



BUREAU OF NUTRITION AND PHYSICAL ACTIVITY DATA REPORT 2020

Submitted to: Iowa Department of Public Health Bureau of Nutrition and Physical Activity
Submitted by: Altarum

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Acknowledgements

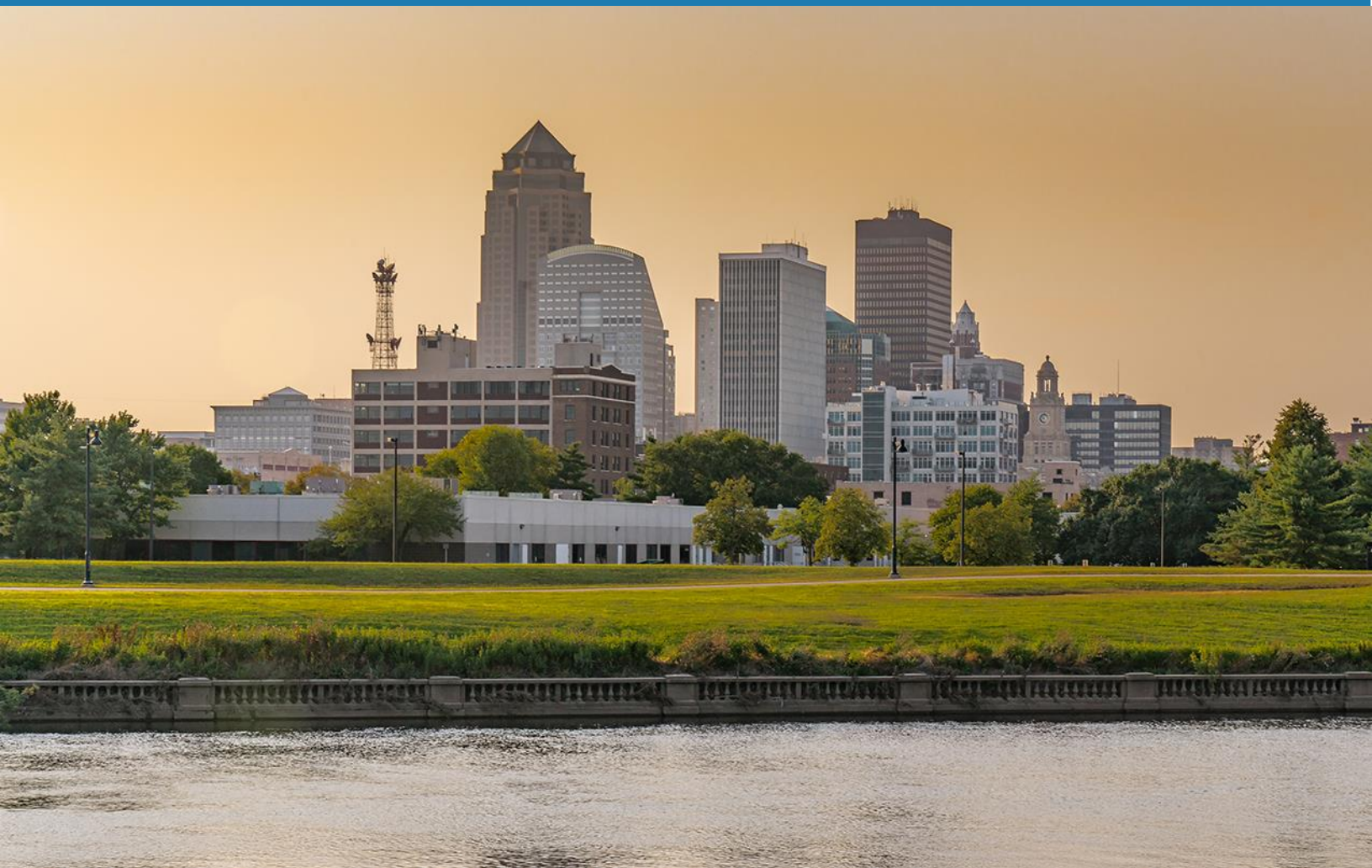
Gov. Kim Reynolds

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How does the Bureau address chronic disease?

WIC. IDPH BNPA contracts with a variety of community-based agencies and organizations to provide WIC services to eligible families in all of Iowa's 99 counties. These local agencies reach an estimated 59,500 participants each month.

Pick a better snack™. The Iowa Nutrition Network School Grant Program, often referred to as Pick a better snack™, is a multicomponent SNAP-Ed program that aims to increase fruit and vegetable consumption and encourage 60 minutes of daily physical activity for students in kindergarten through third grade. Educators teach monthly Pick a better snack™ interactive lessons in the classroom and students are able to learn about and taste new fruits and vegetables as well as participate in physical activity. Take home materials and social marketing campaigns are supplemental components of the program targeted at the parents of students.

Farm to School and Play Your Way. Additional approaches used in the Iowa Nutrition Network School Grant Program aimed at reinforcing the Pick a better snack™ lessons by enhancing the nutrition and physical activity policies, systems, and environments of the schools.

Background

Proper nutrition and physical activity are essential to an individual's overall health and well-being. These healthy behaviors can help to decrease the risk of chronic diseases, such as obesity, cardiovascular disease, diabetes, stroke, depression and certain cancers. However, most Americans do not eat a proper diet or regularly exercise. Fewer than 10% of U.S. adults consume the recommended two or more fruits and three or more vegetables per day and fewer than one-quarter meet the federal physical activity guidelines of 150 minutes of moderate or 75 minutes of vigorous aerobic activity and two days of muscle strengthening per week. Among U.S. youth, only half consume fruits and vegetables at least once per day and less than one-quarter are physically active for at least 60 minutes per day.¹ Inadequate access to healthy foods and beverages and opportunities for physical activity are barriers that can impact healthy behaviors. Further, differences in social determinants of health – the conditions in which individuals are born, live, work, play, and age – can contribute to disparities in health behaviors and disease status among racial, ethnic, and socioeconomic groups, as well as people in different geographies and with different abilities. Local and state health departments can influence and impact residents' health behaviors through education; policy, systems and environmental changes; health promotion programs; and development of resources and guidelines for healthy lifestyles.²

Iowa Department of Public Health Bureau of Nutrition and Physical Activity

The Iowa Department of Public Health Bureau of Nutrition and Physical Activity (IDPH BNPA) helps to lead the state's public health efforts to prevent chronic diseases by promoting proper nutrition and regular physical activity to Iowa residents. The mission of the IDPH BNPA is *"to ensure Iowans have the opportunity to live a healthy lifestyle by providing education and resources, building partnerships, and supporting communities"*. To accomplish its mission, the Bureau is responsible for administering programs and grants in partnership with community-based organizations. The Bureau administers several key programs designed to impact healthy eating and physical activity. These include the Iowa Supplemental Nutrition Program for Women, Infants and Children (WIC), numerous Supplemental Nutrition Assistance Program Education (SNAP-Ed) initiatives, and 5-2-1-0 Health Choices Count!, as well as a variety of other nutrition and physical activity projects aimed at improving the health of Iowans. To monitor the impact of its efforts on Iowa residents, the IDPH BNPA tracks and monitors health behavior and chronic disease information using the Behavioral Risk Factor Surveillance System.

Behavioral Risk Factor Surveillance System

The data in this report is based on the state of Iowa's 2020 Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a nationwide surveillance system that collects behavioral health risk data of residents in all 50 states as well as the District of Columbia and three United States territories using a telephone survey. BRFSS completes more than 400,000 adult interviews each year across the United States, making it the largest continuously conducted health survey system in the world. Administered and supported by the Centers for Disease Control and Prevention (CDC), the objective of the BRFSS is to collect uniform, state-specific data on health risk behaviors, chronic health conditions, access to health care, and use of preventive health services related to the leading causes of death and disability in the United States. By collecting behavioral health risk data at the state and local levels, the BRFSS has become a powerful tool for targeting and building health promotion activities.³

Report Purpose and Organization

The purpose of this report is to summarize and describe the results from the Iowa BRFSS data encompassing five topic areas: physical activity, nutrition, neighborhood environment, obesity and food insecurity. Current prevention efforts and public health programming administered by IDPH BNPA corresponding with the topic areas are highlighted throughout the report. Results can be used to track progress and impact of current efforts and identify any gaps in programming for improving the health of Iowans. This report is organized into sections based on the topic areas included in the BRFSS data tables as follows:

- ▲ Methodology
- ▲ Demographic characteristics
- ▲ Food insecurity
- ▲ Overweight and obesity
- ▲ Fruit and vegetable consumption
- ▲ Physical activity
- ▲ Neighborhood physical activity
- ▲ Summary and conclusion

At the conclusion of this report, infographics corresponding with each of the five BRFSS datasets have been attached as an appendix. The infographics present a summary of behavioral health risk data as reported by Iowans.

Fresh Conversations. The Bureau facilitates monthly meetings that include conversations around healthy eating, active living, and healthy recipe tastings with older adults across the state. Meetings are often held at congregational meal sites, senior housing units, and libraries. The SNAP-Ed program aims to lower nutritional risk and decrease sedentary time supporting healthy aging and independence in older adults.

5-2-1-0 Healthy Choice Count! IDPH BNPA in partnership with the Iowa Healthiest State Initiative (HSI) co-leads the implementation 5-2-1-0 Healthy Choices Count! IDPH and HSI engage with diverse partners across Iowa to create healthy spaces. The Bureau provides funding, technical assistance, and training opportunities to communities to implement the evidence-based 5-2-1-0 message and nutrition and physical activity policy, system and environmental changes for evidence-based healthy eating and active living approaches.

Physical Activity Access Project. BNPA implements this state-level intervention aimed at improving walkability and bikeability within local communities. Local agencies work with transportation and public health stakeholders to implement projects that will promote and encourage active lifestyles.

Methodology

BRFSS has a core component of standard questions that are asked by all states each year or every other year, optional modules that states can choose to add, and state-added questions. The BRFSS is a telephone-based survey that collects data from adults aged 18 years or older. Households are randomly selected from blocks of potential phone numbers in an area. One adult participant from each household is chosen at random. The CDC analyzes the demographic characteristics of the BRFSS sample and assigns weights to each of the responses. This weighting allows generalization of the BRFSS survey results to the population as a whole. The weights also compensate for non-selection or non-response bias since some groups may not have the same likelihood of being chosen to complete the survey, and it adjusts for over-representation or under-representation of certain groups in the sample. The unweighted sample size for Iowa in 2020 was 9,663 weighted to the population of 2,439,600 adults. Detailed BRFSS methodology can be found on the CDC website.³

BRFSS Measures

This report focuses on the BRFSS measures related to chronic disease prevention including obesity prevalence, food insecurity, fruit and vegetable consumption, physical activity, and access to physical activity in communities and neighborhoods. In addition, demographic characteristics are described and compared to the U.S. population. Below we describe measures related to each of these topic areas.

Demographic Characteristics

Demographic characteristics include sex, race, ethnicity, age, education level, income, and number of children in the household. In addition, the respondent's county of residence was classified as urban or rural based on the following 2013 National Center for Health Statistics⁴ definitions.

- ▲ Urban includes:
 - *Medium Metro*: counties in metropolitan statistical area (MSAs) of populations between 250,000 and 999,999
 - *Small Metro*: counties in MSAs of populations of less than 250,000
 - *Micropolitan*: counties in micropolitan statistical areas
- ▲ Rural includes:
 - *Noncore*: non-metropolitan counties that did not qualify as micropolitan

Food Insecurity

Food insecurity is defined as the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.⁵ Risk for food insecurity was measured using two state-added questions:

- ▲ "The food that I bought just didn't last, and I didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months?
- ▲ "I couldn't afford to eat balanced meals." Was that often, sometimes, or never true for you in the last 12 months?

Obesity Prevalence

Obesity prevalence was determined using the adult Body Mass Index (BMI) to measure a person's weight in kilograms divided by height in meters squared. BMI does not measure body fat directly, but research has shown that BMI is moderately correlated with more direct measures of body fat obtained from other methods. A high BMI can be an indicator of high body fatness.⁶ Estimations of the prevalence of obesity in this report are based on BMI determined from self-reported weight and height. Adults are classified as obese if they have a BMI greater than or equal to 30 kg/m².

Fruit and Vegetable Consumption

The 2020 Dietary Guidelines for Americans recommends that each day adults consume 2 ½ to 4 cups of vegetables and 1 ½ to 2 ½ cups of fruit.⁷ The frequency of fruit and vegetable consumption was determined by a series of questions from the CDC's core fruit and vegetable module which is included every other year. For this report, data from 2019 are shown since the fruits and vegetable module was not included in 2020. Respondents were asked to indicate how often per day, per week or per month they ate or drank the following:

- ▲ Fruit
- ▲ 100% fruit juices
- ▲ Green leafy or lettuce salad, with or without other vegetables
- ▲ Fried potatoes, including French fries, home fries, or hash browns
- ▲ Other kind of potatoes, or sweet potatoes, such as baked, boiled, mashed potatoes, or potato salad
- ▲ Other vegetables

The fruit consumption measure incorporates both fruit and 100% fruit juice and the vegetable consumption measure incorporates all four vegetable questions. For this report, the percentage of adults in Iowa eating fruit and vegetables less than once per day is presented.

Physical Activity

In 2020, respondents were asked how often they participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise, other than for their job over the past month. Additionally, in 2019, a series of questions about the types of exercises and the frequency were included from the CDC core exercise (physical activity) module. The U.S. Department of Health and Human Services Physical Activity Guidelines for Adults⁸ states that adults should engage in at least 150 minutes to 300 minutes a week of moderate-intensity, or 75 minutes to 150 minutes of vigorous-intensity aerobic physical activity per week. Adults should also engage in muscle-strengthening activities on 2 or more days per week. Measures indicating whether or not adults in Iowa met these guidelines (aerobic and strengthening) are included in this report.

Neighborhood Physical Activity

The Iowa Department of Public Health added questions about the walkability and access to physical activity in neighborhoods in every year since 2014. The following questions were included in the 2020 survey:

- ▲ *“Overall, how would you rate your neighborhood as a place to walk?”* Would you say very pleasant, somewhat pleasant, not very pleasant, not at all pleasant?
- ▲ *“Does your neighborhood have any sidewalks?”*
- ▲ *“Do you use schools that are open in your community for public recreation activities?”*
- ▲ *“Do you use walking trails, parks, playgrounds, sports fields in your community for physical activity?”*

American Community Survey

The American Community Survey (ACS) is an ongoing survey conducted by the U.S. Census Bureau that provides vital information on a yearly basis about the U.S. population, including demographic characteristics, housing and employment statistics.⁹ In order to understand how representative the Iowa BRFSS sample was of the adults in the state, demographic characteristics of Iowa from BRFSS were compared to characteristics of Iowa from the 2019 ACS, the most recent version available.

Data Analysis

Frequencies and 95% confidence intervals were calculated for each measure overall and by demographic groups, including gender, age, education level, income level, race/ethnicity, type of county (urban versus rural), and number of children in the household. Significant differences were determined by comparing 95% confidence intervals. Confidence intervals give the estimated range of values likely to include an unknown population parameter that is represented by a survey result with 95% certainty. If the 95% confidence intervals around a measurement do not overlap between two groups, their outcomes are considered significantly different at the alpha equals 0.05 level. This method provides a conservative estimate of statistical significance; it is possible that existing significant differences were undetected when comparing confidence intervals. Wherever the terms “significant” or “statistically significant” are used to describe differences between data estimates, it means that the 95 percent confidence intervals for the given point estimates do not overlap.



Demographic Characteristics

Since BRFSS data are weighted to the population of the state, they can be used to describe the population of adults in Iowa. Iowa's demographic distributions from BRFSS were compared to the BRFSS data from the United States overall as well as to 2019 U.S. Census data for Iowa. Shown in **Figure 1**, in 2020, about one-quarter of Iowans were 65 years of age and older; all other age groups comprised about 15% of the population each. The majority of Iowans have had some post-high school education (61.1%) with about one-quarter obtaining college degrees. Over half of households in Iowa had an annual income of \$50,000 or more with only about 7% earning less than \$15,000 per year. Age, education, and income distribution in Iowa was very similar to the U.S. BRFSS population as a whole. Additionally, Iowa BRFSS results are consistent with 2019 Census data for Iowa from the American Community Survey: 22.4% of adults over age 65, 30.0% with bachelor's degree or higher 53.8% of households with annual income of \$50,000 or more.

Figure 1. Age, Education, and Income of Iowa Adults Compared to United States Adults, 2020.

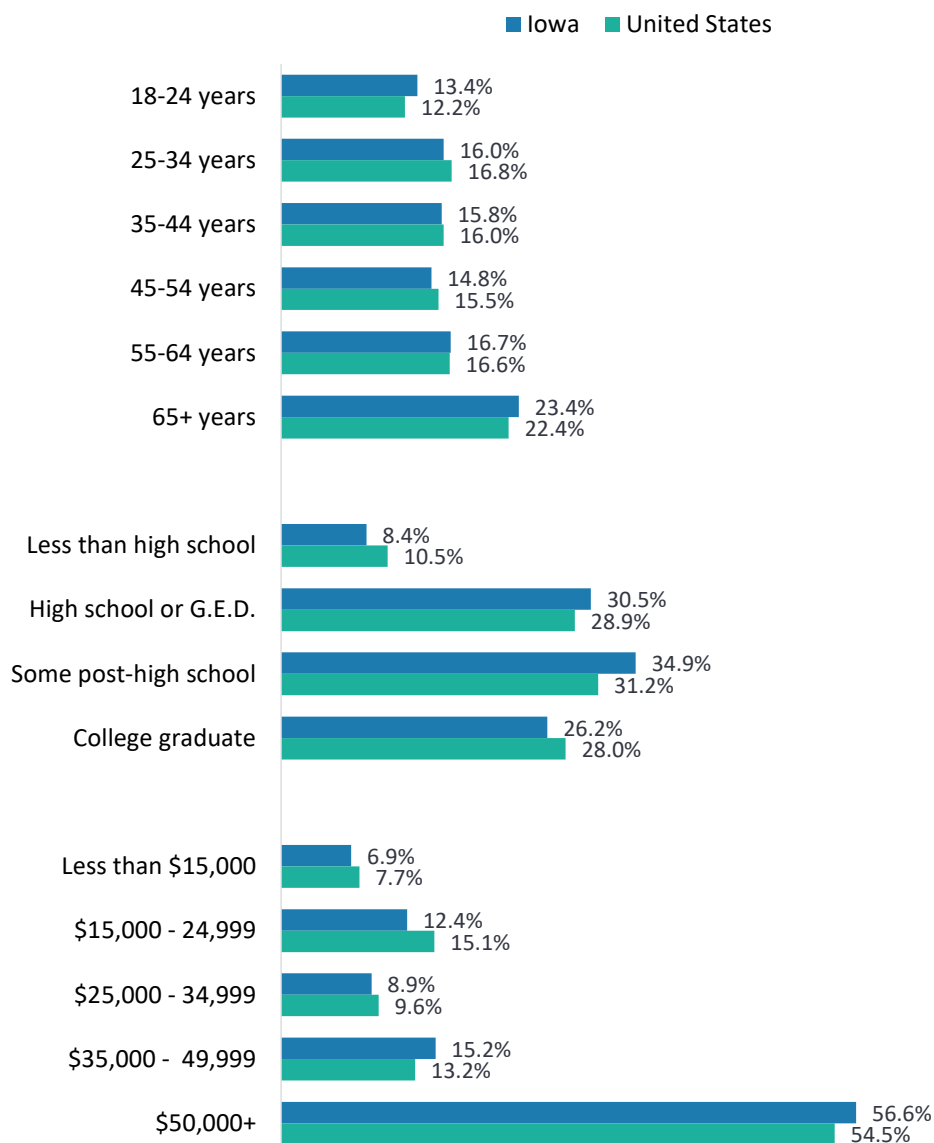
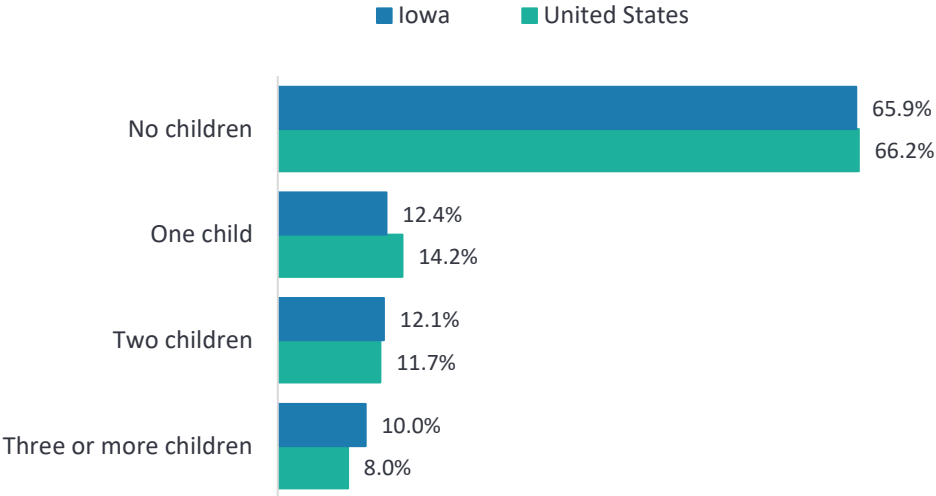


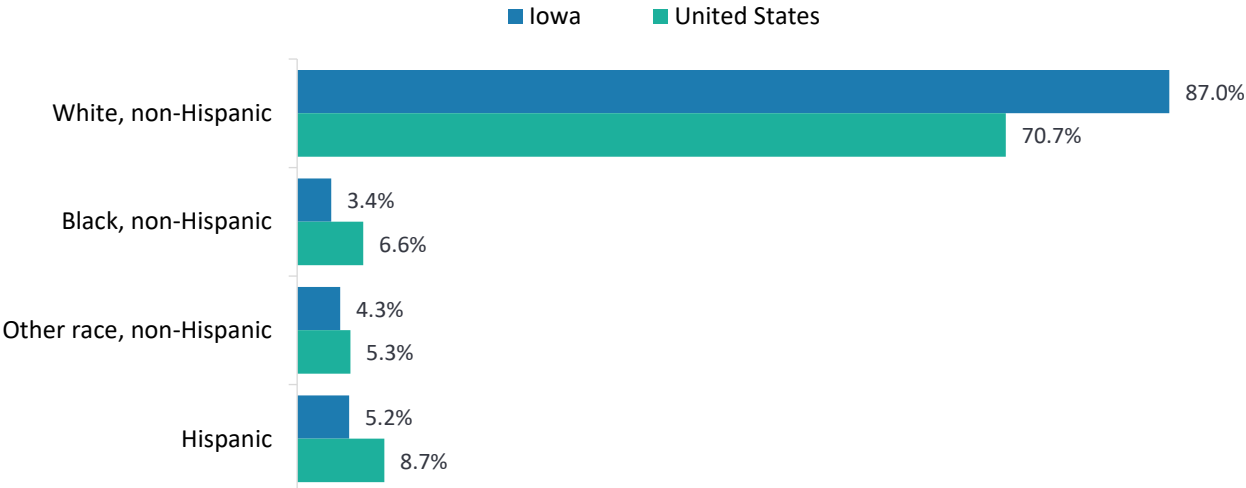
Figure 2 shows that in 2020, about two-thirds of Iowans had no children in the home, 12.4% had one child, 12.1% had two children, and 10.0% had three or more children. These proportions are very similar to the nation as a whole and 2019 Iowa Census data from the American Community Survey (66.2% with no children in the household).

Figure 2. Household Type, Iowa Compared to the United States, 2020.



As shown in **Figure 3**, the majority of the population of Iowa (87.0%) identifies as White, approximately 16 percentage points higher than the United States overall. In Iowa, 3.4% of the population identifies as Black compared to 6.6% of the population in the United States and 5.2% identifies as Hispanic compared to 8.7% in the United States. Census data collected race and ethnicity data differently than BRFSS so exact comparisons cannot be made; however, Census data for Iowa indicates a similar distribution. Among those identifying with only one race, 90.6% identified as White, 4.1% as Black and 6.3% as Hispanic. While Iowa is overwhelmingly White, other racial and ethnic groups account for 13% of the adult population or over 300,000 citizens, therefore, it is important to consider the needs of these groups in health promotion and chronic disease prevention efforts.

Figure 3. Racial and Ethnic Composition, Iowa Compared to the United States, 2020.



Food Insecurity

Among the social determinants of health, food insecurity has one of the most substantial impacts on the overall health of individuals. Adults who are food insecure are disproportionately affected by chronic diseases, including diabetes, high blood pressure, and obesity. Children who are food insecure have an increased risk of obesity and developmental problems.^{10,11} A household is food insecure if there is lack of consistent access to enough food for an active and healthy life. Reduced food intake, quality or variety of foods eaten, or desirability of diet are all indicators of food insecurity.¹² Food insecurity in households is not solely caused by poverty. Other issues such as affordable housing, lack of transportation, social isolation, location, and chronic health issues may also contribute to food insecurity.

Did you know?

- ✓ The BNPA works hard to address food insecurity, such as contracting with community-based organizations to provide WIC services to eligible families including nutrition education, breastfeeding promotion and support, nutrition food packages, and referrals to other health programs. These local agencies reach an estimated 59,500 participants each month.



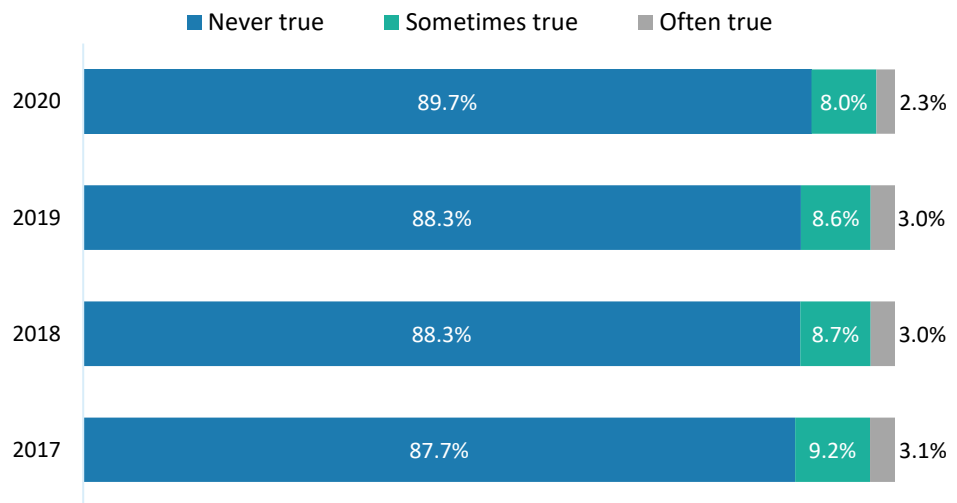
About one in ten Iowa households sometimes struggled to afford food and about 12% sometimes struggled to afford balanced meals (**Figure 4**). There is no national rate of food insecurity from BRFSS since all states did not include that question in their 2020 survey. According to a U.S. Department of Agriculture Economic Research Service 2020 report, Iowa's prevalence of food insecurity was comparable to the national prevalence of 10.5% of United States households.¹²

10.3%

of Iowans struggle to afford food.

Figure 4. Adults Iowans Ability to Afford Food and Balanced Meals in the Last 12 Months, by Year 2017-2020.

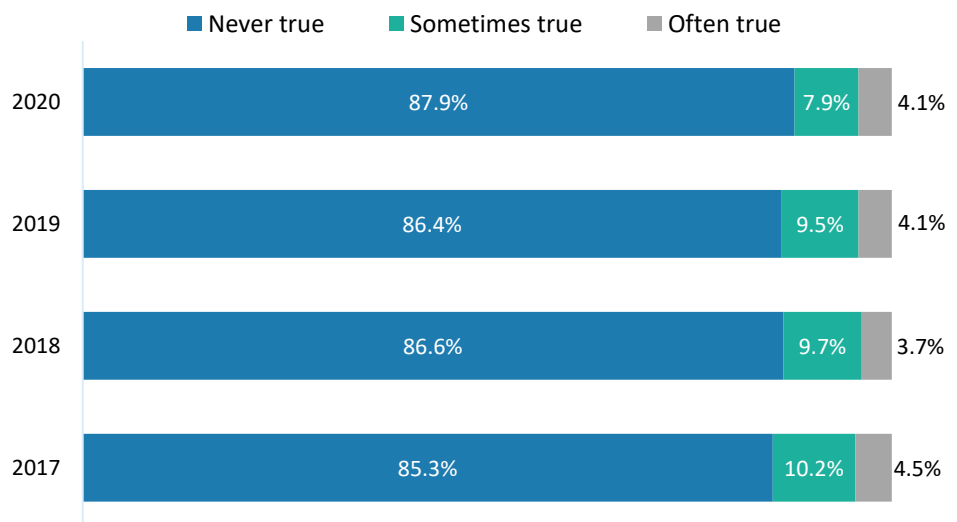
"The food that I bought just didn't last, and I didn't have enough money to get more."



12.0%

of Iowans cannot afford to eat balanced meals.

"I couldn't afford to eat balanced meals."



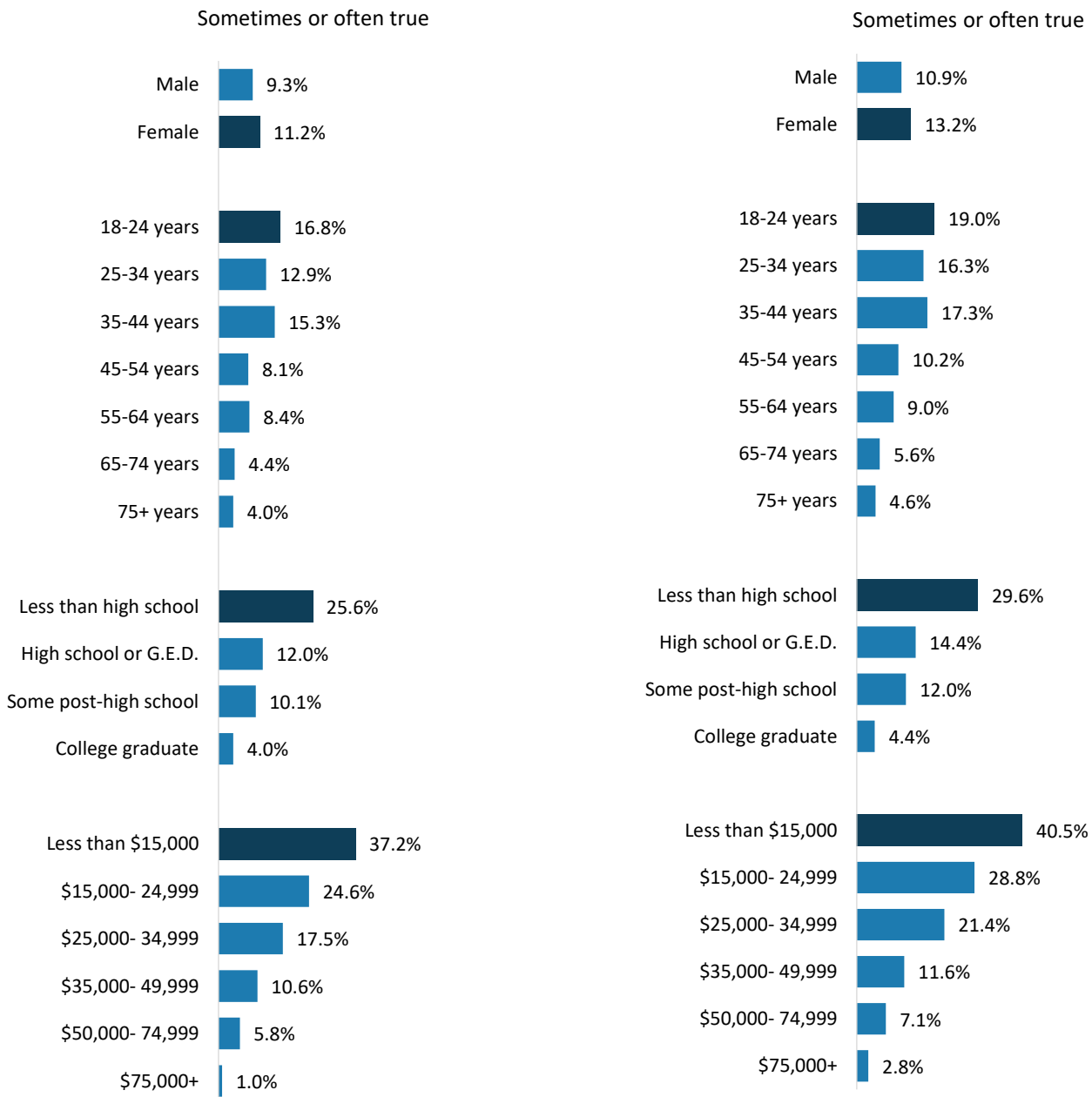
Demographic Comparisons

While the majority of Iowans reported never having trouble affording food or balanced meals in 2020, the rates were not the same for all demographic groups. **Figure 5** shows that those who were younger, less educated, and had lower annual incomes were more likely to struggle affording food than those who were older, more educated, and had higher annual incomes.

Figure 5. Percentage of Iowans Who Struggled to Afford Food in 2020, by Selected Demographic Group.

"The food that I bought just didn't last, and I didn't have enough money to get more."

"I couldn't afford to eat balanced meals"



More than
25%
 of Black and Hispanic families struggle to afford food at times, while less than 10% of White families struggle to afford food.

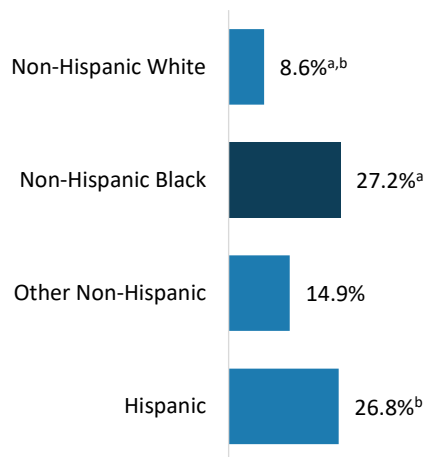


There was a significant difference in food insecurity by race and ethnicity. Approximately 10% of White Iowans struggled to afford food or balanced meals, while about one-quarter to one-third of Black and Hispanic families sometimes or often struggled to afford food (**Figure 6**).

Figure 6. Percentage of Iowans Who Never Struggled to Afford Food in 2020, by Race and Ethnicity.

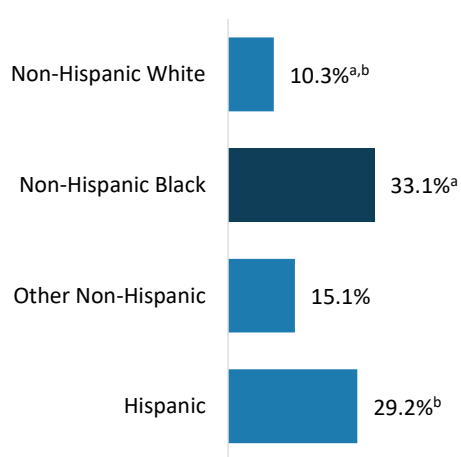
"The food that I bought just didn't last, and I didn't have enough money to get more."

Sometimes or often true



"I couldn't afford to eat balanced meals"

Sometimes or often true

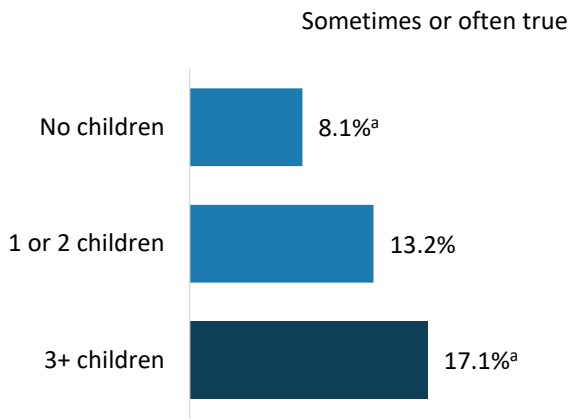


Note: Matching superscripts indicate significant differences in percentages based on 95% confidence intervals.

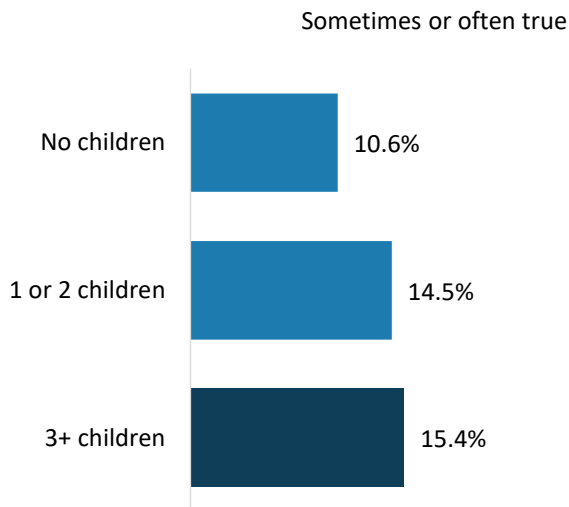
Household composition was also related to risk of food insecurity. Households with children were more likely than households without children to be food insecure. (Figure 7).

Figure 7. Percentage of Iowans Who Never Struggled to Afford Food in 2020, by Household Type.

"The food that I bought just didn't last, and I didn't have enough money to get more."



"I couldn't afford to eat balanced meals"



Note: matching superscripts indicate significant differences in percentages based on 95% confidence intervals.



Iowans with children in the home are more likely than those without children to struggle to afford food and balanced meals.

Key Findings

- ✓ About one-tenth of Iowans are struggling to afford food and balanced meals at times.
- ✓ Food insecurity disproportionately impacts Black and Hispanic populations with up to one-third of those populations having difficulty affording food at times.
- ✓ Food insecurity disproportionately impacts Iowans with children in the home.



Overweight and Obesity

Overweight and obesity are complex and serious chronic diseases in which prevalence continues to increase throughout the United States.¹³ Individuals who are obese are at an increased risk for several serious diseases and health conditions, including all-causes of death, high blood pressure, high cholesterol, Type 2 diabetes, coronary heart disease, stroke, and some forms of cancer.¹⁴ Obesity status reflects both individual health status and society-level aspects that are made up of social determinants of health. Individual determinants include genetics, behaviors such as physical activity and dietary patterns, and other exposures. Society-level determinants include the built environment such as sidewalks, parks and grocery stores in a community, transportation options, social marketing, social norms and attitudes, and availability of resources to meet daily needs such as educational and job opportunities, or healthful foods.¹⁵

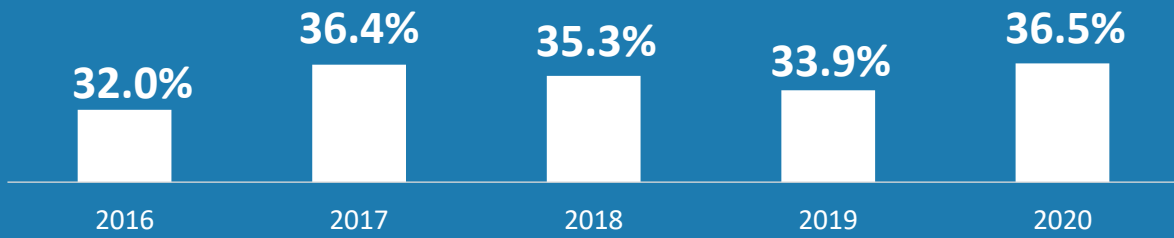
Did you know?

The BNPA administers multiple programs to address obesity in Iowa, including:

- ✓ Overseeing the Iowa Nutrition Network School Grant Program, a multicomponent SNAP-Ed program that aims to increase fruit and vegetable consumption and encourage 60 minutes of daily physical activity for students in kindergarten through third grade with classroom lessons and strategies that promote healthy school buildings. Take home materials and social marketing campaigns are supplemental components of the program targeted at the parents of students.
- ✓ Co-leading the implementation of 5-2-1-0 Healthy Choices Count!, a public-private partnership which cultivates healthy places for Iowa children and families using evidence-based active living approaches. The Bureau partners with the Iowa Healthiest State Initiative to engage with diverse partners across Iowa to adopt evidence-based strategies that create healthy spaces.



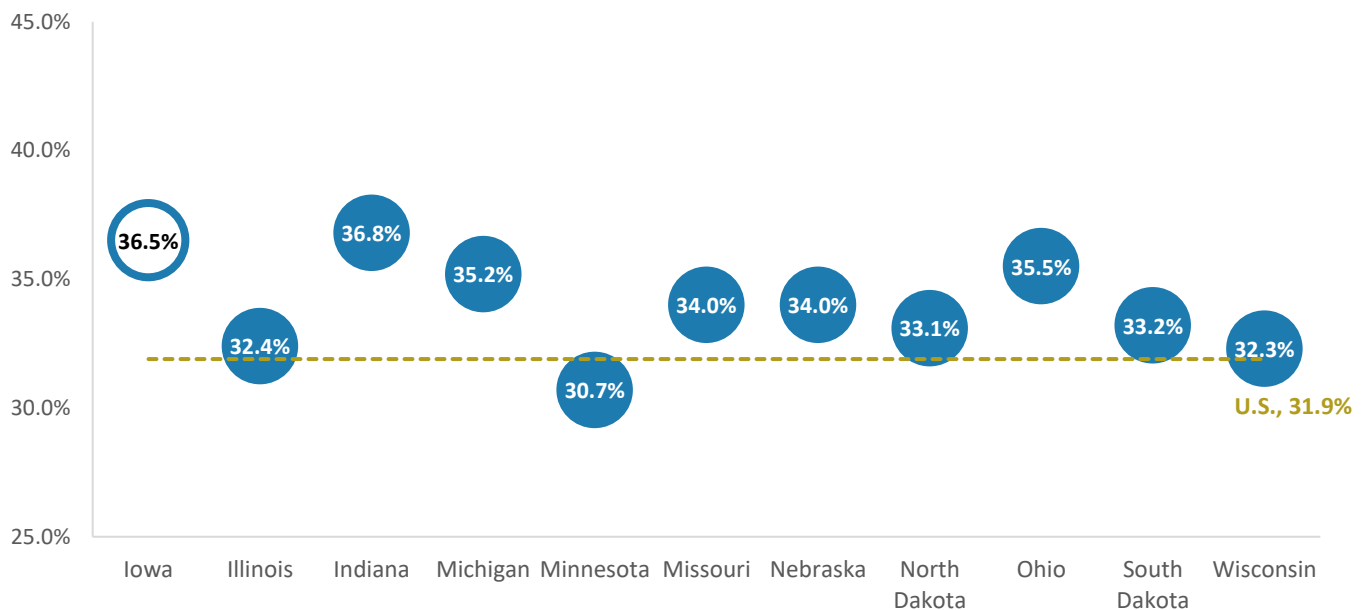
Prevalence of Obesity in Iowa Adults, 2016-2020



Comparison to Other States

In 2020, the prevalence of obesity in Iowa (36.5%) was higher than the United States as a whole (31.9%) as well as most other states in the surrounding Midwest region except for Illinois. Iowa currently has the seventh highest rate of obesity in the United States (**Figure 8**).

Figure 8. Obesity Prevalence Comparing Iowa to the United States and other Midwest States, 2020.



7

Iowa's rank in obesity prevalence among U.S. states.

Iowa observed a

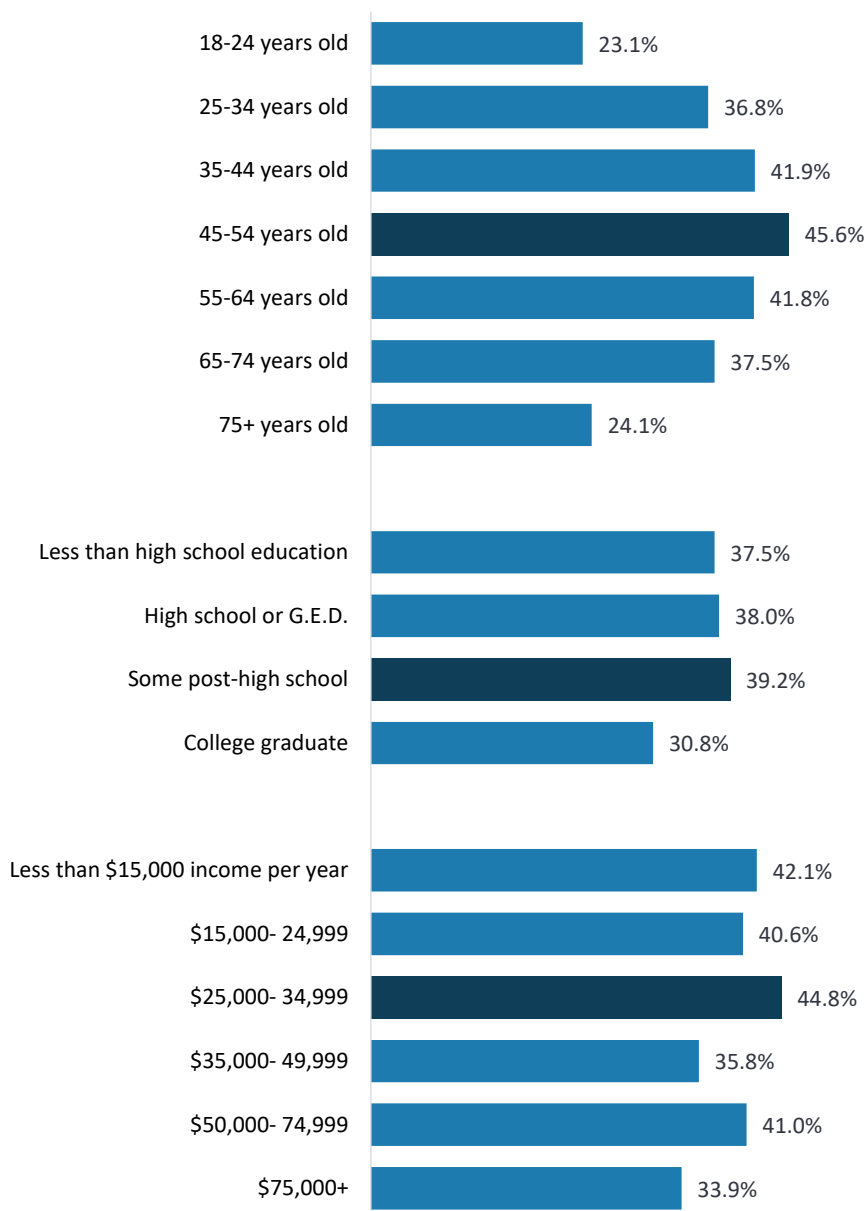
2.6%

increase in obesity prevalence from 2019 to 2020.

Demographic Comparisons

Approximately one in three Iowans is classified as obese. The prevalence of obesity has increased over time, from 32.0% in 2016 to 36.5% in 2020. **Figure 9** displays obesity prevalence in 2020 by age, education, and annual household income. Males and females had similar prevalence of obesity (36.0% and 34.6% respectively). Those that were youngest (18-24 years old) and oldest (75 years or older) had less than one-quarter of their population with obesity, significantly lower than other age groups. Nearly 31% of college graduates had obesity, significantly lower than those with high school degrees and some post-high school education. Those in lower annual income brackets (less than \$35,000 per year) had higher prevalence of obesity than the higher income groups.

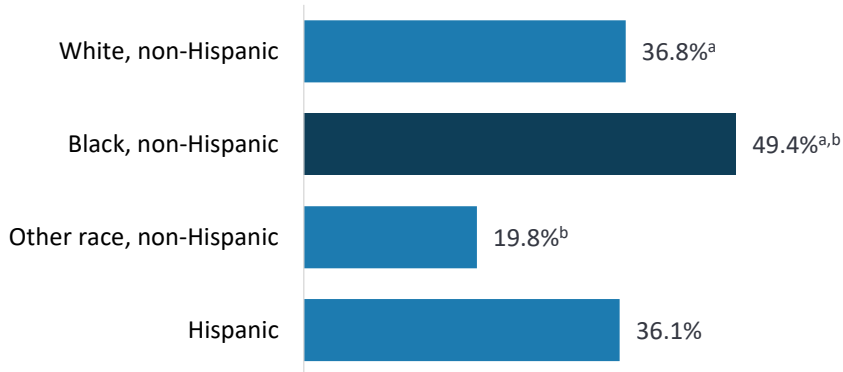
Figure 9. Prevalence of Obesity in Iowa by Age, Education, and Annual Household Income, 2020.



Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.

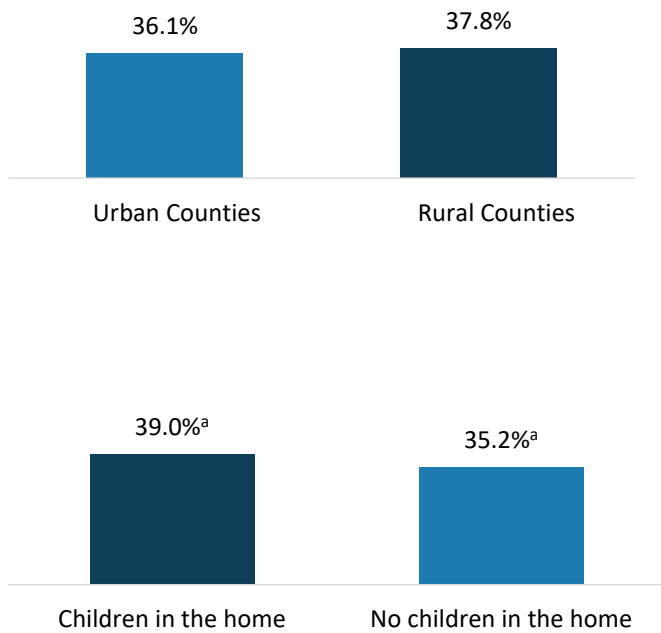
Obesity prevalence in Iowa varies by race and ethnicity. Nearly half of the Black population in Iowa was considered obese in 2020, significantly higher than the prevalence of obesity in the White population (36.8%) and other races, non-Hispanic (19.8%, **Figure 10**). Iowans living in rural and urban counties had a similar prevalence of obesity in 2020 with just over one-third of both groups considered obese. Adults in Iowa with children under the age 18 in the home had a significantly higher obesity prevalence than those without children (39.0% versus 35.2%, **Figure 11**).

Figure 10. Prevalence of Obesity in Iowa by Race and Ethnicity, 2020.



Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.

Figure 11. Prevalence of Obesity by Type of County and Household, 2020.



Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.



Key Findings

- ✓ Iowa has one of the highest rates of obesity in the Midwest and is ranked 7th in obesity prevalence in the United States.
- ✓ Black Iowans have the highest prevalence of obesity among all racial and ethnic groups.
- ✓ Adults with children in the home are more likely to have obesity than those without children.



Fruit and Vegetable Consumption

Individual diets high in fruit and vegetables reduce the risk of chronic diseases, including Type 2 diabetes, obesity, heart disease, and stroke. Consumption of three or more fruits and vegetables per day, as opposed to less than one fruit or vegetable, was associated with decreased cardiovascular deaths.¹⁶ The 2020 Dietary Guidelines for Americans recommends individuals follow a healthy dietary pattern at every life stage, customize and enjoy nutrient-dense food and beverage choices, focus on meeting food groups with nutrient-dense foods and beverages and stay within calorie limits, and limit foods and beverages high in added sugars, saturated fat, and sodium. The 2020 Dietary Guidelines for Americans also recommends that each day young children consume 1 to 2 ½ cups of vegetables and 1 to 2 cups of fruit, while adolescents and adults consume 2 ½ to 4 cups of vegetables and 1 ½ to 2 ½ cups of fruit.⁷ Barriers to adequate fruit and vegetable consumption include lack of access to food, including fresh produce, cost of food, and lack of preparation time or cooking knowledge.²

Did you know?

The BNPA uses multiple strategies to promote fruit and vegetable consumption among Iowans, such as:

- ✓ Overseeing the Iowa Nutrition Network School Grant Program, a multi-component SNAP-Ed program that aims to increase fruit and vegetable consumption for students in kindergarten to third grade. Educators teach monthly Pick a better snack™ interactive lessons in the classroom and students learn about and taste new fruits and vegetables.
- ✓ Promoting Farm to School, an additional approach used in the Iowa Nutrition Network School Grant Program, to reinforce the Pick a Better Snack™ lessons by enhancing the nutrition policies, systems, and environments of schools.
- ✓ Offering Fresh Conversations, a program aimed at lowering nutritional risk and decreasing sedentary time by supporting healthy aging and independence of older adults by facilitating monthly meetings that include conversations around active living, healthy eating, and healthy recipe tastings.
- ✓ Overseeing the implementation of WIC, which provides nutritious foods like fruits and vegetables for children under five years old. Program participants can use their eWIC cards at WIC-approved grocery stores to purchase fresh and frozen fruits and vegetables. WIC also provides vouchers for Farmers Markets to be used for fresh, unprepared, locally-grown fruits and vegetables.



40.4%

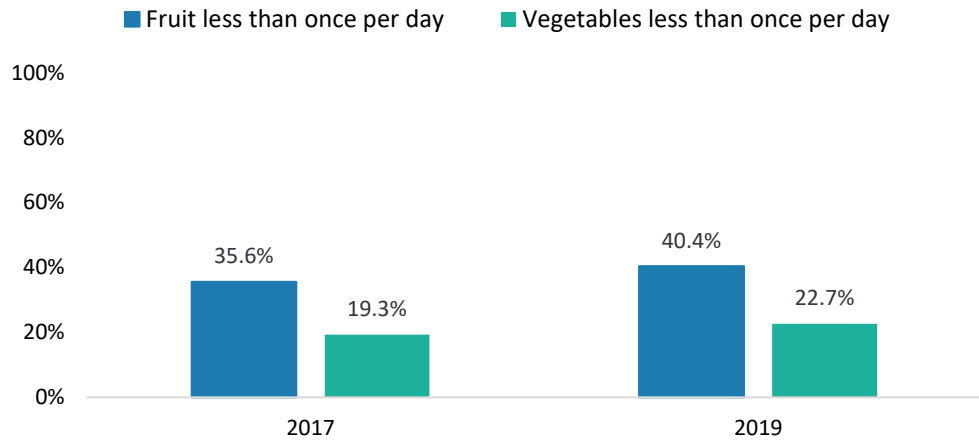
of lowans consumed fruit less than once per day.

Many lowans are not consuming adequate fruit and vegetables and the number of lowans consuming the least amount of fruit and vegetables has increased over time. The Dietary Guidelines for Americans recommends adults consume 2 ½ to 4 cups of vegetables and 1 ½ to 2 ½ cups of fruit each day. In Iowa, over one-third of adults consumed fruit less than once per day in 2017 and this increased to 40.4% of adults in 2019 (Figure 12). More lowans eat vegetables daily than fruit; however, about one-fifth ate vegetables less than once per day in 2017 and this increased to one-quarter of Iowa adults in 2019.

Figure 12. Proportion of lowans Who Consumed Fruit or Vegetables Less Than Once per Day, 2017 and 2019.

22.7%

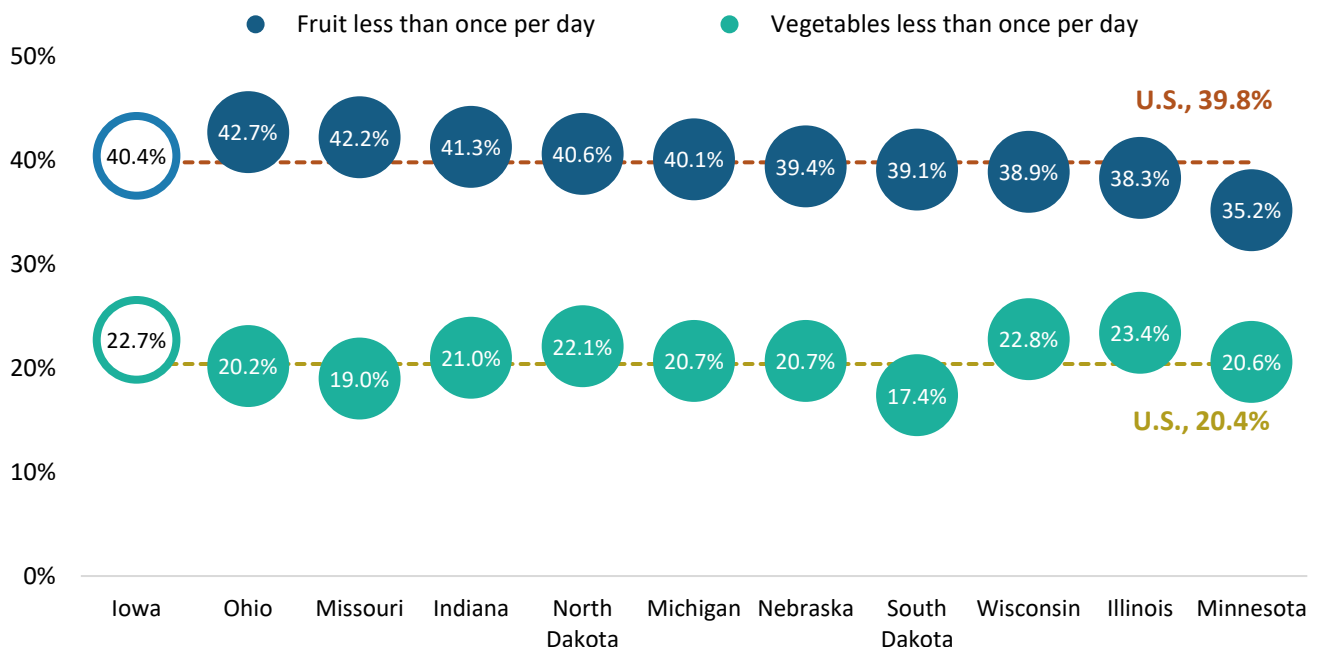
of lowans consumed vegetables less than once per day.



Comparison to Other States

The percentage of the population in Iowa eating fruit and vegetables less than once per day is similar to that of the United States overall and most other Midwestern or nearby states (Figure 13).

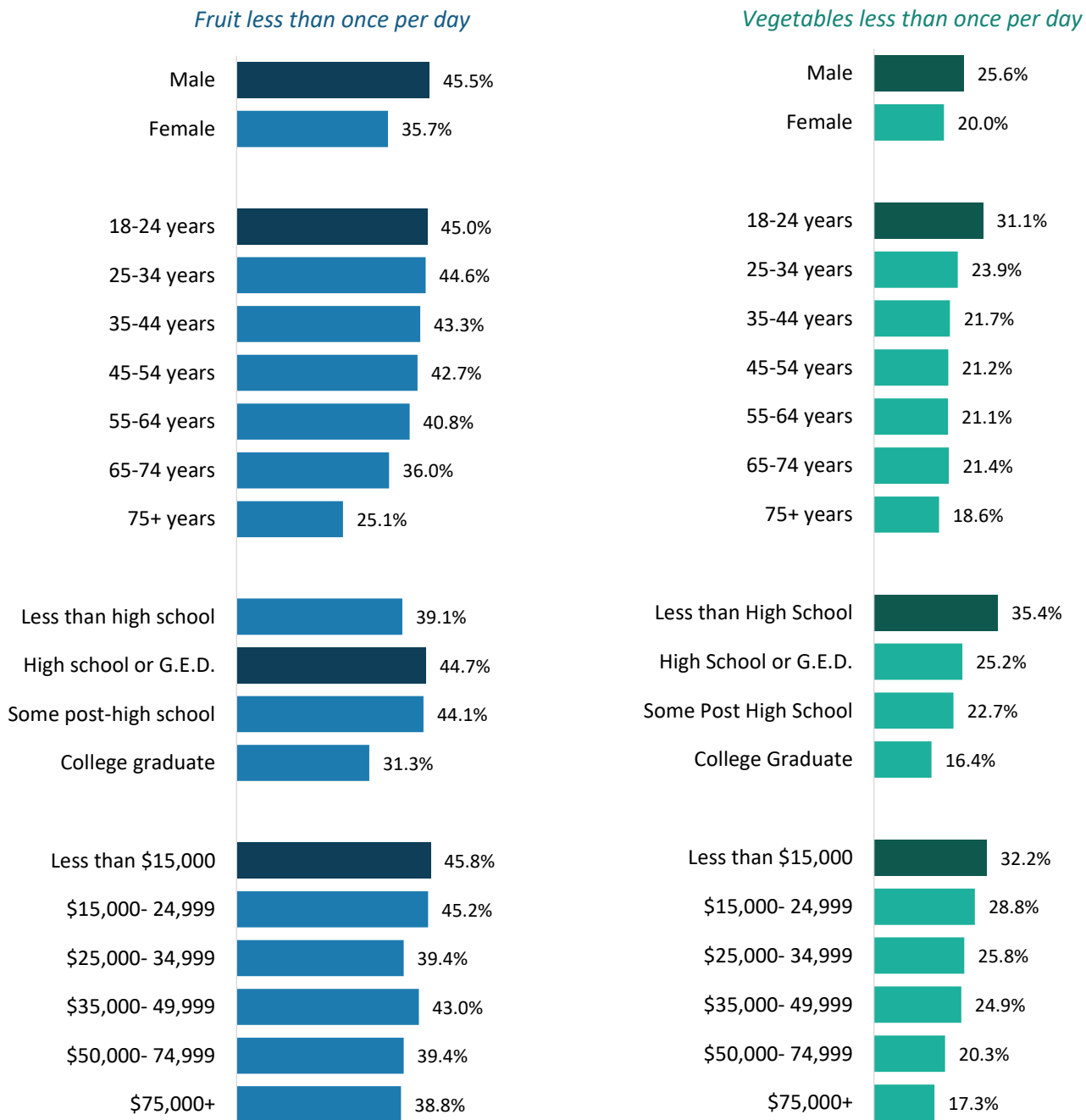
Figure 13. Percentage of Adults Consuming Fruit or Vegetables Less Than Once Per Day, by State, 2019.



Demographic Comparisons

Certain demographic groups were less likely to eat fruit and vegetables daily than others. **Figure 14** shows that females consume fruit more often than males. Older adults and college graduates are more likely than their younger and less educated counterparts to eat fruit and vegetables at least once per day. There was a steady decline in the percentage eating vegetables less than once per day with higher incomes, however, the trend isn't as clear for fruit. There were no differences in fruit and vegetable consumption between those living in urban versus rural counties or by number of children in the home.

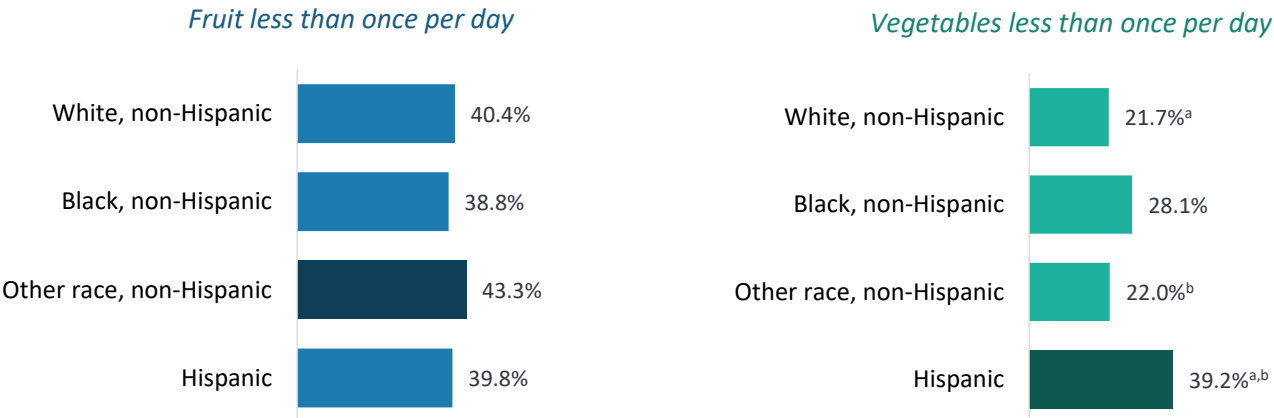
Figure 14. Percentage of Iowans Consuming Fruit or Vegetables Less than Once per Day, by Gender, Age, Education, and Income, 2019.





Across racial and ethnic groups, around 40% of adults in Iowa were eating fruit less than once per day in 2019. For vegetable consumption, however, Iowans identifying as Hispanic were much less likely to eat vegetables each day than other racial and ethnic groups (Figure 15).

Figure 15. Percentage of Iowans Consuming Fruit or Vegetables Less than Once Per Day, by Race and Ethnicity, 2019.



Note: Matching superscripts indicate significant difference between groups based on 95% confidence intervals.

Key Findings

- ✓ Many adults in Iowa are not meeting the daily recommended guidelines for fruit and vegetable consumption with approximately 40% eating fruits and vegetables less than once per day.
- ✓ The percentage of the population in Iowa eating fruit and vegetables less than once per day is similar to that of the United States overall and most other Midwestern or nearby states.
- ✓ Continuing efforts focusing on promotion of fruit and vegetable consumption for adults and children in Iowa is important. It may also be important to prioritize low-income, young adult, Hispanic and male populations.



Physical Activity

Engaging in regular physical activity is one of the most important things an individual can do to enhance their overall health and well-being. Physical activity is associated with numerous health benefits for both youth and adults. For youth, regular physical activity is correlated with improved attention and memory, maintaining normal blood sugar levels, strong bones, reduced risk of depression, improved blood pressure, regulation of body weight, and reduced body fat. Long-term health benefits of youth engaging in regular physical activity includes reduced risk of chronic disease, including Type 2 diabetes and obesity. For adults, a single moderate-to-vigorous workout provides immediate health benefits such as improving sleep quality, reducing anxiety, and reducing blood pressure. Adults who engage in regular physical activity have a reduced risk of cardiovascular disease, hypertension, Type 2 diabetes, certain cancers, and dementia.¹⁷

The Physical Activity Guidelines for Americans provides recommendations for physical activity by age group. Children aged 3 to 5 years should engage in physical activity throughout the day, every day for growth and development. Children and adolescents aged 6 to 17 years need at least 60 minutes of moderate-to-vigorous intensity physical activity daily. Physical activity for children and adolescents should include a mixture of aerobic activity, muscle strengthening activities, and bone-strengthening activities. Adults need 150 minutes of moderate intensity activity per week.⁸ Adults should engage in moderate-intensity aerobic activity and muscle-strengthening activity each week.

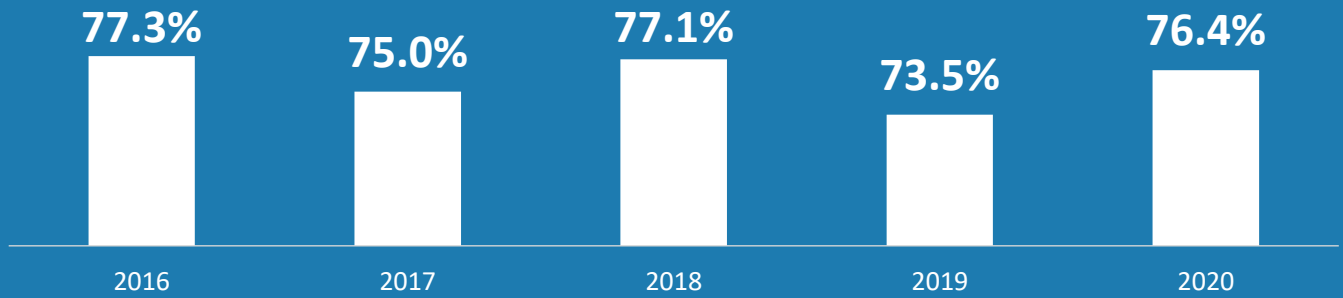
Did you know?

The BNPA works hard to promote physical activity among Iowans, including:

- ✓ Promoting Play Your Way, an additional approach used in the Iowa Nutrition Network School Grant Program, to reinforce the Pick a Better Snack™ lessons by enhancing the physical activity policies, systems, and environments of schools. The Play Your Way campaign encourages youth to engage in 60 minutes of daily physical activity.
- ✓ Co-leading the implementation of 5-2-1-0 Healthy Choices Count!, a public-private partnership which cultivates healthy places for Iowa children and families using evidence-based active living approaches. The Bureau partners with the Iowa Healthiest State Initiative to engage with diverse partners across Iowa to adopt evidence-based strategies that create healthy spaces.

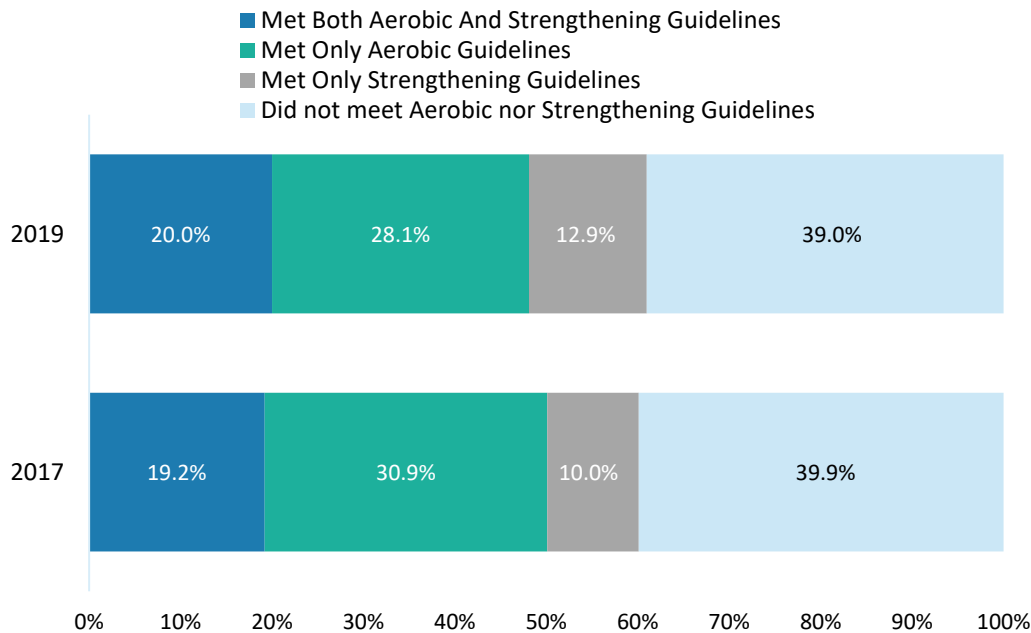


Iowans participating in *any amount of physical activity or exercise* such as running, calisthenics, golf, gardening, or walking for exercise, other than for their job in the past month, 2016-2020



In 2020, approximately three in four Iowans participated in any physical activity within the past month, a 2.9% increase since 2019. Iowa currently ranks 41st in adults meeting the Physical Activity Guidelines for Americans. About one-fifth of Iowans met recommendations for both aerobic and strengthening exercise (Figure 16). Conversely, two in five Iowans are not meeting either of the physical activity recommendations.

Figure 16. Percentage of Adults in Iowa Meeting Guidelines for Physical Activity, by Year.



39%

of Iowans are not meeting physical activity guidelines.

Physical Activity Guidelines for Adults state that adults should engage in:

- at least 150 minutes of aerobic physical activity per week and
- muscle-strengthening activities on 2 or more days per week.

41

Iowa's rank among U.S. states in the proportion of adults meeting physical activity guidelines.

Iowa observed a

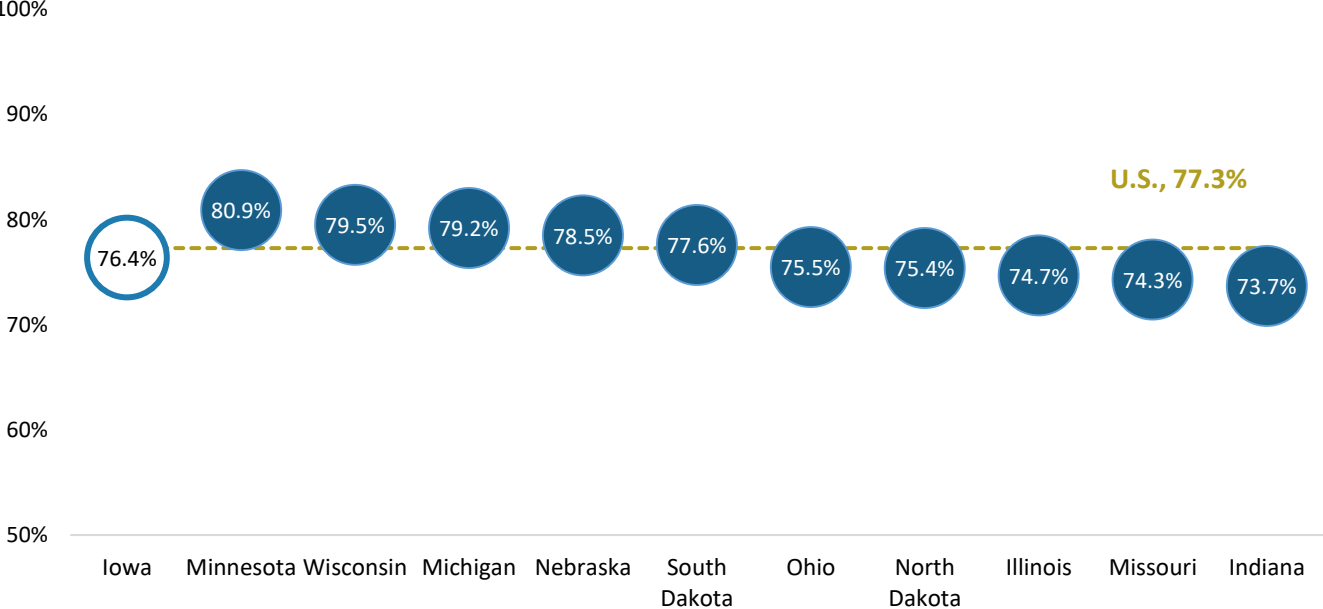
2.9%

increase in physical activity participation from 2019 to 2020.

Comparisons to Other States

The percentage of adults in Iowa participating in any physical activity is similar the U.S. population overall and to nearby states, with a range from 80.9% to 73.7% (Figure 17).

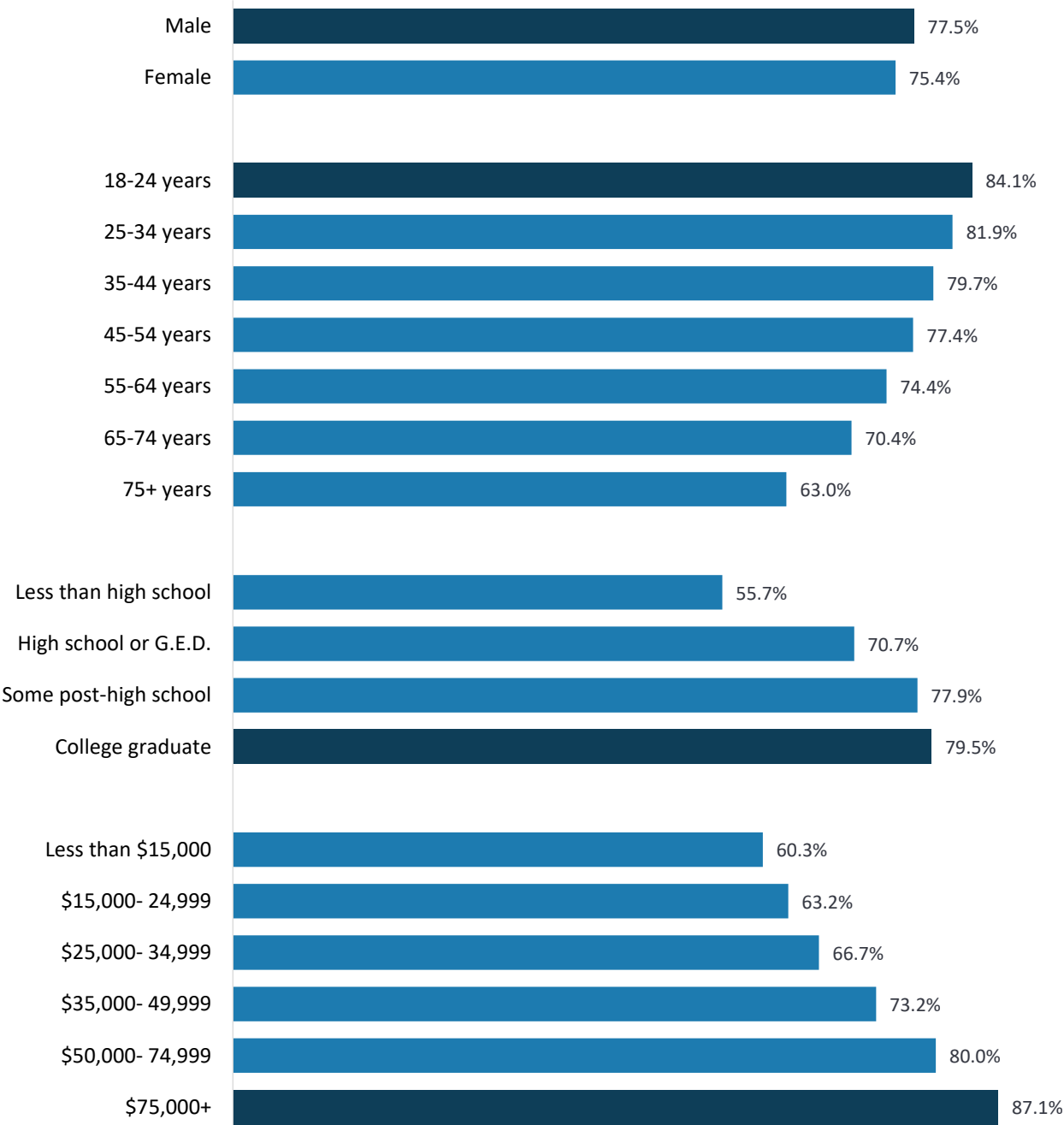
Figure 17. Percentage of Adults in Iowa Who Participated in Any Physical Activity in the Past Month, by State, 2020.



Demographic Comparisons

The majority of lowans are participating in some physical activity; however, some groups participate more than others. In 2020, males participated in physical activity slightly more often than females (**Figure 18**). Those who were younger, more educated and with higher incomes were more likely to participate in physical activity than their counterparts.

Figure 18. Percentage of lowans who Participated in Physical Activity in the Past Month, by Demographic Groups, 2020.



Across racial and ethnic groups, adults identifying as White and non-Hispanic were significantly more likely than those identifying as Black or Hispanic to participate in any amount of physical activity (Figure 19).

Figure 19. Percentage of Adults in Iowa Who Participated in Physical Activity in the Past Month, by Race and Ethnicity, 2020.

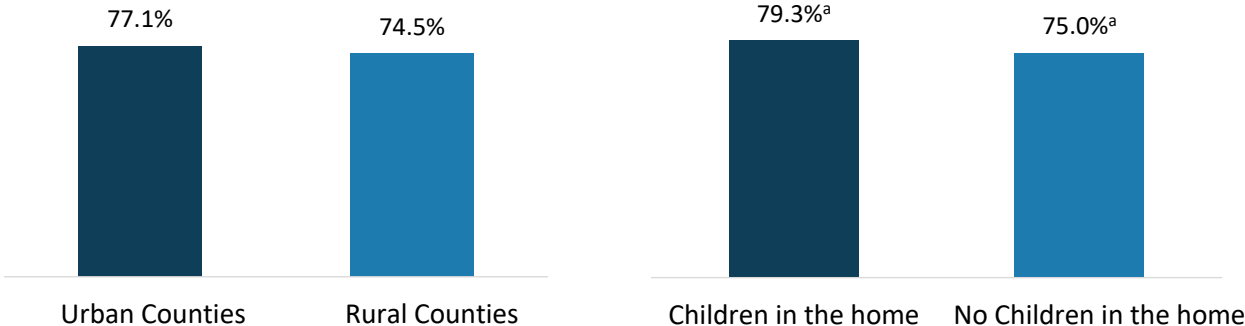
Black and Hispanic populations have significantly lower rates of physical activity than other racial and ethnic groups.



Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.

Iowans living in urban counties were 2% more likely than those in rural counties to participate in any physical activity over the past month. Individuals with children in the home were significantly more likely than those with no children to participate in physical activity (79.3% versus 75.0%). Among age groups, older adults were the least likely to participate in any physical activity and they are more likely to not have children in the household (Figure 20).

Figure 20. Percentage of Adults in Iowa Who Participated in Physical Activity in the Past Month, by Type of County and Household, 2020.



Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.

Key Findings

- ✓ Most lowans are participating in some physical activity; however, only about one-fifth are meeting the recommended guidelines for physical activity.
- ✓ Interventions designed to promote physical activity focused on older adults and Black and Hispanic populations could be beneficial.



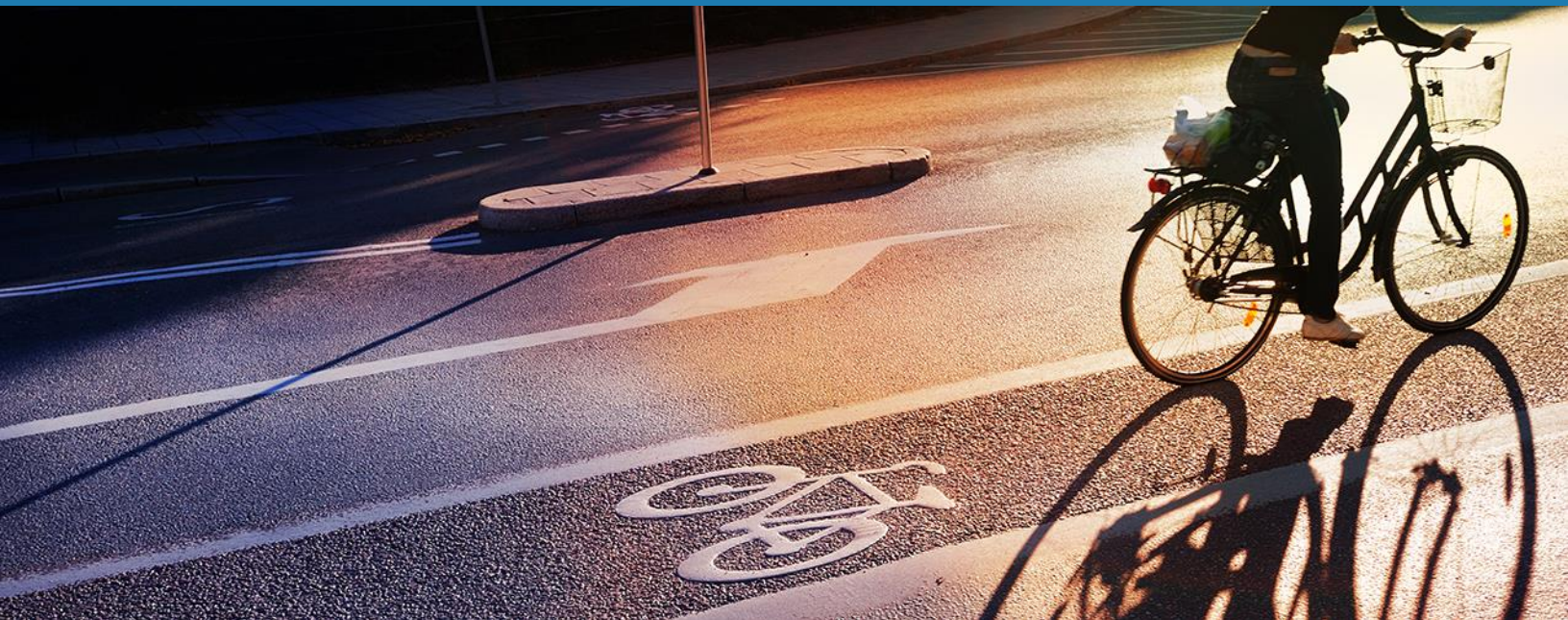
Neighborhood Physical Activity

Active individuals generally live longer and are at a decreased risk of serious health problems, including obesity, diabetes, and heart disease. For those with chronic diseases, physical activity can help manage these conditions.⁸ The way in which communities are designed and function can promote or inhibit physical activity for its residents. For example, communities with quality sidewalks promote walkability and bikeability which can help to increase physical activity. People who live in neighborhoods with sidewalks are 50% more likely to meet physical activity guidelines¹⁸ and are twice as likely to be physically active.¹⁹ Additionally, access to places for physical activity and community-based programming increases the opportunities for residents to be physically active.²⁰

Did you know?

The BNPA promotes neighborhood physical activity through numerous programs, such as:

- ✓ Implementing the Physical Activity Access Project, a state-level intervention aimed at improving and enhancing walkability and bikeability within local Iowa communities. Local agencies work with transportation and public health stakeholders to implement projects that will promote and encourage active lifestyles, such as increasing access to and improving safety of walking and biking paths, influencing zoning policies, and adopting Complete Streets changes.
- ✓ Co-leading the implementation of 5-2-1-0 Healthy Choices Count! The Bureau provides funding, technical assistance, and training opportunities to communities to implement the evidence-based 5-2-1-0 message and nutrition and physical activity policy, system and environmental changes for evidence-based healthy eating and active living approaches.



Sidewalks are present in

73.3%

urban neighborhoods vs.

54.0%

rural neighborhoods throughout Iowa.

Shown in **Figure 21**, sidewalks were present in over two-thirds of the neighborhoods where lowans live and that proportion has remained stable since 2014. Sidewalks were significantly more likely to be present in urban neighborhoods than in rural areas, 73.3% versus 54.0% in 2020.

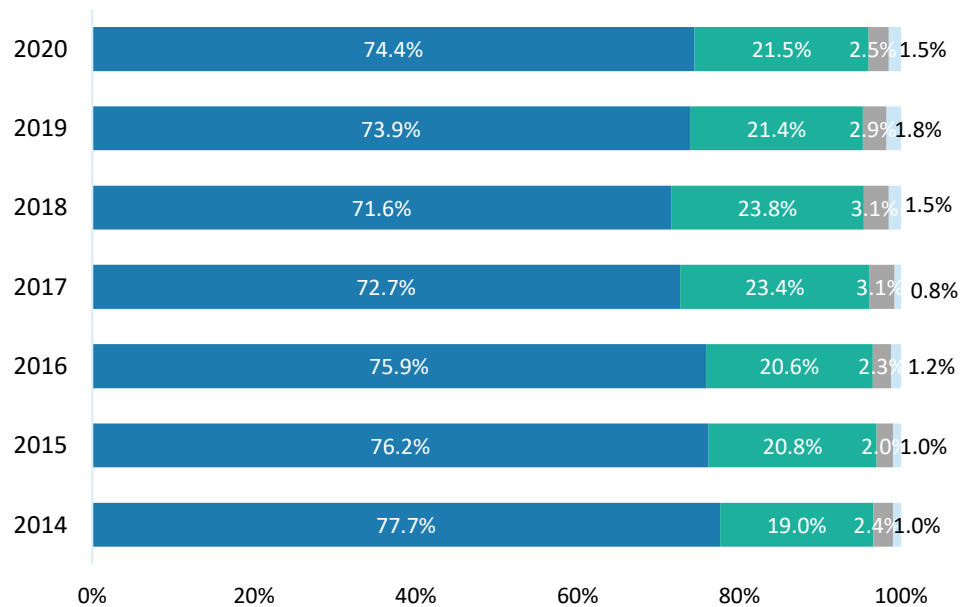
Figure 21. Percentage of Sidewalks in Neighborhoods, by Year.



From 2014-2020, nearly all lowans rated their neighborhood as a very or somewhat pleasant place to walk. Across demographic groups, there were very few lowans rating their neighborhoods as not very or not all pleasant; however, those that were older, more educated, and had higher incomes were the least likely groups to rate their neighborhood negatively.

Figure 22. Neighborhood Rating as a Place to Walk, by Year.

■ Very Pleasant ■ Somewhat pleasant ■ Not very pleasant ■ Not at all pleasant



4.0%
of lowans rated their neighborhood as not very or not at all pleasant as a place to walk in 2020.

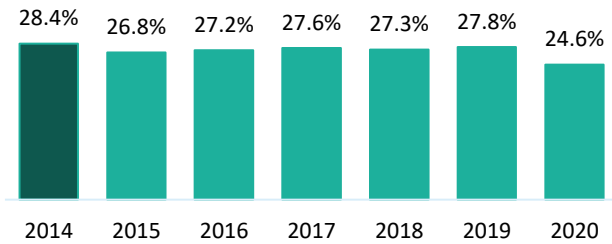
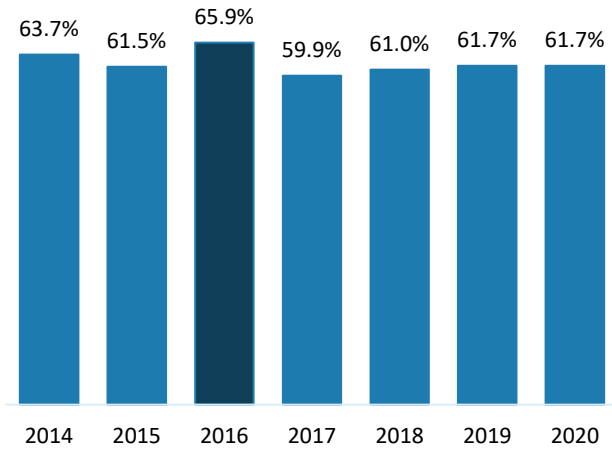


From 2014-2020, BRFSS asked Iowans if they use recreational facilities such as schools, walking trails, parks, playgrounds, and sports fields in their community for physical activity. Shown in **Figure 23**, almost two-thirds of adults in Iowa use walking trails, parks, playgrounds, and sports fields in their community for recreational activity. About one-quarter use schools in the community. There was a slight decline in school use for physical activity in 2020, potentially due to building closures related to the COVID-19 pandemic. Only about 1% or fewer people each year indicated they do not have these facilities in their communities.

Figure 23. Percentage of Iowans Using Recreational Facilities in the Community, by Year.

Use walking trails, parks, playgrounds, sports fields in the community for physical activity

Use schools that are open in the community for recreational activities



Demographic Characteristics

Figure 24 shows that Iowans who were younger, more educated, and had a higher income were most likely to use outdoor facilities for recreational activities. Additionally, people residing in urban counties were more likely than people residing in rural counties to use these types of facilities.

Figure 24. Percentage of Iowans Using Walking Trails, Parks, Playgrounds, and Sports Fields in Their Community for Recreational Activity, by Demographic Groups, 2020.

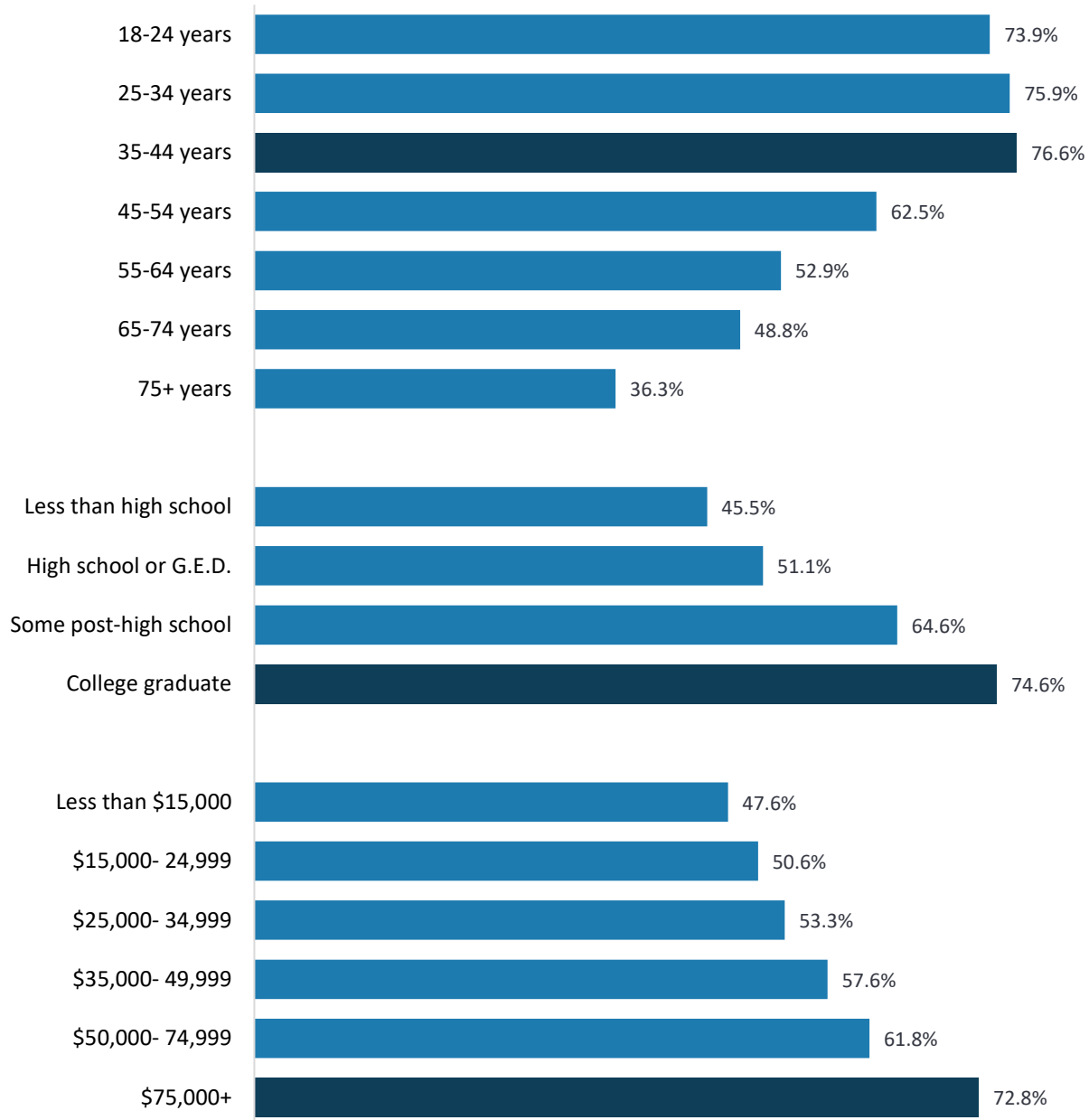
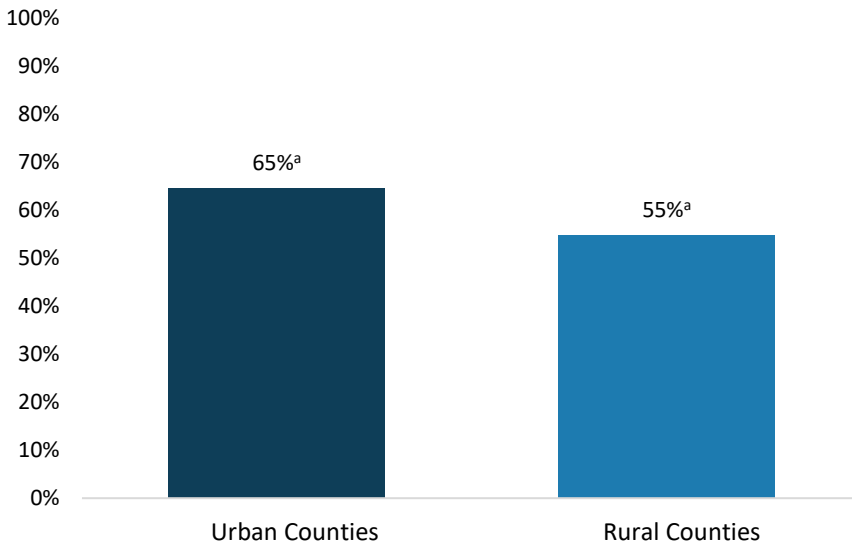


Figure 25. Percentage of Iowans Using Walking Trails, Parks, Playgrounds, and Sports Fields in Their Community for Recreational Activity, by County Type, 2020.



Iowans residing in urban counties and Hispanic adults are the most likely to use community-based recreational facilities.

Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.

Across all racial and ethnic groups, more than half of all adults in Iowa used community-based recreational facilities. **Figure 26** shows that the Hispanic population is more likely than the other race and ethnic groups to use community facilities for recreation.

Figure 26. Percentage of Iowans Using Recreational Facilities in the Community, by Race and Ethnic Group, 2020.



Note: Matching superscripts indicate significant differences between groups based on 95% confidence intervals.

Key Findings

- ✓ About two-thirds of communities in Iowa have sidewalks and most Iowans rated their neighborhoods as a somewhat or very pleasant place to walk.
- ✓ Outdoor facilities such as walking trails, parks, playgrounds, and sports fields are present in almost all communities in Iowa and about two-thirds of the population are using them for recreational activity.
- ✓ Most communities have schools available for recreational activity and about one-quarter are taking advantage of this resource.



Summary and Conclusions

Iowa has one of the highest obesity rates in the Midwest and in the United States. Obesity in Iowa disproportionately affects populations of color and adults with lower educational attainment and household income. Two of the primary modifiable risk factors for obesity are diet and physical activity. When looking at these risk factors in Iowa, data show many Iowans are consuming inadequate amounts of fruits and vegetables and one in 10 Iowans struggle to afford food and balanced meals at times. In addition, Iowa ranks low among states in the percentage of its population that achieves nationally recommended physical activity goals. Black and Hispanic Iowans are among those consuming the least amount of fruit and vegetables per day, as well as those who participate least in regular physical activity.

Despite these challenges, there are many positive factors to build upon to improve risk factors and promote optimal health outcomes for Iowa residents. Many Iowans feel positively about their neighborhoods and communities. Community facilities and infrastructure is a strength, with many communities having sidewalks and almost all residents reporting some access to outdoor community facilities that can be utilized to engage in recreational physical activity. Further, most Iowans are participating in some form of exercise and the proportion of Iowans engaged in physical activity is trending in a positive direction with more Iowans engaged in the healthy behavior in 2020 compared to 2019.

The IDPH BPNA can build on these assets and address obesity and its risk factors by implementing evidence-based strategies that promote and increase access to opportunities for healthy eating and physical activity, particularly among populations facing health disparities. To ensure strategies are effective and culturally relevant for the populations most at risk, additional information beyond BRFSS data may be needed. Engaging these populations to better understand their lived experiences, assets, barriers, needs, and preferences can help to inform specific approaches, contextualize the BRFSS data, and support all Iowa residents in leading healthy, active lives.

Limitations

This report utilized aggregated data tables from the BRFSS and therefore, we were only able to focus on one characteristic at a time during our analyses. It may be beneficial to determine the relationships between characteristics and their effect on health outcomes. For example, how higher obesity rates among adults with children relate to age or income factors. Additionally, BRFSS data only captures the behaviors and health outcomes of adults aged 18 years and older. Since obesity in childhood and adolescence is a strong predictor of obesity in adulthood, it may be helpful to analyze data from the Youth Risk Behavioral Surveillance System (YRBSS) alongside BRFSS data for future reports. The YRBSS monitors health behaviors among youth in grades 9-12. By including analyses of YRBSS data alongside BRFSS data, unhealthy behaviors can be identified earlier, and the report would provide a broader view of Iowa's population for consideration of targeted evidence-based strategies to improve the health of all Iowans.

Get Connected

To find out more information on the work IDPH is doing to improve healthy eating, active living, and food security in Iowa, please visit the BNPA program's websites.

BNPA: <https://idph.iowa.gov/nutrition-physical-activity>

WIC: <https://idph.iowa.gov/WIC>

SNAP-Ed: <https://idph.iowa.gov/INN>

5-2-1-0 Healthy Choices Count!: <https://idph.iowa.gov/5210>



Appendix A: Infographics

Food Insecurity Prevalence Among Adults in Iowa, 2020

DATA SPOTLIGHT

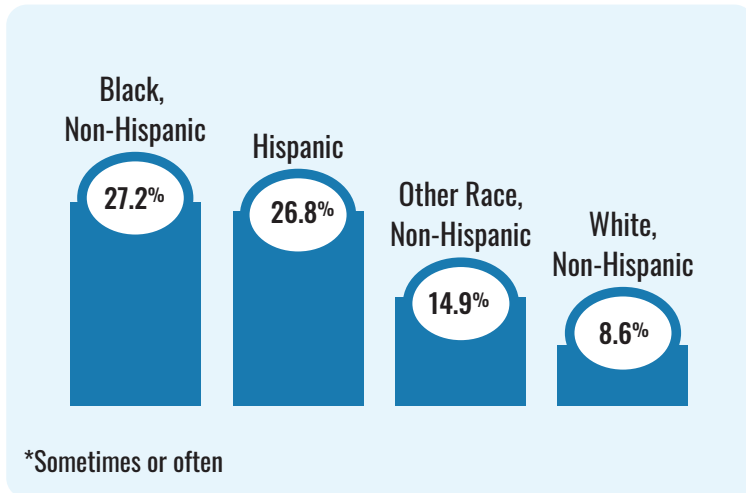
10.3%

Percent of Iowa adults struggle to afford food at times

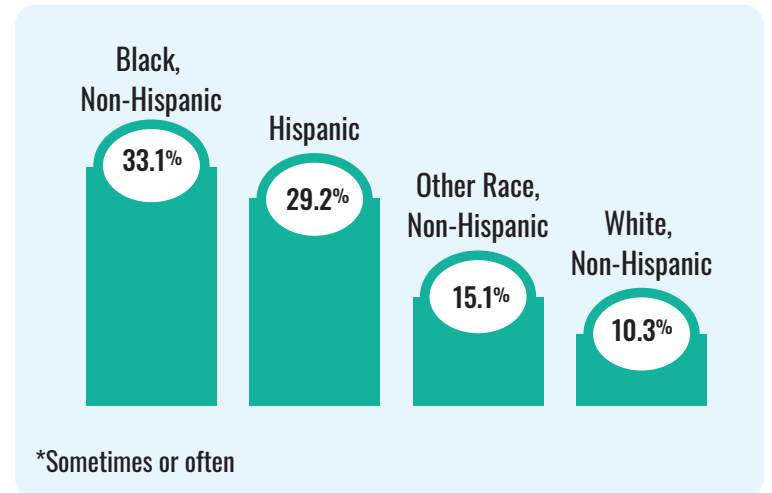
12.0%

Percent of Iowa adults cannot afford to eat balanced meals at times

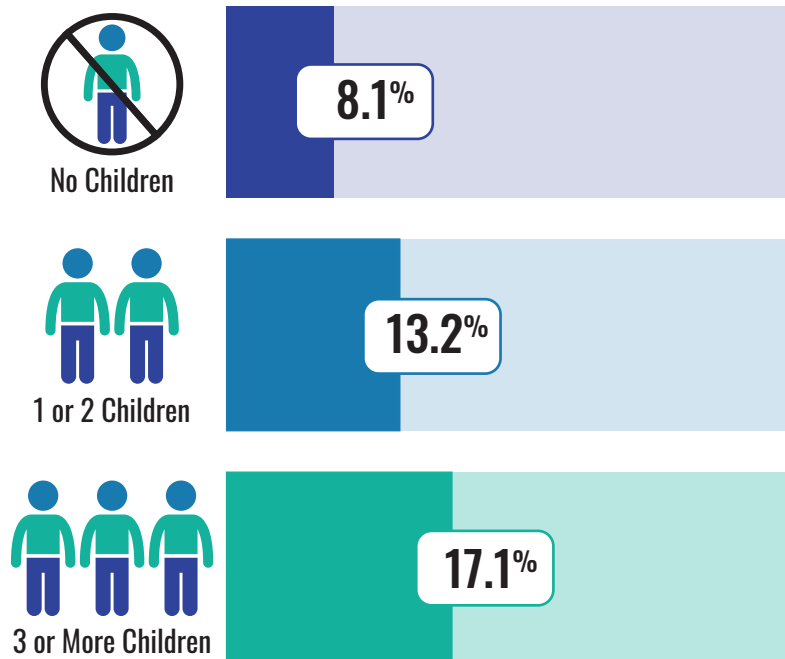
Struggle to Afford Food* by Race/Ethnicity



Cannot Not Afford to Eat Balanced Meals* by Race/Ethnicity



Struggle to Afford Food* by Number of Children in the Home



More than **25%** of **Black and Hispanic families** struggle to afford food at times, while less than **10%** of **White families** struggle to afford food.

Obesity Prevalence Among Adults in Iowa, 2020

DATA SPOTLIGHT

36.5%

Percent of Iowa adults who have obesity



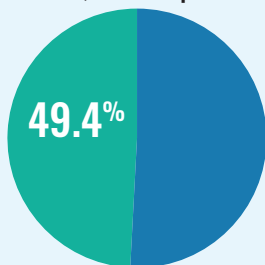
7

Iowa's rank in obesity prevalence among U.S. states

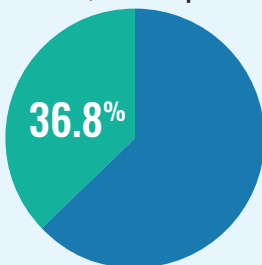


By Race/Ethnicity

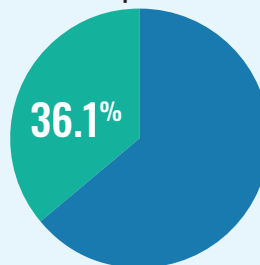
Black, Non-Hispanic



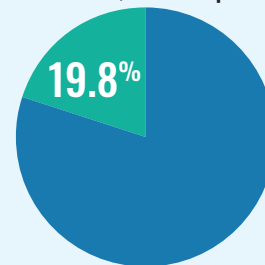
White, Non-Hispanic



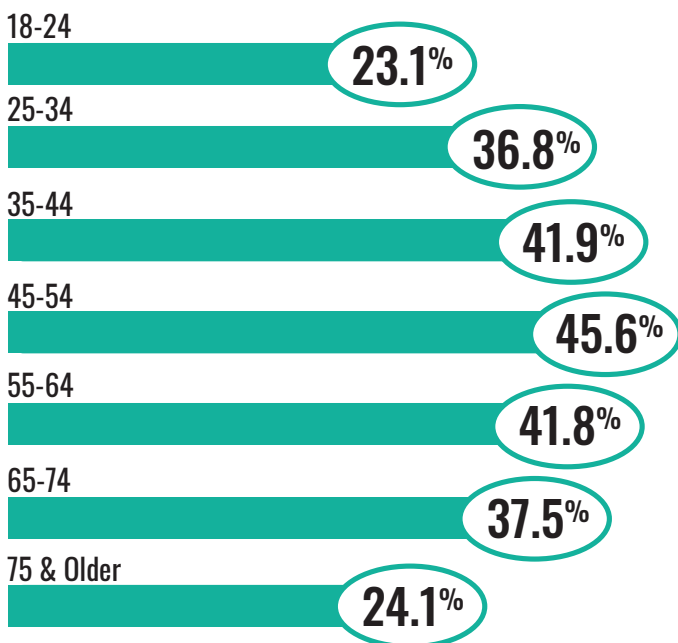
Hispanic



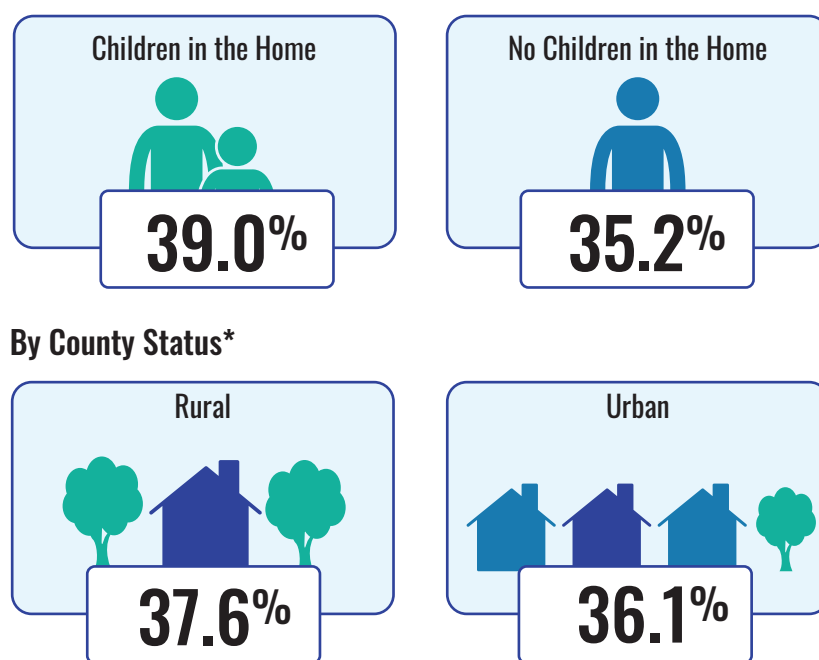
Other Race, Non-Hispanic



By Age Group (in Years)



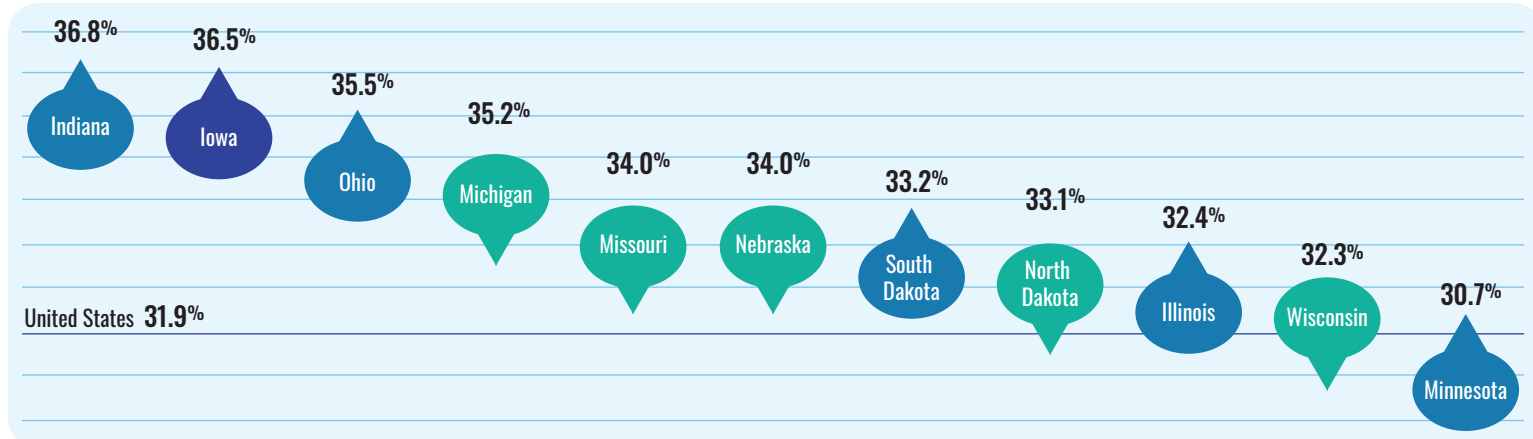
By Household Type



By County Status*



Compared to the United States and Other Midwestern States (Arrows show direction of change from 2019)



Based on data collected through the Behavioral Risk Factor Surveillance System (BRFSS) during calendar year 2020.
 *Urban and rural definitions based on the 2013 National Center for Health Statistics' Urban-Rural Classification Scheme for Counties.

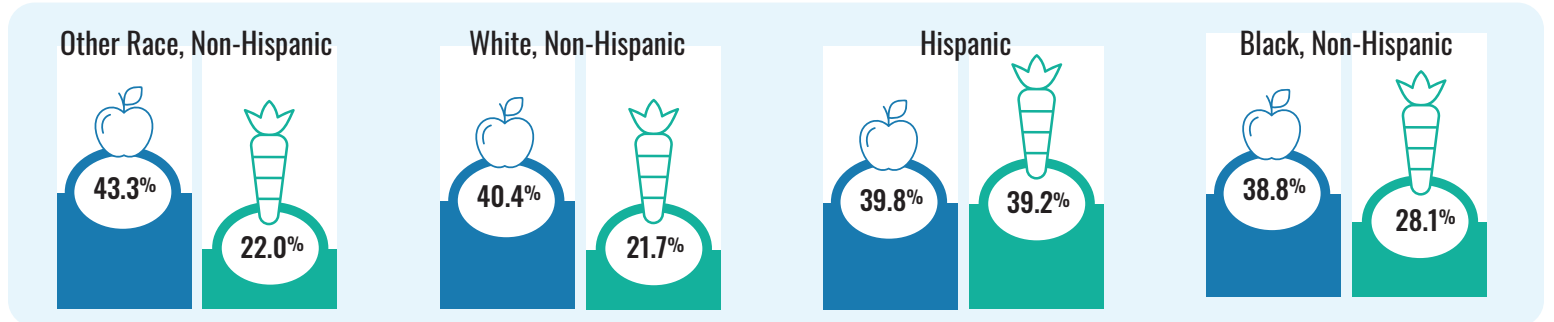
Fruit & Vegetable Consumption in Iowa, 2019

DATA SPOTLIGHT

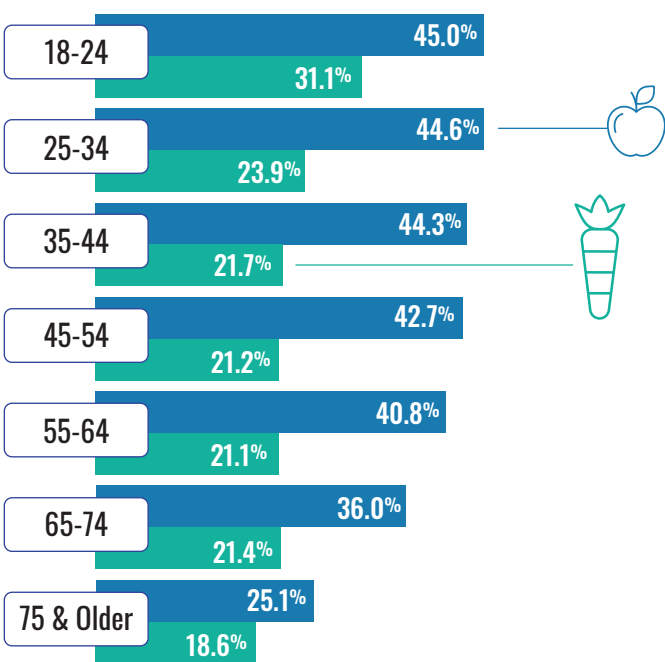
40.4% Percent of Iowa adults who consumed fruit less than once per day

22.7% Percent of Iowa adults who consumed vegetables less than once per day

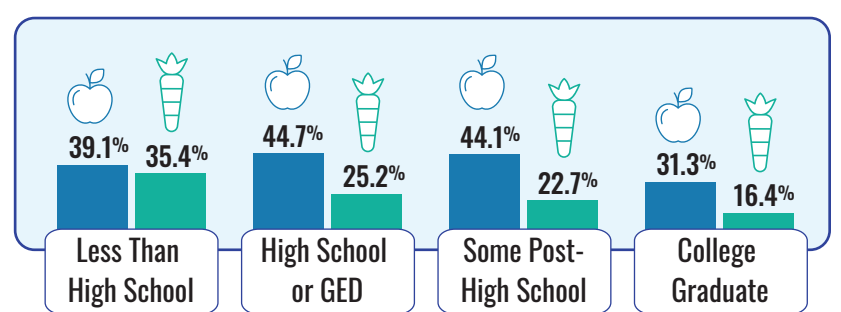
By Race/Ethnicity



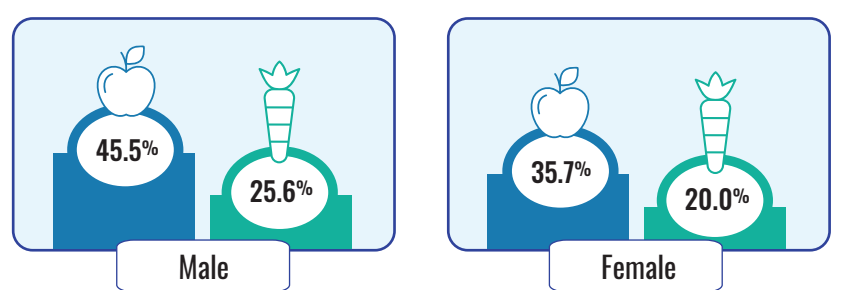
By Age Group (in Years)



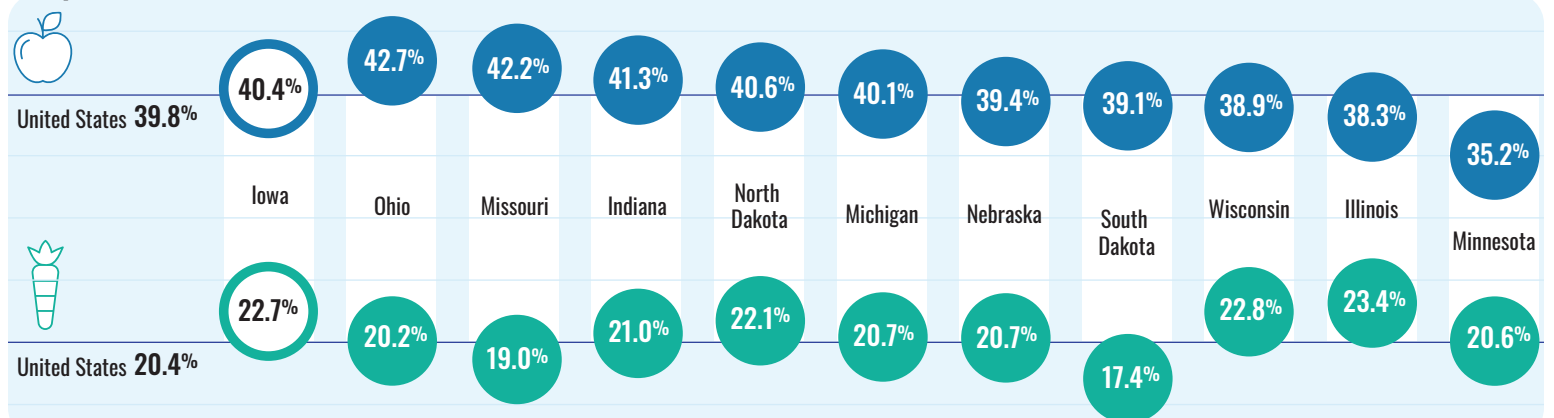
By Education



By Gender



Compared to the United States and Other Midwestern States



Based on data collected through the Behavioral Risk Factor Surveillance System (BRFSS) during calendar year 2019.

Physical Activity Among Adults in Iowa, 2019-2020

DATA SPOTLIGHT

76.4%

Percent of Iowa adults who participated in any physical activity in the past month, 2020



41ST

Iowa's rank among U.S. states in the percentage of adults meeting physical activity guidelines, 2019

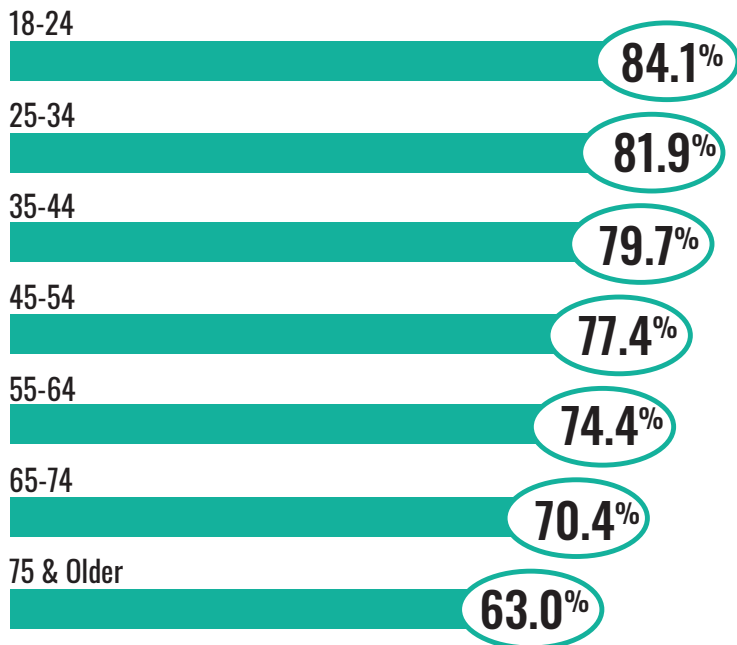


Met Physical Activity Guidelines (Aerobic and Strengthening),* 2019

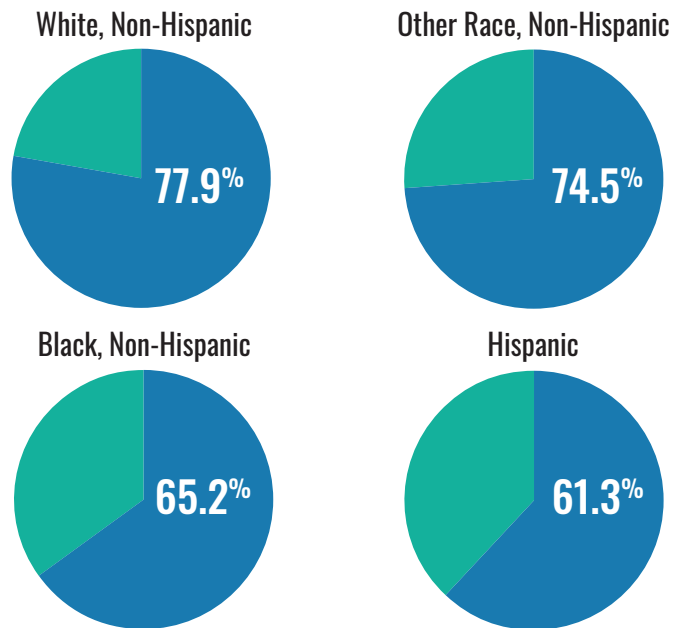


*The Physical Activity Guidelines for Adults recommend at least 150 minutes a week of aerobic physical activity and muscle-strengthening activities on 2 or more days per week.

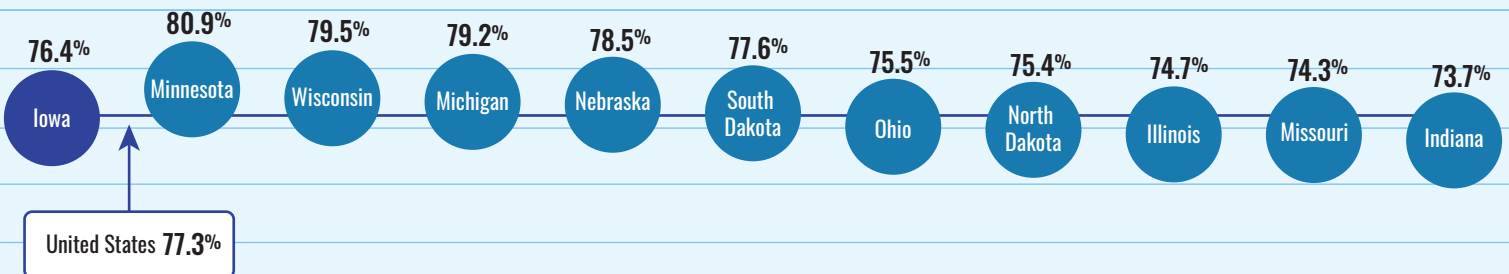
Any Physical Activity in the Past Month by Age Group (in Years), 2020



Any Physical Activity in the Past Month by Race/Ethnicity, 2020



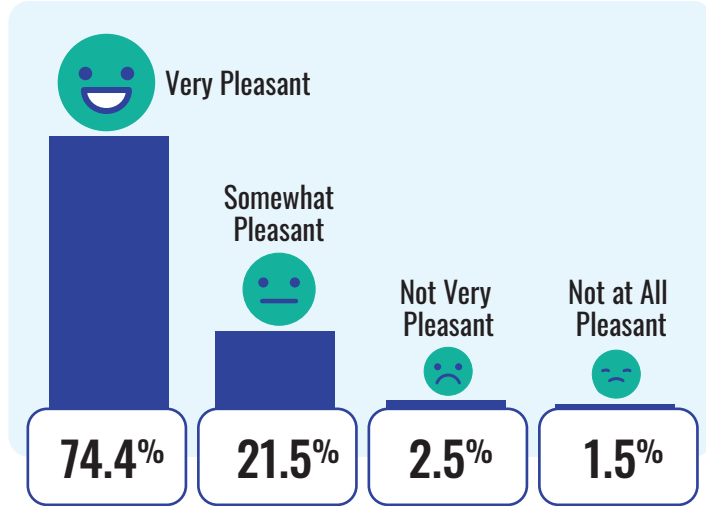
Any Physical Activity in the Past Month, United States and Midwestern States, 2020



Using Outdoor Areas for Physical Activity Among Adults in Iowa, 2020

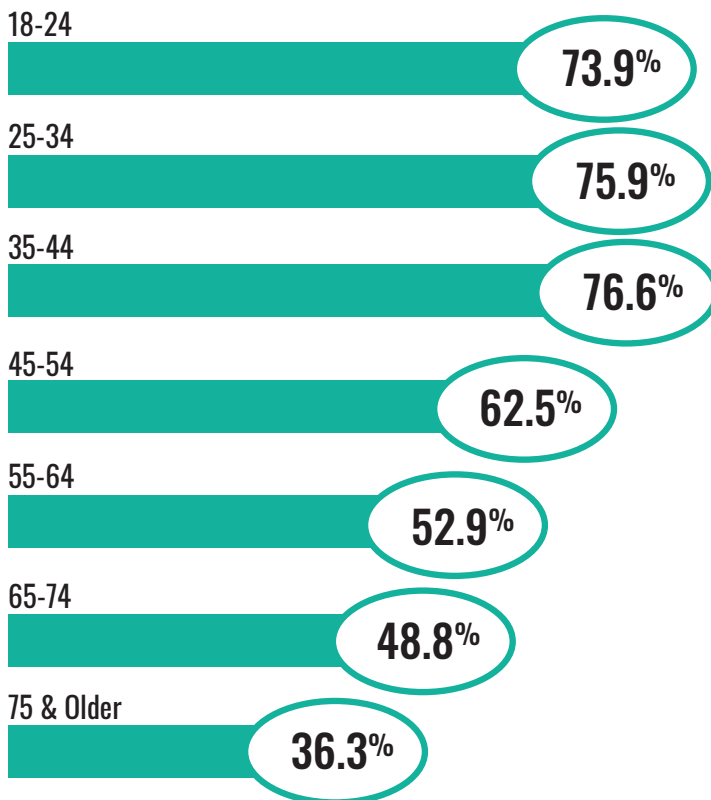
DATA SPOTLIGHT

Neighborhood Rating as a Place to Walk

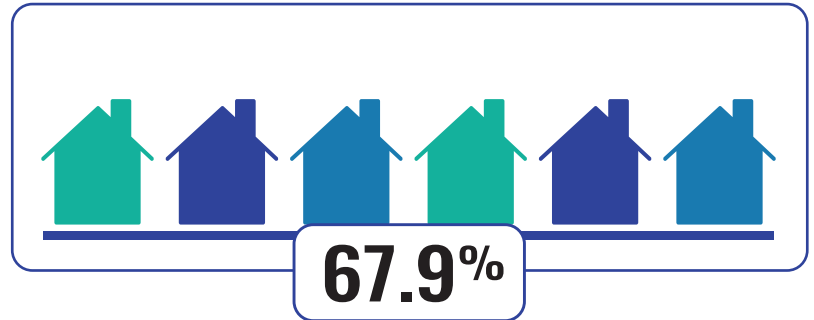


61.7% Percent of Iowa Adults Using Recreational Facilities**

Use of Recreational Facilities** by Age Group (in Years)



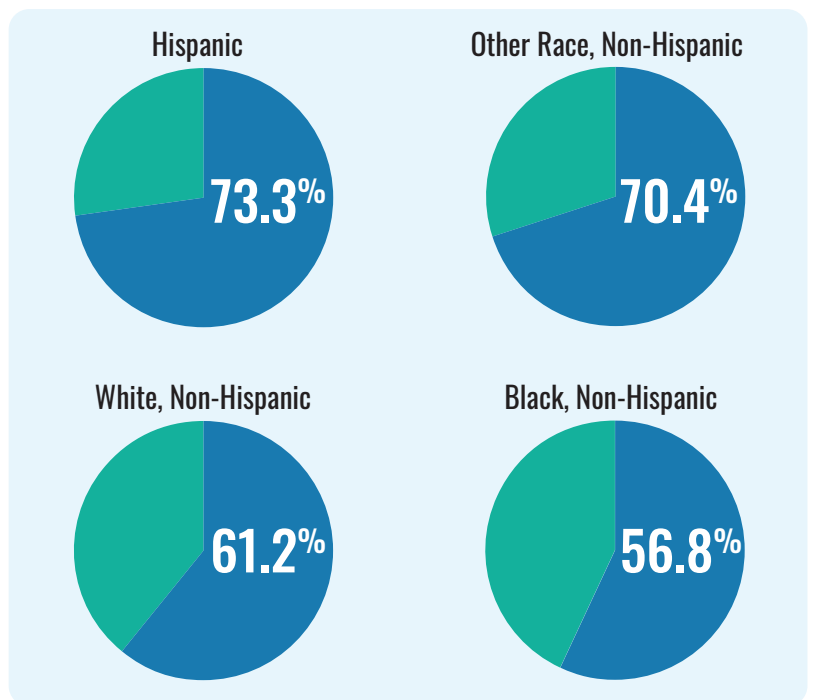
Presence of Sidewalks in Neighborhoods



Presence of Sidewalks in Neighborhoods by County Status*



Use of Recreational Facilities** by Race/Ethnicity



Based on data collected through the Behavioral Risk Factor Surveillance System (BRFSS) during calendar year 2020.

*Urban and rural definitions based on the 2013 National Center for Health Statistics' Urban-Rural Classification Scheme for Counties. **Recreational facilities include walking trails, playgrounds, parks, and sports fields.

Appendix B: References

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- ¹⁶ America's Health Rankings analysis of CDC, Behavioral Risk Factor Surveillance System, United Health

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¹⁷ Centers for Disease Control and Prevention. 2021. *Physical Activity*. Centers for Disease Control and Prevention; Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion. Available at: <https://www.cdc.gov/physicalactivity/index.html>

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