

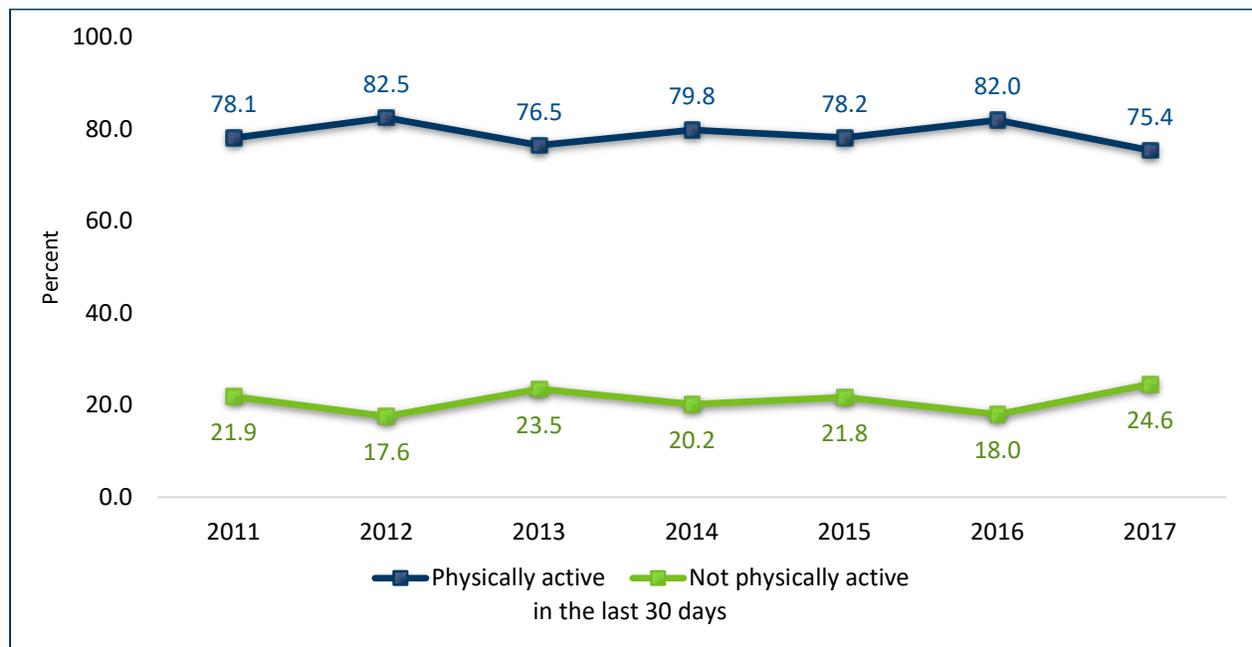
Physical Activity and Nutrition in Minnesota

Physical activity and fruit and vegetable consumption are key behaviors that influence a person’s weight. Two important components of obesity prevention are a healthy diet and regular physical activity. Balancing the calories consumed with the number of calories the body uses for activity plays an important role in preventing excess weight gain [1-3]. This data brief presents findings on trends in physical activity and nutrition from the most recent national and Minnesota BRFSS data and the relationship between obesity rates, physical activity and nutrition.

Minnesota rates for physical activity and nutrition

Physical activity: Over the period from 2011 to 2017, the rate of Minnesota adults who said they engaged in some kind of physical activity during the last 30 days has been relatively stable [Figure 1]. In comparison, Minnesota rates are higher than the U.S. median rates for physical activity over the same time period. In 2017, 75.4 percent of Minnesota adults participated in physical activity during the last 30 days, compared to 73.1 percent in the U.S. as a whole [4].

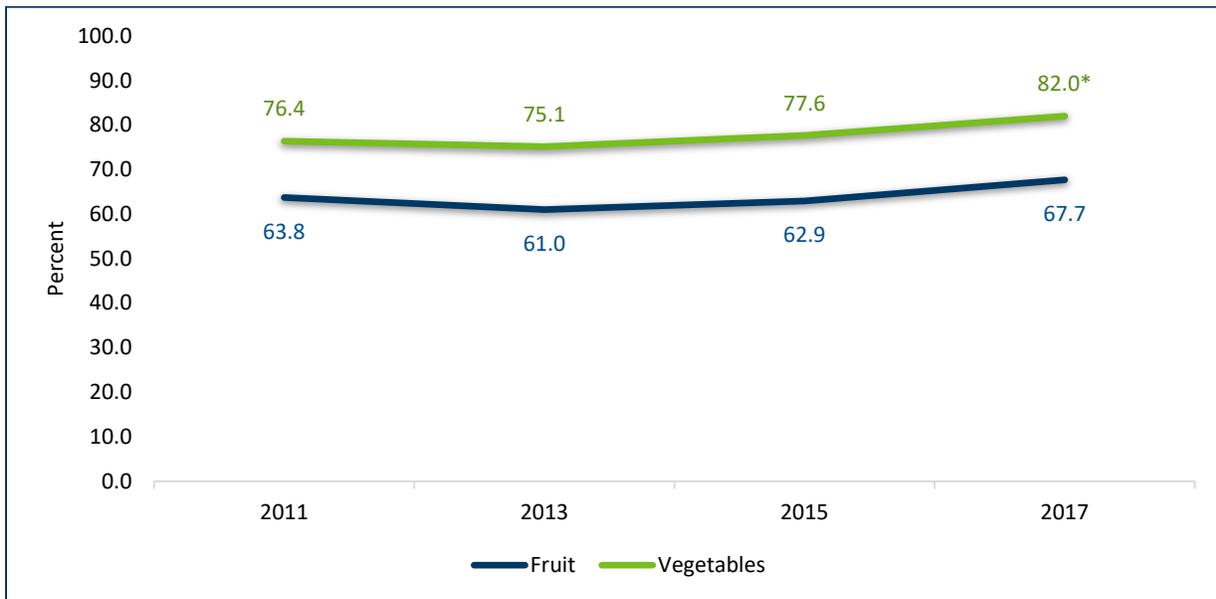
Figure 1. 2011-2017 MN Adults: Participated in any physical activity during the last 30 days



Data source: CDC Behavioral Risk Factor Surveillance System

Fruit and vegetable consumption: In Minnesota fruit and vegetable consumption has increased moderately since 2011 [Figure 2]. As with physical activity, Minnesota rates for fruit and vegetable consumption are higher than the U.S. median rates [4].

Figure 2. 2011-2017 Minnesota adults: fruit or vegetable consumption – one or more servings per day

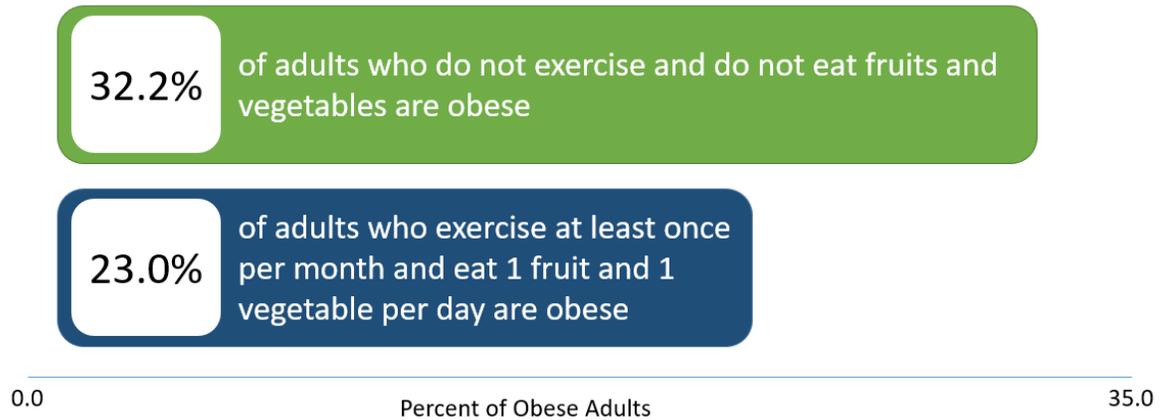


Data source: CDC Behavioral Risk Factor Surveillance System. *Vegetable consumption calculated differently in 2017

Minnesotans who exercise and eat healthfully are less likely to be obese

A combination of physical activity, fruit and vegetable consumption are needed to combat obesity. Minnesotans who consume one or more servings of both fruit and vegetable and exercised at least once every 30 days are less likely to be obese than those who do not [Figure 3]. In 2017, the obesity rate for Minnesotans who exercised monthly and consumed at least one serving of fruit and vegetable per day was 9.3 percentage points lower than those who did not [Figure 3]. This data suggests that if Minnesota could increase physical activity, fruit and vegetable consumption, then the obesity rate would likely decrease.

Figure 3. 2017 Minnesota adult obesity rates by combined physical activity, fruit consumption and vegetable consumption



^Difference in obesity rates are significant: t-test $P < 0.05$. Data source: CDC Behavioral Risk Factor Surveillance System

Discussion

Physical activity and fruit and vegetable consumption are key behaviors that influence obesity. Positive relationships have been observed between weight status and recommended physical activity and eating behavior [3]. Minnesotans who eat one or more fruit and vegetable per day and exercise are less likely to be obese than adults who do not. To make it easier for Minnesotans to eat healthfully and exercise, Minnesota’s Statewide Health Improvement Partnership (SHIP) works with communities, schools, workplaces, health care and child care to increase access to healthy foods and opportunities for physical activity. For example, SHIP grantees have helped create safe and convenient spaces to walk and bike, increased the availability of fruits and vegetables at food shelves and corner stores and helped make school food environments healthier, from concessions to celebrations.

Technical Notes

Data Source and Methods

Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual statewide random telephone and cellular surveillance survey designed by the Centers of Disease Control and Prevention (CDC). The survey is conducted in all 50 states and U.S. territories. BRFSS monitors modifiable risk behaviors and other factors contributing to the leading causes of morbidity and mortality in the population. Data from the BRFSS are useful for planning, initiating, and supporting health promotion and disease prevention programs at the state and federal level [5]. The survey has three sections:

- Standard Core Questions – Asked every year and are required by all states.
- Rotating Core Questions – Asked every other year and are required by all states.
- Optional Modules – Sets of standardized questions on various topics that each state may select and include in its questionnaire. Once selected, a module must be used in its entirety and asked of all eligible respondents

Given the random selection of survey participants each year, the data collected each year is cross-sectional and does not follow a single group of individuals over time. This means that changes in estimates from year to year are affected by sample size and changes in demographics of survey respondents from year to year, and that determinations regarding changes in estimates must be made by examination of data trends over time.

Definitions

Obesity

Obesity is defined as an abnormal or excessive fat accumulation that may impair health [6]. Although there are a number of ways to measure fat accumulation, the most common population-level measure is a calculation based on weight and height called Body Mass Index (BMI) [7]. Using this system a person with a BMI of 30 kg/m² or greater is defined as obese [6].

Physical Activity

For this brief, physical activity is defined based on the BRFSS survey question: “During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?” For purposes of reporting in this brief, the data from this question appears in tables and the text as “Had Physical Activity in the last 30 Days.”

Nutrition

For this brief, nutrition is defined based on the BRFSS survey question about fruit and vegetable consumption [8] that are part of the rotating survey core questions and are asked in odd-numbered years [5]. The responses to these questions are used to produce calculated variables intended to emphasize the lack of fruit and vegetable consumption by using 1 or more servings and less than 1 serving as cut points. Comparisons using fruit and vegetable consumption are

based on the measure 1 or more servings a day with the knowledge that comparisons using higher consumption levels could attenuate relationships presented.

References

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