

Fruit and Vegetable Consumption in North Dakota

Survey Summary

March 2025



Background

Access to fresh fruits and vegetables is essential to the health and well-being of North Dakotans, playing a role in preventing chronic illness, improving overall nutrition, and promoting a healthy lifestyle. Lack of affordable, accessible produce may leave some residents reliant on less healthy alternative food sources. In 2021, North Dakota was below the median national prevalence in adult consumption of both fruits and vegetables.

The purpose of this report is to explore sources of representative, state-level data on North Dakotans' behaviors related to fruit and vegetable consumption to highlight gaps, advise decision making, and inform efforts to enhance access to fresh produce. For questions or further information regarding this report, please contact Matt Schmidt at matschmidt@nd.gov.

Data Sources

The N.D. Behavioral Risk Factor Surveillance System (BRFSS) is a telephone survey that collects information on the health behaviors, outcomes, and other priority health topics among North Dakotans ages 18 years and older. The survey has been conducted each year in N.D. since the 1980s. Over 5,000 surveys are collected annually from a random sample of N.D. adults. In total, 17,103 survey respondents from 2017, 2019, and 2021 answered questions about eating fresh fruits and vegetables.

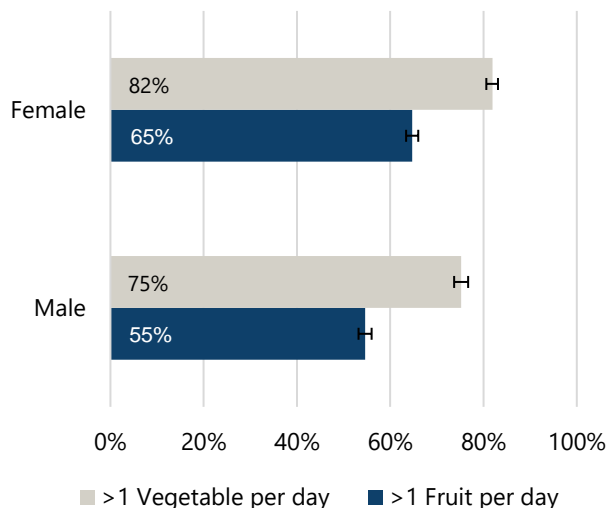


The N.D. Youth Risk Behavior Survey (YRBS) is an anonymous, school-based survey used to monitor behaviors in middle and high school students that lead to poor health outcomes. Every other year, schools and students are randomly selected to attain a representative sample of N.D. adolescents. Initiated in N.D. in 1995, the YRBS is used by educators and health professionals as a tool to track leading causes of mortality, morbidity, and social problems among youth.

Adult fruit and vegetable consumption

In total, 59% of North Dakota adults report eating one or more servings of fruit each day, and 78% report eating one or more servings of vegetables each day. Behaviors related to fruit and vegetable consumption vary by age, with younger adults ages 18-24 significantly less likely to report fresh produce consumption than older age groups. Among adult females, 82% report eating at least one vegetable per day and 65% report eating at least one fruit per day. This is significantly higher than males, with only 75% and 55% reporting eating vegetables and fruit, respectively (Figure 1). No significant differences in produce consumption are observed by race, region, or rurality among adults in North Dakota.

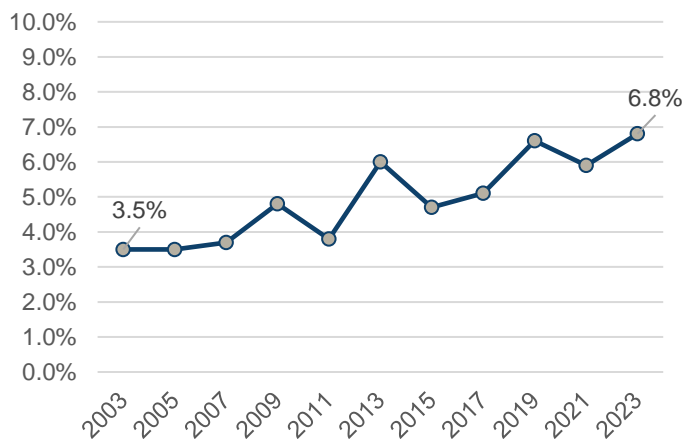
Figure 1. Adult Produce Consumption by Sex



Adolescent fruit and vegetable consumption

According to the U.S. Department of Agriculture, the minimum daily intake recommendation for adolescents aged 14-18 are 1.5 cups of fruit and 2.5 cups of vegetables for females, and 2 cups of fruit and 3 cups of vegetables for males. Among N.D. high schoolers in 2017, only 5.3% met the recommendation for daily fruit intake and 1.4% for daily vegetable intake, compared to 7.1% and 2.0% meeting those recommendations nationally, respectively. In contrast, 20% of N.D. high schoolers and 14% of middle schoolers reported eating at least one meal from a fast-food restaurant in the past 7 days. These patterns suggest that rates of consuming adequate fruits and vegetables remains below recommendations, while processed foods are more commonly consumed by adolescents in N.D.

Figure 2. % of high school students that reported not eating vegetables in the last week



In the most recent survey of N.D. high school students, overall, 6.8% reported not eating any vegetables in the 7 days prior to the survey. This continues a concerning trend that has seen that rate increase from 3.5% in 2003 (Figure 2). The trend is not observed for fruit intake, though, as 4.3% of high school students reported not eating any fruit in the past seven days, compared to 5.1% in 2003. During this same period, the percentage of N.D. high schoolers who had obesity rose from 9.2% to 16.3%.

Adolescent fruit and vegetable consumption (continued)

Fruit and vegetable consumption among N.D. high school students varies by sex, race, and ethnicity. In 2017-2023, 6.0% of male students reported not eating any fruits compared to 4.1% among females. This is observed with vegetable consumption too, where 7.1% of male students report no vegetable consumption in the past week compared to 5.1% of females (Figure 3b). Variances by race can be observed in Figure 3a, however, the only significant difference is among Black students reporting no vegetable consumption in the past week.

Few differences exist in produce consumption by region among high schoolers in N.D. (Figure 4). The highest proportion of students that report not eating fruits in the past week are in HHS Region 1 (13.6%) and HHS Region 4 (12.4%). Vegetable consumption does not vary significantly by region. There are also no significant differences in produce consumption when comparing urban and rural schools.

Figure 3. % of high school students that did not eat fruits or vegetables in the past 7 days (2017-2023)

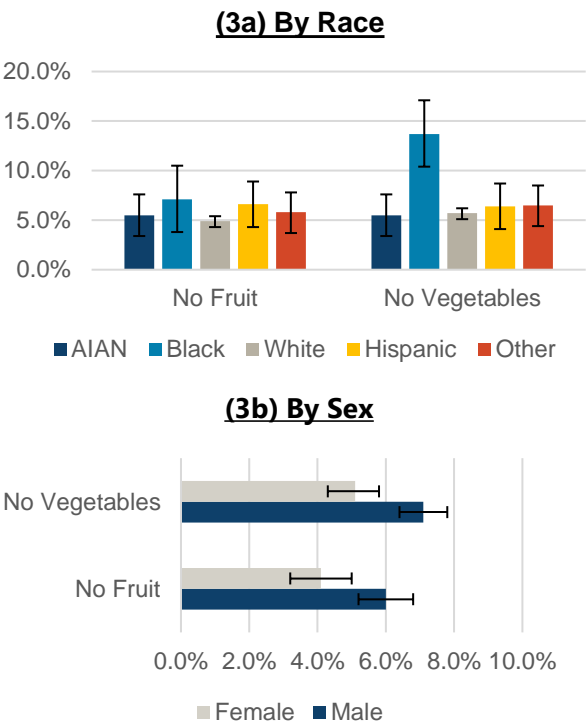


Figure 4. % of high school students that did not eat fruits or vegetables in the past 7 days, by region (2023)

