

KEY POINTS

- **Six in 10 adults who currently or formerly smoked started smoking regularly before age 18.**
- **Preventing regular use of cigarettes during youth decreases the risk of chronic disease development and improves quality of life.**
- **Quitting smoking decreases prevalence of chronic conditions and improves overall health.**

Approximately 16 million Americans live with a smoking-related disease, costing the United States upwards of \$600 billion due to healthcare costs and losses in productivity.^{1,2} Studies have shown that duration of smoking cigarettes is highly correlated with chronic condition development including respiratory and cardiovascular diseases, cancer and diabetes as well as the reduction in quality of life.^{3,4} Less is known about how age of initiation of cigarette smoking impacts development of chronic conditions later in life. In this data brief, we show that Vermonters who initiated smoking before age 18 have worse health outcomes later in life. Thus, youth prevention efforts are vital to reducing the burden of tobacco use in Vermont.

Among the general population who smoke, prevention is not the only effective tool for curbing tobacco use; cessation also proves successful. A recent study found that adults who quit smoking before age 65 lowered their smoking-related mortality risk by as much as 90%.⁴ Here we explore whether health benefits are also available to those who initiated before age 18 and find that there are significant benefits of quitting among this population. Prevention of cigarette smoking prior to adulthood and cessation later in life therefore can reduce the prevalence of chronic disease in Vermont.

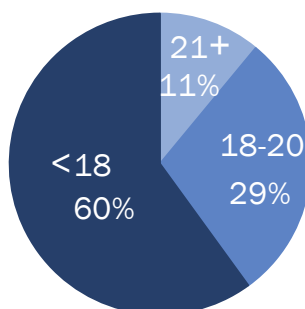
This brief presents data from the 2017 and 2019 Vermont Behavioral Risk Factor Surveillance System (BRFSS).⁵

Early Initiation of Smoking Leads to an Increased Risk of Current and Heavy Smoking

In Vermont, the majority of adults who have ever smoked at least 100 cigarettes in their lifetime started smoking regularly before adulthood (60%) compared to only one in ten who initiated use at age 21 or later (11%). Adults who started smoking before age 18 are more likely to currently smoke and smoke at least a pack of cigarettes (20 cigarettes) per day compared to those who initiated smoking at or after age 18.

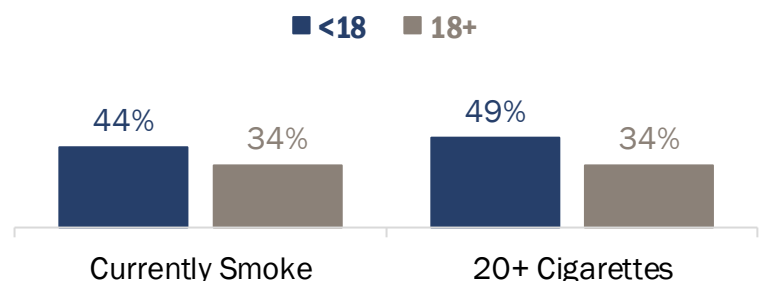
Most adults who have ever smoked started before age 18.

Age of Initiation



Adults who started smoking before age 18 are more likely to currently smoke and smoke at least a pack a day.

Smoking Status and Frequency of Smoking by Age



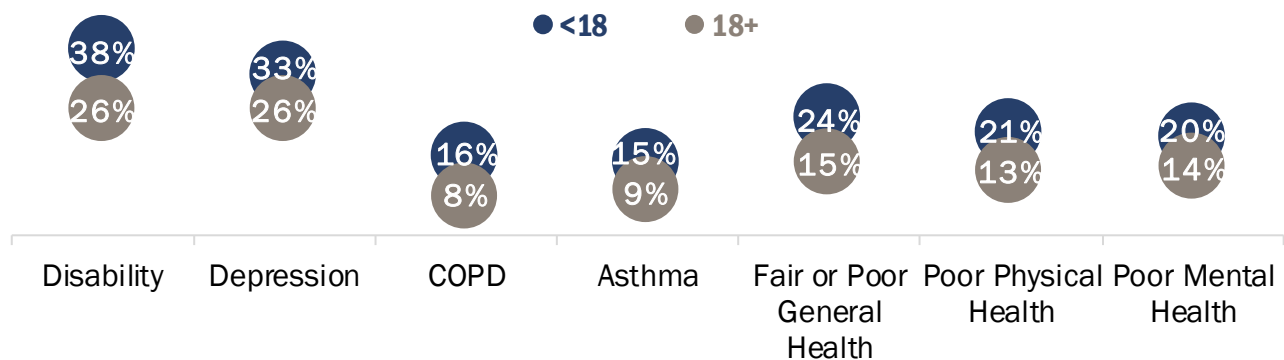
Impacts of Age of Initiation of Smoking in Vermont

Early Initiation of Smoking is Associated With Greater Likelihood of Chronic Disease

Adults who started smoking prior to age 18 are 1.5 to 2 times as likely to have a disability, depression, COPD or asthma while also reporting poorer general, physical and mental health compared to adults who initiated smoking at age 18 or later. Prevalence of chronic kidney disease, cardiovascular disease, arthritis, diabetes and non-skin cancer do not statistically differ between those who initiated before and at or after age 18.

Adults who began smoking before age 18 are more likely to have a disability, depression, COPD, asthma, fair or poor general health or poor physical or mental health.

Prevalence of chronic health conditions and quality of life by age of initiation

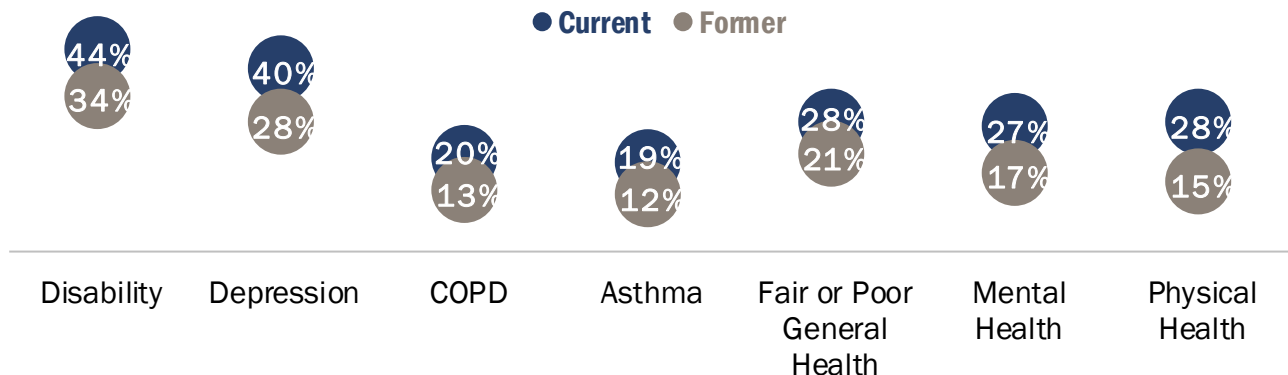


Quitting Smoking Positively Impacts an Adult's Health and Wellbeing

Although adults who started smoking before age 18 often have worse health outcomes, they can still benefit from quitting. Vermonters who initiated smoking before age 18 and currently smoke are more likely to have a disability, depression, COPD, asthma, fair or poor general health, poor physical health or poor mental health compared to those who formerly smoked and initiated at an early age.

Vermonters who initiated smoking before age 18 and quit smoking are less likely to have a disability, depression, COPD, asthma, fair or poor general health, poor mental health or poor physical health.

Prevalence of Chronic Health Conditions and Quality of Life by Smoking Status



Key Takeaways

Preventing initiation of cigarette smoking prior to adulthood decreases the risk of chronic disease development and leads to improved general, physical and mental health. Cessation of smoking among those who initiated in youth also has positive health impacts for Vermonters as those who quit smoking are less likely to have several chronic conditions and have better quality of life. Thus, prevention and cessation efforts are vital to reducing the health-related impacts of tobacco use in Vermont.

Prevention and cessation of smoking are pivotal to reducing the burden of chronic health impacts in Vermont.

References, Data Sources and Data Notes:

¹ *The Health Consequences of Smoking – 50 Years of Progress:*

<https://www.ncbi.nlm.nih.gov/books/NBK179276/>

² *Cost of Cigarette Smoking – Attributable Productivity Losses, U.S., 2018:*

[https://www.ajpmonline.org/article/S0749-3797\(22\)00294-X/fulltext](https://www.ajpmonline.org/article/S0749-3797(22)00294-X/fulltext)

³ *Cigarette Smoking Among US Adults With Selected Chronic Diseases Associated with Smoking, 2010-*

2019: https://www.cdc.gov/pcd/issues/2022/22_0086.htm

⁴ Pleasants RA, Rivera MP, Tilley SL, Bhatt SP. Both Duration and Pack-Years of Tobacco Smoking Should Be Used for Clinical Practice and Research. *Ann Am Thorac Soc.* 2020 Jul;17(7):804-806. doi:

10.1513/AnnalsATS.202002-133VP. PMID: 32348693; PMCID: PMC7405110.

⁴ *Association Between Smoking, Smoking Cessation, and Mortality by Race, Ethnicity, and Sex Among US*

Adults: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2797597>

⁵ *Vermont Behavioral Risk Factor Surveillance System (BRFSS):* <https://www.healthvermont.gov/health-statistics-vital-records/population-health-surveys-data/brfss>

For More Information

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