

Arkansas Department of Health

The State of Physical Activity

in Arkansas 2011



Nathaniel Smith, MD, MPH, Director
Mike Beebe, Governor

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The State of Physical Activity in Arkansas

Arkansas Department of Health
Center for Health Advancement
Chronic Disease Prevention and Control Branch

For questions about this report, please contact:

Becky Adams, MPH, RD, CDE, Director 501-661-2334

Brandy Sutphin, MPH, CPH, Epidemiologist 501-661-2889

This Report Prepared by

Brandy Sutphin, MPH, CPH

Epidemiologist – Analytical Epidemiology Branch

Contributors:

Analytical Epidemiology Branch

Joyce Biddle, MPA, MPH, Epidemiologist, Arkansas Department of Health

Abby Holt, MPH, Epidemiologist, Arkansas Department of Health

Chronic Disease Control and Prevention Branch

Leesa Freasier, Physical Activity Section Chief

Becky Adams, MPH, RD, CDE, Partnership and Policy Support Director

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Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA,
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, 24 Hours/Every Day -

cdcinfo@cdc.gov

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Executive Summary

This report describes the impact of physical activity in Arkansas in terms of the degree to which Arkansans are physically active as well as the long term consequences of inactivity to overall health. This information has been compiled and published for use by Arkansas Department of Health (ADH) program managers, Obesity Task Force members, policy makers, researchers, and other interested parties. It is intended to provide data to assist in determining what and where interventions are needed. The Center for Health Advancement of the Arkansas Department of Health is funded by the Centers for Disease Control and Prevention to produce this report and support efforts to increase the level of physical activity in Arkansas.

Key Findings

Arkansas Adult Findings According to BRFSS

- According to the Behavioral Risk Factor Surveillance System (BRFSS) data, the percent of Arkansas adults who met CDC's recommended level of physical activity rose from 45.2% in 2001 to 47.3% in 2009, but this level still remained below the 2009 national average of 51.0%.
- In 2011, the BRFSS used the recently updated CDC guidelines for physical activity, which added muscle-strengthening activities. Using these guidelines, 16.7% of Arkansas adults met the new and more rigorous CDC minimum recommended level of physical activity.
- In 2011, males (20.5%) were more likely to meet the new CDC recommended level of physical activity than females (13.2%), and Blacks (20.4%) were more likely to meet the recommended level than Whites (15.7%).
- Young adults (30.4% of 18-24 year olds), members of the lower middle class (23.6% of those with an annual household income of \$25,000 to \$34,999), and college graduates (22.6%) had the highest percent of physically active adults in 2011. Although those with an annual household income of \$50,000+ were not far behind at 21.6%.
- In almost all categories, the percent of Arkansas adults who met the CDC's recommended level of physical activity was below the national average for 2011.
- Similar results were seen when considering adults who met CDC's recommended level of vigorous physical activity and those who participated in any physical activity outside of work.

Arkansas High School Student Findings According to YRBSS

- According to the Youth Risk Behavior Surveillance System (YRBSS) data, the percent of Arkansas high school students who met the CDC's recommended level of daily physical activity rose from 18.4% in 2005 to 26.7% in 2011. Unlike adults, this level was above the national average until 2011.
- In 2011, males (39.0%) were more likely to have met the CDC's recommended guidelines for physical activity than females (14.2%), and Whites (29.1%) were more likely to have met the recommended level than Blacks (21.9%) or Hispanics (15.3%).
- In 2011, tenth graders were the most likely to be physically active with 28.3% having 60 or more minutes of daily physical activity, closely followed by ninth graders at 27.5%.
- Over forty (40.8%) percent of high school students did have 60 or more minutes of exercise at least five of the seven days prior to the survey, in 2011. However, one-fifth (20.2%) did not obtain 60 or more minutes of exercise on any day of the week prior to the survey. The percent of inactive students increased steadily from 15.1% in 9th grade to 25.3% in 12th grade.

Arkansas Adult (18-64) Chronic Illness Findings According to BRFSS

- Adults (18-64) who met the CDC's recommended level of physical activity in 2011 were less likely to report several types of chronic disease. The prevalence for high blood pressure was 22.9% for persons with the recommended level of physical activity, while the prevalence among less active persons was 33.7%. For high cholesterol, the prevalence was 27.5% for active persons as compared to 42.3% for less active persons. The differences between those who met CDC's recommended level of physical activity and those who did not were statistically significant for both high blood pressure and high cholesterol.
- Differences in the prevalence of high blood pressure was greater for those who met the 2008 physical activity guidelines through vigorous exercise when compared to the low activity group. The prevalence for high blood pressure for vigorously active people was 22.5% versus a prevalence of 33.7% for the low activity persons. The difference in prevalence for high cholesterol was greater when comparing the vigorously active group (26.4%) to the low activity group (42.3%). These differences were statistically significant for both high cholesterol and high blood pressure.
- Cardiovascular disease was less common among persons who were physically active relative to persons with low levels of activity, in 2011. Less than three percent (2.6%) of the physically active group reported having had a heart attack

versus 4.6% of the low activity group. Less than two percent (1.8%) of the physically active group reported having had a stroke versus 3.2% of the low activity group. Angina, or coronary heart disease (CHD), was reported for 2.8% of the active group versus 4.0% of the low activity group. The difference between the active and the low activity group was not statistically significant for any of the three conditions.

- When persons who reported meeting the 2008 recommended guidelines for vigorous activity were compared to the low activity group, the differences in the disease prevalences increased. For the high activity group, 0.1% reported having a heart attack compared to 4.6% for the low activity group. For stroke, the prevalences were 1.2% for the vigorous activity group versus 3.2% for the low activity group. For angina, or CHD, the prevalence was 0.5% for the vigorous group versus 4.0% for the low activity group. The difference between the high activity group and the low activity group was not statistically significant for stroke, but it was significant for heart attack and angina.
- For those who met the CDC recommendations for physical activity, the prevalence for arthritis was lower at 16.7% versus 28.3% for low activity persons. An equivalent disparity was seen for the prevalence of disabilities for active versus low activity persons with prevalences of 21.1% and 34.0%, respectively. The differences between activity groups were statistically significant for both arthritis and disability. For the data examined, it could not be determined whether arthritis or a disability directly contributed to lower levels of physical activity or whether a moderate level of physical activity conferred some protection against the effects of arthritis or other disabling conditions.

Methods

- The Centers for Disease Control and Prevention (CDC) established the Behavioral Risk Factor Surveillance System (BRFSS) in 1984. Currently data are collected monthly on adults in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. States use BRFSS data to identify emerging health problems, establish and track health objectives, and develop and evaluate public health policies and programs. Most physical activity questions are located in one of the two rotating core modules and are asked every other year. The physical activity question concerning participating in any amount of exercise is asked every year as part of the standard set of questions.

In the United States, several hundred thousand adults are interviewed each year, from 212,510 in 2001 to 504,408 in 2011. In Arkansas, several thousand adults are interviewed each year, from 2,928 in 2001 to 4,739 in 2011, with a high of 5,738 in 2007.

- The CDC established the Youth Risk Behavior Surveillance System (YRBSS) in 1991. Currently data are collected every other year on 9th-12th grade students from all 50 states, the District of Columbia, Puerto Rico, and other U.S. Territories. States use the YRBSS to measure trends in behaviors that contribute to unintentional injuries and violence, alcohol and drug use, sexual behaviors, unhealthy dietary behaviors, tobacco use, and inadequate physical activity.

In the United States, 9th-12th grade high school students completed surveys in 2005 (n=13,670), 2007 (n=13,840), 2009 (n=16,109), and 2011 (n=15,048). In Arkansas, 9th-12th grade high school students also completed surveys in 2005 (n=1,549), 2007 (n=1,552), 2009 (n=1,610), and 2011 (n=1,328).

- Statistical significance was indicated in the text for United States BRFSS data when the p-value ≤ 0.05 (for trends). For Arkansas BRFSS data, statistical significance was indicated when the p-value ≤ 0.05 (for trends) or when the 95% confidence intervals did not overlap between categories. A statistically significant difference between Arkansas and the United States, for BRFSS data, was determined when the United States median did not fall within the Arkansas 95% confidence interval. For both the United States and Arkansas YRBSS data, statistical significance was indicated when the p-value ≤ 0.05 (for trends) or when the 95% confidence intervals did not overlap.

Physical Activity Overview

Persons of all ages and health, even the disabled and elderly, can improve their health through physical activity. The U.S. Department of Health and Human Services states that “physical fitness should be a priority for Americans of all ages” as it provides numerous health benefits, including⁽¹⁾⁽²⁾⁽³⁾:

- Maintaining a healthy weight,
- Losing excess weight,
- Improving cardio respiratory and muscular fitness,
- Reducing high blood pressure,
- Reducing the risk of heart attack and stroke,
- Reducing the risk for osteoporosis and falls among the elderly,
- Reducing symptoms of depression and anxiety,
- Reducing the risk of metabolic syndrome, and
- Reducing the risk of many chronic illnesses, including: type 2 diabetes; several forms of cancer including colon and breast cancer; and arthritis pain and associated disability.

Although any physical activity is better than none, the Centers for Disease Control and Prevention (CDC) provides guidelines for the minimum amount of physical activity people of all ages should obtain to maintain health. In 2008, the federal government issued new physical activity guidelines for adults, which was used in analyzing the 2011 BRFSS data.

Physical Activity Guidelines for Adults

- 1995 Physical Activity Guidelines for Americans - All adults should obtain a minimum of 30 minutes five or more times per week of moderate-intensity, or 20 minutes three or more times per week of vigorous-intensity physical activity.
- 2008 Physical Activity Guidelines for Americans – All adults should obtain a minimum of 2 hours and 30 minutes (150 minutes) a week of moderate-intensity, or 1 hour and 15 minutes (75 minutes) a week of vigorous-intensity aerobic activity (i.e. jogging). All adults should also engage in muscle-strengthening activities on 2 or more days a week that work all muscle groups. Additional health benefits can be obtained by increasing to 5 hours (300 minutes) a week of moderate-intensity aerobic physical activity, or 2 hours and 30 minutes (150 minutes) a week of vigorous-intensity physical activity. Aerobic activity should be performed in episodes of at least 10 minutes, preferably spread throughout the week.

Physical Activity Guidelines for Children (6 to 17 years of age)

- Children should obtain at least 1 hour (60 minutes) of physical activity each day.
- Most of the daily exercise should consist of aerobic activity, either moderate-intensity or vigorous-intensity.
- Exercise should include vigorous-intensity aerobic activity on at least three days per week, muscle-strengthening activities on at least three days per week, and bone strengthening activities on at least three days per week.
- Aerobic activity should be performed in episodes of at least 10 minutes.

When choosing a physical activity program, individuals should remember that physical activity requirements are different for everyone. Individuals with chronic conditions should consult with a health care provider before starting any new exercise program. Older adults should be as physically active as their abilities allow and should perform exercises that maintain or improve balance if they are at an increased risk of falling.

Individuals beginning a new physical activity program should start with moderate-intensity activities before slowly increasing to vigorous-intensity activities. The CDC defines moderate activity as any physical activity in which your breathing and heart rate noticeably increase but you are still able to carry on a conversation. Moderate-intensity activities include⁽²⁾: “walking briskly (a 15-minute mile), light yard work (raking/bagging leaves or using a lawn mower), light snow shoveling, actively playing with children, and biking at a casual pace”. The CDC defines vigorous activity as any physical activity in which your heart rate increases “substantially and you are breathing too hard and fast to have a conversation”. Vigorous-intensity activities include⁽²⁾: “jogging/running, swimming laps, rollerblading/inline skating at a brisk pace, cross-country skiing, most competitive sports (football, basketball, or soccer), [and] jumping rope”.

Changes in Physical Activity Guidelines for Adults in the 2011 BRFSS

The addition of muscle-strengthening exercises to CDC’s recommended physical activity guidelines greatly reduced the percent of people who met the recommended physical activity level.

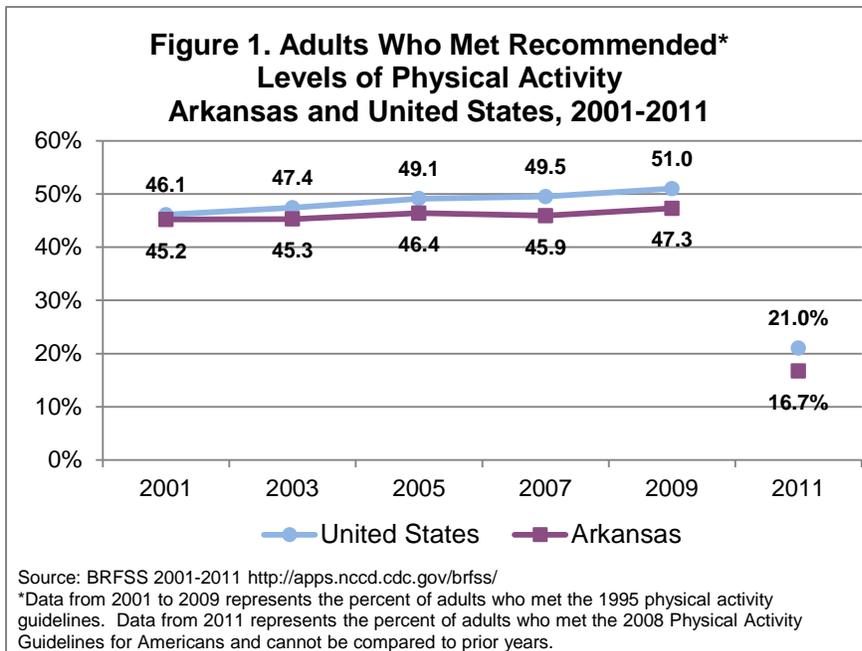
Physical Activity Guidelines	Arkansas	United States
Met the aerobic activity guideline	45.7%	51.7%
Met the muscle-strengthening guideline	24.7%	29.6%
Met both aerobic and muscle-strengthening guidelines	16.7%	21.0%

Physical Activity Among Adults

Adults Who Met Recommended Levels of Physical Activity

Adults who meet CDC's recommended level of physical activity have better aerobic fitness and are less likely to develop many chronic diseases than adults who do not. In 1995, CDC recommended that adults have 30+ minutes of moderate physical activity five or more days per week, or 20+ minutes of vigorous physical activity three or more days per week. In 2008, new physical activity guidelines were released that recommended adults should obtain at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic physical activity. These guidelines also recommended that adults engage in muscle-strengthening activities that work all muscle groups at least 2 times a week. Adults can gain additional benefits by increasing the amount of regular physical activity they obtain⁽²⁾.

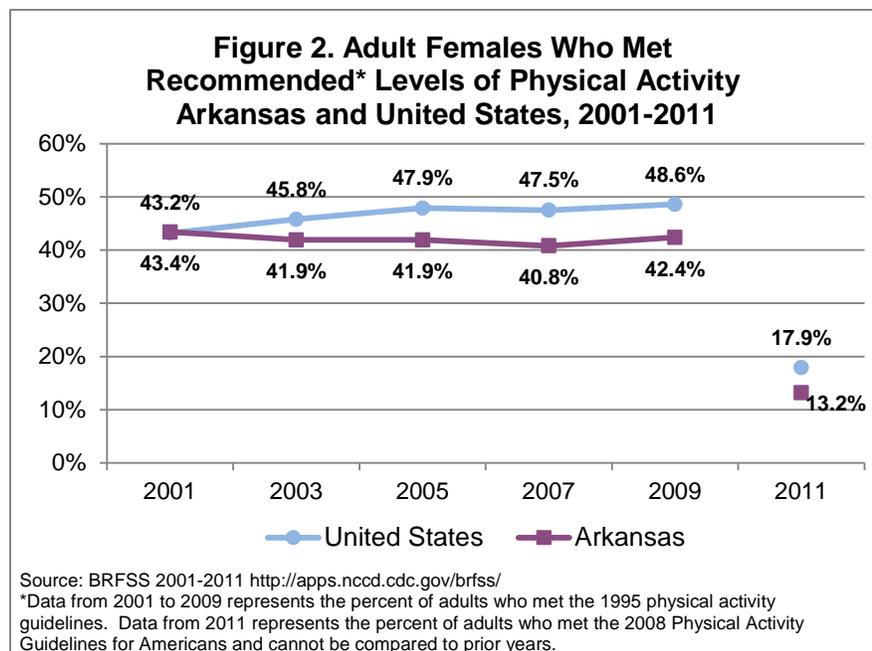


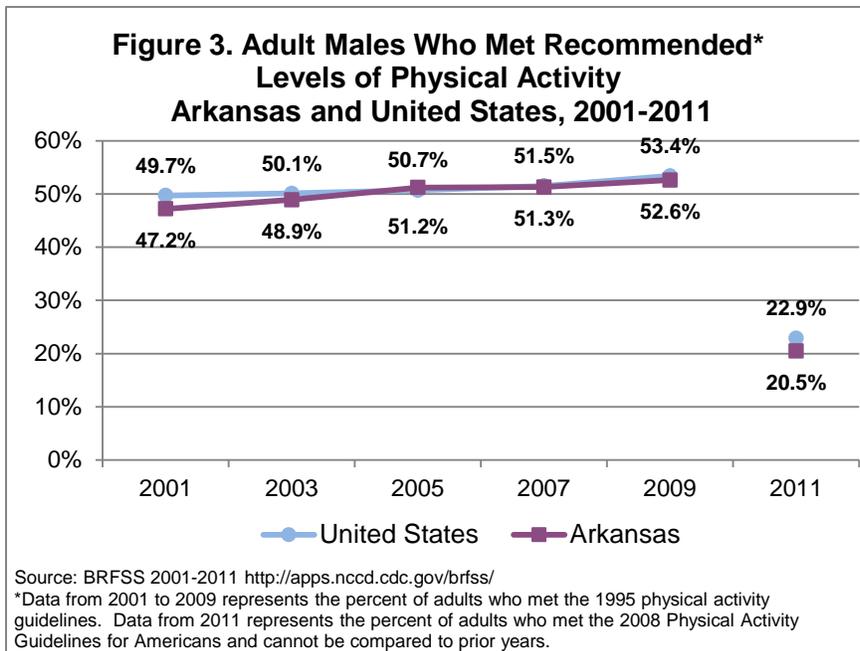


Between 2001 and 2009, the percent of adults in Arkansas who met the recommended level of physical activity increased from 45.2% to 47.3%. Similarly, for the United States, the percent of adults who met the recommended level increased from 46.1% to 51.0%. The increase from 2001 to 2009 was statistically significant for the U.S., but not Arkansas. Also,

in every year, the percent of adults in the United States who met the recommended level was increasingly greater than in Arkansas. Using the new CDC recommendations in 2011, the percent of adults who met the recommended level of physical activity was 21.0% for the U.S. and 16.7% for Arkansas.

There was an increase in the percent of United States adult females (18+ years old), who met the CDC's recommended physical activity level between 2001 (43.2%) and 2009 (48.6%). However, there was a small decline among adult females in Arkansas (from 43.4% to 42.4%) over the same period of time. This change over time was statistically significant for the U.S., but not for Arkansas. For each year, except 2001, the percent of females who met the recommended level was lower in Arkansas than in the United States. With the new recommendations, the percent of adult females in 2011 who met the new CDC recommended level was 17.9% U.S. and 13.2% in Arkansas.

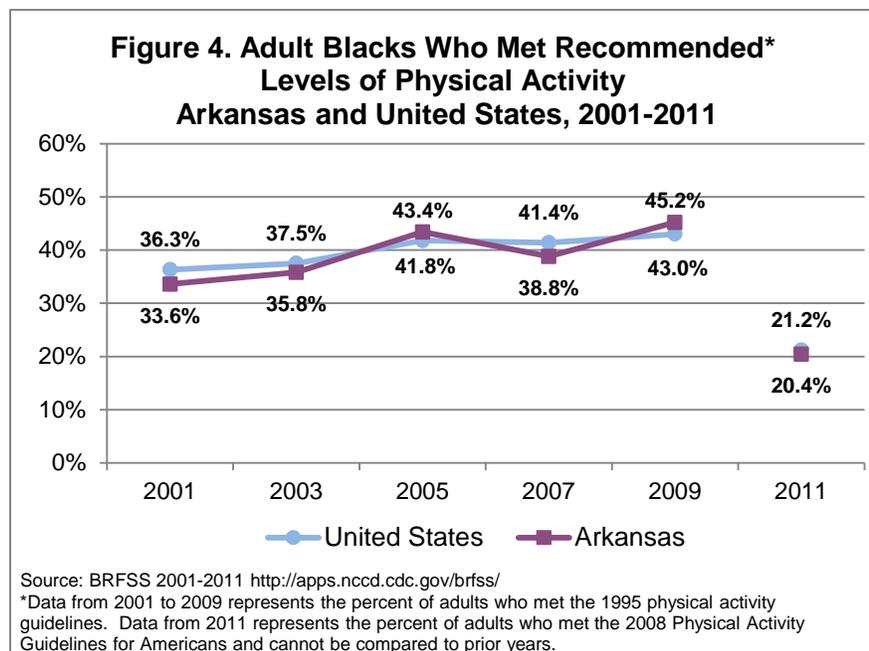


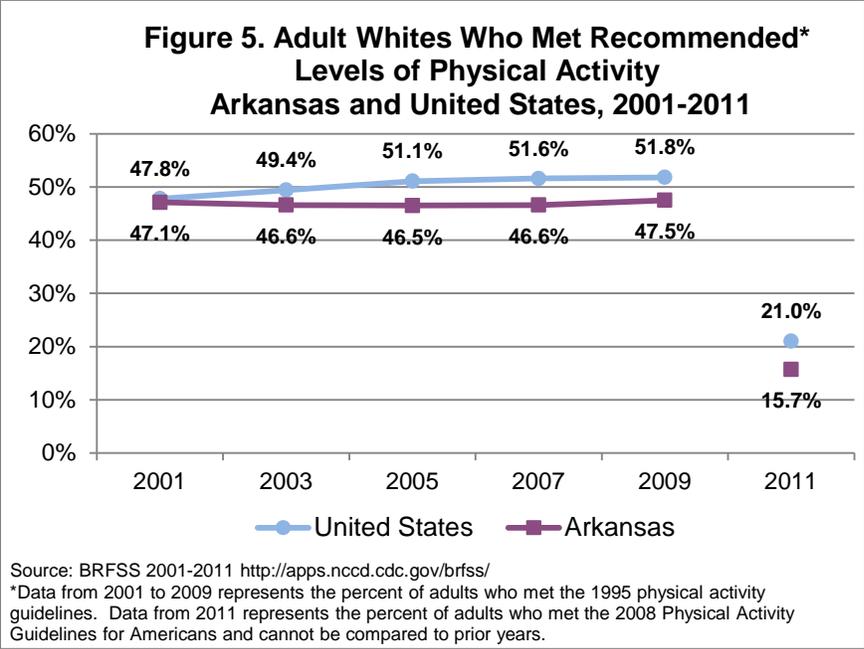


The percent of adult males (18+) who met the recommended level of physical activity has increased in parallel for both the United States and Arkansas over the last decade. In the U.S., the percent of adult males who met the recommended level of activity increased from 49.7% in 2001 to 53.4% in 2009. Over the same period of time, the percent of adult males

(18+) who met the recommended level of physical activity in Arkansas increased from 47.2% to 52.6%. For both the United States and Arkansas, this increasing trend from 2001 to 2009 was statistically significant. In 2011, the percent of adult males who met the recommended level of physical activity was 22.9% for the U.S. and 20.5% for Arkansas with the new CDC guidelines for physical activity.

Between 2001 and 2009, the percent of adult Blacks (18+ years old) who met the recommended level of physical activity increased in the United States from 36.3% to 43.0%. During the same time period, there was an equivalent increase in Arkansas among adult Blacks from 33.6% to 45.2%. In the United States, the changing trend over time was statistically significant, but it was not significant for Arkansas, due to the fluctuation over time. With the new guidelines, the percent of adult Blacks in 2011 that meet recommended level of physical activity was 21.2% for the U.S. and 20.4% for Arkansas.

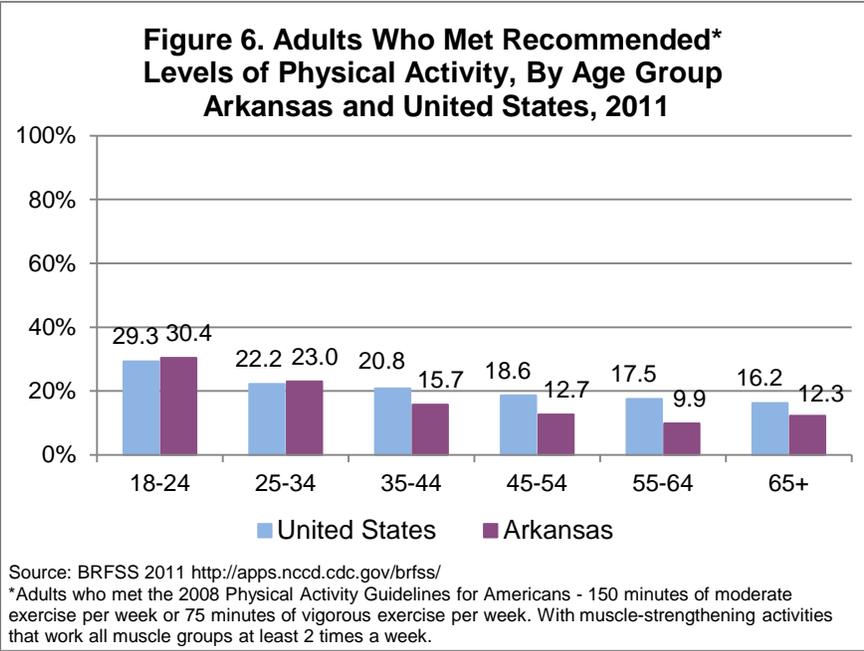


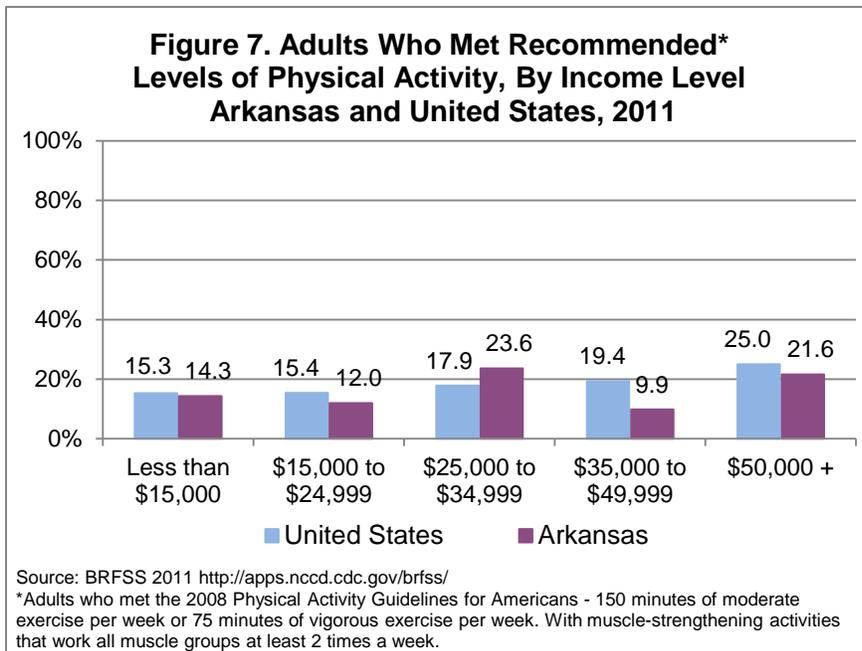


The percent of Arkansas adult Whites (18+ years old) who met the CDC's recommended level of physical activity was fairly level from 2001 (47.1%) to 2009 (47.5%). There was a modest increase in the United States (from 47.8% to 51.8%) over the same period. For the United States, the increase over time was significant, but there was no significant trend

for Arkansas. In each year, the percent of adult Whites who met the recommended level was higher in the U.S. than in Arkansas, and the gap between the U.S. and Arkansas increased over the years. With the new recommendations used for the 2011 BRFSS, the percent of adult Whites that met the recommended level of physical activity was 21.0% for the U.S. and 15.7% for Arkansas.

In 2011, the percent of adults who met recommended levels of physical activity generally decreased with increasing age. It was highest in the 18-24 age group for both the U.S. (29.3%) and Arkansas (30.4%). The lowest percent was in the 65+ age group for the U.S. (16.2%) and in the 55-64 age group for Arkansas (9.9%). For all age groups, except the 18-24 and 25-34, a higher percent met the recommended level in the United States than in Arkansas. For all age groups, except 18-24 and 25-34, the difference between Arkansas and the United States was statistically significant.

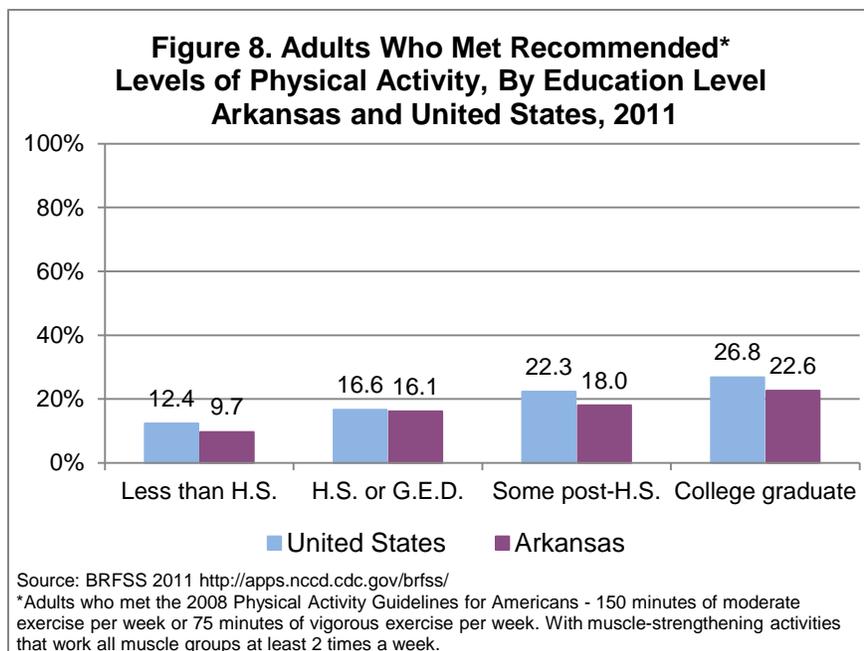




In 2011, the level of physical activity mostly increased with rising income in the United States. Those making \$50,000 or more had the highest percent of adults who met the recommended levels of physical activity for the United States (25.0%). In Arkansas, the \$25,000 - \$34,999 income group had the highest percent who met the recommended

level (23.6%), with the \$50,000+ income group not far behind (21.6%). For all income groups except \$25,000-\$34,999, the percent who met the recommended level of physical activity was higher in the United States than in Arkansas. The difference between U.S. and Arkansas was statistically significant for the \$35,000 to \$49,999 income group.

Adults with a college education had a higher percent who met the recommended level of physical activity for both the United States (26.8%) and Arkansas (22.6%) in 2011. Adults with less than a high school education had the lowest percent for both the U.S. (12.4%) and Arkansas (9.7%). The difference between the U.S. and Arkansas was significant for the two highest education levels. For all groups, the percent who met the recommended level was higher in the U.S. than Arkansas. In Arkansas, the difference between those with less than high school and a college education was statistically significant.

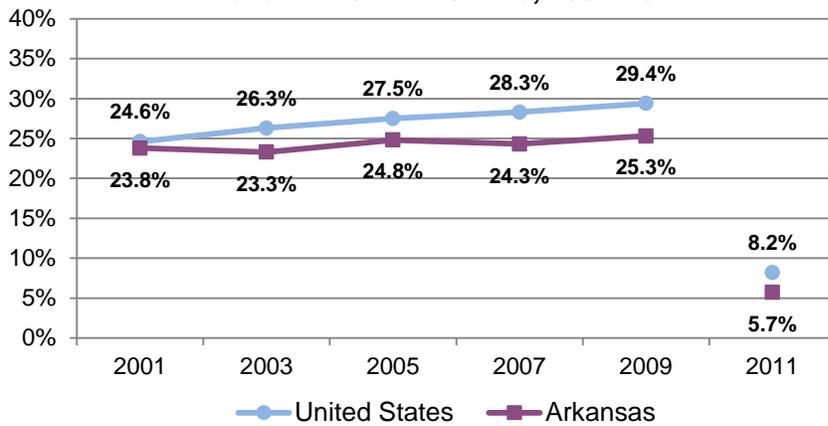


Adults Who Met Recommended Levels of Vigorous Physical Activity

In 1995, the CDC recommended that adults who choose to exercise vigorously should get 20 or more minutes of physical activity at least three times a week. In 2008, the CDC changed the recommendations to 75 minutes of vigorous-intensity aerobic physical activity per week, with muscle-strengthening activities that work all muscle groups at least 2 times a week. Vigorous exercise includes such activities as jogging, running, swimming laps, and competitive sports (football, baseball, soccer). Exercising at a vigorous intensity “has been shown to increase aerobic fitness more effectively” and may provide greater health benefits than moderate intensity exercise⁽⁴⁾.



**Figure 9. Adults Who Met Recommended Levels of Vigorous* Exercise
Arkansas and United States, 2001-2011**



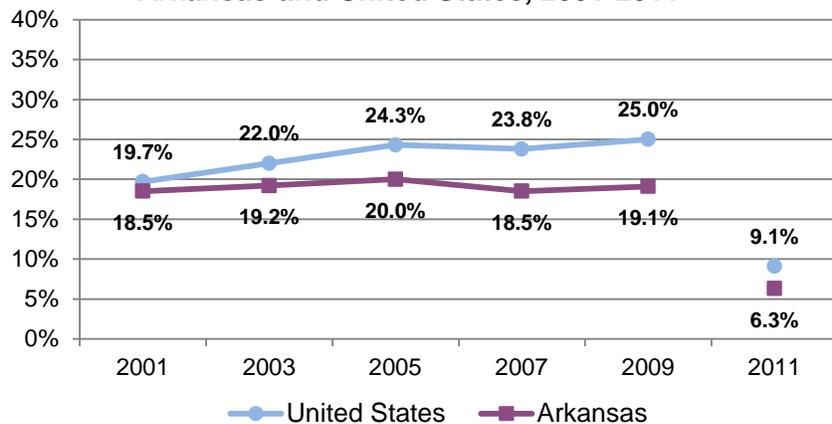
Source: BRFSS 2001-2011 <http://apps.nccd.cdc.gov/brfss/>
 *Data from 2001 to 2009 represents the percent of adults who met the 1995 physical activity guidelines. Data from 2011 represents the percent of adults who met the 2008 Physical Activity Guidelines for Americans and cannot be compared to prior years.

The percent of adults (18+ years old) who met the recommended level of vigorous physical activity increased from 2001 (23.8%) to 2009 (25.3%) in Arkansas. There was a similar increase in the U.S. from 24.6% in 2001 to 29.4% in 2009. The increasing trend in the percent who met the recommended level in the U.S. was statistically significant, but it was

not significant for Arkansas. For every year, the percent of adults who exercise vigorously was greater in the United States than in Arkansas and the gap has increased. Using the new guidelines in 2011, the percent of adults that met the recommended level was 8.2% for the U.S. and 5.7% for Arkansas.

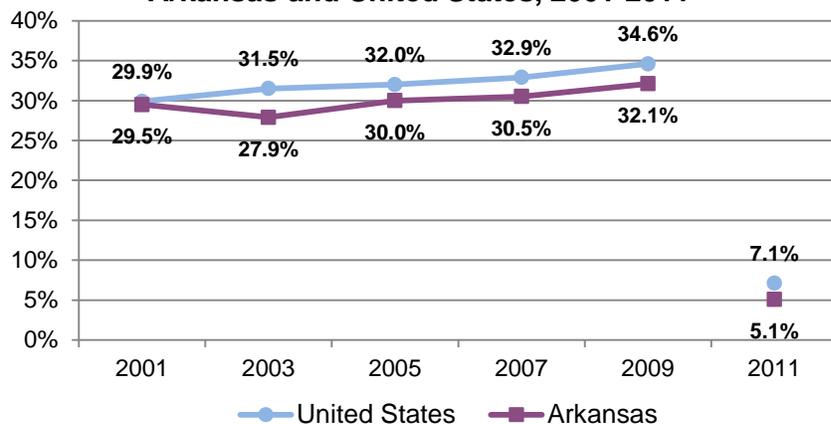
Among adult females, the percent who exercised vigorously increased significantly in the United States (from 19.7% to 25.0%) between 2001 and 2009. In Arkansas, there was a modest increase from 2001 to 2005. In 2007, the activity level decreased and there was only a slight increase in 2009. This variation resulted in no discernible change for Arkansas from 2001 to 2009 (from 18.5% to 19.1%). For each year, the percent of adult females who exercised vigorously was greater in the U.S. than in Arkansas and the gap has increased. The percent that met the recommended physical activity level, using the new guidelines in 2011, was 9.1% for the U.S. and 6.3% for Arkansas.

**Figure 10. Adult Females Who Met Recommended Levels of Vigorous* Exercise
Arkansas and United States, 2001-2011**



Source: BRFSS 2001-2011 <http://apps.nccd.cdc.gov/brfss/>
 *Data from 2001 to 2009 represents the percent of adults who met the 1995 physical activity guidelines. Data from 2011 represents the percent of adults who met the 2008 Physical Activity Guidelines for Americans and cannot be compared to prior years.

Figure 11. Adults Males Who Met Recommended Levels of Vigorous* Exercise Arkansas and United States, 2001-2011



Source: BRFSS 2001-2011 <http://apps.nccd.cdc.gov/brfss/>

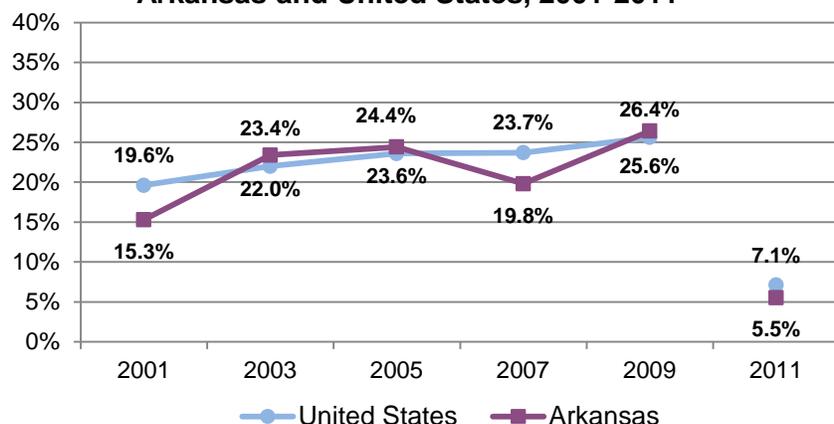
*Data from 2001 to 2009 represents the percent of adults who met the 1995 physical activity guidelines. Data from 2011 represents the percent of adults who met the 2008 Physical Activity Guidelines for Americans and cannot be compared to prior years.

Between 2001 and 2009, the percent of adult males (18+ years old) who exercise vigorously increased for Arkansas from 29.5% to 32.1% and in the United States from 29.9% to 34.6%. The increase from 2001 to 2009 was statistically significant for the U.S., but not for Arkansas. In each year, the percent of adult males who exercised vigorously was greater

in the United States than in Arkansas by an averaged two percentage points. With the new guidelines being used in 2011, the percent that met the vigorous physical activity recommendations was 7.1% for the U.S. and 5.1% for Arkansas.

The percent of adult Blacks (18+ years old) who exercise vigorously has increased in Arkansas over the last decade from 15.3% in 2001 to 26.4% in 2009. There has been a similar increase in the United States from 19.6% in 2001 to 25.6% in 2009. In the U.S. the increase in the percent of adult Blacks who met the CDC's recommended level of vigorous activity was statistically significant, but it was not significant for Arkansas. For 2003, 2005, and 2009, the percent of adult Blacks who exercise vigorously was slightly greater in Arkansas than in the United States. Using the new guidelines in 2011 the percent of adult Blacks that met the recommended vigorous physical activity level was 7.1% in the U.S. and 5.5% in Arkansas.

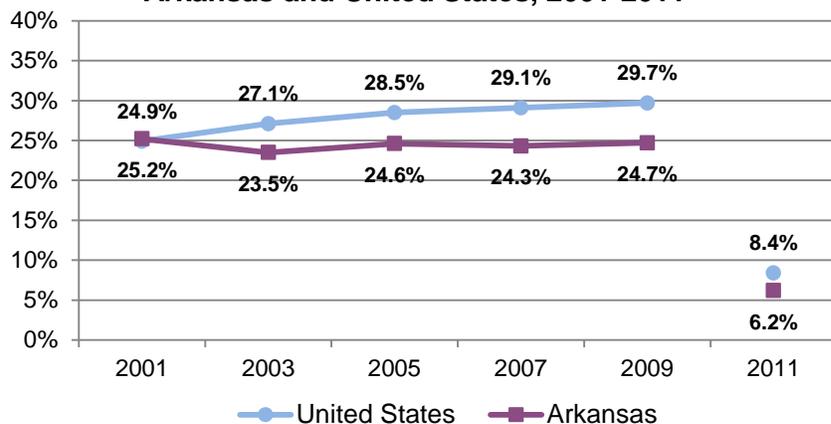
Figure 12. Adult Blacks Who Met Recommended Levels of Vigorous* Exercise Arkansas and United States, 2001-2011



Source: BRFSS 2001-2011 <http://apps.nccd.cdc.gov/brfss/>

*Data from 2001 to 2009 represents the percent of adults who met the 1995 physical activity guidelines. Data from 2011 represents the percent of adults who met the 2008 Physical Activity Guidelines for Americans and cannot be compared to prior years.

Figure 13. Adult Whites Who Met Recommended Levels of Vigorous* Exercise Arkansas and United States, 2001-2011



Source: BRFSS 2001-2011 <http://apps.nccd.cdc.gov/brfss/>

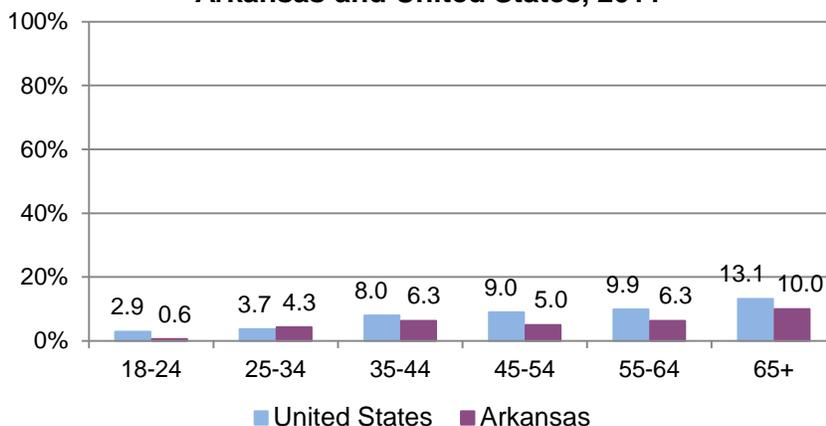
*Data from 2001 to 2011 represents the percent of adults who met the 1995 physical activity guidelines. Data from 2011 represents the percent of adults who met the 2008 Physical Activity Guidelines for Americans and cannot be compared to prior years.

Between 2001 and 2009, the percent of adult Whites (18+ years old) who exercise vigorously decreased in Arkansas from 25.2% to 24.7%. For the same time period, the percent increased in the United States (from 24.9% to 29.7%). For the United States, the increase was statistically significant; however the decrease in Arkansas was not statistically significant.

During every year, except 2001, the percent of adult Whites who exercise vigorously was greater in the U.S. than in Arkansas and the gap steadily increased. With CDC's new recommendations, the percent of adults that met the recommended level of physical activity was 8.4% in the U.S. and 6.2% in Arkansas.

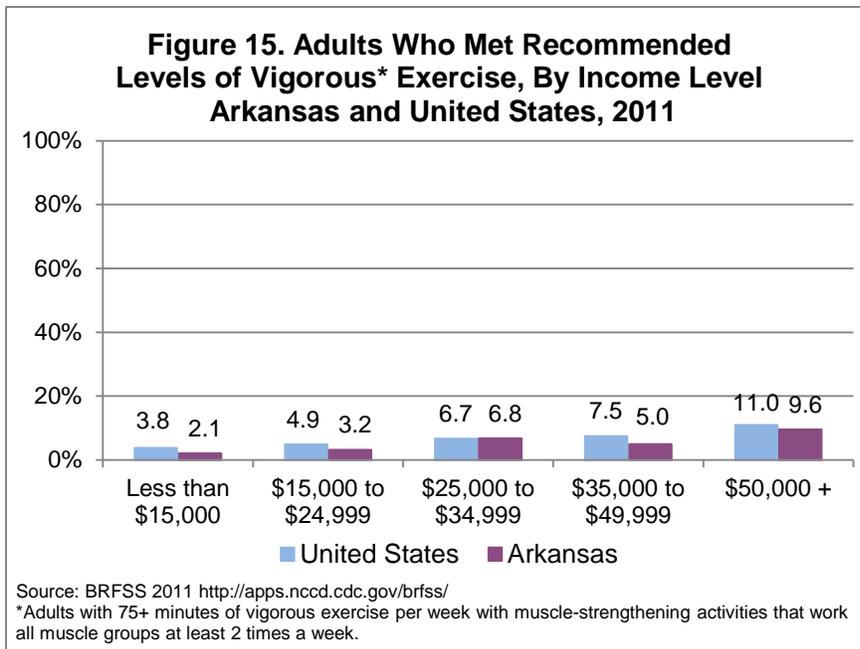
The measure of vigorous activity relies on age and gender. Activity that may be considered moderate for a young person may be vigorous for an older person. In 2011, the percent of adults who exercise vigorously generally increased with increasing age for both the U.S. and Arkansas. The 18-24 age group had the lowest percent in both the U.S. (2.9%) and Arkansas (0.6%). The 65+ age group had the highest percent for both the U.S. (13.1%) and Arkansas (10.0%). For every age group but 25-34, the percent who exercise vigorously was greater in the U.S. than in Arkansas. For all age groups except 25-34 and 35-44, the difference between the U.S. and Arkansas was statistically significant.

Figure 14. Adults Who Met Recommended Levels of Vigorous* Exercise, By Age Group Arkansas and United States, 2011



Source: BRFSS 2011 <http://apps.nccd.cdc.gov/brfss/>

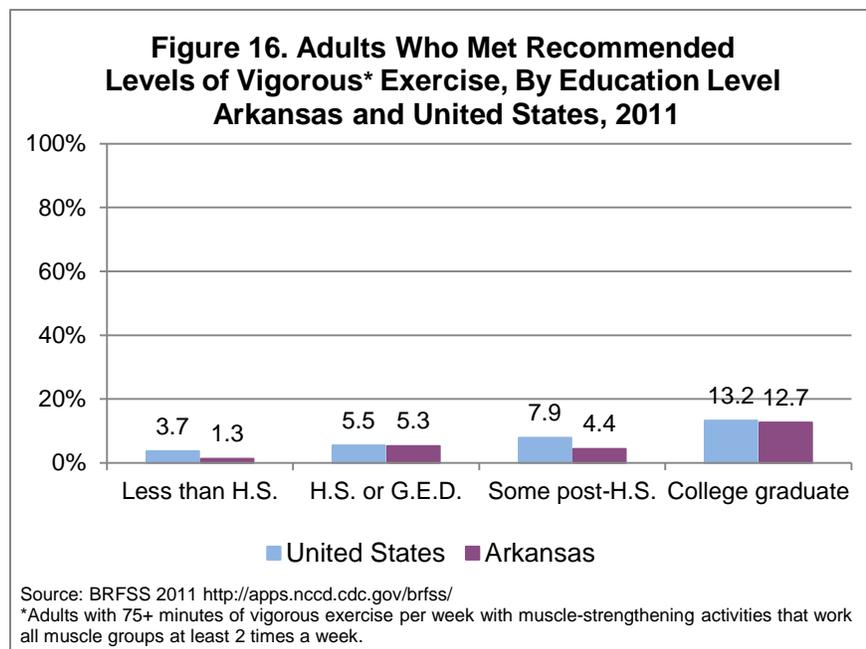
*Adults with 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.



The level of vigorous exercise generally increased with rising income. The income group with the highest percent who exercise vigorously in 2011 was \$50,000+, for both Arkansas (9.6%) and the U.S. (11.0%). The less than \$15,000 income group had the lowest percent who exercise vigorously for both Arkansas (2.1%) and the United States

(3.8%). For all income groups, the percent who exercise vigorously in the United States was higher than or approximately equal to the percent in Arkansas. The difference between the U.S. and Arkansas was statistically significant for the less than \$15,000, the \$15,000 to \$24,999, and the \$35,000 to \$49,999 income groups.

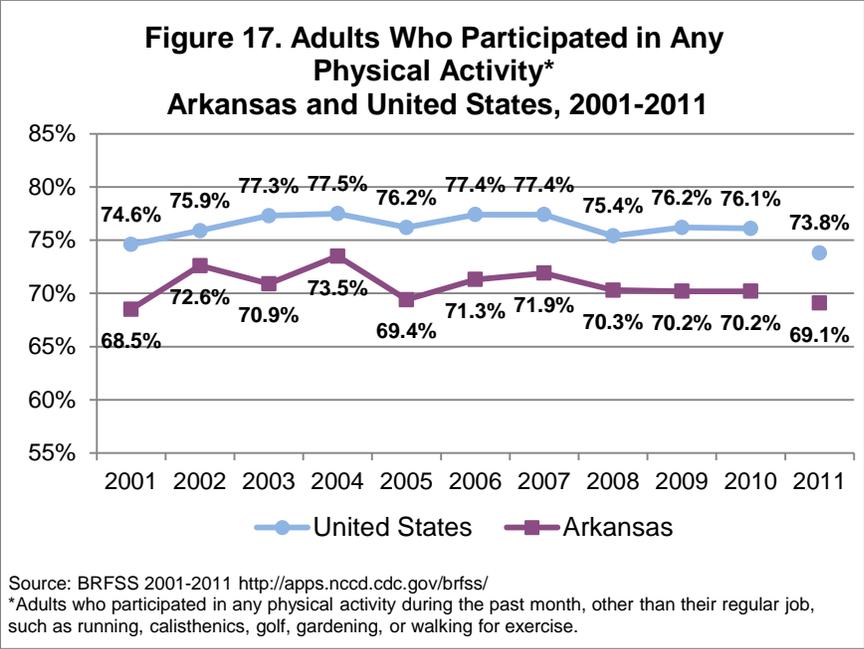
Among education levels, adults (18+) with at least a college education had the highest percent who met the recommended level of vigorous physical activity for both Arkansas (12.7%) and the United States (13.2%) during 2011. Adults with less than a high school education had the lowest percent who exercise vigorously for both Arkansas (1.3%) and the U.S. (3.7%). For all groups, the U.S. had a higher percent of adults who met the CDC's new recommended level of vigorous activity than Arkansas. For adults with less than a high school education and with some post high school education, the difference between the U.S. and Arkansas was statistically significant.



Adults Who Participated in Any Physical Activity

Physical activity is known to provide numerous health benefits to persons of all ages and health status. Although CDC provides minimum recommended levels of physical activity to improve and maintain health, any amount of exercise is better than no exercise.

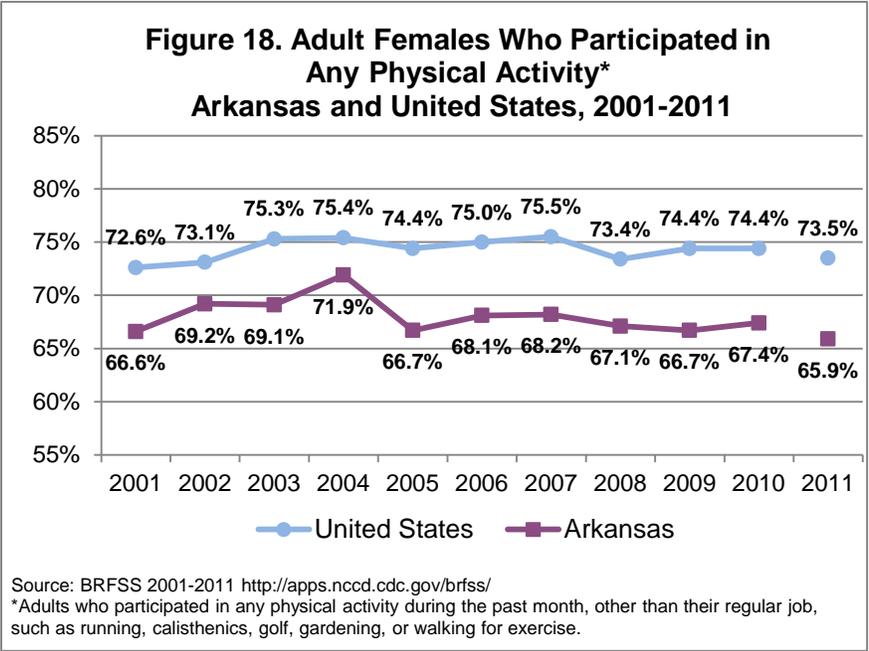


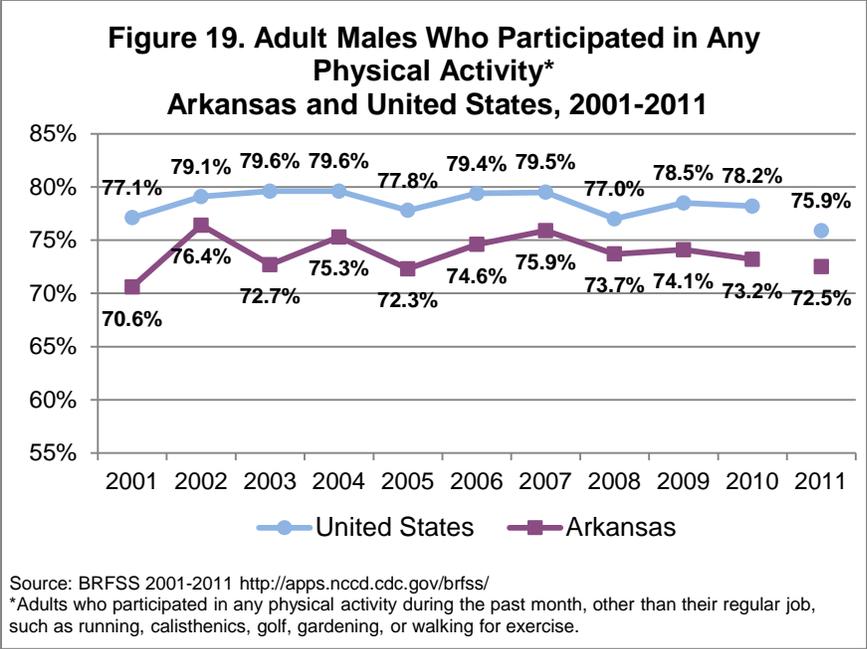


Between 2001 and 2010, the percent of adults (18+ years old) who participated in any physical activity during the past month other than their regular job increased marginally for both Arkansas (from 68.5% to 70.2%) and the United States (from 74.6% to 76.1%). From 2001 to 2010, the percent of adults who participated in any physical activity was

greater by an average of 5.5 percentage points in the U.S. than in Arkansas. In 2011, 73.8% of adults in the United States and 69.1% of adults in Arkansas participated in at least some physical activity. The 2011 results cannot be compared to previous years.

Among adult females, the percent who participated in any physical activity during the past month increased slightly for the United States between 2001 (72.6%) and 2010 (74.4%). There was an increase in Arkansas from 2001 (66.6%) to 2004 (71.9%), but it was not statistically significant. This progress was reversed in 2005 when the percent returned to the 2001 level and remained flat through 2010 (67.4%). For 2001 to 2010, the percent of adults who participated in any physical activity was greater in the United States than in Arkansas by an average of 6.3 percentage points. In 2011, which cannot be compared to previous years, 73.5% of adult females in U.S. and 65.9% of adult females in Arkansas participated in some physical activity.





From 2001 to 2010, the percent of adult males (18+ years old) who participated in any physical activity during the past month other than their regular job fluctuated slightly with no substantial gain for the U.S. (from 77.1% to 78.2%). For Arkansas, the major improvement occurred from 2001 to 2002 (from 70.6% to 76.4%) and remained in the 72%-76% range for

2003 to 2010. For each year, the percent of adult males who participated in any physical activity was greater in the U.S. than in Arkansas by an average of 4.7 percentage points. In 2011, which cannot be compared to previous years, 75.9% of adult males in the U.S. and 72.5% in Arkansas participated in some physical activity.

For adult Blacks (18+ years old), the percent who participated in any physical activity during the past month other than their regular job increased between 2001 and 2010 for both Arkansas (from 60.2% to 69.4%) and the United States (from 66.1% to 69.7%). The difference between 2001 and 2010 was statistically significant for the United States, but it was not significant for Arkansas. For every year, the percent of adults who participated in any physical activity was greater in the U.S. than in Arkansas. In 2011, which cannot be compared to previous years, 70.8% of adult Blacks in the U.S. and Arkansas participated in some physical activity.

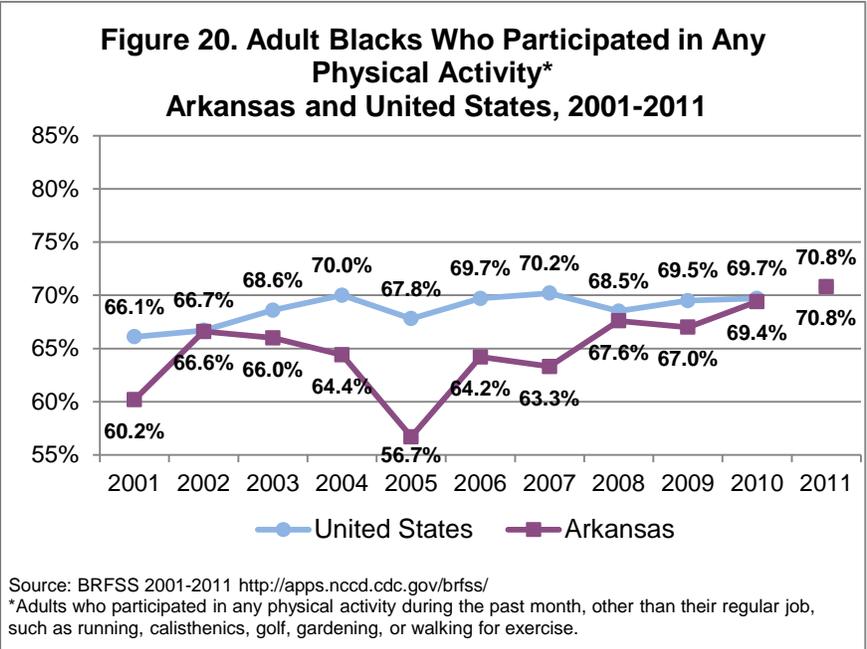
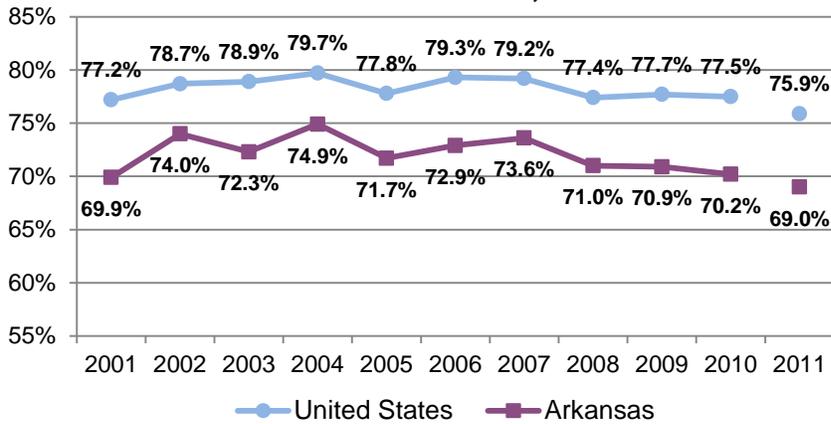


Figure 21. Adult Whites Who Participated in Any Physical Activity* Arkansas and United States, 2001-2011



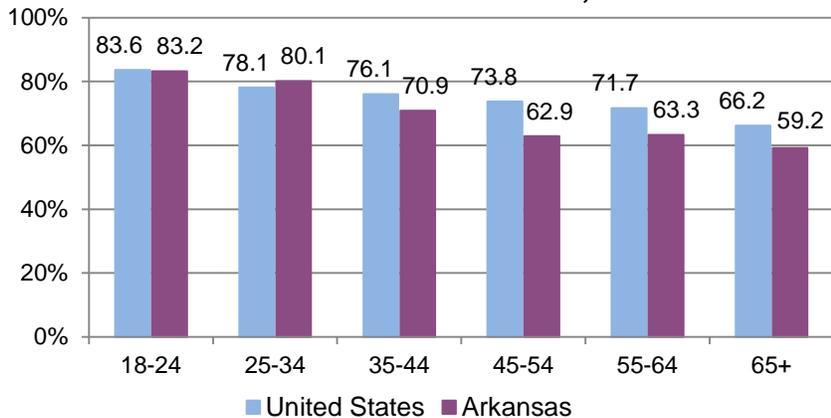
Source: BRFSS 2001-2011 <http://apps.nccd.cdc.gov/brfss/>
 *Adults who participated in any physical activity during the past month, other than their regular job, such as running, calisthenics, golf, gardening, or walking for exercise.

Among adult Whites (18+ years old), the percent who participated in any physical activity other than their regular job fluctuated over the last decade in Arkansas but returned to 2001 (69.9%) levels by 2010 (70.2%). In the U.S., the level of activity remained essentially unchanged during the same period (from 77.2% to 77.5%). In every year the percent who participated

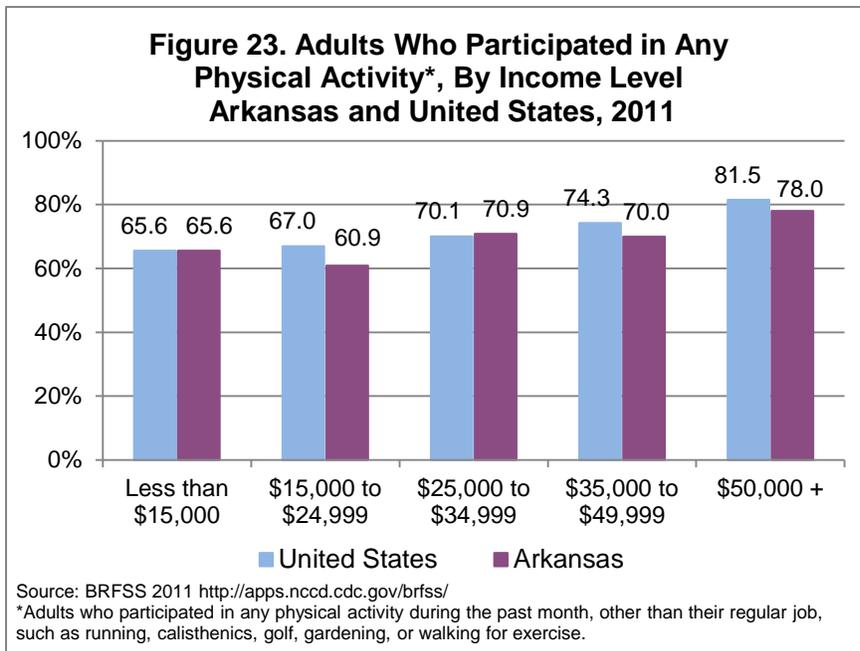
in any physical activity other than their regular job was greater in the United States than in Arkansas by an average of 6.2 percentage points. In 2011, which cannot be compared to previous years, 75.9% of adult Whites in United States and 69.0% of adult Whites in Arkansas participated in at least some physical activity.

In 2011, the percent of adults who participated in any physical activity generally decreased with increasing age. The 18-24 age group had the highest percent who participated in any physical activity for both the United States (83.6%) and Arkansas (83.2%). The 65+ age group had the lowest percent who participated in any physical activity both in Arkansas (59.2%) and in the U.S. (66.2%). For all age groups, except 25-34, the U.S. had a higher percent than Arkansas of persons with any type of physical activity. The difference between the U.S. and Arkansas was statistically significant for the 45-54, 55-64, and 65+ age groups.

Figure 22. Adults Who Participated in Any Physical Activity*, By Age Group Arkansas and United States, 2011



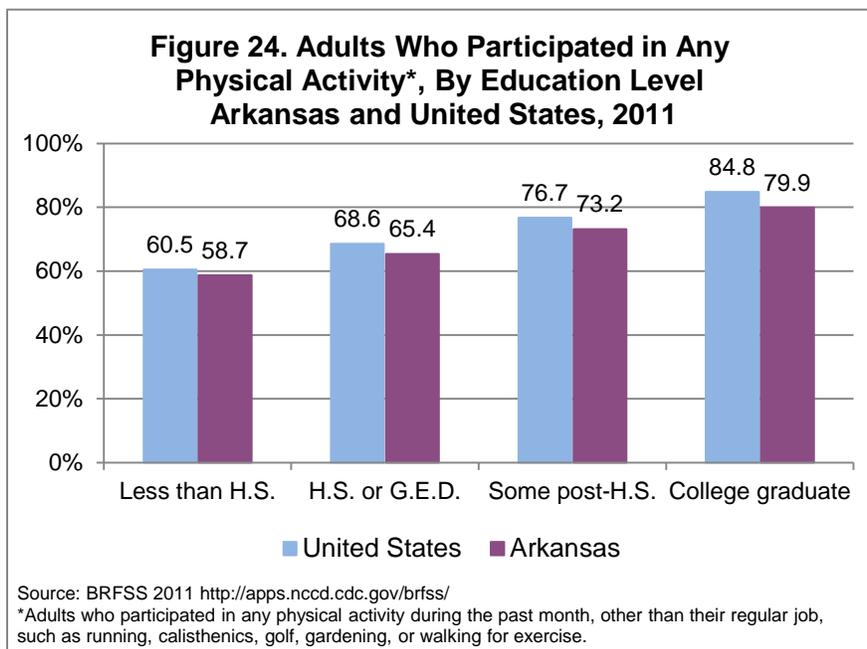
Source: BRFSS 2011 <http://apps.nccd.cdc.gov/brfss/>
 *Adults who participated in any physical activity during the past month, other than their regular job, such as running, calisthenics, golf, gardening, or walking for exercise.



In 2011, the percent of adults that reported participating in physical activity, other than their regular jobs, generally increased with income. The income group with the highest percent was the \$50,000+ group for both Arkansas (78.0%) and the United States (81.5%). Those who made less than \$15,000 had the lowest percent participating in any physical activity for the

United States at 65.6%. Those in the \$15,000-\$24,999 income group had the lowest percent for Arkansas at 60.9%. For all income levels, except \$25,000-\$34,999, the U.S. had the same or a higher percent of those that participated in any physical activity than Arkansas. The difference between the U.S. and Arkansas was statistically significant for the \$15,000-\$24,999 and the \$50,000+ income groups.

In 2011, physical activity increased with increasing education level for both the United States and Arkansas. Those with at least a college education had the highest percent who participated in any physical activity for both Arkansas (79.9%) and the U.S. (84.8%). Those with less than a high school education had the lowest percent for Arkansas (58.7%) and the U.S. (60.5%). Regardless of the education level, Arkansas had a lower percent participating than the U.S. The difference between Arkansas and the United States was statistically significant only for those with a college education.



Physical Activity Among High School Students

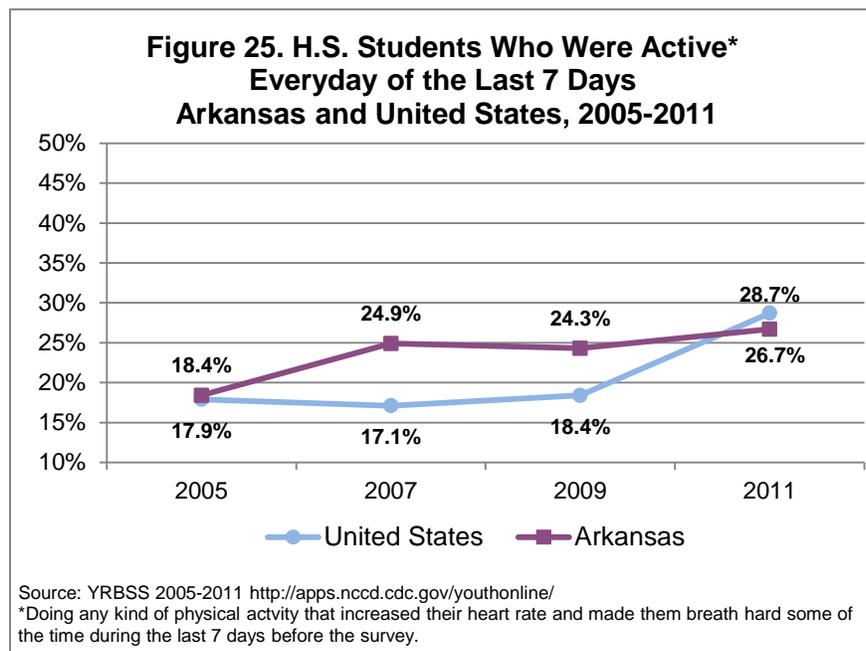
Children and adolescents have a greater need for adequate physical activity than adults. They should obtain at least 60 minutes of moderate or vigorous physical activity each day, with at least three of those days including vigorous physical activity. This activity should include muscle-strengthening activity on at least three days a week and bone-strengthening activities on at least three days a week⁽²⁾.

Children gain many health benefits from physical activity, including⁽⁵⁾⁽⁶⁾:

- Controlling weight,
- Reducing blood pressure,
- Improving bone health,
- Increasing good cholesterol,
- Reducing the risk of type 2 diabetes,
- Reducing the risk of several types of cancer,
- Improving self-confidence and self-esteem, and
- Reducing the risk of depression.

Health benefits gained in childhood carry over into adulthood. Active children are likely to become active adults and continue to have lower risks of many health problems.

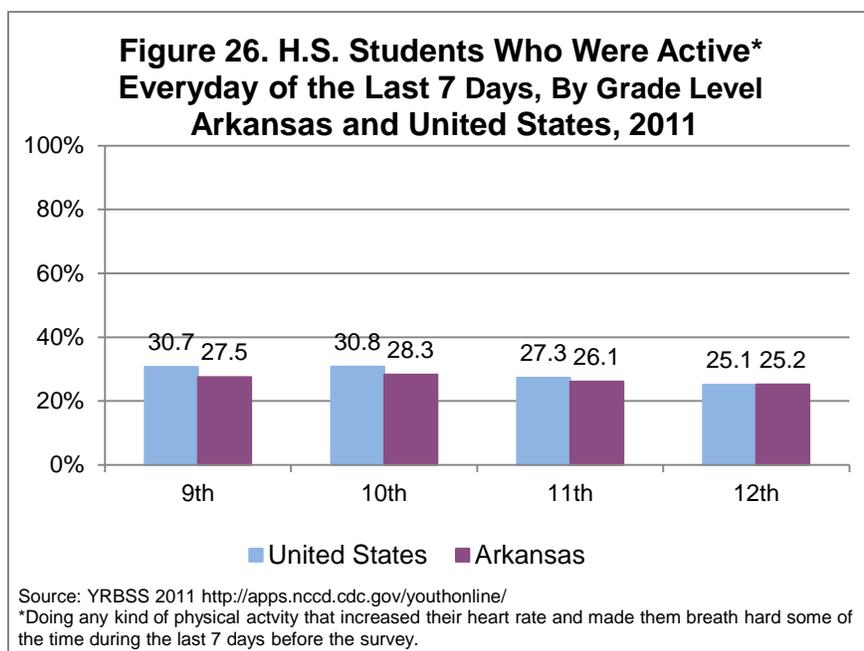
High-School Students Who Were Active Every Day of the Last Seven Days

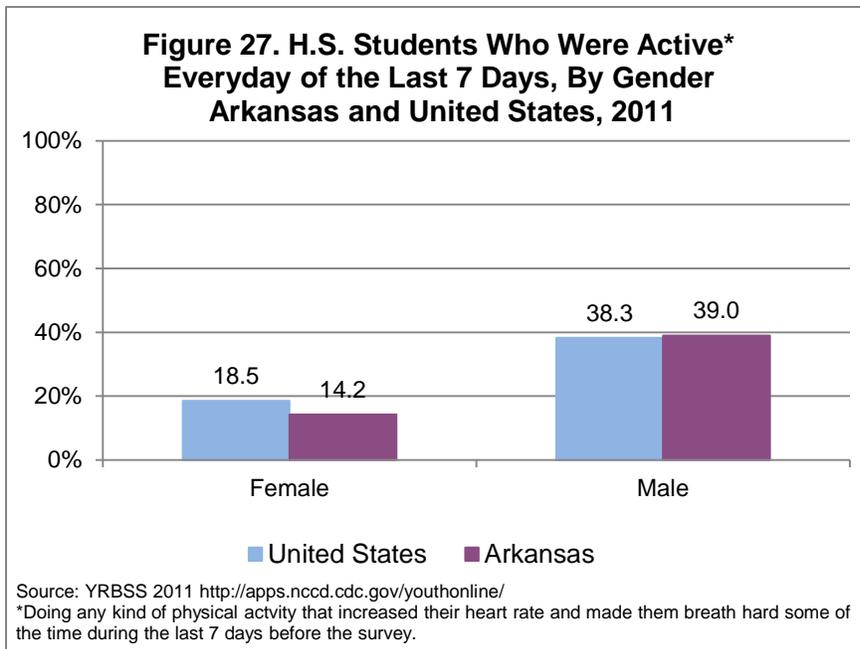


Between 2005 and 2011, the percent of high school students who were active every day for the seven days prior to the survey increased in Arkansas (from 18.4% to 26.7%) and the United States (from 17.9% to 28.7%). In Arkansas, the exercise level increased from 18.4% in 2005 to 24.9% in 2007 then remained nearly the same through 2011. In the U.S., the exercise level remained

flat from 2005 to 2009, but increased dramatically in 2011. The 2007-2011 Arkansas rates were significantly higher than the 2005 Arkansas rate. While the 2007-2009 Arkansas rates were significantly higher than the 2007-2009 U.S. there was no statistically significant difference between the 2011 Arkansas and U.S. rates.

In 2011, the grade with the highest percent of those who were active every day for the seven days prior to the survey was 10th for Arkansas (28.3%) and the United States (30.8%). Twelfth grade had the lowest percent of active students in both Arkansas (25.2%) and the U.S. (25.1%). For all grades but 12th, the U.S. had a higher percent of students who were active every day than Arkansas. There was no statistically significant difference between the U.S. and Arkansas for any grade level.

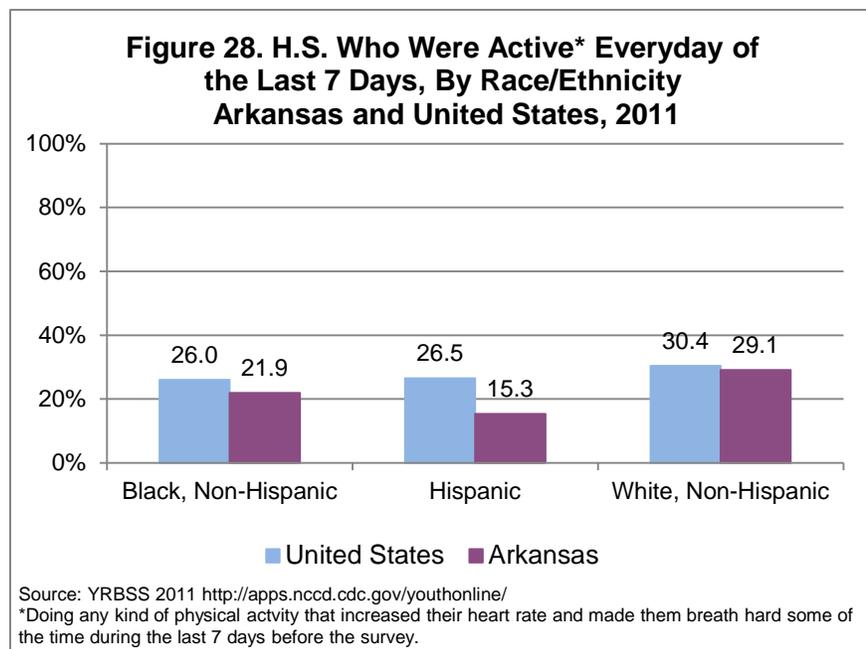




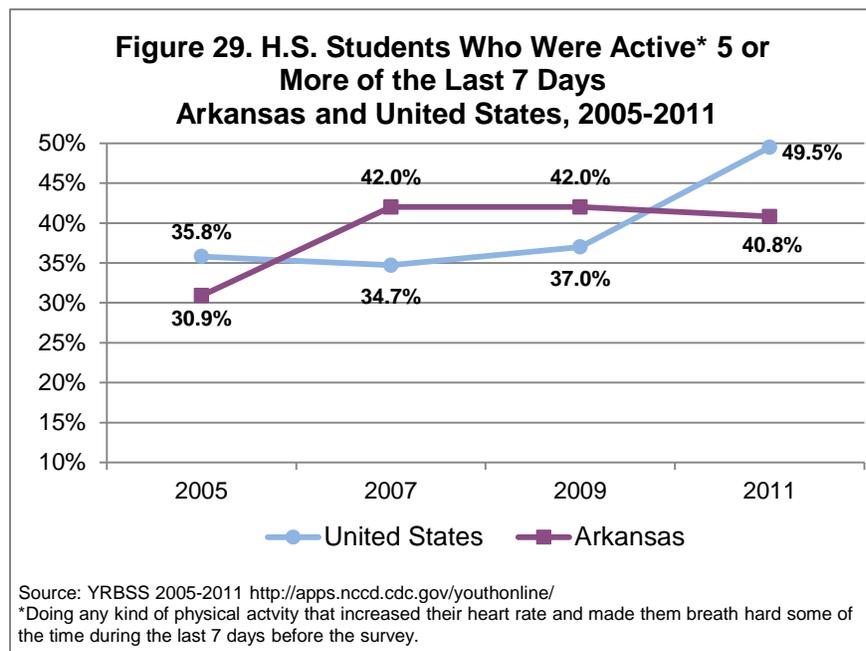
For 2011, the percent of male high school students who were active every day for the seven days prior to the survey was higher than the percent of female high school students for Arkansas (39.0% and 14.2%, respectively) and the United States (38.3% and 18.5%, respectively). Arkansas had a higher percent who were active every day than the United

States for male, but not female, high school students. The difference between Arkansas and the United States is statistically significant for females. The difference between males and females is also statistically significant in both the United States and Arkansas.

In 2011, the percent of high school students who were active every day for the seven days prior to the survey was highest among White, non-Hispanics in both Arkansas (29.1%) and the United States (30.4%). The percent was lowest among Hispanics for Arkansas (15.3%) and among Black, non-Hispanics for the United States (26.0%). For all categories (Black, NH; Hispanic; and White, NH), Arkansas had a lower percent than the U.S. who were active every day. There was no statistically significant difference in Arkansas or in the U.S. between race/ethnic groups. There was no statistically significant difference between the U.S. and Arkansas for any race/ethnic group.



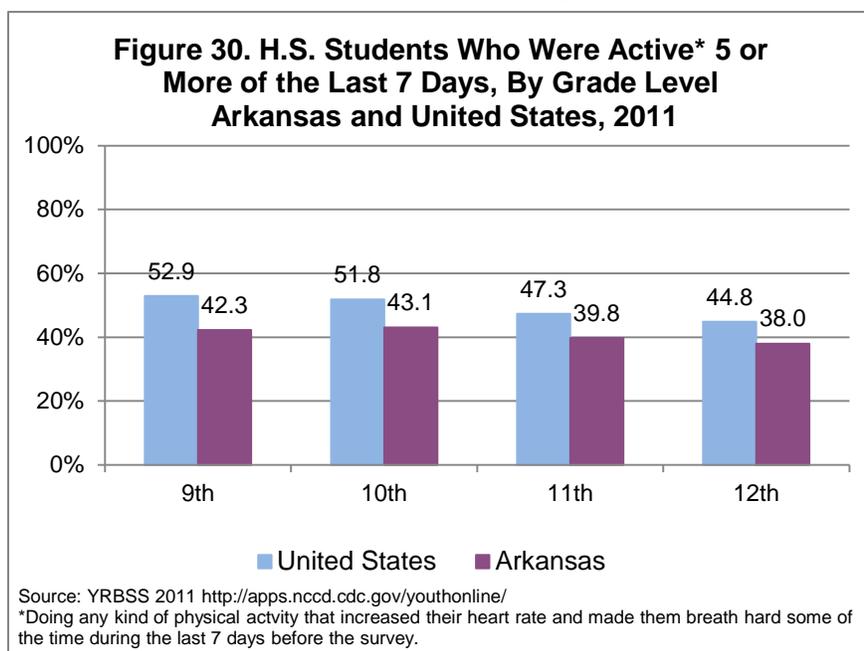
High-School Students Who Were Active 5 or more of the Last Seven Days

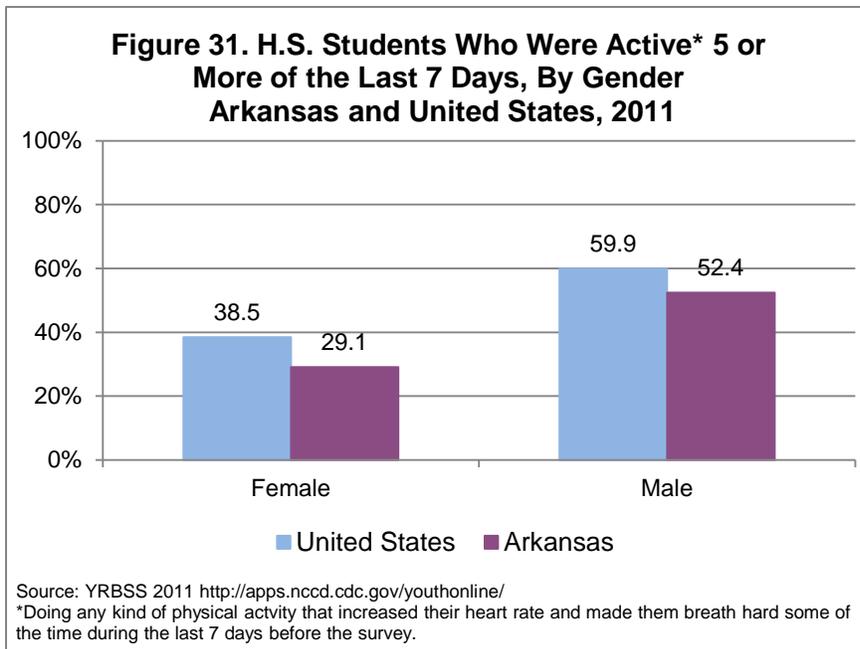


Between 2005 and 2009, the percent of high school students who were active at least five of the seven days prior to the survey increased for Arkansas (from 30.9% to 42.0%), but decreased in 2011 to 40.8%. For the U.S., there was a marginal increase from 35.8% in 2005 to 37.0% in 2009 followed by a sharp increase to 49.5% in 2011. The difference between 2005 and 2011

was statistically significant for both Arkansas and the United States. In 2007 and 2009, the percent of high school students who were active at least five of the seven days prior to the survey was higher in Arkansas than in the United States.

The percent of high school students who were active at least five of the seven days prior to the survey was highest among 9th grade students for the United States (52.9%) and 10th grade students for Arkansas (43.1%) in 2011. The grade with the lowest percent of active students was 12th grade for both Arkansas (38.0%) and the United States (44.8%). For every grade, the percent of high school students who were active was lower in Arkansas than in the United States. The difference between Arkansas and the United States was statistically significant for 9th grade students.

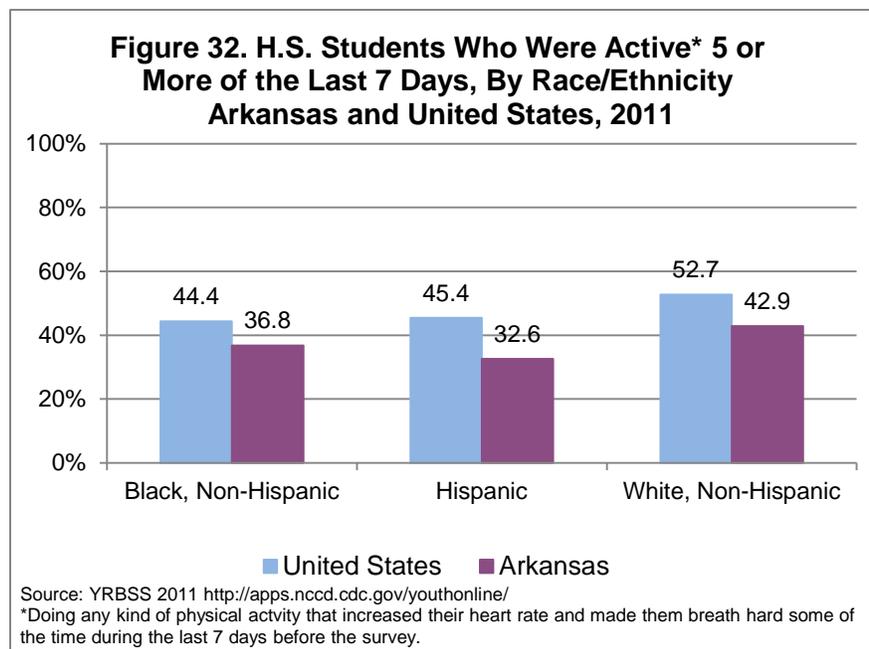




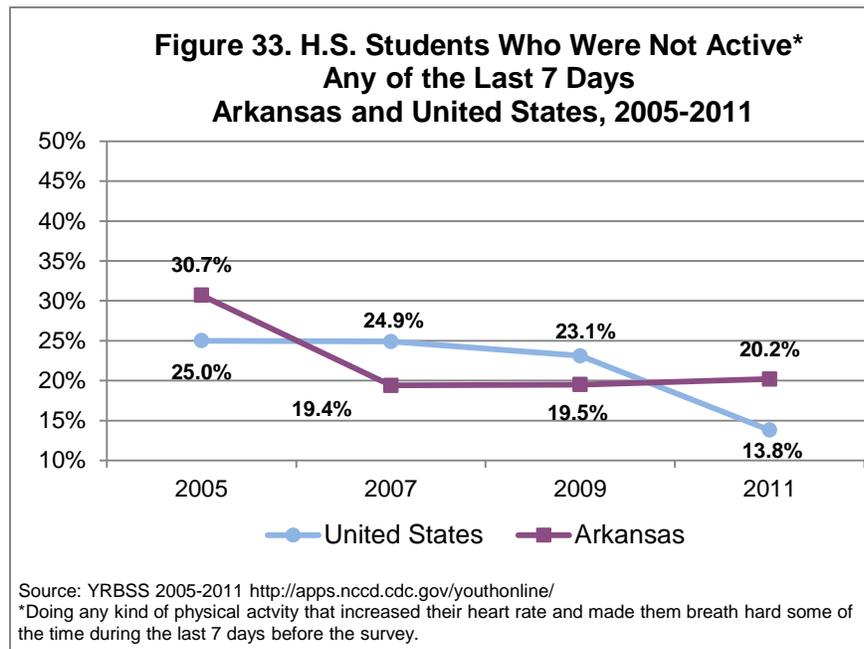
The percent of high school students who were active at least five of the seven days prior to the 2011 survey was higher among males than females for both Arkansas (52.4% versus 29.1%) and the United States (59.9% versus 38.5%). For both the United States and Arkansas, this was a statistically significant difference. The percent who were active at least

five of the last seven days was lower in Arkansas than in the United States for both genders. The difference between the U.S. and Arkansas was statistically significant for both genders.

In 2011, the percent of high school students who were active at least five of the seven days prior to the survey was highest among White, Non-Hispanics for both Arkansas (42.9%) and the United States (52.7%). The lowest percent of active high school students was among Hispanics in Arkansas (32.6%) and Black, Non-Hispanics in the U.S. (44.4%). For all categories, the percent of high school students who were active was lower in Arkansas than in the United States. In Arkansas, the difference between the race/ethnic categories was not statistically significant. In the U.S., White, Non-Hispanics had a significantly higher rate than other race/ethnic categories in the United States and a significantly higher rate than White, Non-Hispanics in Arkansas.



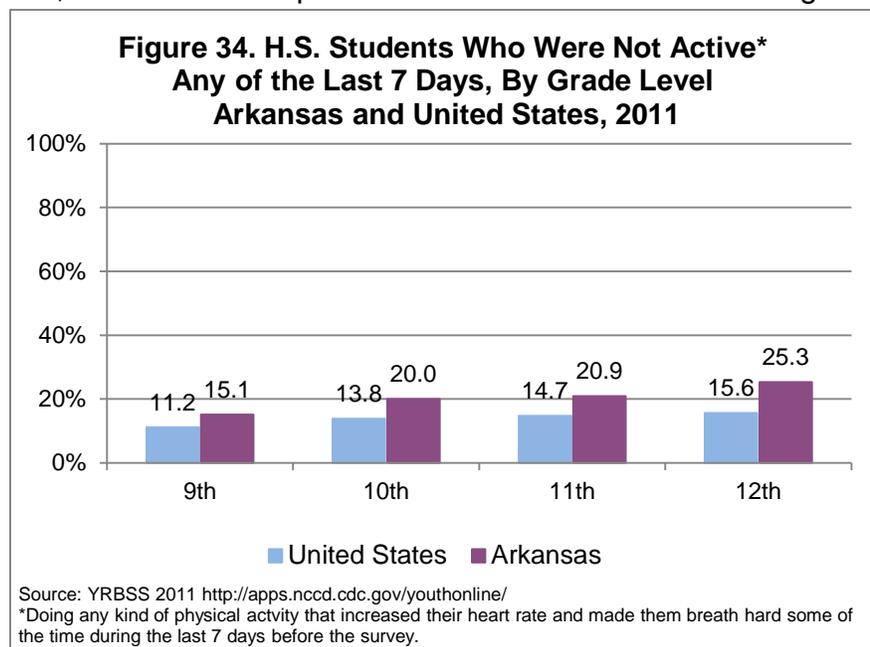
High-School Students Who Were Not Active Any of the Last Seven Days

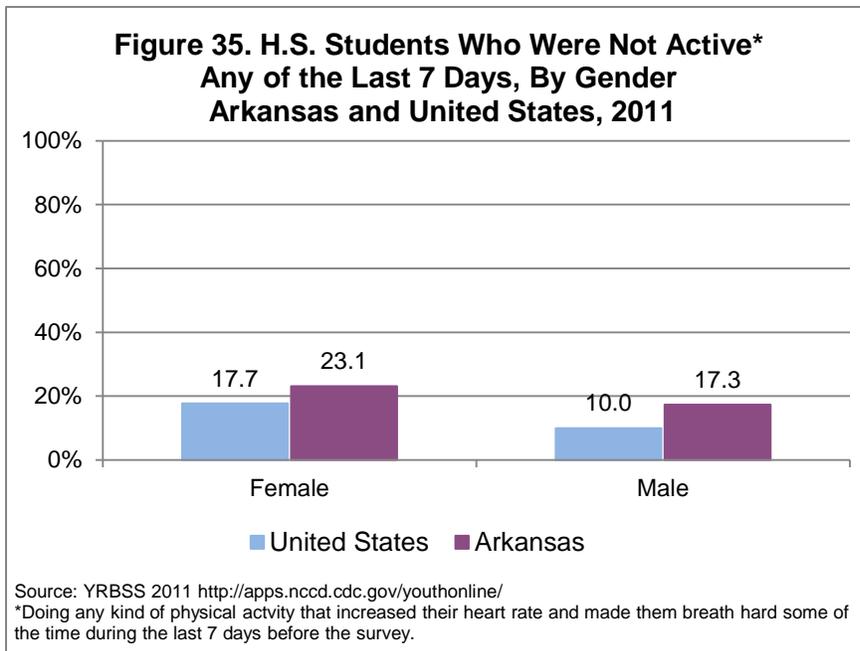


From 2005 to 2009, the percent of high school students who were not active on any of the seven days prior to the survey decreased marginally for the U.S. (from 25.0% to 23.1%) and rather dramatically for Arkansas (from 30.7% to 19.5%). In 2011, the percent increased marginally for Arkansas (20.2%), but decreased by almost ten percentage points for the U.S. (13.8%). For

both Arkansas and the United States, the 2005 rate was significantly higher than the 2011 rate. For 2005, 2007, and 2011, the difference between Arkansas and the U.S. was statically significant.

In 2011, the percent of high school students who were not active on any of the seven days prior to the survey was lowest among 9th grade students for both Arkansas, at 15.1%, and the United States, at 11.2%. The percent who were not active was highest among 12th grade high school students for both Arkansas (25.3%) and the U.S. (15.6%). For all grades, the percent of students who were not active on any of the seven days prior to the survey was higher in Arkansas than in the United States. Only for 11th grade was the difference between the U.S. and Arkansas statistically significant.

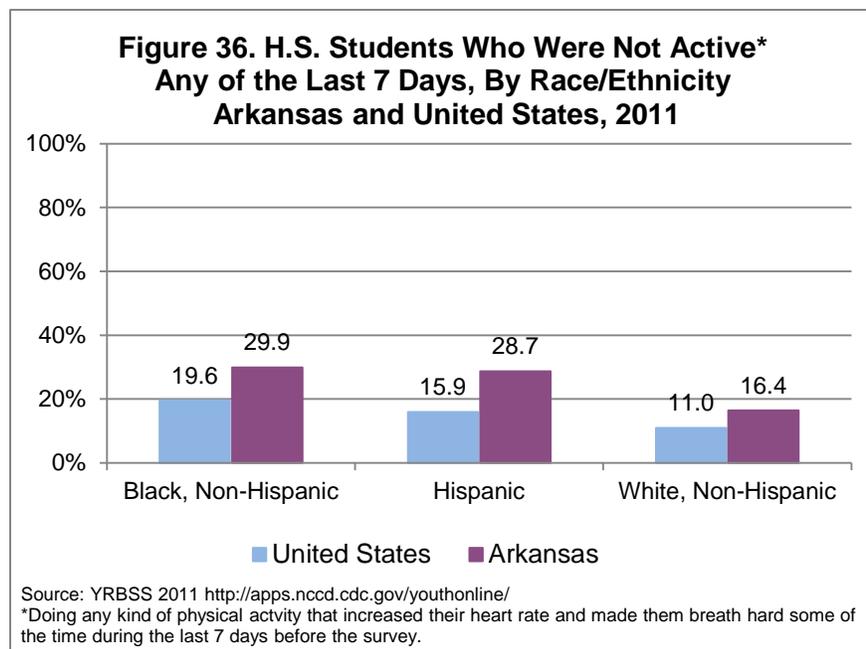




For 2011, the percent of high school students who were not active on any of the seven days prior to the survey was higher among females than males in the United States (17.7% among females and 10.0% among males) and in Arkansas (23.1% among females and 17.3% among males). For both genders, the percent of high school students who were not active on

any of the last seven days was significantly higher in Arkansas than in the United States.

In 2011, the percent of high school students who were not active on any of the seven days prior to the survey was lowest among White, non-Hispanics for both the United States (11.0%) and Arkansas (16.4%). The percent of high school students who were not active was highest among Black, non-Hispanic in both the United States (19.6%) and Arkansas (29.9%). For all race/ethnic categories (Black, NH; Hispanic; White, NH), the percent of high school students who were not active on any of the seven days prior to the survey was significantly higher in Arkansas than in the United States.

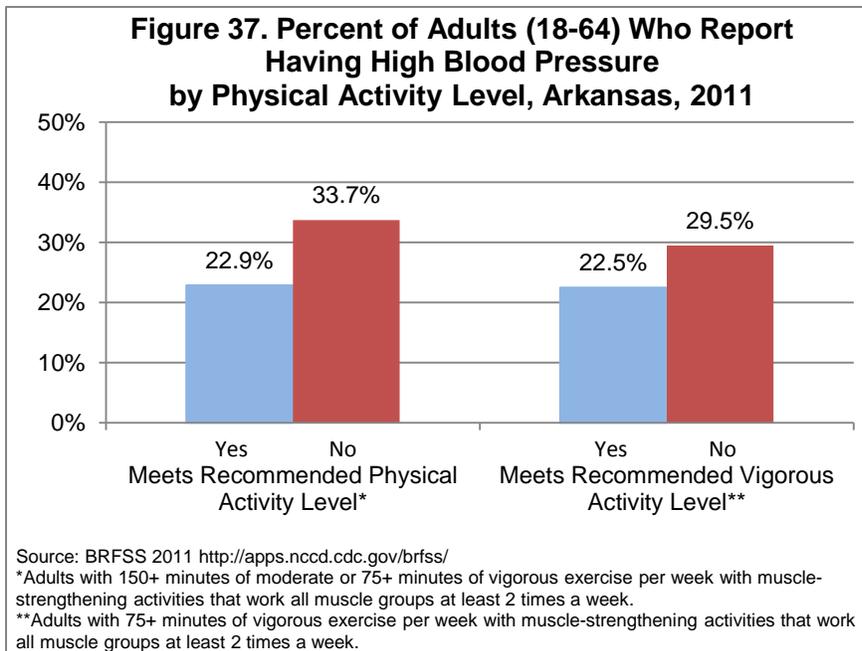


Physical Activity Among Adults (18-64) with Chronic Disease

Many chronic diseases are life-long, costly, and preventable. Maintaining good health through diet and exercise can assist in reducing the risk of many chronic diseases. Anyone who has been diagnosed with a chronic disease should consult a physician before starting a regular physical activity program. Regular physical activity can help prevent and reduce the burden of many chronic diseases, including ^{(2) (7)}:

- Reduce the risk of high blood pressure and help control high blood pressure among those who are already diagnosed,
- Reduce the pain of arthritis,
- Reduce cholesterol by lowering LDL (bad) cholesterol and raising HDL (good) cholesterol,
- Reduce the risk of heart disease and stroke, which are among the leading causes of death in the United States,
- Reduce the risk of developing type 2 diabetes and assist in controlling blood glucose levels for those with diabetes,
- Reduce asthmatic symptoms when performed as part of a rehabilitation program,
- Reduce overall disability and improve quality of life,
- Reduce and control overweight and obesity,
- Improve cardio respiratory and muscular fitness,
- Reduce the risk of metabolic syndrome,
- Reduce the risk of colon cancer and breast cancer, and
- Potentially reduce the risk of endometrial cancer and lung cancer (research is not yet final).

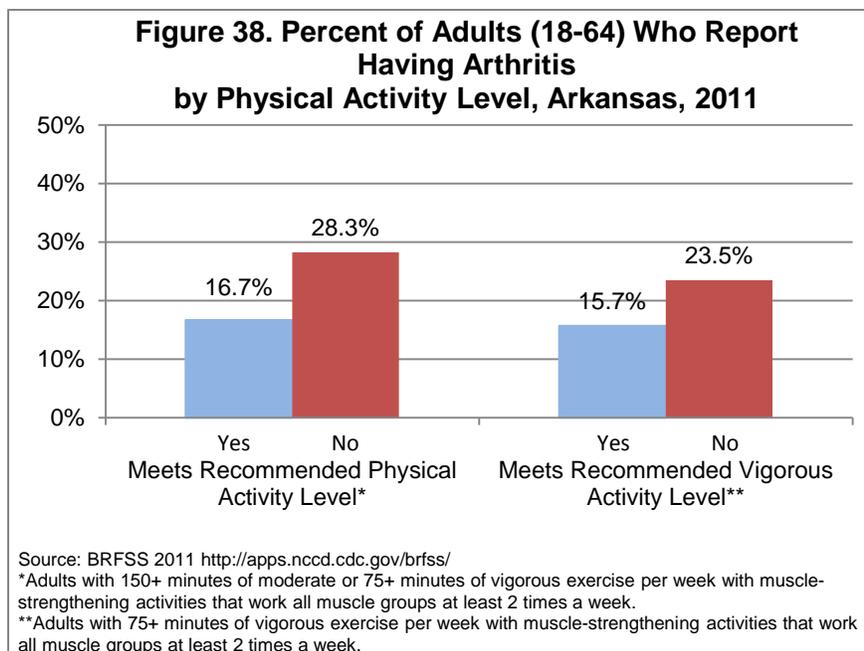
The following figures illustrate that the physically active group has a lower prevalence of many chronic diseases or conditions. However, from the data available it was not possible to determine whether exercise was protective for the prevention or reduction in chronic disease burden or a chronic disease condition prevented persons from being physically active. While the difference may be due to both factors, there is ample published evidence that physical activity is often able to reduce the impact of underlying chronic conditions.

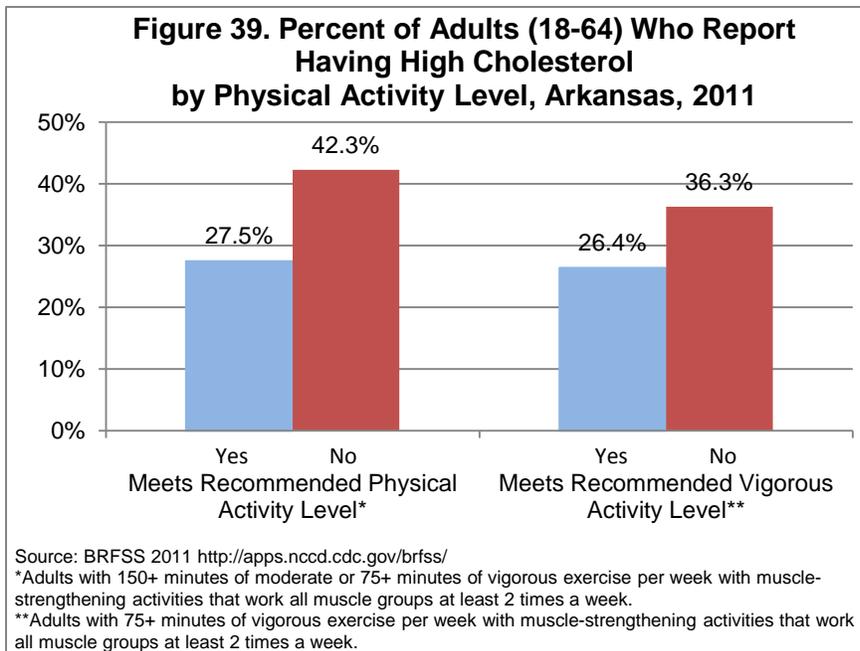


In 2011, the percent of adults who report having been diagnosed with high blood pressure was significantly lower among those who met the CDC recommended physical activity level (22.9%) than those who did not (33.7%). Also, the adults who met the recommended vigorous physical activity level were less likely to report having been diagnosed with high blood pressure

(22.5%) than those who did not (29.5%). The difference between those who met the recommended vigorous activity level and those who did not was not statistically significant.

Adults (18-64 years) who met the recommended level of physical activity were less likely to report have been diagnosed with arthritis (16.7%) than those who did not (28.3%) in 2011. The difference between those who met the CDC recommended level of activity and those who did not was statistically significant. Arthritis was also less reported among those who met the recommended vigorous activity level (15.7%), compared to those who did not (23.5%). This difference was not statistically significant.



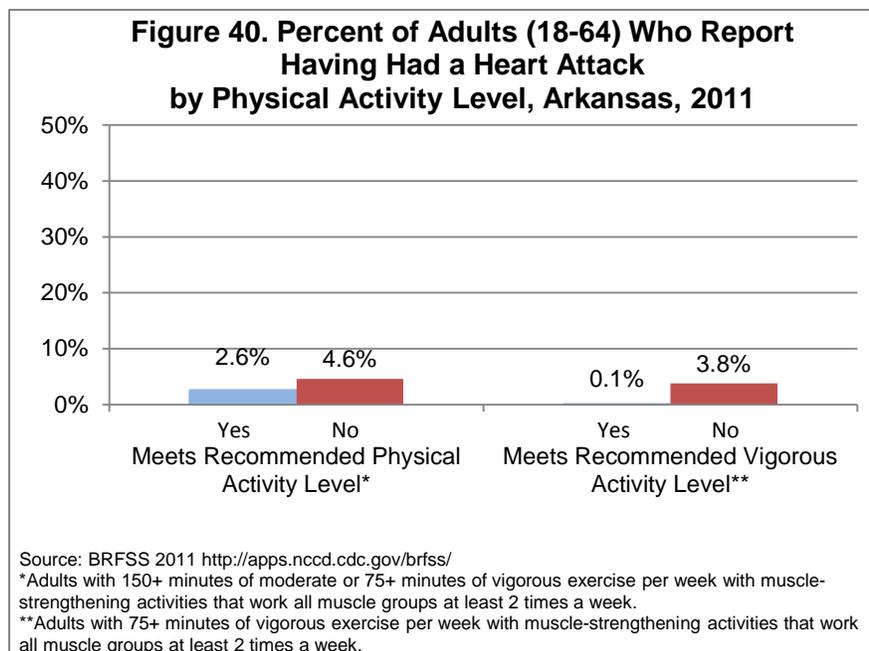


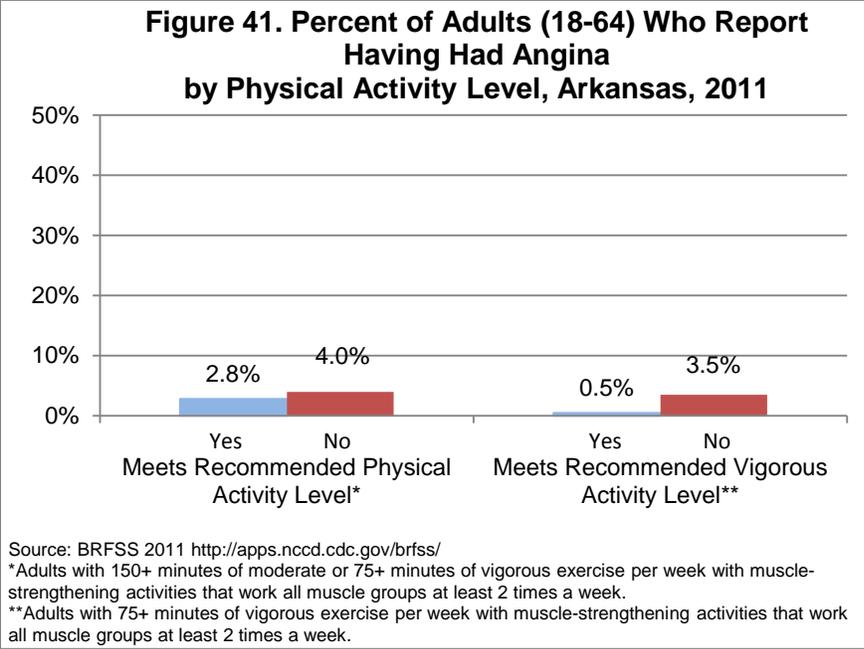
The percent of adults (18-64 years) who report having been told by a healthcare professional that they had high cholesterol in 2011 was significantly lower among those who meet the CDC recommended physical activity level (27.5%) than those who did not meet it (42.3%). The adults who met the CDC recommended vigorous activity level (26.4%) were also less

likely to report having been told by a healthcare professional that they have high cholesterol than those who did not (36.3%), but this was not statistically significant.

Adults who met the recommended level of physical activity were less likely (2.6%) to report having had a heart attack than those who did not meet the recommended level (4.6%) in 2011. The difference between those who met the recommended level and those who did not meet it was not statistically significant. When looking at those who were vigorously active,

adults who met the recommended level for vigorous activity were less likely (0.1%) to report having had a heart attack than those who did not (3.8%). This was a statistically significant difference.





During 2011, adults (18-64 years) who met the CDC’s recommended physical activity level were less likely to report having had angina, or coronary heart disease (CHD), (2.8%) than those who did not meet the recommended level (4.0%). Those who met the CDC recommended level for vigorous activity were much less likely to report having had angina, or CHD, (0.5%)

than those who did not meet the recommended level for vigorous physical activity (3.5%). The difference between the active and inactive group for both levels of physical activity was statistically significant.

Adults (18-64 years), in 2011, who met the CDC’s recommended level of physical activity were less likely to report having had a stroke (1.8%) than those who did not meet the recommended physical activity level (3.2%), although this was not a statistically significant difference. Those who met the recommended level for vigorous activity in 2011 were less likely to report having had a stroke (1.2%) than those who did not meet the CDC recommended vigorous activity level (2.5%), but this was not statistically significant.

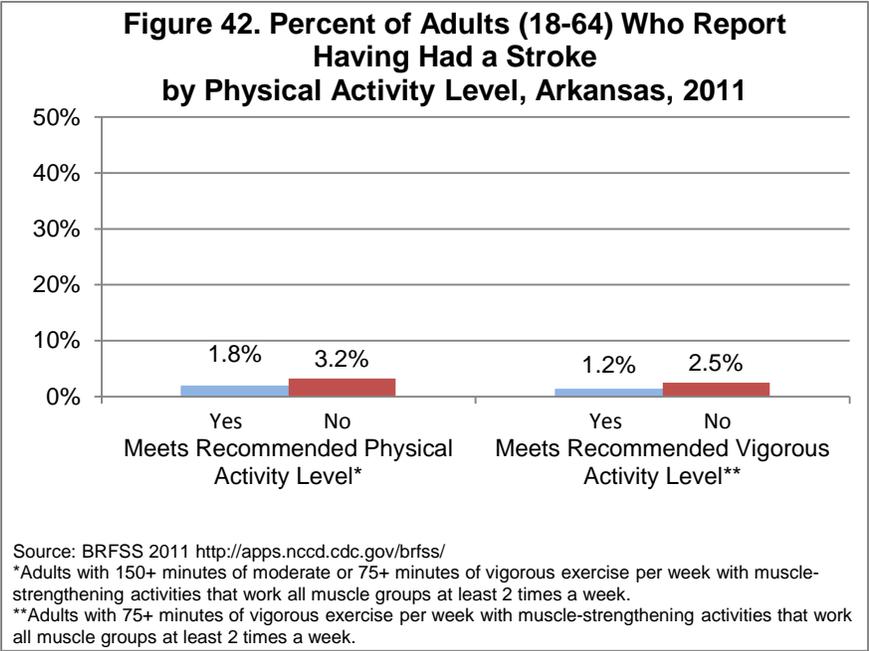
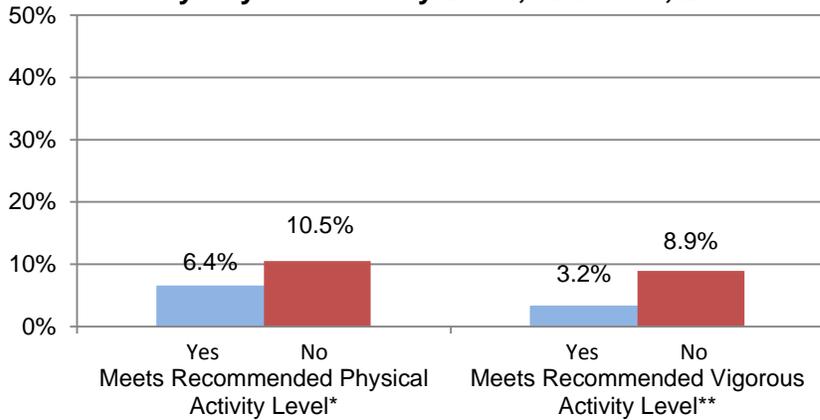


Figure 43. Percent of Adults (18-64) Who Report Having Diabetes by Physical Activity Level, Arkansas, 2011



Source: BRFSS 2011 <http://apps.nccd.cdc.gov/brfss/>

*Adults with 150+ minutes of moderate or 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

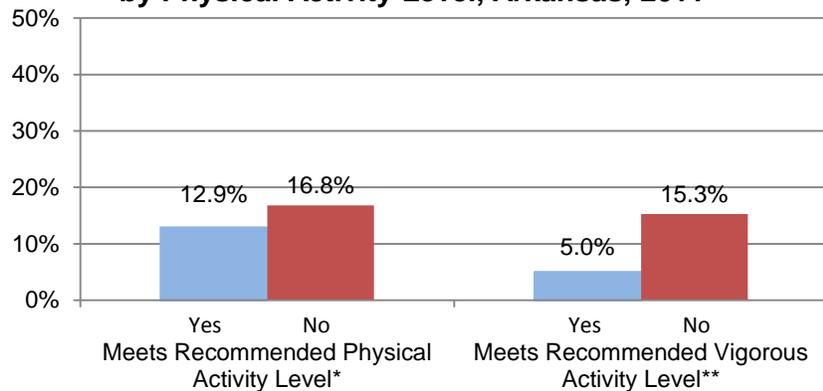
**Adults with 75+ minutes of vigorous exercise per week. With muscle-strengthening activities that work all muscle groups at least 2 times a week.

In 2011, the percent of adults (18-64 years) who report having diabetes was lower among those who met the CDC recommended physical activity level (6.4%) than among those who did not meet it (10.5%); this was a statistically significant difference. Adults who met the recommended level of vigorous activity were also less likely to report having diabetes

(3.2%) than those who did not (8.9%). The difference between those who met the vigorous physical activity level and those who did not was statistically significant.

In 2011, among adults (18-64 years) who met the recommended physical activity level, 12.9% report ever having been diagnosed with asthma at some point in their lives compared to 16.8% among those who had not met the recommended level of physical activity. This difference was not statistically significant. Adults who met the CDC recommended level for vigorous physical activity were three times less likely (5.0%) to report ever having been diagnosed with asthma than those who did not meet the recommended vigorous physical activity level (15.3%). This difference was statistically significant.

Figure 44. Percent of Adults (18-64) Who Report Having Ever Had Asthma by Physical Activity Level, Arkansas, 2011

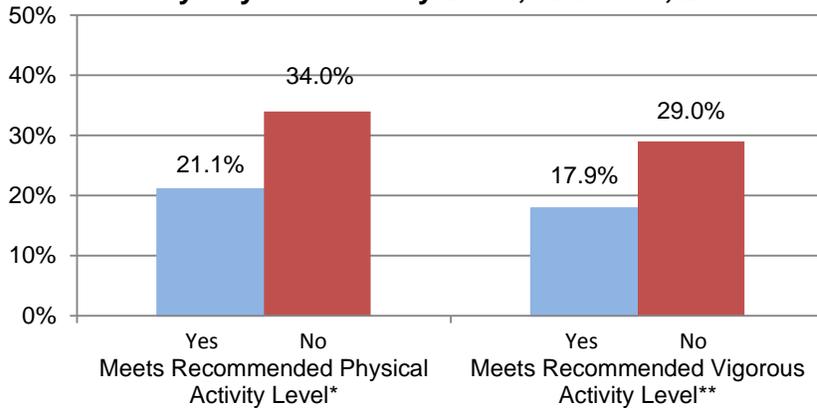


Source: BRFSS 2011 <http://apps.nccd.cdc.gov/brfss/>

*Adults with 150+ minutes of moderate or 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

**Adults with 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

Figure 45. Percent of Adults (18-64) Who Report They Are Disabled by Physical Activity Level, Arkansas, 2011



Source: BRFSS 2011 <http://apps.nccd.cdc.gov/brfss/>

*Adults with 150+ minutes of moderate or 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

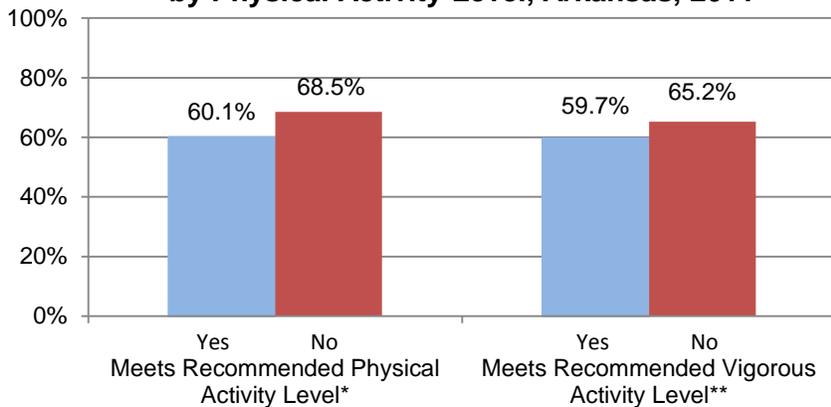
**Adults with 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

Among adults who met the CDC recommended physical activity level in 2011, only 21.1% reported being disabled compared to 34.0% of those who did not meet the CDC recommended activity level. The difference between those who met and those who did not meet the recommended level was statistically significant. Adults who did not meet the CDC

recommended vigorous physical activity level were more likely to report being disabled (29.0%) than those who met the CDC recommended vigorous activity level (17.9%). This difference was not statistically significant.

Adults (18-64 years) in 2011 who met the recommended physical activity level were significantly less likely to report being overweight or obese (60.1%) than those who did not meet it (68.5%). Adults who met the recommended level for vigorous activity were also less likely to report being overweight or obese (59.7%) than those who did not meet it (65.2%). However, this was not a statistically significant difference.

Figure 46. Percent of Adults (18-64) Who Report They Are Overweight or Obese by Physical Activity Level, Arkansas, 2011



Source: BRFSS 2011 <http://apps.nccd.cdc.gov/brfss/>

*Adults with 150+ minutes of moderate or 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

**Adults with 75+ minutes of vigorous exercise per week with muscle-strengthening activities that work all muscle groups at least 2 times a week.

Definitions

Aerobic activity	Activity in which you breath harder and your heart beats faster.
Moderate-intensity	Aerobic activity during which you can talk but not sing.
Physically active	<p>Old Definition: Having a regular pattern of physical activity consisting of at least 30 minutes of moderate activity on five or more days of the week or 20 minutes of vigorous activity on three or more days of the week.</p> <p>New Definition: Having a regular pattern of physical activity consisting of at least 150 minutes of moderate activity a week or 75 minutes of vigorous activity a week, and engaging in muscle strengthening activities on 2 or more days a week that work all muscle groups.</p>
Physically inactive	<p>Old Definition: Not having a regular pattern of physical activity consisting of at least 30 minutes of moderate activity on five or more days of the week or 20 minutes of vigorous activity on three or more days of the week.</p> <p>New Definition: Not having a regular pattern of physical activity consisting of at least 150 minutes of moderate activity a week or 75 minutes of vigorous activity a week or not engaging in muscle strengthening activities on 2 or more days a week that work all muscle groups.</p>
Vigorous-intensity	Aerobic activity during which you cannot say more than a few words without pausing for a breath.

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Appendix I – Data Sources

BRFSS

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system established by the Centers for Disease Control and Prevention (CDC) to collect “information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury”⁽⁸⁾. The Arkansas Department of Health (ADH) Health Statistics Branch conducts the BRFSS survey using a Computer-Aided Telephone Interviewing System. A two-stage Disproportionate Stratified Random Sampling design is used to select participants. First, the system randomly selects a telephone number from all listed and unlisted phone numbers. Once a number has been selected, an adult household member (18 years or older) is randomly selected for interview.

The BRFSS questions used in this document are:

Demographics:

- What county do you live in?
- Indicate sex of respondent. (No specific question is listed)
- Which one of these groups would you say best represents your race?
- Are you Hispanic or Latino?
- What is your age?
- Pre 2011: What is your annual household income from all sources?
2011: Is your annual household income from all sources: <income level>
- What is the highest grade or year of school you completed?
- About how much do you weigh without shoes?
- About how tall are you without shoes?

Physical Activity (Pre 2011):

- Now, thinking about the moderate activities you do [fill in “when you are not working” if “employed” or “self-employed”] in a usual week, do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate?
- How many days per week do you do these moderate activities for at least 10 minutes at a time?
- On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

- Now, thinking about the vigorous activities you do [fill in “when you are not working” if “employed” or “self-employed”] in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?
- How many days per week do you do these vigorous activities for at least 10 minutes at a time?
- On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?
- 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?

Physical Activity (2011)

- 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?
- What type of physical activity or exercise did you spend the most time doing during the past month?
- How many times per week or per month did you take part in this activity during the past month?
- And when you took part in this activity, for how many minutes or hours did you usually keep at it?
- What other type of physical activity gave you the next most exercise during the past month?
- During the past month, how many times per week or per month did you do physical activities or exercises to strengthen your muscles?
- 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?

Health Questions:

- Have you ever been told by a doctor that you have diabetes?
- (Pre 2011) Have you ever been told by a doctor, nurse, or other health professional that you had asthma?
- (Pre 2011) Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?
- Has a doctor, nurse, or other health professional ever told you that you had any of the following?
 - (Ever told) you had a heart attack, also called a myocardial infarction?
 - (Ever told) you had angina or coronary heart disease?

- (Ever told) you had a stroke?
 - (2011) (Ever told) you had asthma?
 - (2011) (Ever told) you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?
- Disability:
 - Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
 - Are you limited in any way in any activities because of physical, mental, or emotional problems?
- Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?
- Have you ever been told by a doctor, nurse or other health professional that your blood cholesterol is high?

YRBSS

The Youth Risk Behavior Surveillance System (YRBSS) is a national system established by the CDC to collect information on obesity, asthma, and priority health-risk behaviors among youth. The Arkansas YRBSS survey is a school-based survey conducted by the Arkansas Department of Education (ADE) Office of Coordinated School Health. This survey assists in gathering information on obesity, asthma, and six categories of priority health-risk behaviors related to: unintentional injury and violence, tobacco use, alcohol and drug use, sexual activity, unhealthy diet, and physical inactivity. These data are used to measure progress towards achieving national and state health objectives, “assess trends in risk behaviors, priority health-risk behaviors among high school students [and] evaluate the impact of broad school and community interventions at the national, state, and local levels”⁽⁹⁾.

The YRBSS questions used in this document are:

Demographics:

- In what grade are you?
- What is your sex?
- Are you Hispanic or Latino?
- What is your race?

Physical Activity:

- During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

Appendix II: Healthy People 2020 Objectives-Physical Activity (www.healthypeople.gov/2020)

Objective Number	Objective Target Area
PA – 1	Reduce the proportion of adults who engage in no leisure-time physical activity.
PA – 2	<p>Increase the proportion of adults who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity.</p> <p>2.1 Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination.</p> <p>2.2 Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for more than 300 minutes/week, or more than 150 minutes/week of vigorous intensity, or an equivalent combination.</p> <p>2.3 Increase the proportion of adults who perform muscle-strengthening activities on 2 or more days of the week.</p> <p>2.4 Increase the proportion of adults who meet the objectives for aerobic physical activity and for muscle-strengthening activity.</p>
PA – 3	<p>Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity.</p> <p>3.1 Aerobic physical activity.</p> <p>3.2 (Developmental) Muscle-strengthening activity.</p> <p>3.3 (Developmental) Muscle-strengthening activity.</p>
PA – 4	<p>Increase the proportion of the Nation’s public and private schools that require daily physical education for all students.</p> <p>4.1 Elementary schools.</p> <p>4.2 Middle and junior high schools.</p> <p>4.3 Senior high schools.</p>
PA – 5	Increase the proportion of adolescents who participate in daily school physical education.
PA – 6	<p>Increase regularly scheduled elementary school recess in the United States.</p> <p>6.1 Increase the number of States that require regularly scheduled elementary school recess.</p> <p>6.2 Increase the proportion of school districts that require regularly scheduled elementary school recess.</p>
PA – 7	Increase the proportion of school districts that require or recommend elementary school recess for an appropriate period of time.

PA – 8	<p>Increase the proportion of children and adolescents who do not exceed recommended limits for screen time</p> <ul style="list-style-type: none"> 8.1 Increase the proportion of children aged 0 to 2 years who view no television or videos on an average weekday. 8.2 Increase the proportion of children and adolescents aged 2 years through 12th grade who view television, videos, or play video games for no more than 2 hours a day. <ul style="list-style-type: none"> 8.2.1 Children aged 2 to 5 years. 8.2.2 Children and adolescents aged 6 to 14 years. 8.2.3 Adolescents in grades 9 through 12. 8.3 Increase the proportion of children and adolescents aged 2 years to 12th grade who use a computer or play computer games outside of school (for nonschool work) for no more than 2 hours a day. <ul style="list-style-type: none"> 8.3.1 Children aged 2 to 5 years. 8.3.2 Children aged 6 to 14 years. 8.3.3 Adolescents in grades 9 through 12.
PA – 9	<p>Increase the number of States with licensing regulations for physical activity provided in child care.</p> <ul style="list-style-type: none"> 9.1 Require activity programs providing large muscle or gross motor activity, development, and/or equipment. 9.2 Require children to engage in vigorous or moderate physical activity. 9.3 Require number of minutes of physical activity per day or by length of time in care.
PA – 10	<p>Increase the proportion of the Nation’s public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours (that is, before and after the school day, on weekends, and during summer and other vacations).</p>
PA – 11	<p>Increase the proportion of physician office visits that include counseling or education related to physical activity.</p> <ul style="list-style-type: none"> 11.1 Increase the proportion of office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that include counseling or education related to exercise. 11.2 Increase the proportion of physician visits made by all child and adult patients that include counseling about exercise.
PA – 12	<p>(Developmental) Increase the proportion of employed adults who have access to and participate in employer-based exercise facilities and exercise programs.</p>
PA – 13	<p>(Developmental) Increase the proportion of trips made by walking.</p> <ul style="list-style-type: none"> 13.1. Adults aged 18 years and older, trips of 1 mile or less. 13.2 Children and adolescents aged 5 to 15 years, trips to school of 1 mile or less.
PA – 14	<p>(Developmental) Increase the proportion of trips made by bicycling.</p> <ul style="list-style-type: none"> 14.1 Adults aged 18 years and older, trips of 5 miles or less. 14.2 Children and adolescents aged 5 to 15 years, trips to school of 2 miles or less.

PA – 15	(Developmental) Increase legislative policies for the built environment that enhance access to and availability of physical activity opportunities. 15.1 Community-scale policies. 15.2 Street-scale policies. 15.3 Transportation and travel policies.
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Arkansas Department of Health
Chronic Disease Prevention & Control Branch
Physical Activity and Nutrition Section
4815 West Markham Street
Little Rock, AR 72205-3867
Telephone (501) 661-2000
www.healthy.arkansas.gov