

Oregon Tobacco Prevention and Education Program

18 – 24 year old adults

Data Report – 2007

According to the 2005 U.S. Census of Oregon’s 3.6 million inhabitants, nine percent (estimated 328,830 individuals) are 18 to 24 years old. Since 1998, the prevalence of smoking among 18 – 24 year olds has exceeded that of other age groupings throughout the United States.ⁱ This trend is mirrored in Oregon, where 27 percent of 18 – 24 year old young adults smoke (Figure 1). National studies suggest some subpopulations of young adults experience a disproportionate burden of tobacco use: young adults who are not currently attending school, and those who are unemployed or living below the federal poverty line.ⁱⁱ

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

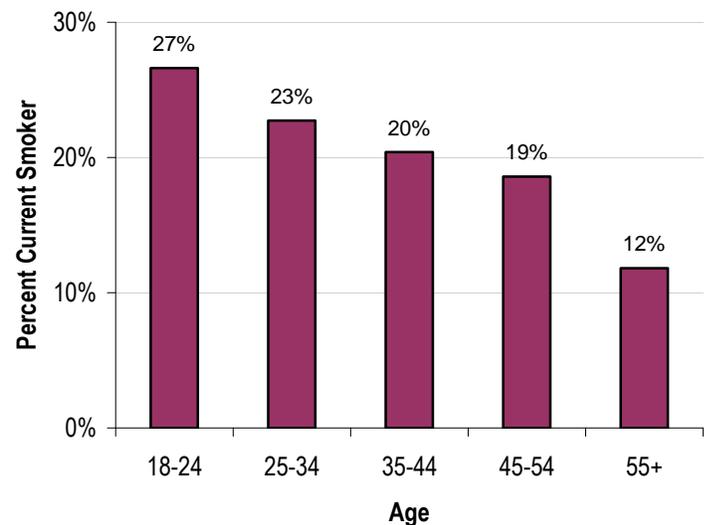
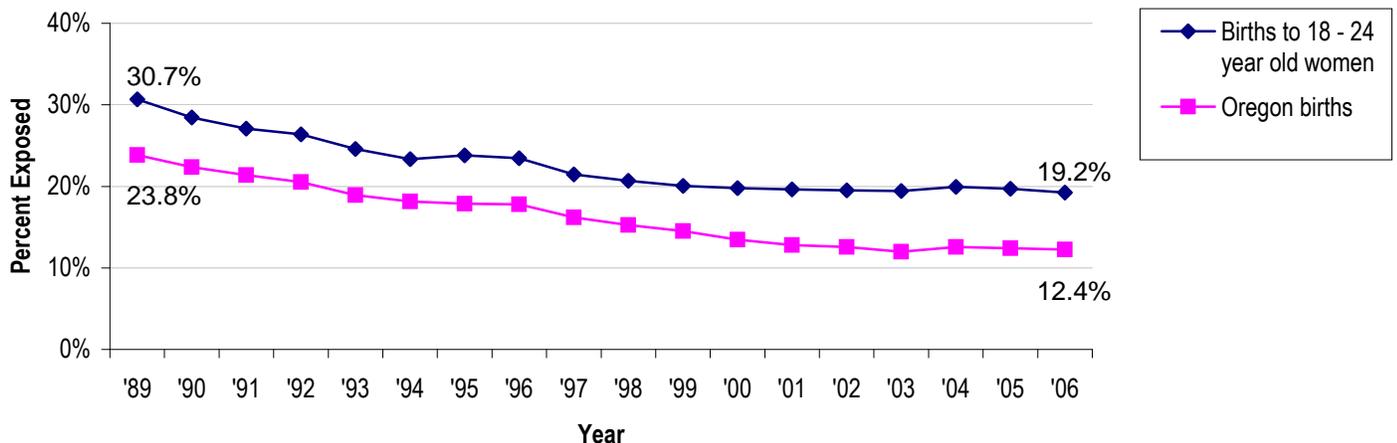


Figure 2. Infants born to women who smoked during pregnancy, 1989 - 2006

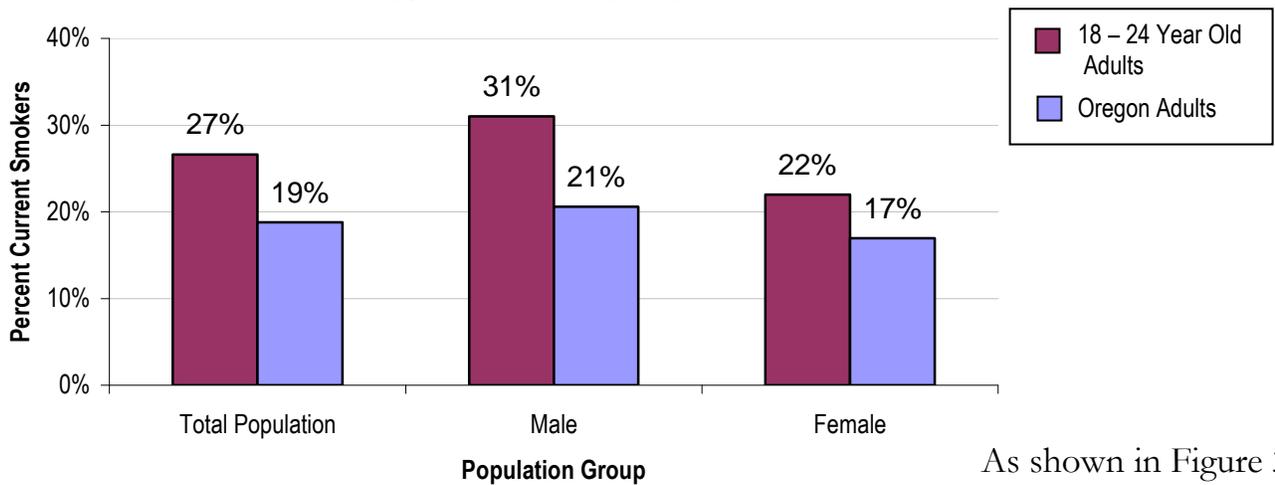


A lower percentage of the babies born to 18-24 year old mothers were exposed to their mother’s cigarette smoking in the prenatal period in 2005 (19.2 percent) than in 1989 (30.7 percent).

The risk for perinatal mortality, both stillbirths and neonatal deaths, and the risk for sudden infant death syndrome (SIDS) are higher for the offspring of women who smoked during pregnancy – 2001 Surgeon General’s Reportⁱⁱⁱ

18 – 24 year old adult smoking

Figure 3. Smoking prevalence among Oregon adults, 2005



As shown in Figure 3, the prevalence of smoking among 18 – 24 year old Oregonians is 42 percent higher than all other adult Oregonians, with male prevalence the highest (31 percent). Despite the high prevalence of current smokers, Figure 4 depicts an overall lower daily consumption of cigarettes among every day 18 – 24 year old smokers.

Figure 4. Cigarette consumption among every day smokers

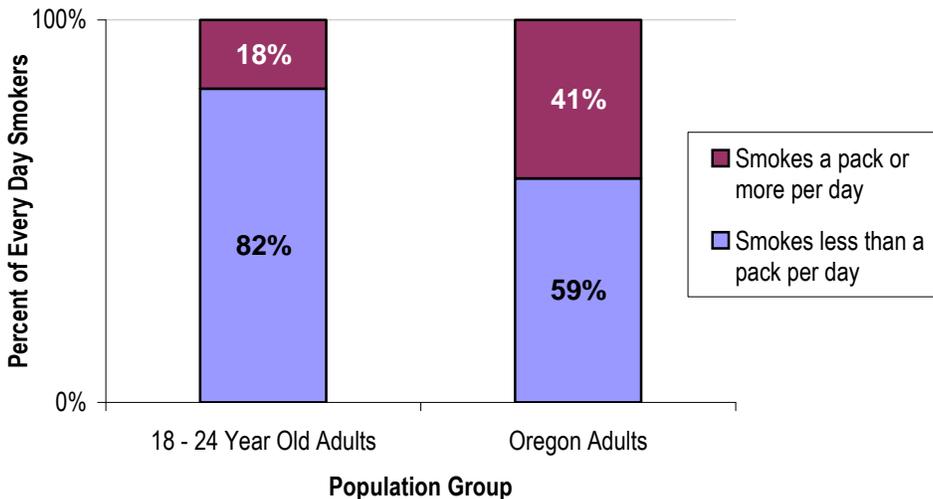
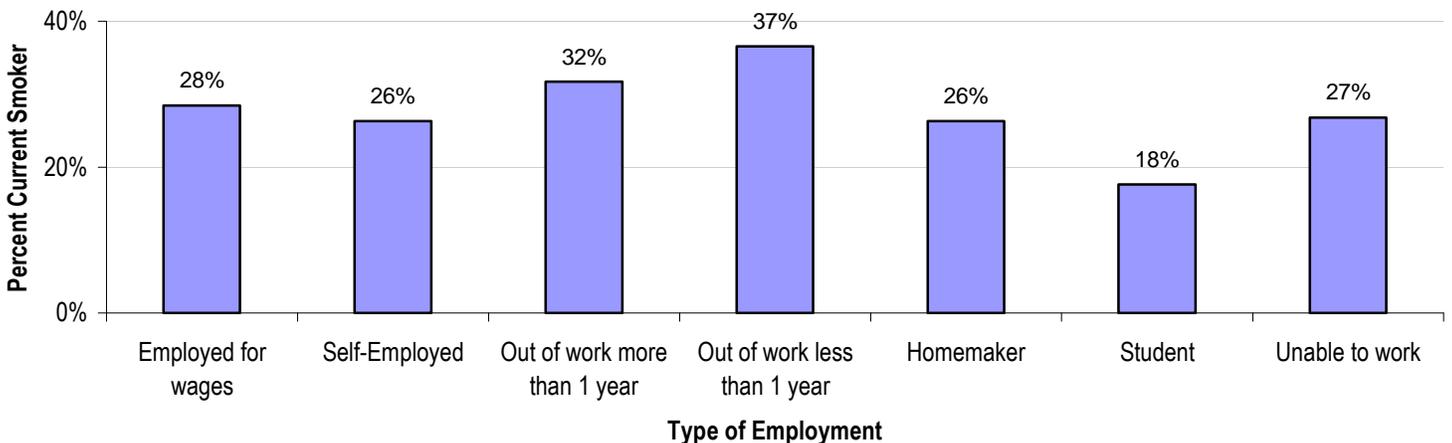


Figure 5. 18 - 24 year old adult smoking prevalence, by employment status, 2005



Smoking prevalence remains high among 18 – 24 year old adults, regardless of employment status, unless they are currently enrolled in school.

18 – 24 year old quitting

Figure 6. Quit Intentions, 2005

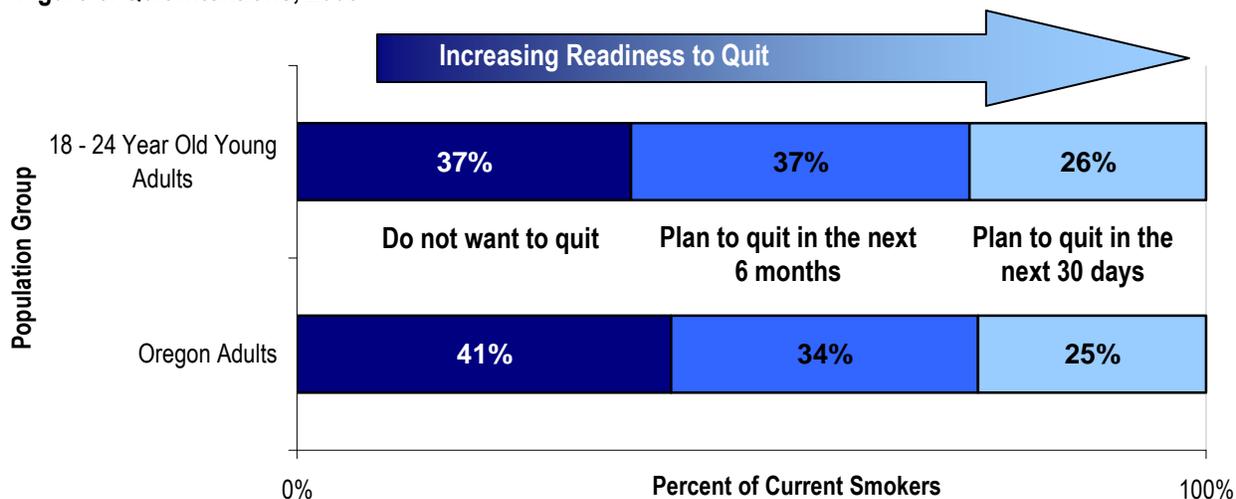


Figure 6 shows readiness to quit using the categories of the Transtheoretical Model.^{iv} According to this model, smokers who do not want to quit are in the pre-contemplation phase. Those planning to quit in the next six months are contemplating, while those planning to quit in the next 30 days are in the preparation stage of change.

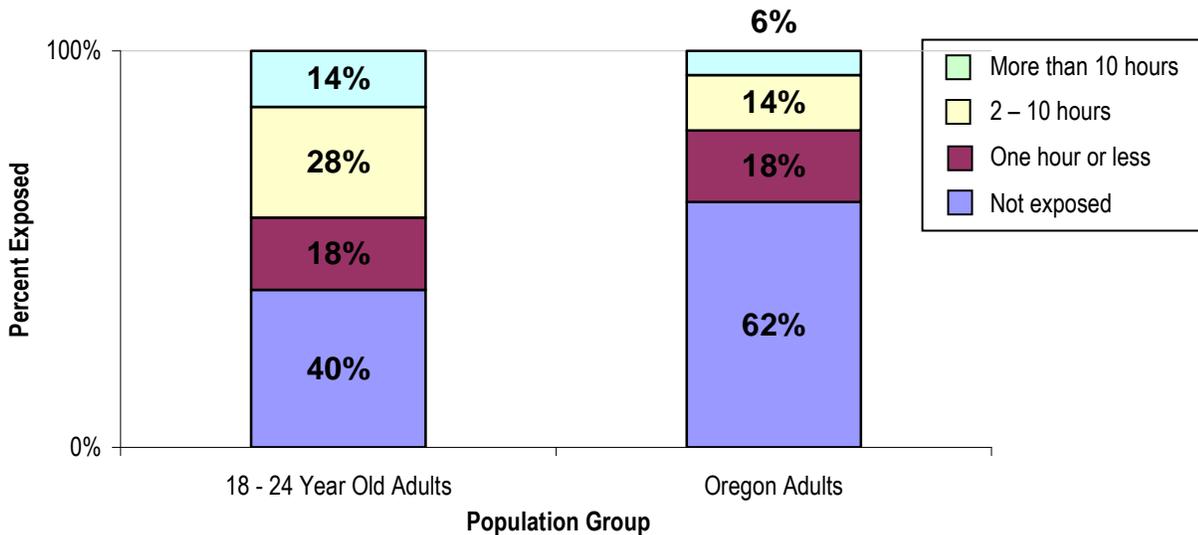
Quitting smoking is a complicated, nonlinear process for many people. A person often plans to quit, and then may quit for some period of time, before relapsing and starting the process again. The diagram above includes the 60 percent of 18 – 24 year old smokers who have attempted quitting in the last year, as well as those who have yet to attempt to quit smoking. The average person attempts to quit smoking two to three times before achieving lasting success.^v

The quit intentions of 18-24 year old adult smokers appear to mirror those of the overall Oregon population. This implies similar levels of social pressure to quit as well as a consciousness regarding the benefits of quitting.

18 – 24 year old exposure to secondhand smoke

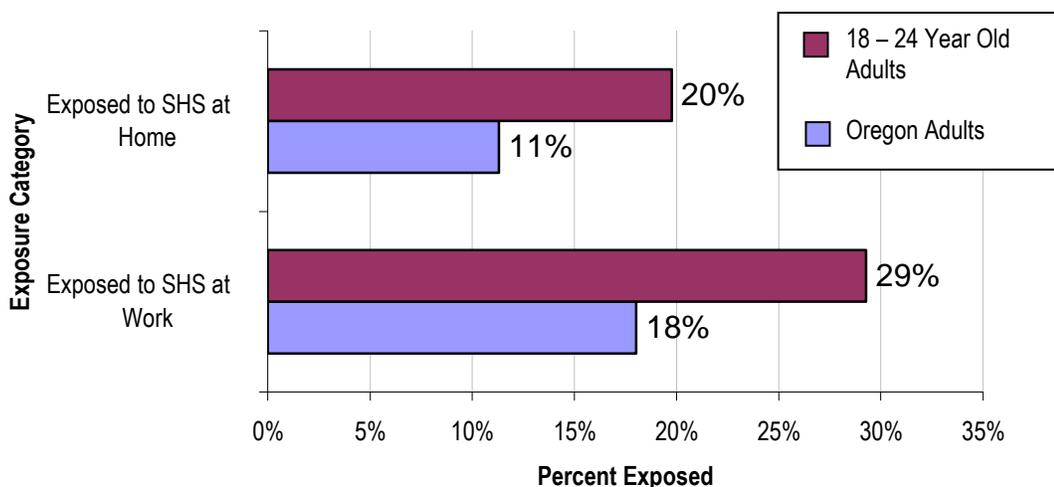
According to the 2006 Surgeon General’s Report – *The Health Consequences of Involuntary Exposure to Tobacco Smoke* – “There is no risk-free level of exposure to secondhand smoke: even small amounts of secondhand smoke exposure can be harmful to people’s health.”^{vi}

Figure 7. Hours of secondhand smoke exposure from all sources during a typical week, 2005



18 – 24 year old Oregonians are much more likely to be exposed to secondhand smoke (SHS) than the overall Oregon population. Twenty-eight percent of 18 – 24 year old Oregonians are exposed to 2 – 10 hours of SHS, while 14 percent are exposed to more than 10 hours in a typical week. Figure 8 shows sources of secondhand smoke exposure among all Oregonians. Of particular note is the 29 percent of 18 – 24 year olds who report exposure at work. Of those exposed to SHS at work, 10 percent are exposed at a bar or restaurant. This exposure will be reduced once the statewide smokefree workplace law goes into effect January 2009.

Figure 8. Secondhand smoke exposure during the last 30 days by source of exposure, 2005



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.^{vi}

Methods

Denominator sizes for the survey data depicted in figures

Figure Number	All Oregonians	18-24 Year Olds
3	15,027	760
4	2,522	197
5		760
6	3,012	148
7	3,012	148
8 - HOME	3,012	148
8 - WORK	8,030	385

General

All survey data for overall 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.”^{vii} 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. The 18 – 24 age group has a small age range; thus, data are not age-adjusted for this sub-population.

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.

Percent of Live Births to Mothers that Smoked

Using Oregon Vital Statistics data, proportions of live births in which the mother reported smoking during the prenatal period were calculated. Data are not age-adjusted or weighted – they are actual counts.

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.”^{viii} “Oregon Adults” data are age-adjusted and weighted.

A current smoker is defined as someone who has smoked at least 100 cigarettes in his or her life and currently smokes.

Economically Disadvantaged

This data report does not include an analysis of economically disadvantaged 18 to 24 year olds, because 45 percent of 18 to 24 year olds in Oregon are economically disadvantaged compared to 20 percent of the overall Oregon adult population. Economic disadvantage is correlated with this age group, because young adults may not yet have had the opportunity to fully realize their academic or career potential.

Potential Limitations

BRFSS is the main source of population-level data to assess tobacco use and exposure among adults in the state of Oregon. The survey is administered using random-digit-dialing of landline phones.

According to a national study in 2006, 18 – 24 year old young adults were more likely to have wireless only households than the overall population (25.2 percent versus 11.8 percent).^{ix} Assuming the trend is similar in Oregon, the current BRFSS methodology might exclude almost one-quarter of 18 – 24 year olds from the sample.

Nationally, wireless only households have a significantly higher prevalence of smoking (29.6 percent) as compared with 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.^{x,xii}

In addition, institutionalized populations (e.g. individuals 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.

ⁱ “Cigarette smoking among adults – United States 1998.” *CDC Morbidity and Mortality Weekly Report*, vol. 49 no. 39, October 2000 (881-884).

ⁱⁱ Lawrence et al. “Cigarette smoking patterns among young adults aged 18 – 24 years in the United States.” *Nicotine & Tobacco Research*, vol. 9, no. 6, June 2006 (687-697).

ⁱⁱⁱ U.S. Department of Health and Human Services. *Women and Smoking: 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, 2001.

^{iv} Prochaska, James O. *Changing for good: the revolutionary program that explains the six stages of change and teaches you how to free yourself from bad habits*. New York: W. Morrow, 1994.

^v *You Can Quit Smoking: Consumer Guide*. U.S. Department of Health and Human Services, Public Health Service. June 2000.

^{vi} 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.

^{vii} National Center for Health Statistics Definitions Web Page. 22 May 2007

www.cdc.gov/nchs/data/nchsdefs/ageadjustment.htm.

^{viii} “Turning Information into Health, Behavioral Risk Factor and Surveillance System.” Center for Disease

Control.11 July 2007 www.cdc.gov/brfss/index.htm.

- ^{ix} 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.
- ^x 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.
- ^{xi} 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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