high school are more likely to smoke (46 percent) than all Oregonians living with a disability (29 percent). This prevalence is further increased for individuals who have ever served on active duty in the military during their life. Fifty-four percent of Oregon adults living with disabilities who have lower income or have not finished high school and who served on active duty are current smokers.

Not only has serving on active duty been linking to increased rates of smoking, but also smoking has been linked to increased risk of disability among individuals injured during military service.^{iv} However, when looking at military service and disability in Oregon, no significant difference was observed unless economic status was included.

Younger Oregon adults with disabilities who have lower income or have not finished high school are more likely to be smokers (57 percent), than older age groups (23 percent).

Methods

Denominator sizes for the survey data depicted in figures

Figure Number	All Oregonians	Disabled Oregonians	Oregon adults living with disabilities who have lower income or have not finished high school	Oregon adults who have lower income or have not finished high school
1 -OVERALL	15,027	3,350		
1 - MALE	5,848	1,201		
1 - FEMALE	9,179	2,149		
2	14,997	3,347		
3	14,997	3,347		
4	15,027	3,350		
5 - MENTAL		785		
5 - PHYSICAL		413		
5 - BOTH		302		
6	15,027	3,350		
7	14,997	3,347		
10	8,030	1,432		
15	1,853	627	99	187
16 – YOUNG			648	92
16 – MIDDLE			654	232
16 - OLD			809	359

General

For analysis using the Behavioral Risk Factor Surveillance Survey (BRFSS), the following definition for disability was used: individuals who self-report 1) activity limitations because of physical, mental or emotional problems and/or 2) the use of assistive equipment.

All survey data for Oregon estimates are age-adjusted and weighted. “Age adjustment is used to compare risks of two or more populations at one point in time or one population at two or more points in time.”^v This method helps to better depict what is happening in a population where age may be correlated with the outcome, in this case, tobacco use.

Weights were applied to survey data to account for Oregon’s population distribution by age and sex during the survey year. Weights are an artificial adjustment to ensure that survey data reflect the population being studied.

All significance testing was conducted at the 95 percent confidence level using an immediate form of a Student’s t-test in Stata 9.0.

Smoking, quitting and secondhand smoke exposure

Adult estimates were calculated using the 2005 Behavioral Risk Factor Surveillance System (BRFSS) dataset. “The Behavioral Risk Factor Surveillance System (BRFSS) is the world’s largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984.”^{vi} Oregon data are age-adjusted.

A current smoker is defined as someone who has smoked at least 100 cigarettes in his or her life and currently smokes. Chewing tobacco use is only assessed for males as less than 0.1 percent of females in Oregon use smokeless tobacco.

Youth tobacco use

Disabilities using the Oregon Healthy Teens survey refers to individuals who self report 1) limitations to activities because of ANY disabilities or long-term health problems, including physical health, emotional, or learning problems and/or 2) have been told by a doctor or nurse that he or she has one or more of the following problems – followed by a list of specific disability related problems. Figure 11 only depicts smoking prevalence among those who have been told by a doctor that they have a disability or medical condition.

Adults who have lower income or have not finished high school

Estimates were calculated using the 2005 BRFSS, and were age-adjusted. The same weighting strategy used for adult estimates was applied to this analysis. Adults who have lower income or have not finished high school is defined as respondents living below 100 percent of the federal poverty line and/or possessing less than a high school education. The 100 percent federal poverty line variable was calculated using household size and income. Income on BRFSS is collected using categories rather than actual numbers. At the lower end of income, these categories increase by \$5000 increments. The category that matched the 100 percent federal poverty line for household size in the year the survey was conducted was used for the calculation.

Potential limitations

BRFSS is the main source of population level data to assess tobacco use and exposure among adults in the state of Oregon using landline telephones. The survey is administered using random-digit-dialing of landline phones and does not use the equipment to interview hearing-impaired respondents.

According to a national study in 2006, 12.8 percent of American homes only used wireless telephones.^{vii} Assuming the trend is similar in Oregon, the current BRFSS methodology may exclude almost one-eighth of adults from the sample because they do not have landlines.

Nationally, wireless only households have a significantly higher prevalence of smoking (29.6 percent) as compared to landline only households (18.9 percent). Households without telephone service have the highest smoking prevalence (41.5 percent).^{xi} These limitations may lead to underreporting of smoking prevalence, as multiple studies have confirmed the correlation between cell phone usage and smoking.^{viii,ix}

Although some Oregonians living with disabilities are captured by BRFSS, the more severely disabled individuals are excluded. Institutionalized populations (e.g. individual in hospitals, prisons, nursing homes, mental health facilities, etc.) are not included in BRFSS.

These populations may have higher rates of smoking than the general population, but would not be counted in overall prevalence estimates. In addition, individuals with substantial cognitive, speech or other communication impairments, or with physical limitations that prevent them from answering the phone, were not included.

In looking at disability in relation to smoking prevalence, individuals whose disability was the result of smoking cannot be separated from individuals with other forms of disability. Thus the higher prevalence of smoking among Oregonians living with disabilities warrants further research.

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- ⁱ U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.
- ⁱⁱ “Exposure to Secondhand Smoke Among Students Aged 13 – 15 years – Worldwide, 2000-2007.” *CDC Morbidity and Mortality Weekly Report*. vol. 56, no. 20, May 25, 2007.
- ⁱⁱⁱ Smoking Habits and Prevention Strategies in Low Socio-economic Status Populations. *National Network on Tobacco Prevention and Poverty*. 2004
- ^{iv} Lincoln et al. “The effect of smoking on musculoskeletal related disability.” *American Journal of Industrial Medicine*. vol. 43, 2003 (337-349).
- ^v National Center for Health Statistics Definitions Web Page. 22 May 2007
www.cdc.gov/mill1.sjlibrary.org/nchs/dataawh/nchsdefs/ageadjustment.htm.
- ^{vi} “Turning Information into Health, Behavioral Risk Factor and Surveillance System.” Center for Disease Control. 11 July 2007 www.cdc.gov/brfss/index.htm.
- ^{vii} Blumeberg SJ, Luke JV. “Wireless Substitution: Early release of estimates based on data from the national Health Interview Survey, July – December 2006.” National Center for Health Statistics. 14 May 2007 www.cdc.gov/nchs/nhis.htm.
- ^{viii} Blumeberg et al. “Telephone Coverage and Health Survey Estimates: Evaluating the Need for Concern About Wireless Substitution.” *American Journal of Public Health*. vol. 96, no. 5, May 2006.
- ^{ix} Nelson et al. “A Comparison of National Estimates from the National Health Interview Survey and the Behavioral Risk Factor Surveillance System.” *American Journal of Public Health*. vol. 93, no. 8, August 2003.

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