



# Vermont Cancer Data Pages

## Chapter 1: Risk Factors and Prevention

Department of Health Surveillance  
Published March 2022

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# Introduction: Risk Factors and Prevention

Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environmental, social and genetic factors.

People are at higher risk for certain cancers due both to factors related to personal behaviors such as: diet, physical inactivity, tobacco use, alcohol use, and overexposure to sunlight; and to social determinants of health such as race/ethnicity, income-level, disability status, and sexual identity and orientation.

This chapter of the *Vermont Cancer Data Pages*, Risk Factors and Prevention, explores the personal behaviors of Vermonters that are known to increase or decrease the risk of developing cancer.

Note: Throughout this report, data comparisons presented as “higher,” “lower,” “larger,” “smaller,” “better,” “worse,” or as “significantly different” are **all considered statistically significant differences**. Statistical significance is assessed by comparing the confidence intervals of different groups.

# Vermont Health Equity Priority Populations

The Vermont Department of Health (VDH) recognizes that some individuals are more likely to be affected by cancer than others due to social, environmental and economic disadvantages.

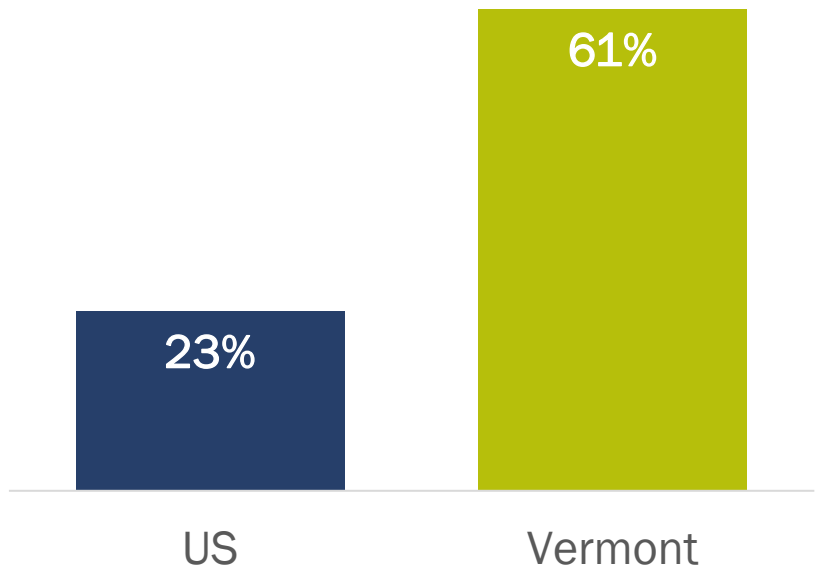
In developing the [2025 Vermont Cancer Plan](#), **four populations of focus** were chosen to track to assess disparities in health behaviors and outcomes. These four populations are highlighted in these data pages as well to support work focusing on decreasing disparities.

The four populations of focus are defined in the following ways, based on VDH's main data sources:

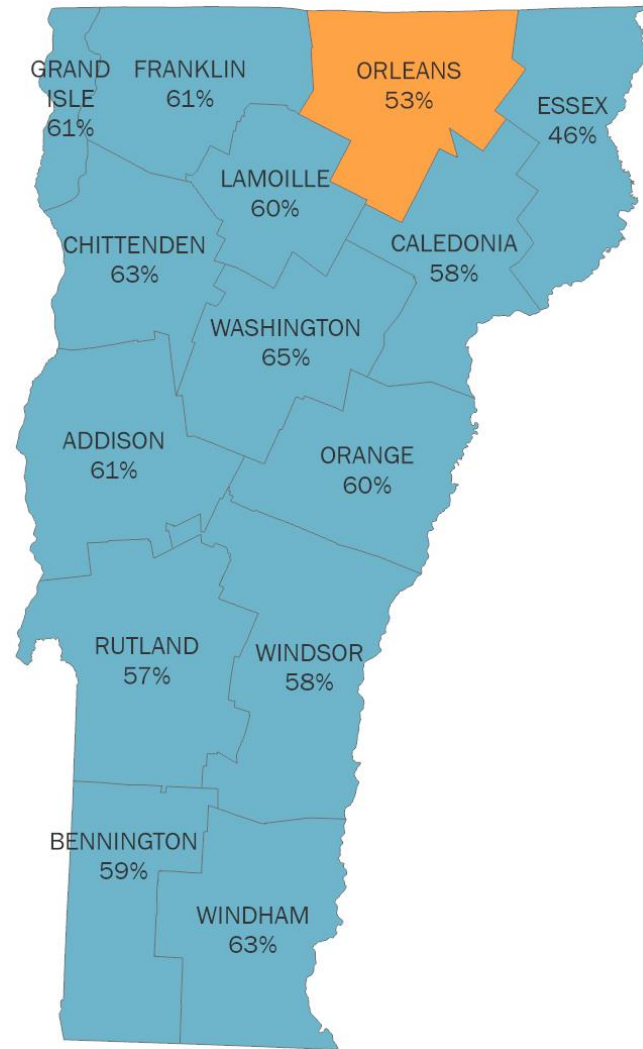
- **Black, Indigenous and people of color (BIPOC):** Individuals who self-identified that they were of Hispanic, Latino/a, or Spanish origin, and/or responded that their race is one or more of the following: Black or African American, American Indian and/or Alaska Native, Asian, Pacific Islander.
- **Lesbian, gay, bisexual, transgender and queer (LGBTQ+) Vermonters:** Data sources only ask respondents to self-identify if they are lesbian, gay, bisexual and/or transgender. To best represent the available data therefore, we use **LGBT** when discussing findings from these data sources, while also acknowledging that these data do not fully represent the LGBTQ+ community.
- **Vermonters living with disabilities:** Individuals who self-identified as having one or more of the following conditions: sight impairment, being deaf or having serious difficulty hearing, difficulty walking, difficulty making decisions, difficulty doing errands alone, difficulty getting dressed alone.
- **Low-income Vermonters:** Individuals who have a household income that is 250% or less of the federal poverty limit.

# Physical Activity

**Vermonters** meet current physical activity guidelines more than the **U.S. population**.

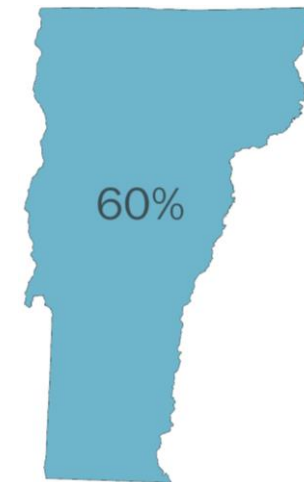


All estimates are age-adjusted to the 2000 U.S. standard population  
Vermont Department of Health Source: BRFSS 2019



**Adults in Orleans County** meet current physical activity guidelines less than Vermonters in general.

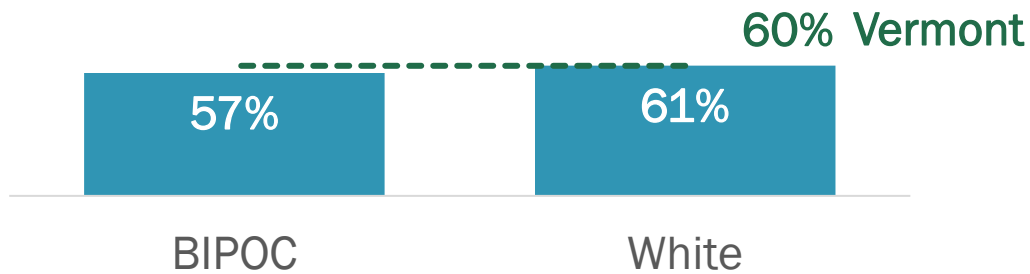
- Same as state rate
- Lower than state rate



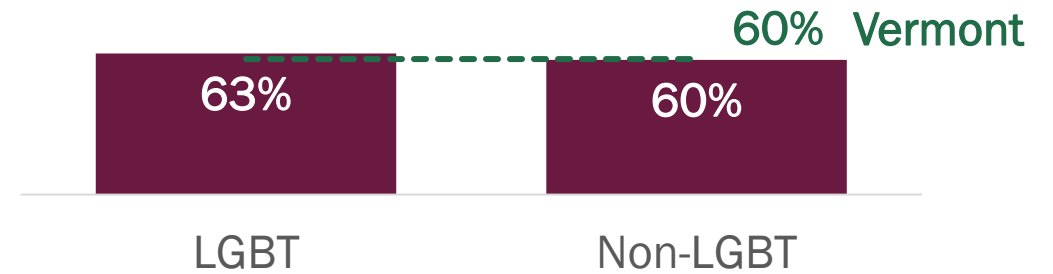
Vermont Department of Health Source: BRFSS 2017 and 2019

# Physical Activity

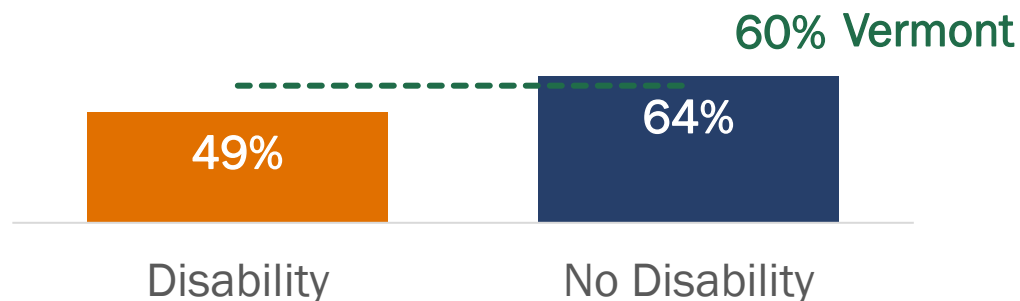
BIPOC and White, Non-Hispanic adults meet current physical activity recommendations at a similar rate.



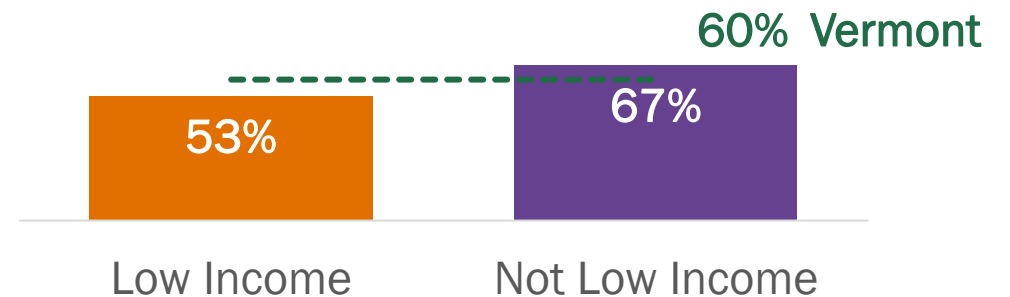
LGBT and Non-LGBT adults meet current physical activity recommendations at a similar rate.



Adults with a disability are less likely to meet current physical activity recommendations than those without a disability.

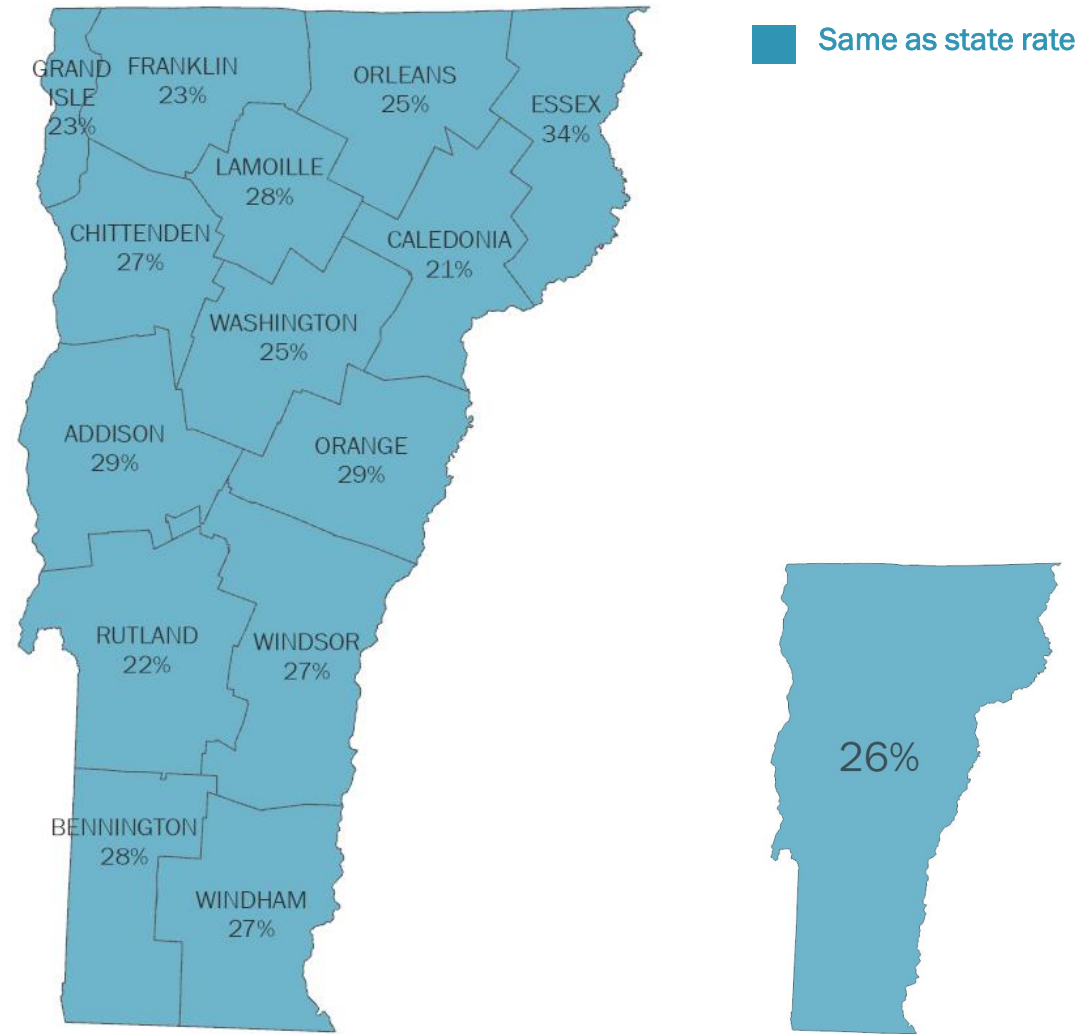


Adults with a low income are less likely to meet current physical activity recommendations than those that are not low-income.



# Eat at Least Five Servings of Fruits and Vegetables<sup>+</sup>

**The % of Vermonters eating at least five servings of fruits and vegetables in each county is like that of Vermont in general.**

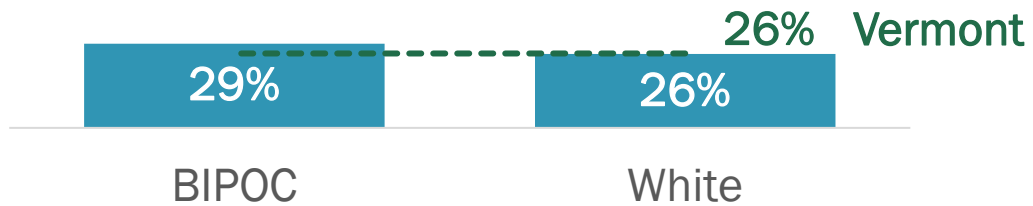


All estimates are age-adjusted to the 2000 U.S. standard population  
Vermont Department of Health Source: BRFSS 2017 and 2019

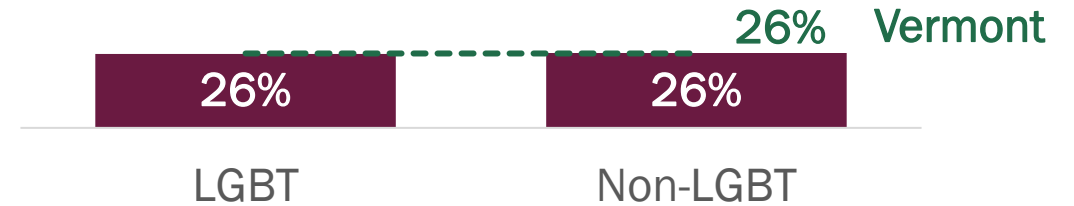
<sup>+</sup>US data from BRFSS 2019 for this measure are not yet available. This page will be updated when data are available.

# Eat at Least Five Servings of Fruits and Vegetables

BIPOC and White, Non-Hispanic adults eat at least 5 servings of fruits and vegetables at a similar rate.



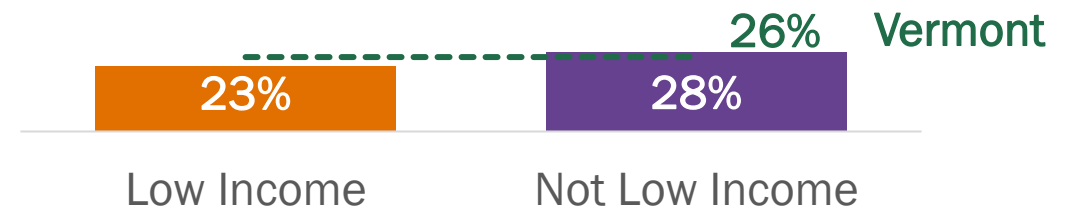
LGBT and non-LGBT adults eat at least 5 servings of fruits and vegetables at a similar rate.



Adults with a disability eat at least 5 servings of fruits and vegetables less than adults without a disability.



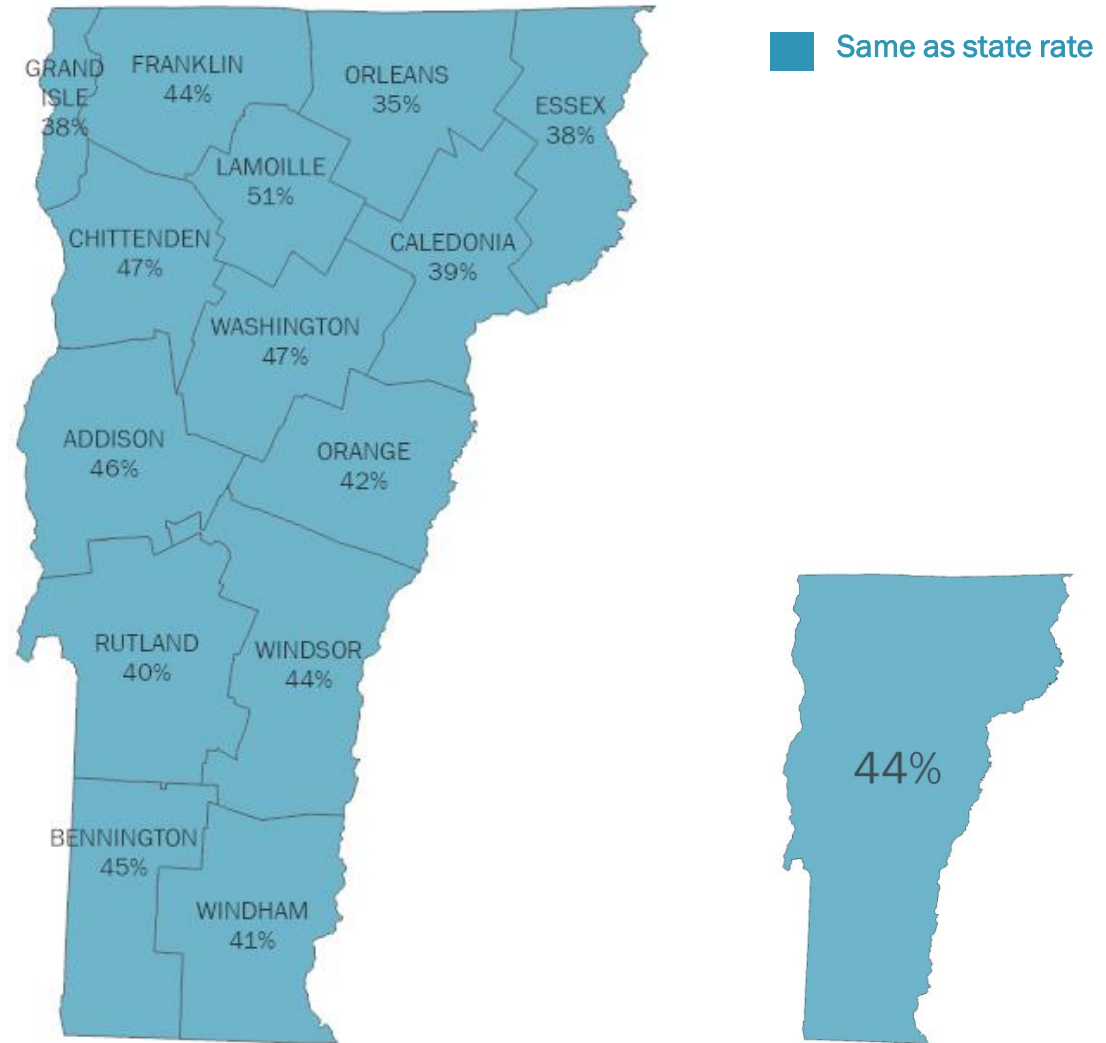
Adults with a low income eat at least 5 servings of fruits and vegetables less than those without a low income.





# Sunburns: Adults

The % of Vermonters that had a sunburn in the past year in each county is like that of Vermont as a whole.

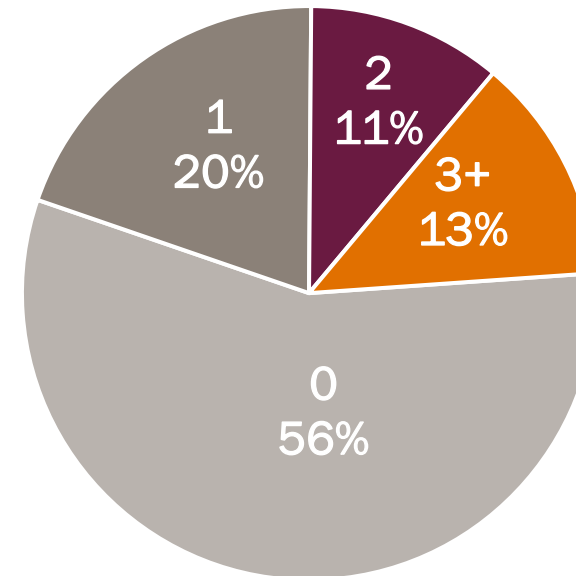
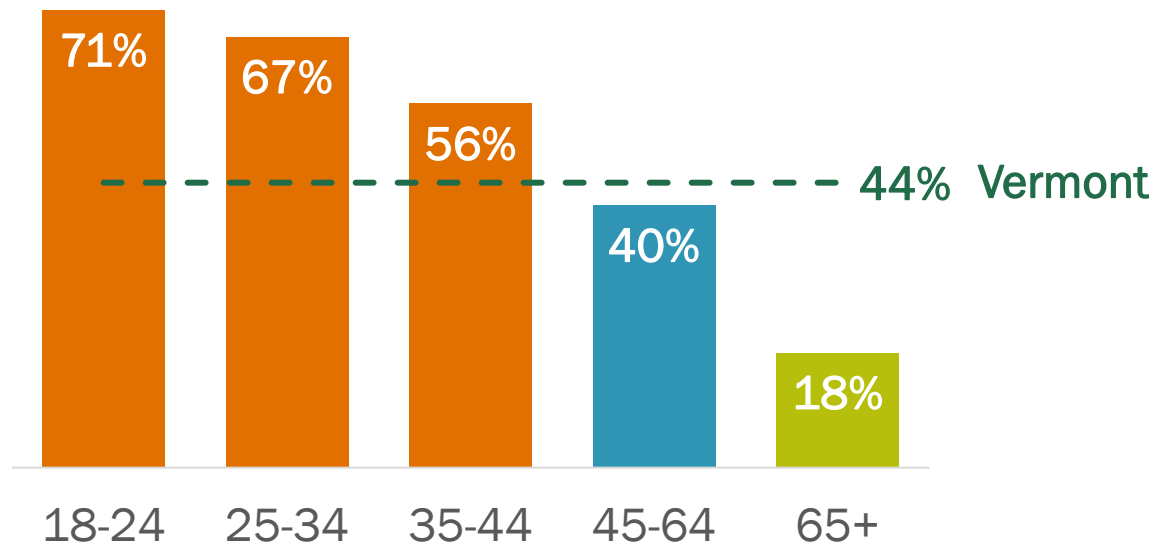


# Sunburns: Adults

**Vermonters ages 18-44** are more likely to have had a sunburn in the past year than Vermont adults in general.

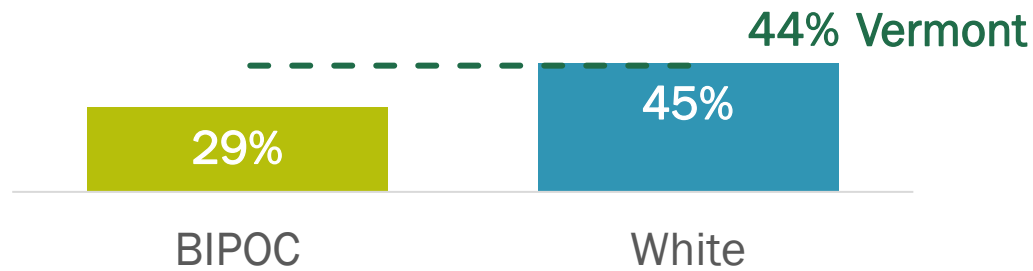
Vermonters ages 65 and older are less likely to have had a sunburn in the past year.

**26% of Vermont adults** have had 2 or more sunburns in the past year.

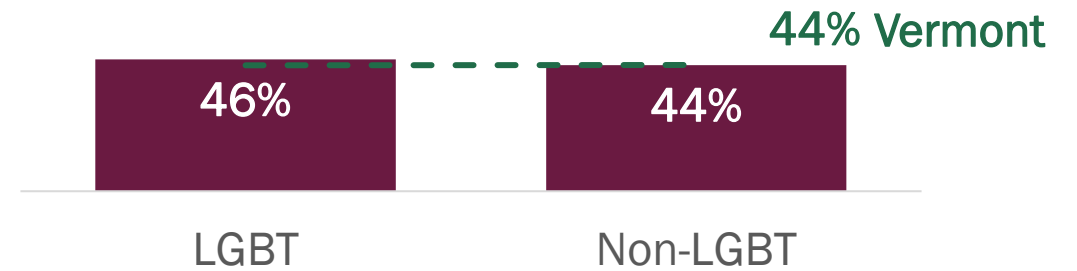


# Sunburns: Adults

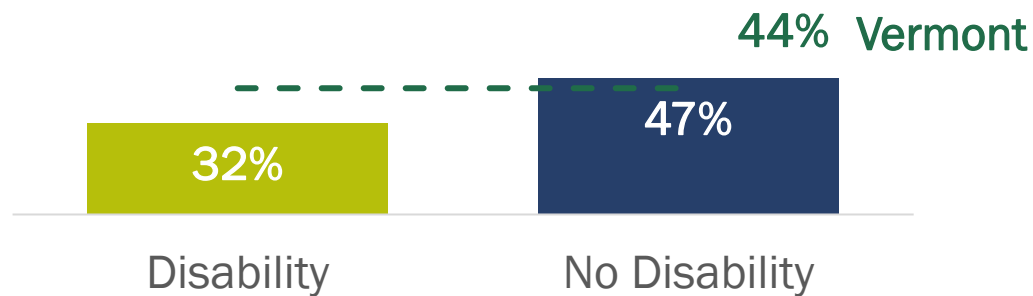
BIPOC adults are less likely than White, Non-Hispanic Vermonters to have had a sunburn in the past year.



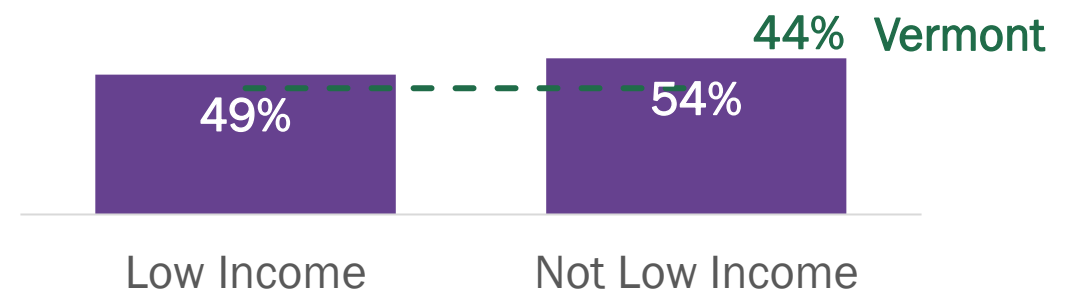
LGBT and Non-LGBT adults have had at least one sunburn in the past year at a similar rate.



Adults with a disability are less likely to have had a sunburn in the past year than those without a disability.



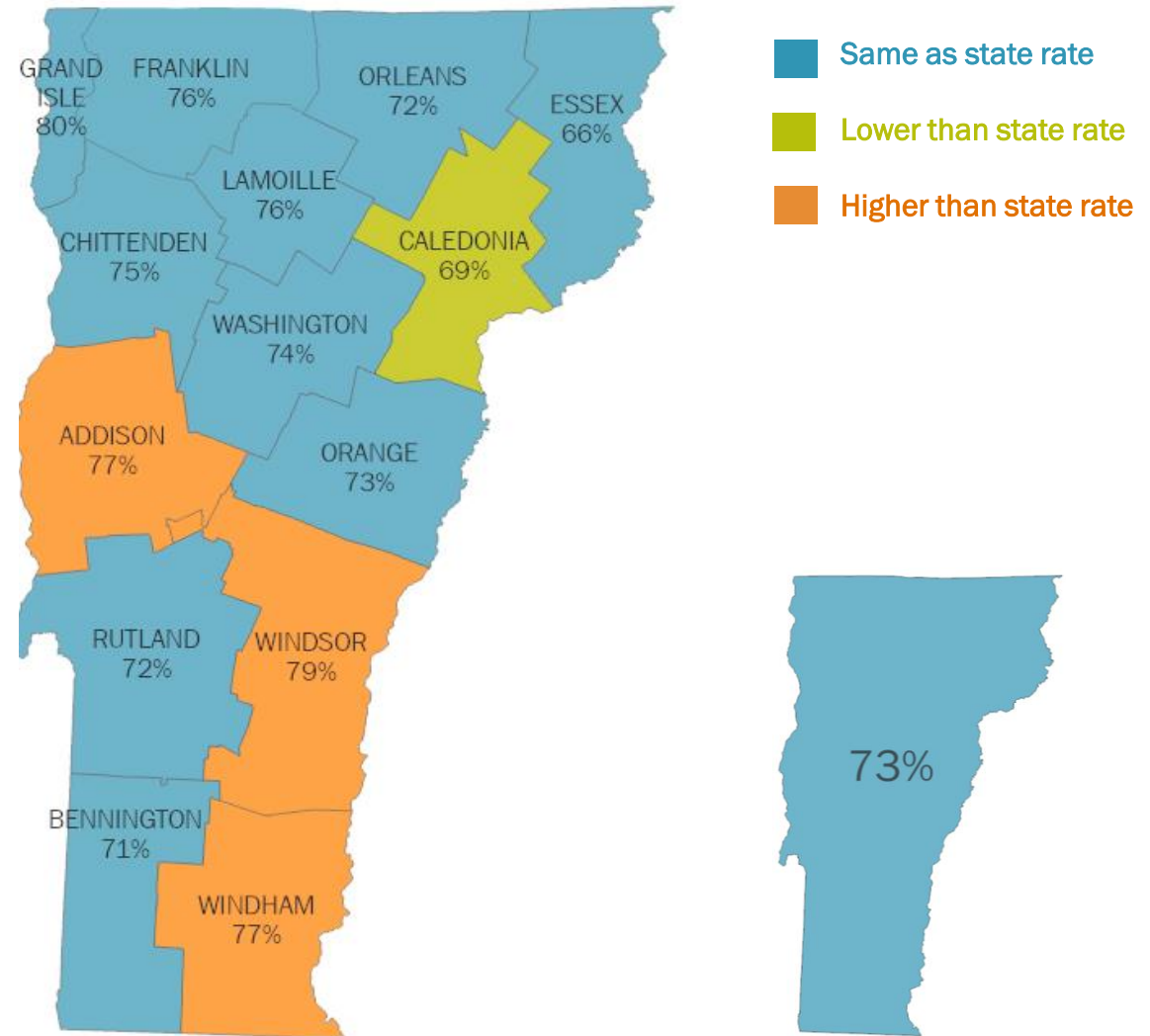
Adults with and without a low income have had at least one sunburn in the past year at a similar rate.



# Sunburns: High School

High school students in **Addison, Windsor and Windham Counties** are more likely to have had a sunburn in the past year than high school students in general.

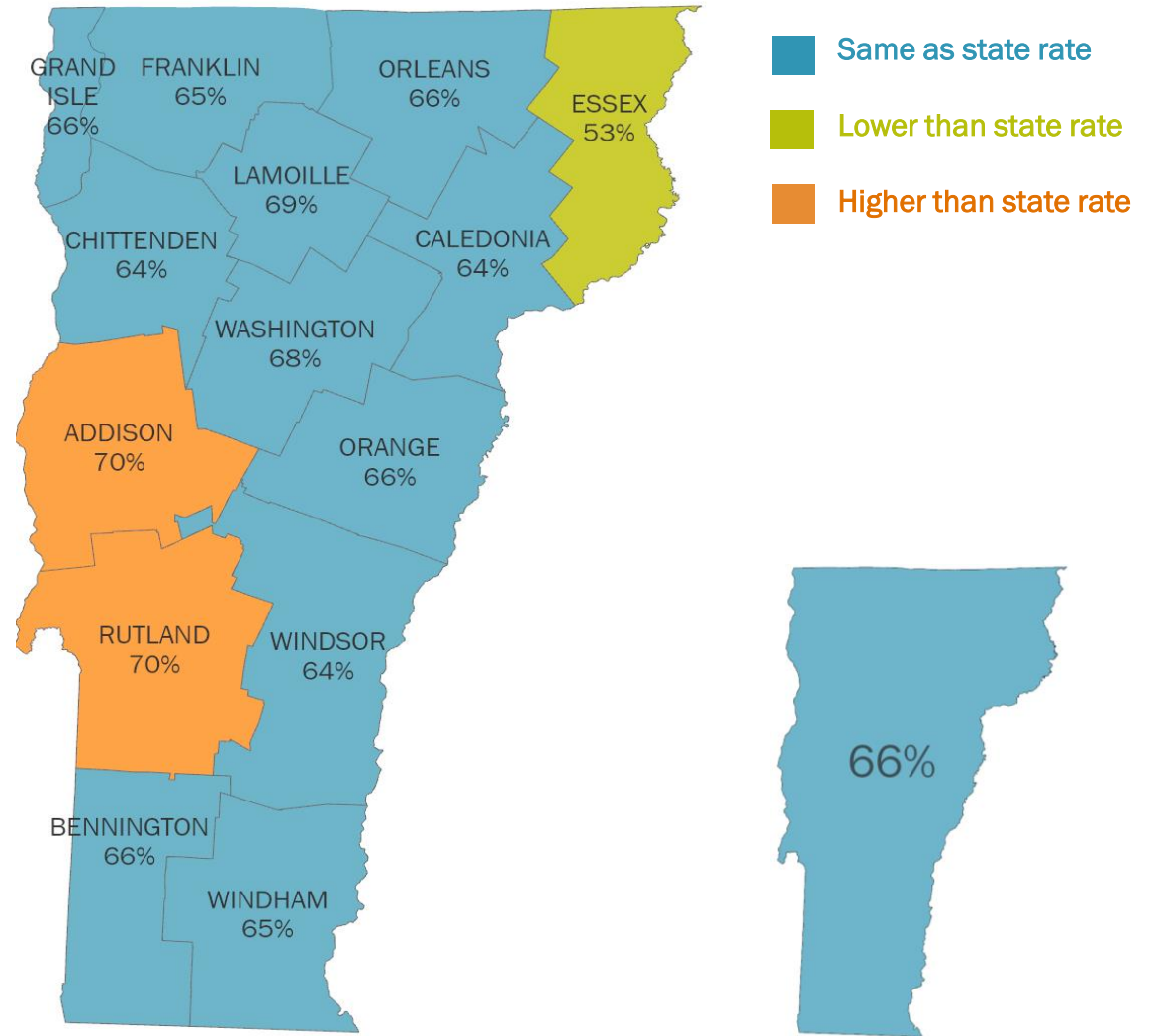
Those in **Caledonia County** are less likely to have had a sunburn.



# Sunburns: Middle School

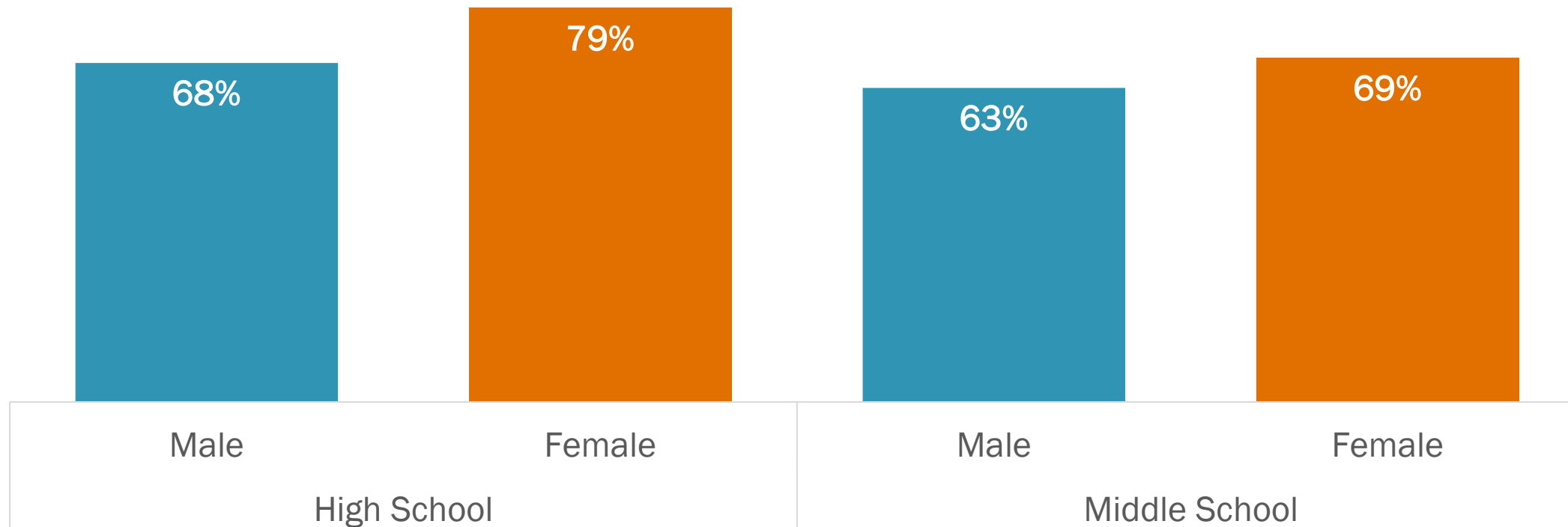
Middle school students in **Addison and Rutland Counties** are more likely to have had a sunburn in the past year than middle school students in general.

Those in **Essex County** are less likely to have had a sunburn.



# One or More Sunburns: High School and Middle School

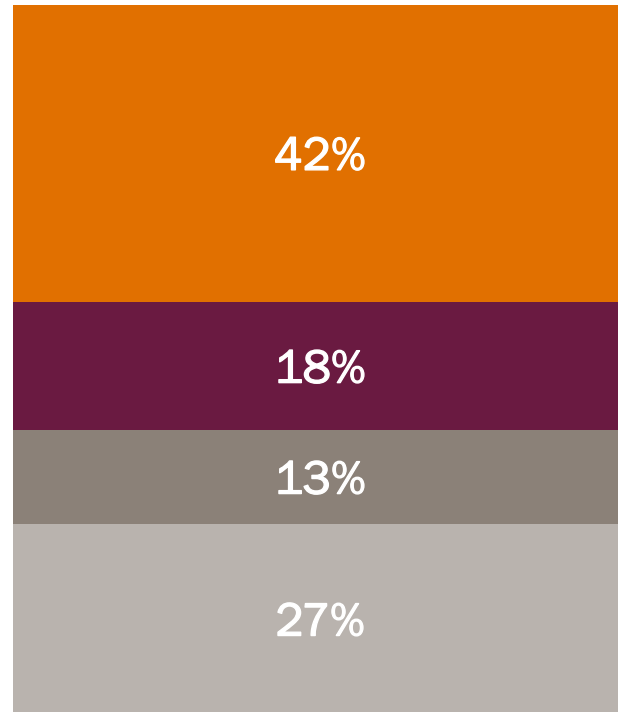
**Female students** in both high school and middle school were more likely to have had a sunburn in the past year than **male students**.



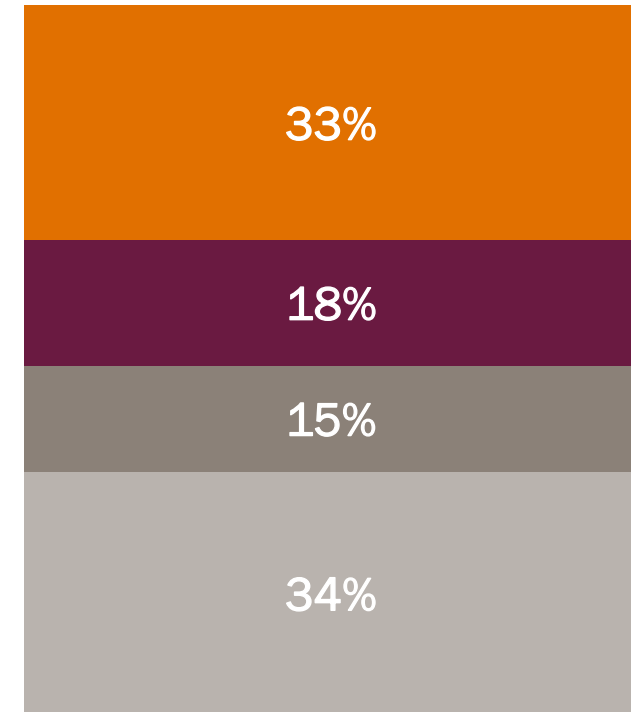
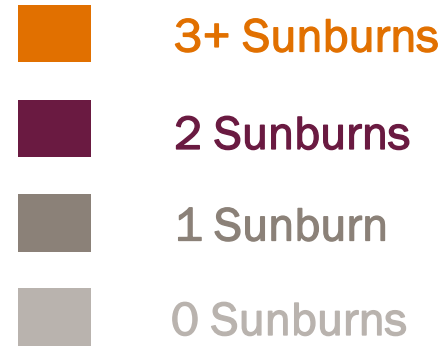
# Number of Sunburns: High School and Middle School

**60% of high school students had 2 or more sunburns in the past year.**

**51% of middle school students had 2 or more sunburns in the past year.**



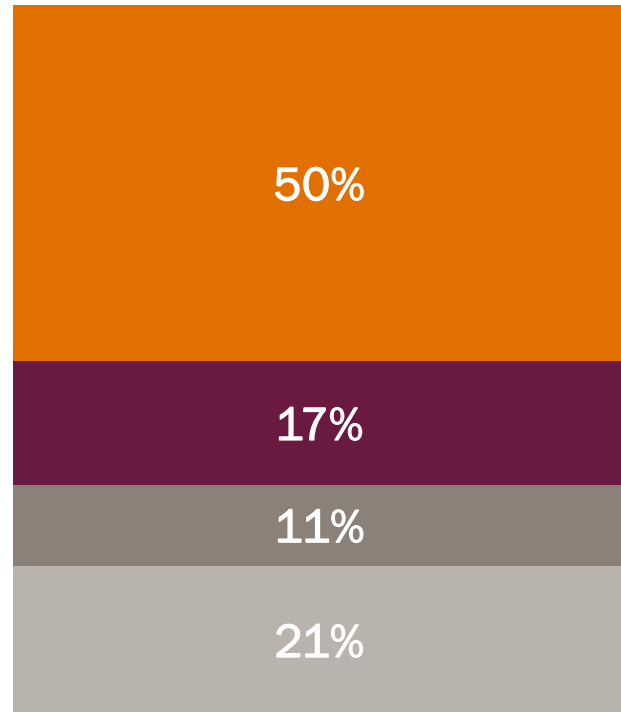
High School Students



Middle School Students

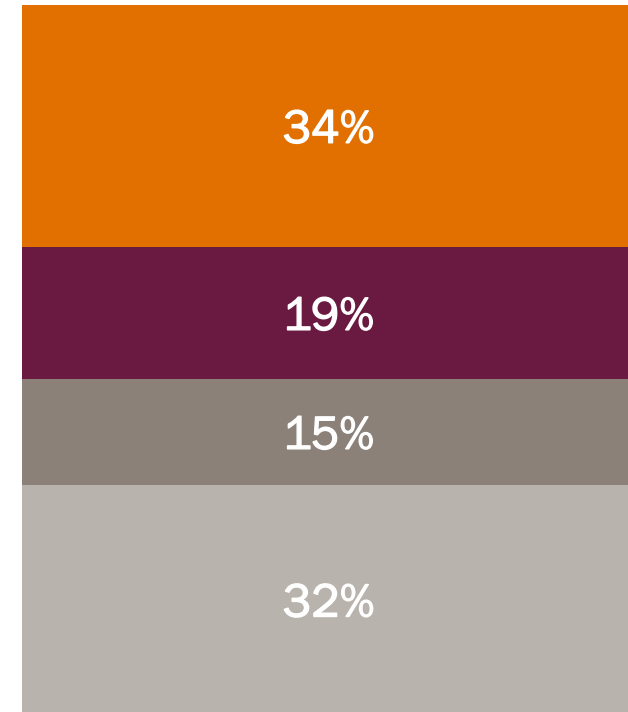
# Number of Sunburns: High School

67% of female high school students had 2 or more sunburns in the past year.



Female Students

53% of male high school students had 2 or more sunburns in the past year.

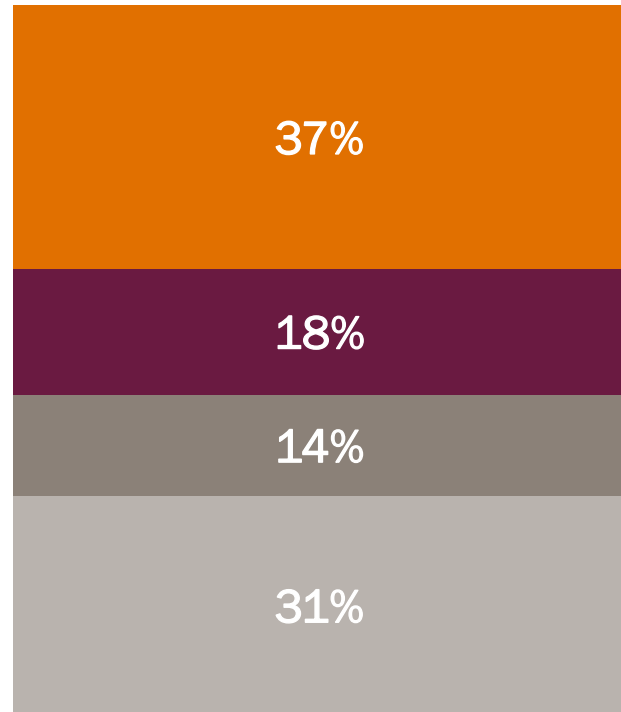


Male Students



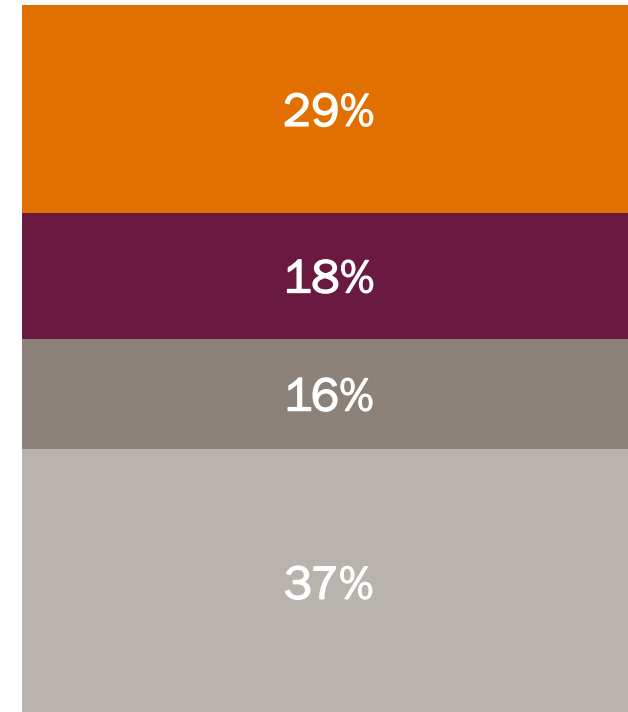
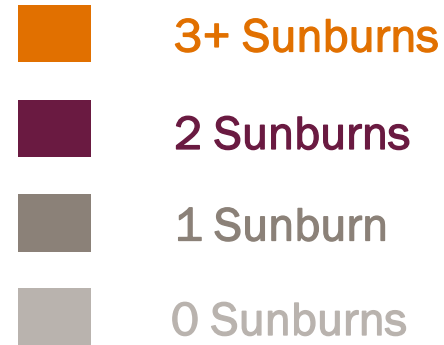
# Number of Sunburns: Middle School

**55% of female middle school students had 2 or more sunburns in the past year.**



Female Students

**47% of male middle school students had 2 or more sunburns in the past year.**

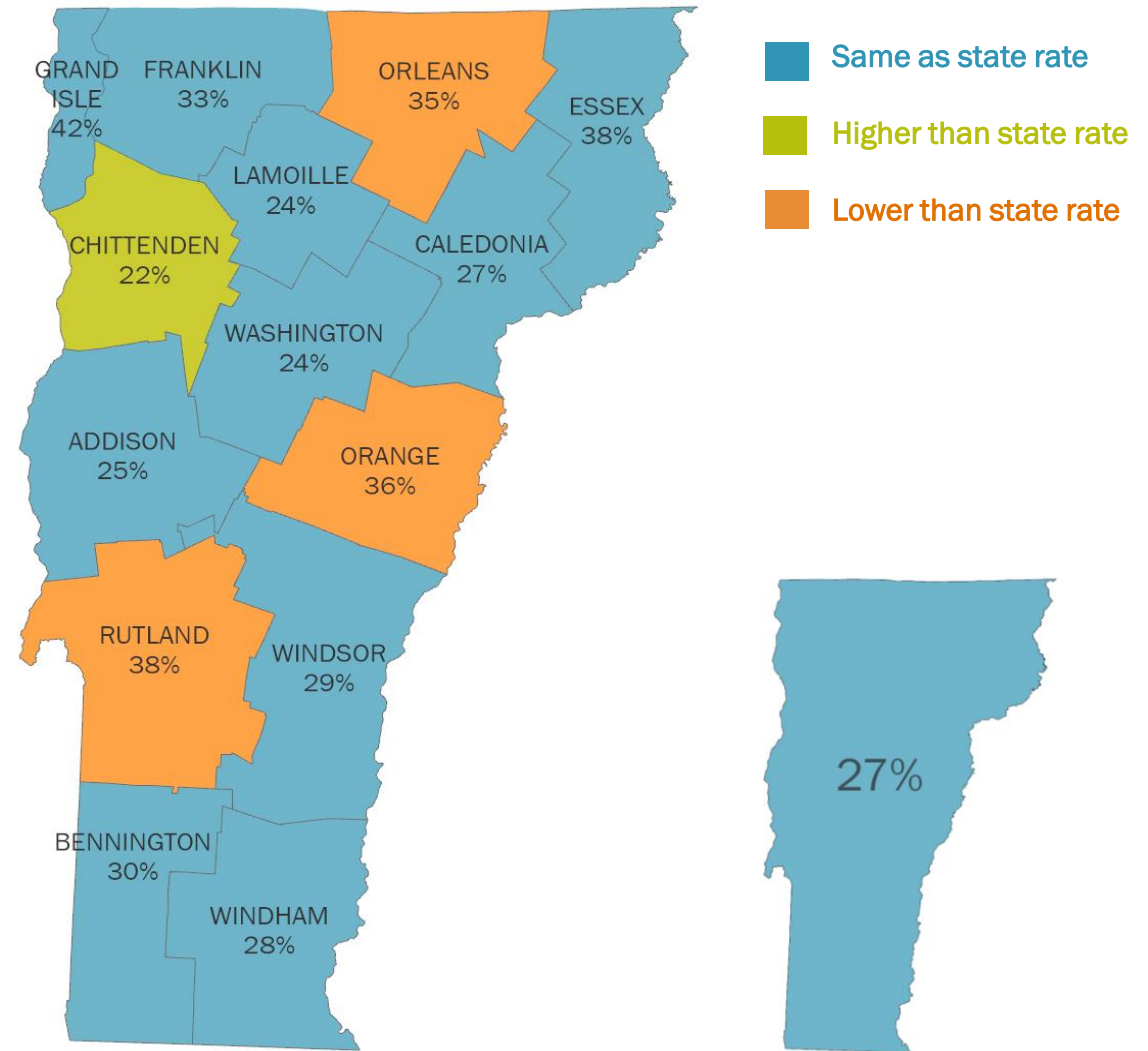


Male Students

# Obesity<sup>+</sup>

**Adults in Orleans, Orange and Rutland Counties have obesity at a higher rate than Vermonters in general.**

**Those in Chittenden County have obesity at lower rates.**



All estimates are age-adjusted to the 2000 U.S. standard population  
Vermont Department of Health Source: BRFSS 2018 and 2019

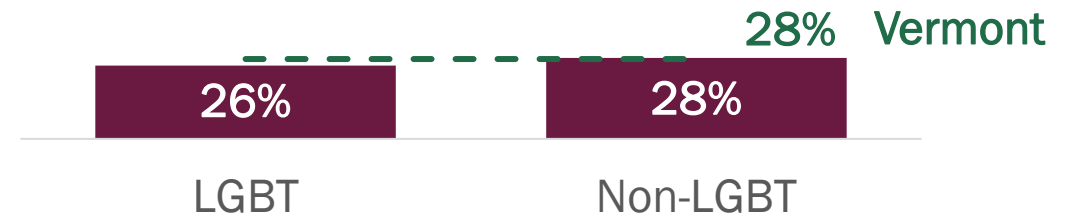
+US data from BRFSS 2019 for this measure are not yet available. This page will be updated when data are available.

# Obesity

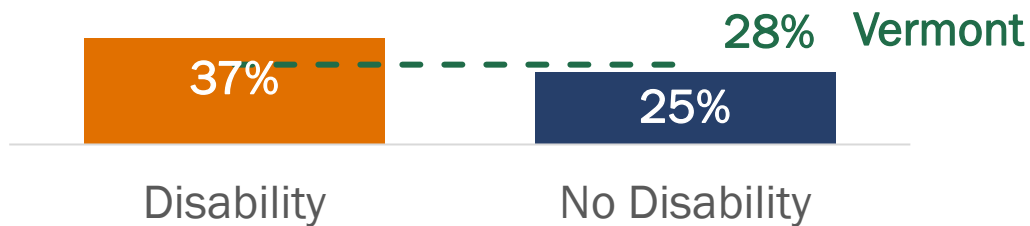
BIPOC and White, Non-Hispanic adults have obesity at a similar rate.



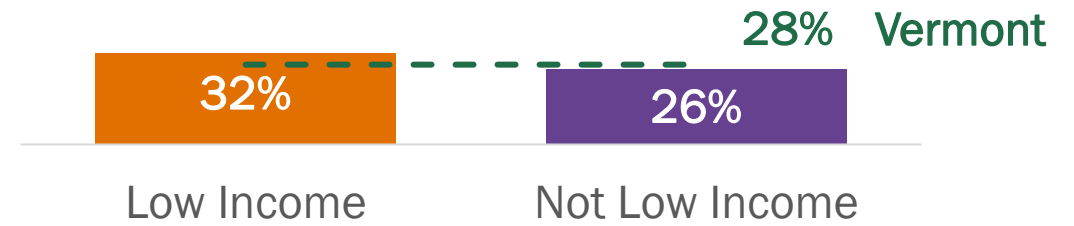
LGBT and Non-LGBT adults have obesity at a similar rate.



Adults with a disability are more likely to have obesity than those without a disability.



Adults with a low income are more likely to have obesity than those that do not have a low income.

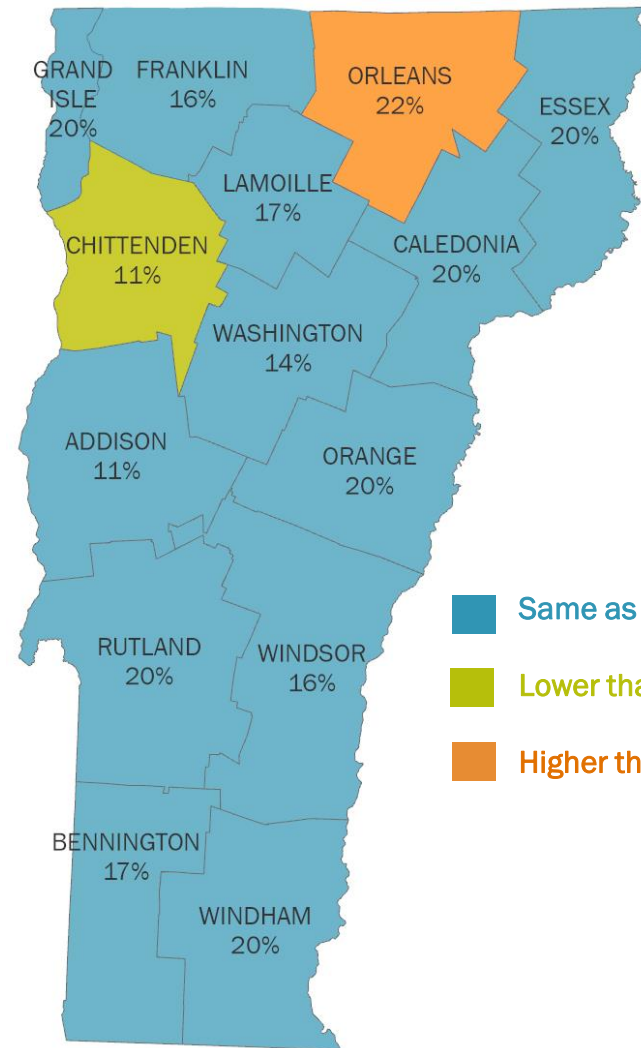


# Smoking

**Vermont adults** smoke at a higher rate than the U.S. population.

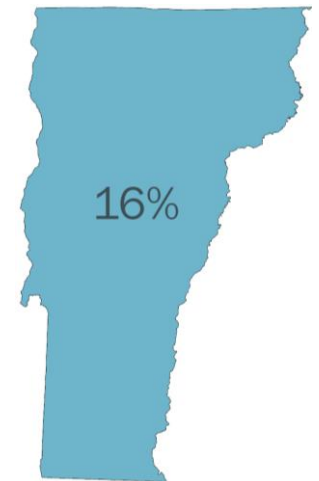


All estimates are age-adjusted to the 2000 U.S. standard population  
Vermont Department of Health Source: BRFSS 2019



- Same as state rate
- Lower than state rate
- Higher than state rate

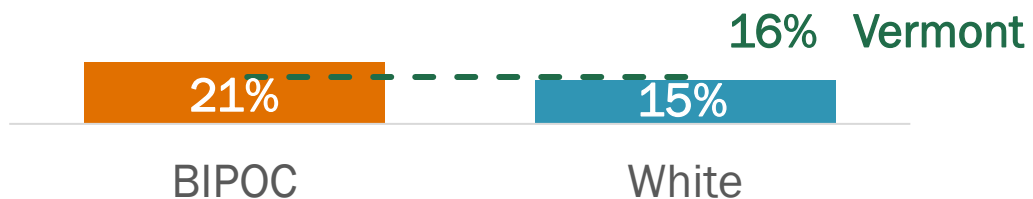
**Adults in Orleans County** smoke at a higher rate than Vermonters in general.  
**Those in Chittenden County** smoke at a lower rate.



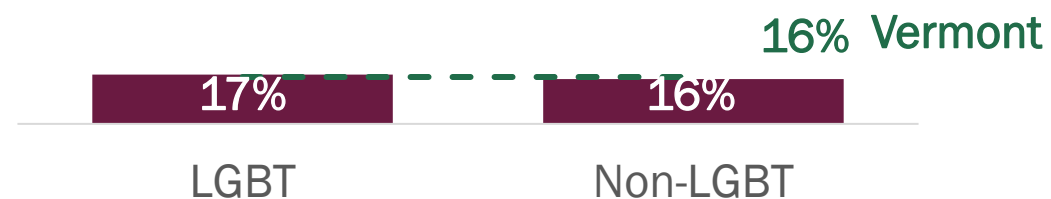
Vermont Department of Health Source: BRFSS 2018 and 2019

# Smoking

 BIPOC adults are more likely to smoke than White, Non-Hispanic adults.



LGBT and Non-LGBT adults smoke at a similar rate.



 Adults with a disability are more likely to smoke than those without a disability.

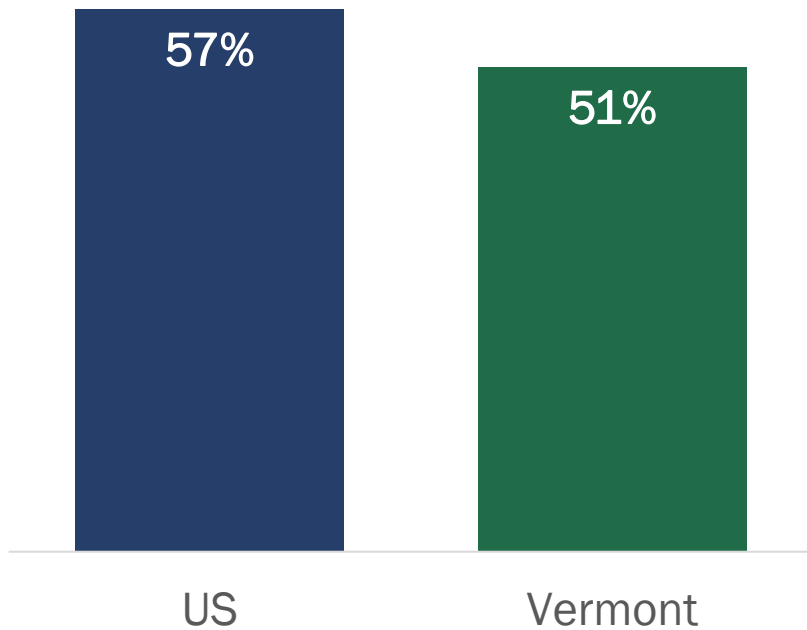


 Adults with a low income are more likely to smoke than those without a low income.

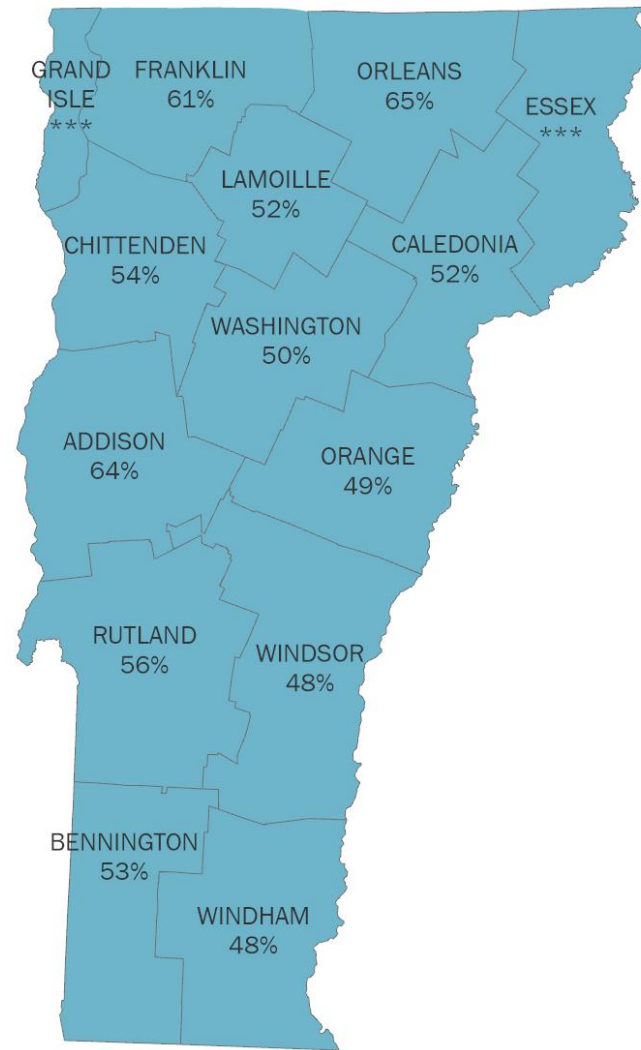


# Quit Attempts

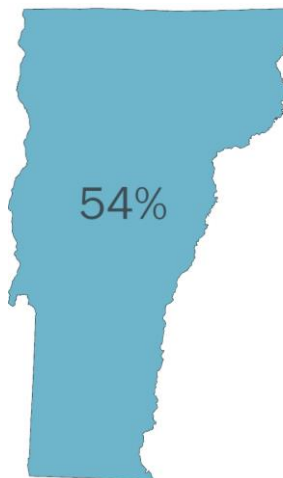
**Vermonters** who smoke make quit attempts at a similar rate as the **US population**.



All estimates are age-adjusted to the 2000 U.S. standard population  
 Vermont Department of Health Source: BRFSS 2019



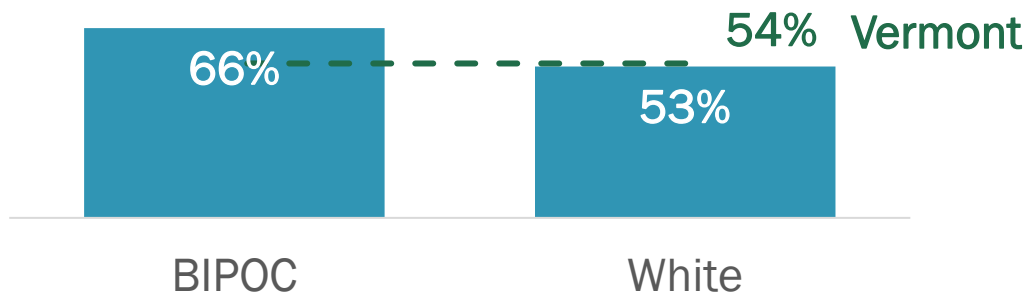
The % of adult smokers who make quit attempts in each county is like that of Vermont in general.



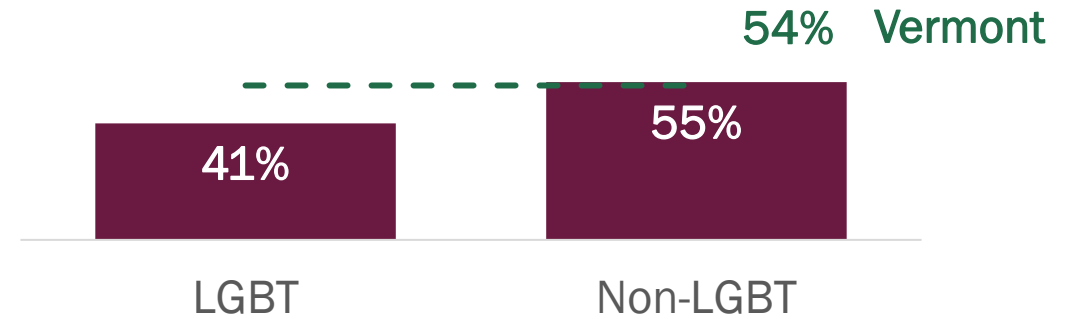
Vermont Department of Health Source: BRFSS 2018 and 2019

# Quit Attempts

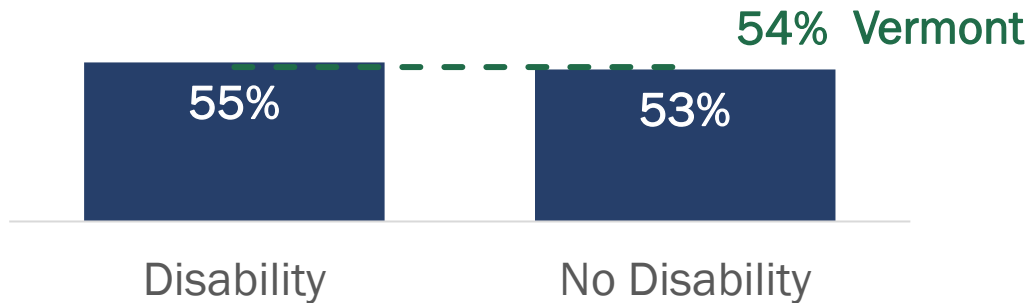
BIPOC and White, Non-Hispanic adults who smoke make quit attempts at a similar rate.



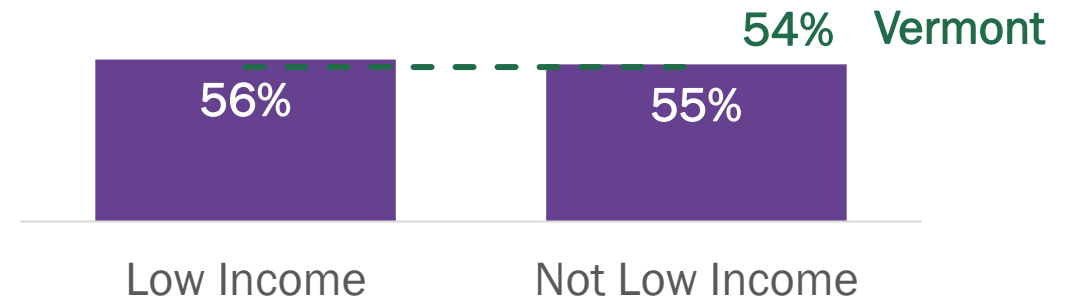
LGBT and Non-LGBT adults who smoke make quit attempts at a similar rate.



Adults with and without a disability who smoke make quit attempts at a similar rate.



Adults with and without a low income who smoke make quit attempts at a similar rate.

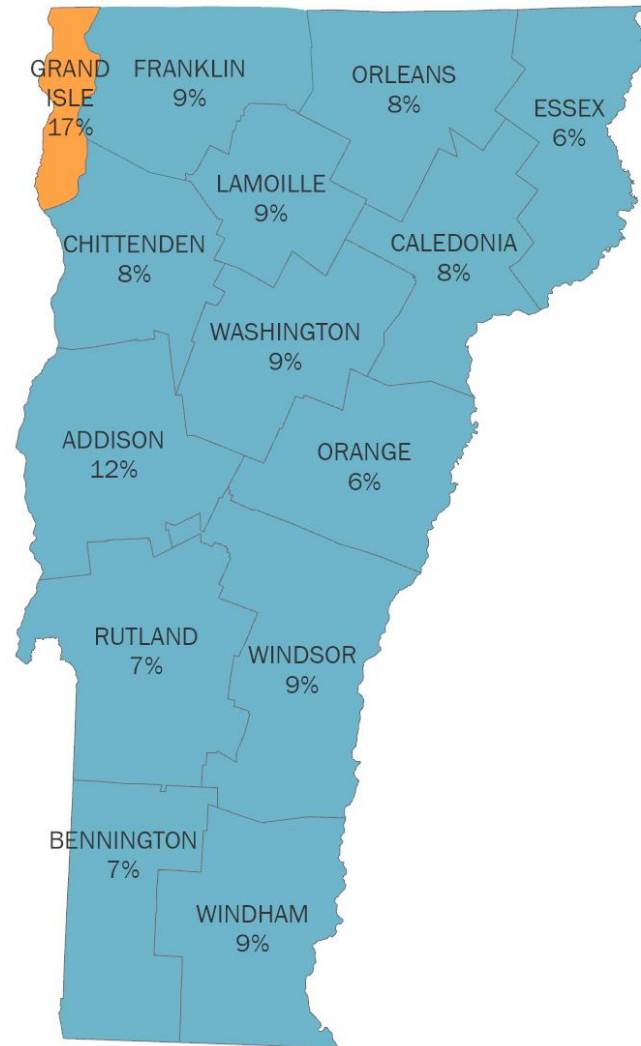


# Heavy Drinking

**Vermont adults** are more likely to drink heavily more than the **US population**.

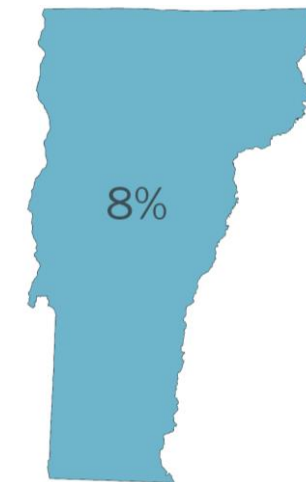


All estimates are age-adjusted to the 2000 U.S. standard population  
 Vermont Department of Health Source: BRFSS 2019



**Adults in Grand Isle County** are more likely to drink heavily than Vermonters in general.

- Same as state rate
- Higher than state rate

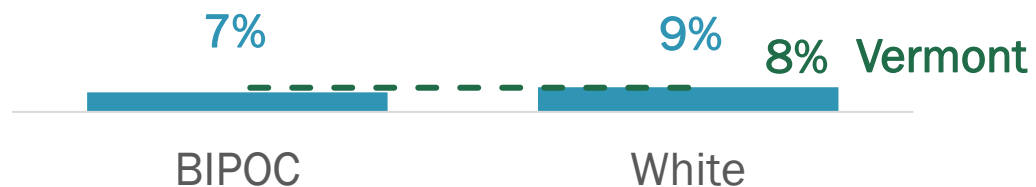


Vermont Department of Health Source: BRFSS 2018 and 2019



# Heavy Drinking

BIPOC and White, Non-Hispanic adults drink heavily at a similar rate.



LGBT and Non-LGBT adults drink heavily at a similar rate.



Adults with and without a disability drink heavily at a similar rate.



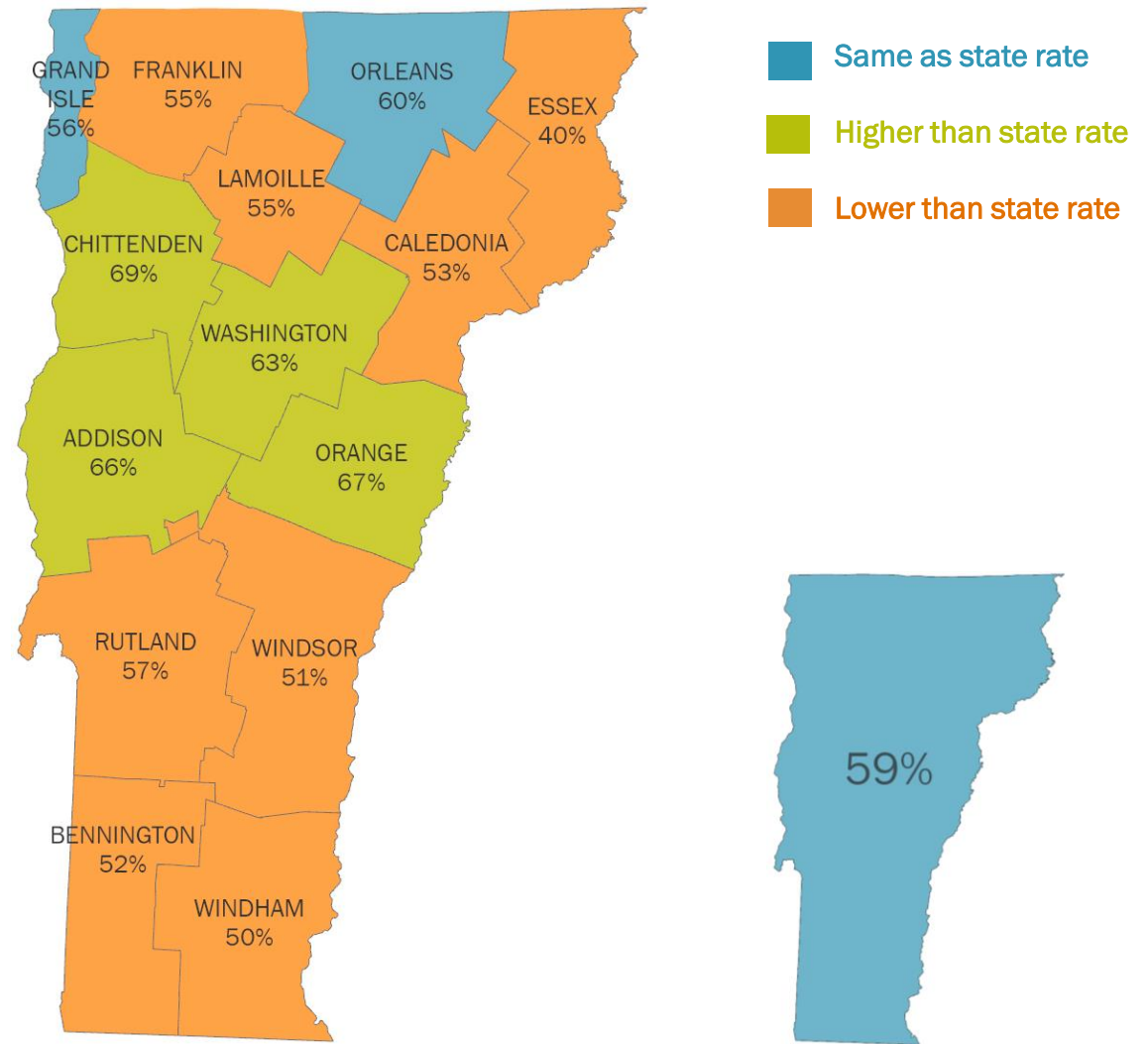
Adults with and without a low income drink heavily at a similar rate.



# HPV Vaccination, Ages 13-17

The rate of adolescents who have completed the HPV vaccine series varies widely across the state, with most counties falling under the statewide rate.

Having completed the HPV vaccine series requires adolescents who received the first dose before their 15<sup>th</sup> birthday to receive two doses, and those that received the first dose after their 15<sup>th</sup> birthday to receive 3 doses.



# Data Sources and Notes

**Behavioral Risk Factor Surveillance System (BRFSS):** Vermont tracks risk behaviors using this telephone survey of adults. The results are used to plan, support, and evaluate health promotion and disease prevention programs. Vermont, along with the 49 other states and three territories, has participated in the BRFSS with the Centers for Disease Control and Prevention (CDC) since 1990. An adult (18 or older) in the household is asked a uniform set of questions. The results are weighted to represent the adult population of the state.

**Youth Risk Behavior Survey (YRBS):** Every two years since 1993, the Department of Health's Division of Alcohol and Drug Abuse Program and the Department of Education's Coordinated School Health Programs have sponsored the YRBS. The YRBS measures the prevalence of behaviors that contribute to the leading causes of death, disease, and injury among youth. The YRBS is part of a larger effort to help communities increase the “resiliency” of young people by reducing high risk behaviors and promoting healthy behaviors.

**Vermont Immunization Registry (IMR):** A confidential system for maintaining immunization records for all Vermont residents and those who seek medical care in Vermont. It was designed, developed, and is operated by the Vermont Department of Health, and was first made available to providers in July 2004. It receives immunization data from medical providers, hospitals, health insurers, and increasingly, from pharmacies and nursing homes. The advantage of using the IMR for immunization data is that unlike survey information, it is much more comprehensive, and is not subject to selection bias. As is the case with any large database, the IMR has its limitations. It can be very difficult to keep up with the residences of all these individuals, resulting in a larger population base in the registry than actually live in the state of Vermont. The data shown in this chapter represent vaccine completion rates as of April 2021.

**Age Adjustment:** Many measures throughout this document are age adjusted. Age adjustment eliminates variation that results from differences in a populations' age distributions. Measures from BRFSS are adjusted for age only if they are Healthy Vermonters 2020 goals. Age adjustment groupings come from those determined by Healthy People 2020.

**Acknowledgement:** This publication was supported by Grant/Cooperative Agreement Number NU58DP006322-02-02 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.



## Learn more about cancer in Vermont:

Vermont Cancer Program:

[www.healthvermont.gov/wellness/cancer](http://www.healthvermont.gov/wellness/cancer)

Vermont Cancer Surveillance:

[www.healthvermont.gov/health-statistics-vital-records/surveillance-reporting-topic/cancer](http://www.healthvermont.gov/health-statistics-vital-records/surveillance-reporting-topic/cancer)

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