

## Lifestyle Modification

### Lifestyle Modification and Health

- Unhealthy behaviors place many Americans at risk for a variety of diseases.
- Lifestyle practices account for more than 40% of the differences in health among individuals (Satcher & Higginbotham, 2008).

### Impact of Behaviors on Health

- A recent study (Ford, et al., 2012) examined the effects of three healthy lifestyles on the risks of all-cause mortality and developing chronic conditions among adults in the United States:
  - Not smoking,
  - Engaging in at least 150 minutes of moderate or vigorous physical activity per week, and
  - Eating a healthy diet (e.g., grains, fruits, vegetables).
- Compared with adults who did not engage in healthy behaviors, the risk for all-cause mortality was reduced by:
  - 56% among nonsmokers,
  - 47% among adults who were physically active, and
  - 26% among adults who consumed a healthy diet (Ford, et al., 2012).
- The risk of death decreased as the number of healthy behaviors increased.
- For adults engaged in all three healthy behaviors, the risk of death was reduced by:
  - 82% for all causes,
  - 65% for cardiovascular disease,
  - 83% for cancer, and
  - 90% for other causes (Ford, et al., 2012).

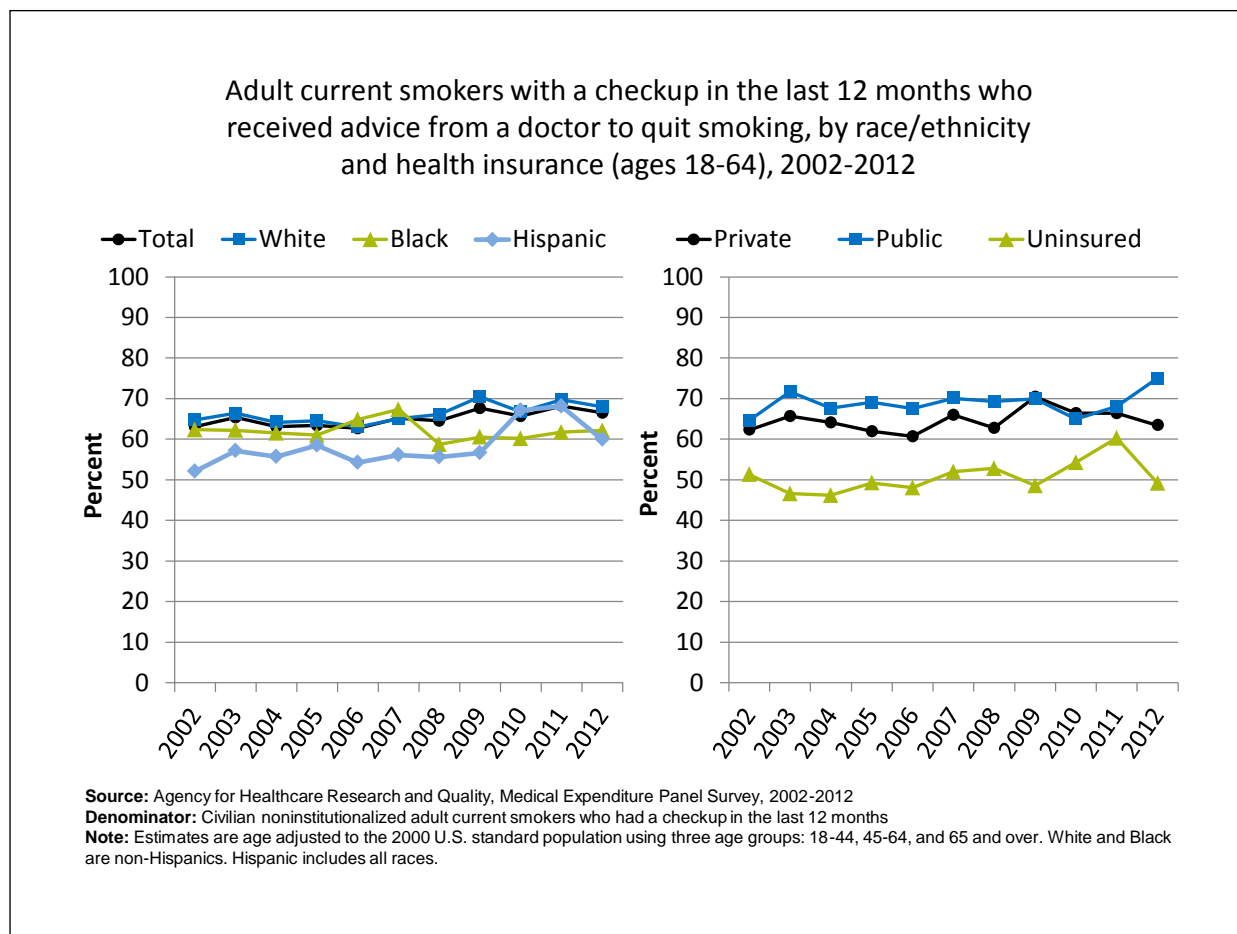
### Lifestyle Modification Measures

- Adult current smokers with a checkup in the last 12 months who received advice to quit smoking
- Adults with obesity who ever received advice from a health professional to exercise more
- Adults with obesity who did not spend half an hour or more in moderate or vigorous physical activity at least five times a week
- Children ages 2-17 for whom a health provider gave advice within the past 2 years about the amount and kind of exercise, sports, or physically active hobbies they should have
- Adults with obesity who ever received advice from a health professional about eating fewer high-fat or high-cholesterol foods
- Children ages 2-17 for whom a health provider gave advice within the past 2 years about healthy eating

## Prevention: Counseling To Quit Smoking

- Smoking harms nearly every bodily organ and causes or worsens many diseases.
- Since the first Surgeon General's report on smoking and health in 1964, more than 20 million premature deaths have been attributable to smoking and exposure to secondhand smoke (OSH, 2014).
- Smoking causes more than 87% of deaths from lung cancer and more than 79% of deaths from chronic obstructive pulmonary disease (OSH, 2014).

### Adult Smokers Whose Doctors Advised Them To Quit Smoking



- **Importance:** Smoking is a modifiable risk factor, and health care providers can help encourage patients to change their behavior and quit smoking. The 2008 update of the Public Health Service Clinical Practice Guideline *Treating Tobacco Use and Dependence* concludes that counseling and medication are both effective tools alone, but the combination of the two methods is more effective in increasing smoking cessation. For more information: <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/index.html>.
- **Overall Rate:** From 2002 to 2012, the overall percentage of adult current smokers with a checkup in the last 12 months who received advice to quit smoking, improved from 63.1% to 66.5%.

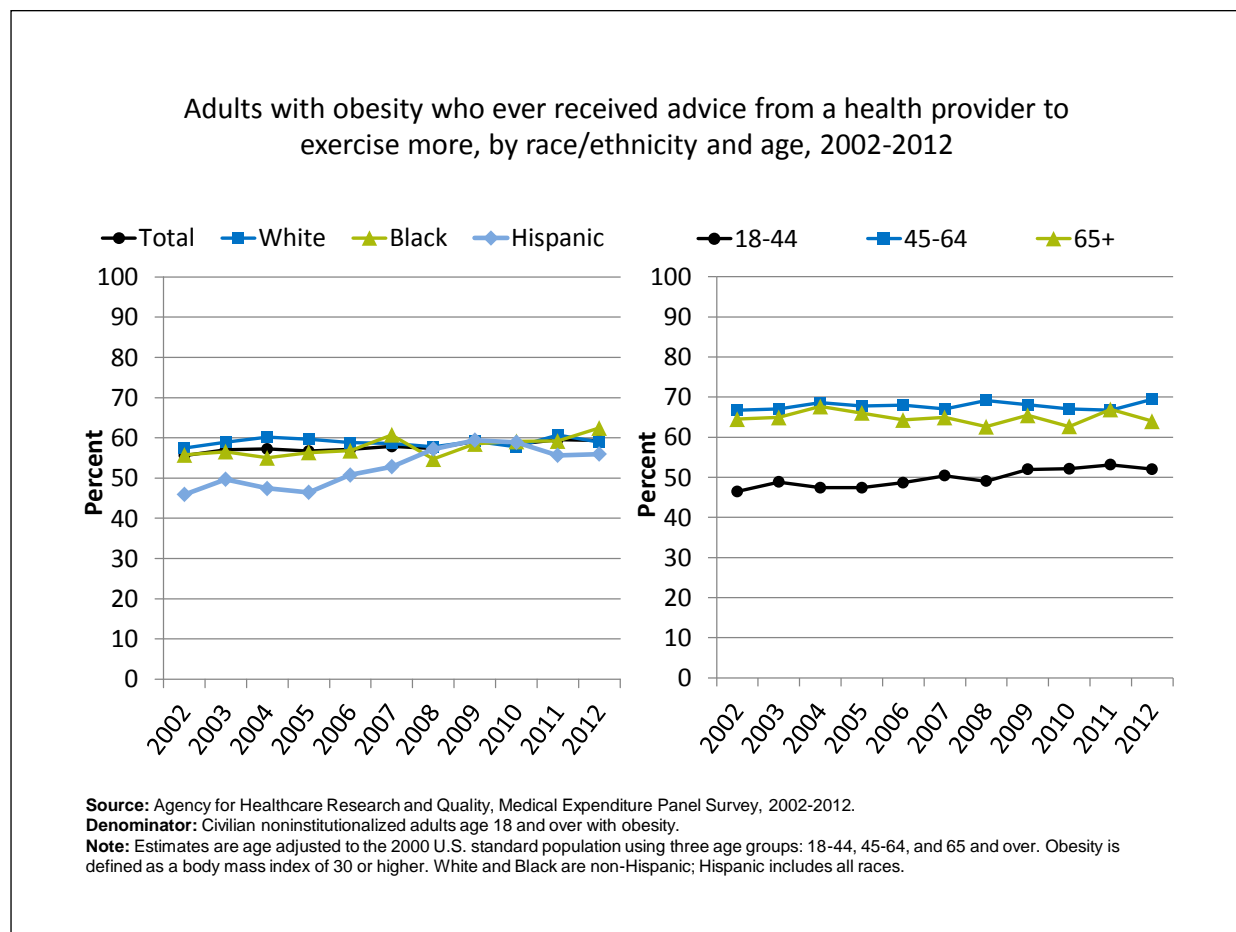
- **Groups With Disparities:**

- From 2002 to 2012, the percentage of adult current smokers with a checkup who received advice to quit smoking improved for Hispanics (from 52.0% to 59.9%) and Whites (from 64.8% to 67.9%).
- In 4 of the 5 most recent years, Black adult current smokers with a checkup were less likely than White adult current smokers to receive advice to quit smoking.
- In 2012, adult current smokers ages 18-64 with a checkup who had only public insurance (75.0%) were more likely to receive advice to quit smoking compared with those with private insurance (63.4%) and those without insurance (49.2%).
- In all years, except 2011, uninsured adult current smokers ages 18-64 with a checkup were less likely to receive advice to quit smoking compared with those with private insurance.
- From 2002 to 2012, adult current smokers with a checkup with 2-3 multiple chronic conditions were more likely to receive advice to quit smoking compared with those with 0-1 multiple chronic conditions. In 7 of the most recent 8 years, adult current smokers with a checkup with 4 or more chronic conditions were more likely to receive advice to quit smoking compared with those with 0-1 chronic conditions (data not shown).

### **Prevention: Counseling About Exercise for Adults**

- About one-third of adults (34.9%) are obese. Obesity-related conditions are among the leading causes of preventable death, such as heart disease, stroke, type 2 diabetes, and some cancers (CDC, 2014a).
- Physicians encounter many high-risk individuals, increasing the opportunity to educate patients about their personal risks and to suggest realistic and sustainable lifestyle changes that can lead to a healthier weight and more active life.

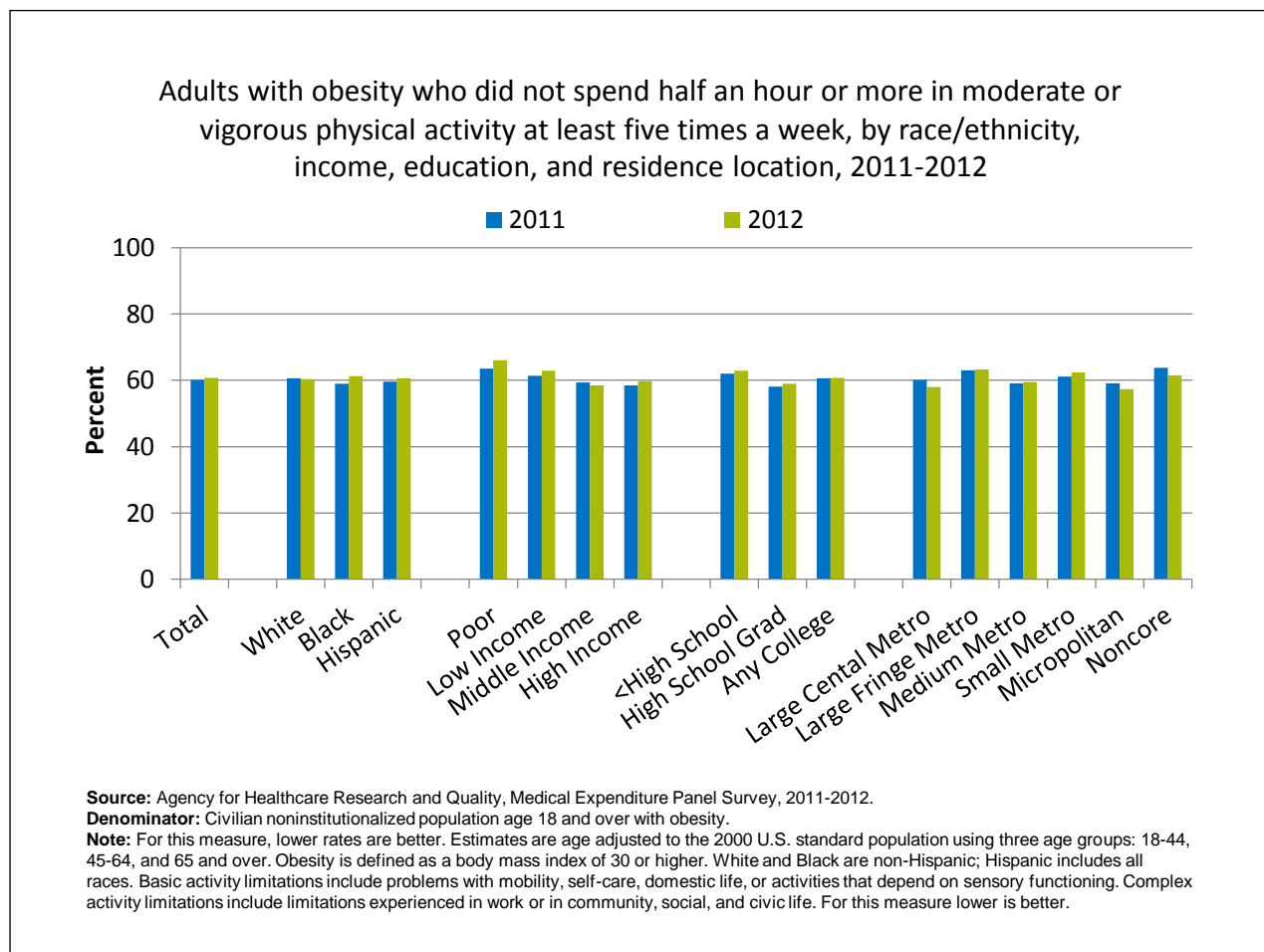
## Adults With Obesity Who Received Advice About Exercise



- **Importance:** Physician-based exercise and diet counseling is an important component of effective weight loss interventions. Such interventions have been shown to increase levels of physical activity among sedentary patients, resulting in a sustained favorable body weight and body composition (Lin, et al., 2010).
- **Overall Rate:** In 2012, overall, 59.3% of adults with obesity had ever received advice from a health provider to exercise more.
- **Groups With Disparities:**
  - From 2002 to 2012, the percentage of obese adults who ever received advice from a health provider to exercise more improved for Blacks (from 55.8% to 62.4%) and Hispanics (from 45.9% to 55.9%).
  - In 7 of 11 years, Hispanic adults with obesity were less likely to ever receive advice from a health provider to exercise more compared with White adults with obesity. The disparity has narrowed between obese Hispanic adults and obese White adults.
  - From 2002 to 2012, the percentage of adults with obesity who ever received advice to exercise more improved for those ages 18-44 (from 46.5% to 52%).
  - In all years, obese adults ages 18-44 were less likely than those ages 45-64 and 65 and over to ever receive advice to exercise more.

- In all years, obese adults with 2-3 chronic conditions or with 4 or more chronic conditions were more likely to ever receive advice to exercise compared with those with 0-1 chronic conditions (data not shown).

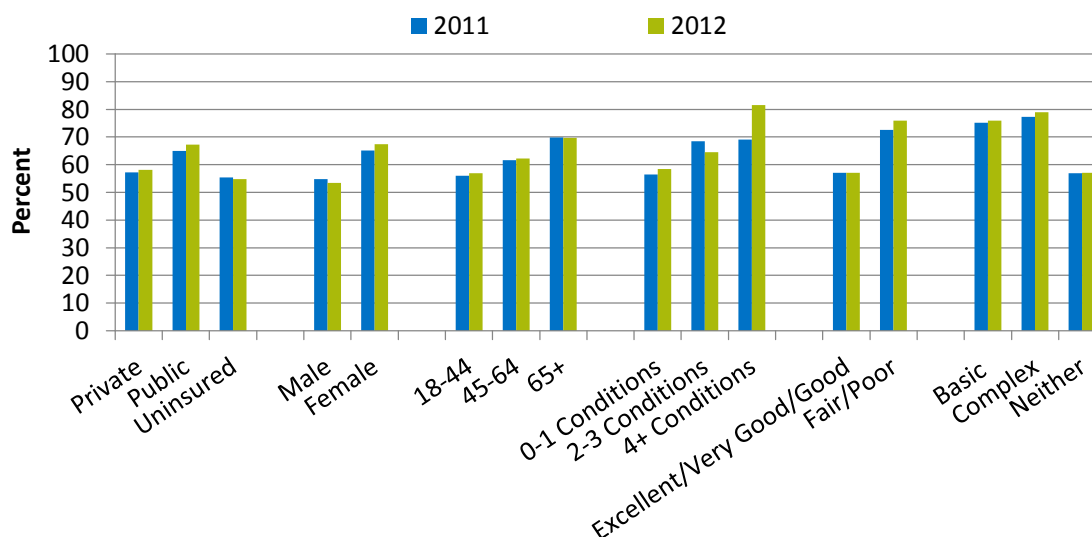
### Adults With Obesity Who Did Not Exercise



- **Importance:** The 2008 Physical Activity Guidelines for Americans recommend that adults engage in at least 2 hours and 30 minutes a week of moderate-intensity physical activity or 1 hour and 15 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. For more information, visit [www.health.gov/paguidelines/guidelines/default.aspx](http://www.health.gov/paguidelines/guidelines/default.aspx).
- **Overall Rate:** In 2012, overall, 60.7% of adults with obesity did not spend half an hour or more in moderate or vigorous physical activity at least five times a week.
- **Groups With Disparities:**
  - In both years, there were no statistically significant differences by race/ethnicity, education, or residence location for adults with obesity who did not spend half an hour or more in moderate or vigorous physical activity at least five times a week.
  - In 2012, adults with obesity in poor families (66.0%) were more likely not to spend half an hour or more in moderate or vigorous physical activity at least five times a week than those from high-income families (59.7%).

## Adults With Obesity Who Did Not Exercise

Adults with obesity who did not spend half an hour or more in moderate or vigorous physical activity at least five times a week, by health insurance (ages 18-64), sex, age, chronic conditions, perceived health status, and activity limitations, 2011-2012



**Source:** Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2011-2012.

**Denominator:** Civilian noninstitutionalized population age 18 and over with obesity.

**Note:** For this measure, lower rates are better. Estimates are age adjusted to the 2000 U.S. standard population using three age groups: 18-44, 45-64, and 65 and over. Obesity is defined as a body mass index of 30 or higher. Basic activity limitations include problems with mobility, self-care, domestic life, or activities that depend on sensory functioning. Complex activity limitations include limitations experienced in work or in community, social, and civic life.

### • Groups With Disparities:

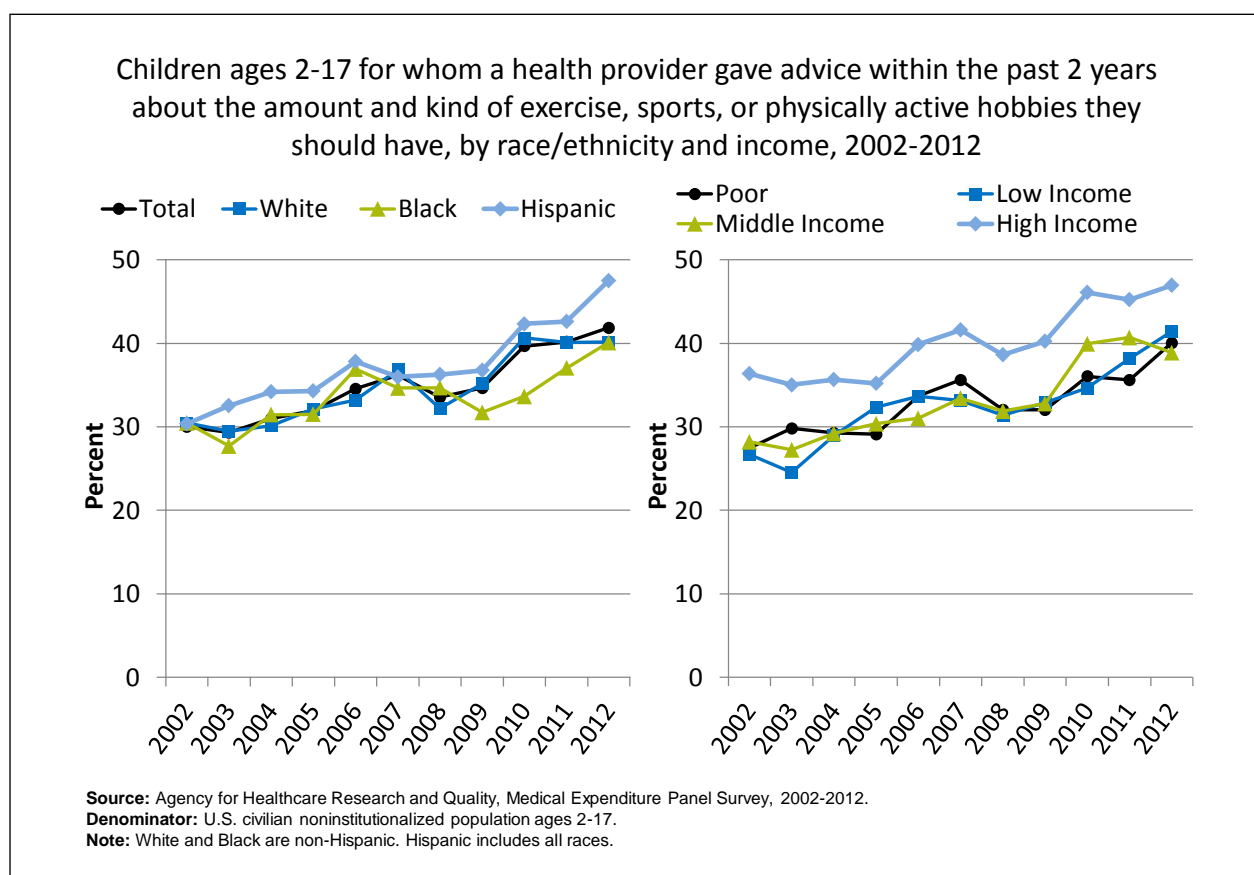
- In 2011 and 2012, adults ages 18-64 with obesity with only public insurance were less likely to spend half an hour or more in vigorous physical activity at least five times a week compared with those with private insurance.
- In both years, female adults with obesity were less likely to spend half an hour or more in moderate or vigorous physical activity at least five times a week compared with male adults with obesity.
- In both years, adults with obesity age 65 and over were less likely to spend half an hour or more in moderate or vigorous physical activity at least five times a week compared with adults with obesity ages 18-44.
- In both years, adults with obesity with 2-3 chronic conditions and with 4 or more chronic conditions were less likely to spend half an hour or more in moderate or vigorous physical activity at least five times a week compared with adults with obesity with 0-1 chronic conditions.
- In both years, adults with obesity who perceived their health status to be fair or poor were less likely to spend half an hour or more in moderate or vigorous physical activity at least five times a week compared with adults who perceived their health status to be excellent, very good, or good.

- In both years, adults with basic or complex activity limitations were less likely to spend half an hour or more in moderate or vigorous physical activity at least five times a week compared with adults with neither limitation.

### Prevention: Counseling About Exercise for Children and Adolescents

- About 17% of children and adolescents ages 2-19 are overweight or obese (CDC, 2014b).
- Childhood is when people can establish healthy lifelong habits, and physicians can play an important role in encouraging healthy behaviors.
- The 2008 Physical Activity Guidelines for Americans recommend that children and adolescents engage in 1 hour or more of physical activity everyday. For more information, visit [www.health.gov/paguidelines/guidelines/default.aspx](http://www.health.gov/paguidelines/guidelines/default.aspx).

### Children for Whom a Health Provider Gave Advice About Exercise



- **Importance:** Physicians can educate children and parents about the importance of regular exercise and healthy eating.
- **Overall Rate:** From 2002 to 2012, the overall percentage of health providers who gave advice within the past 2 years about the amount and kind of exercise, sports, or physically active hobbies children should engage in improved from 30.0% to 41.8%.

- **Groups With Disparities:**

- From 2002 to 2012, the percentage of children whose health providers gave advice about exercise improved for Whites (from 30.5% to 40.1%), Blacks (from 30.5% to 40.1%), and Hispanics (from 30.4% to 47.5%).
- In 2012, Hispanic children (47.5%) were more likely to receive advice from health providers about exercise than White children (40.1%).
- From 2002 to 2012, the percentage of children whose health providers gave advice about exercise improved for children in all income groups. The percentage of children whose health providers gave advice about exercise improved for children in poor households (from 27.5% to 40%), low-income households (from 26.7% to 41.4%), middle-income households (from 28.2% to 38.9%), and high-income households (from 36.4% to 46.9%).
- In 2012, the percentage of children whose health providers gave advice about exercise was lower for children from poor households (40.0%) and middle-income households (38.9%) than for children from high-income households (46.9%).
- In 9 of 11 years, children from low-income households were less likely to receive advice from health providers to exercise than those from high-income households. In 8 of 11 years, children from poor and middle-income households were less likely to receive advice from health providers to exercise compared with those from high-income households.

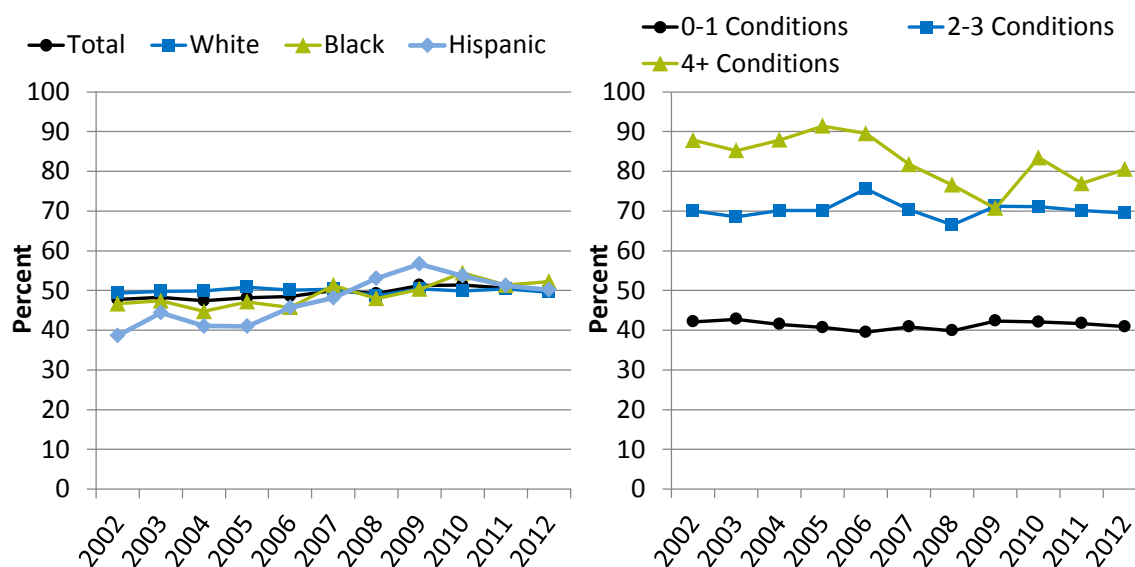
### **Prevention: Counseling for Adults About Healthy Eating**

- An important factor in maintaining a healthy body weight is changing eating habits to incorporate nutritious food and beverages.
- The U.S. Department of Agriculture created the Dietary Guidelines for Americans to help people understand the complexity of healthy eating for both children and adults. For more information, visit [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).



## Adults With Obesity Who Received Advice About Healthy Eating

Adults with obesity who ever received advice from a health provider about eating fewer high-fat or high-cholesterol foods, by race/ethnicity and chronic conditions, 2002-2012



**Source:** Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2002-2012.

**Denominator:** Civilian noninstitutionalized population age 18 and over with obesity.

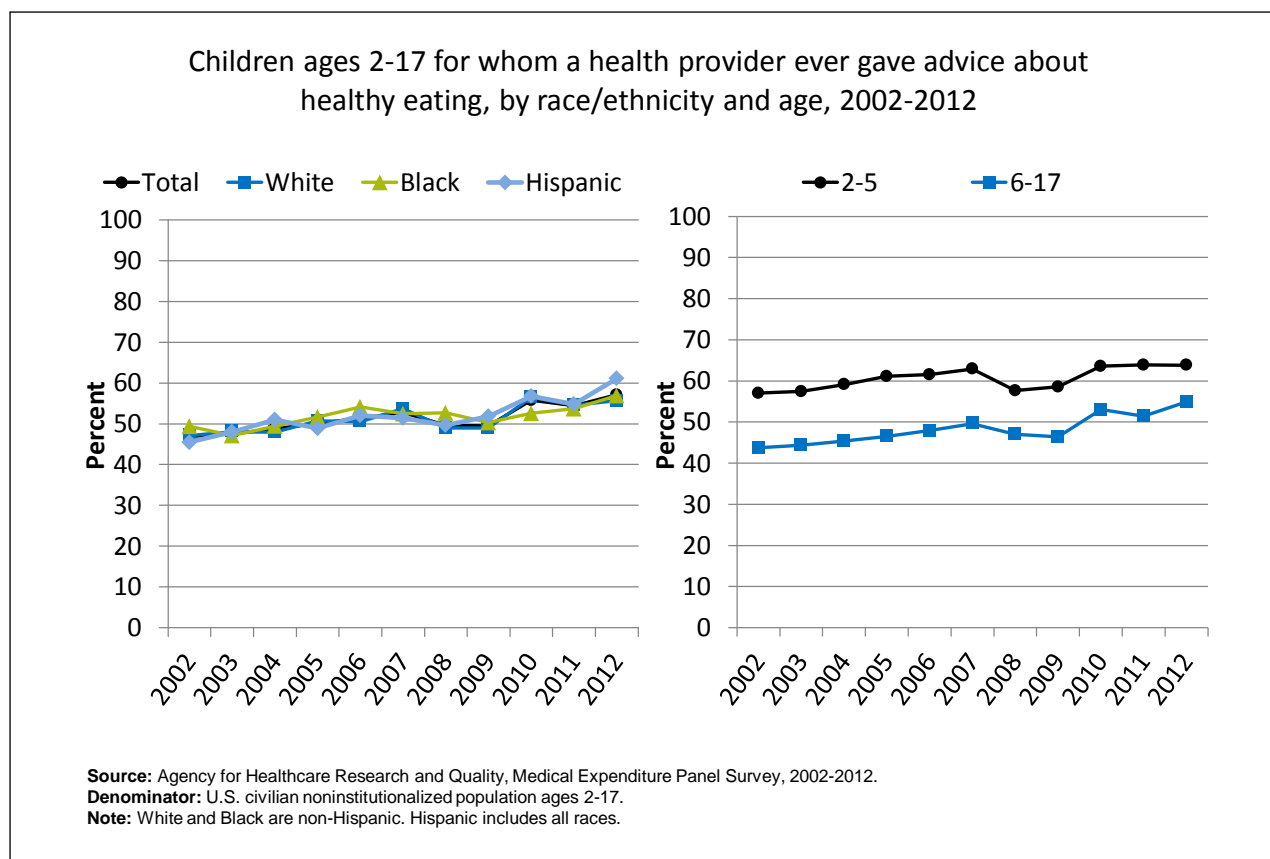
**Note:** Estimates are age adjusted to the 2000 U.S. standard population using three age groups: 18-44, 45-64, and 65 and over. Obesity is defined as a body mass index of 30 or higher. White and Black are non-Hispanic; Hispanic includes all races.

- **Importance:** Physicians need to emphasize the importance of eating foods from all food groups and balancing energy intake and energy expenditure. Foods from all food groups include whole grains and fibers, lean proteins, complex carbohydrates, fruits and vegetables, and low-fat or fat-free milk and dairy products.
- **Overall Rate:** In 2012, overall, 50.2% of adults with obesity were reported to have ever received advice from a health provider about eating fewer high-fat or high-cholesterol foods.
- **Groups With Disparities:**
  - From 2002 to 2012, the percentage of adults with obesity who ever received advice about healthy eating improved for Blacks (from 46.7% to 52.3%) and Hispanics (from 38.6% to 50.2%).
  - In 4 of 11 years, the percentage of Hispanic adults with obesity who ever received advice about healthy eating was lower compared with White adults with obesity. The disparity between obese Hispanic and White adults has narrowed.
  - In all years, adults with obesity with 2-3 chronic conditions and with 4 or more chronic conditions were more likely to receive advice about healthy eating compared with those with 0-1 chronic conditions.

## Prevention: Counseling for Children About Healthy Eating

- Children and adolescents have become overweight from eating more calories than they burn, and their diets have become nutrient deficient. About 30% to 40% of daily calories children and adolescents consume are energy-dense, nutrient-poor foods and drinks (AAP, 2015).
- An estimated 55 million children and teenagers attend the 105,000 schools in the United States and consume 35% to 40% of their daily energy in school, so schools need to provide diverse, nutrient-based foods and drinks (AAP, 2015).
- The Dietary Guidelines for Americans encourage children and adolescents to maintain a calorie-balanced diet to support normal growth and development without gaining excess weight. For more information, visit [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

### Children for Whom a Health Provider Gave Advice About Healthy Eating



- **Importance:** It is important to advise parents and guardians to provide balanced diets at home. Eating patterns that are established early in childhood are often adopted later in life, making early interventions important.
- **Overall Rate:** From 2002 to 2012, the overall percentage of children ages 2-17 for whom a health provider gave advice within the past 2 years about healthy eating improved from 46.9% to 57.1%.

- **Groups With Disparities:**

- From 2002 to 2012, the percentage of children for whom a health provider gave advice about healthy eating improved for Blacks (from 49.3% to 56.9%), Hispanics (from 45.5% to 61.1%), and Whites (from 47.2% to 55.6%).
- In 2012, Hispanic children were more likely to receive advice about healthy eating compared with White children.
- In all years except 2012, there were no statistically significant racial/ethnic differences in the percentage of children given advice about healthy eating.
- From 2002 to 2012, the percentage of children who received advice about healthy eating improved for children in both age groups: ages 2-5 (from 57.0% to 63.8%) and 6-17 (from 43.7% to 54.9%).
- In all years, children ages 2-5 were more likely to receive advice about healthy eating compared with those ages 6-17.

## References

Adult Obesity Facts. Atlanta, GA: Centers for Disease Control and Prevention; 2014a. <http://www.cdc.gov/obesity/data/adult.html>. Accessed June 16, 2015.

American Academy of Pediatrics, Council on School Health; Committee on Nutrition. Policy Statement. Snacks, sweetened beverages, added sugars, and schools. *Pediatrics* 2015;135(3):575-83. <http://pediatrics.aappublications.org/content/135/3/575.long>. Accessed June 16, 2015.

Child Obesity Facts. Atlanta, GA: Centers for Disease Control & Prevention; 2014b. <http://www.cdc.gov/obesity/data/childhood.html>. Accessed June 16, 2015.

Ford E, Bergmann M, Boeing H, et al. Healthy lifestyle behaviors and all-cause mortality among adults in the United States. *Prev Med* 2012 Jul;55(1):23-7. Epub 2012 Apr 29. PMID: 22564893. <http://www.sciencedirect.com/science/article/pii/S0091743512001582>. Accessed June 16, 2015.

Lin JS, O'Connor E, Whitlock EP, et al. Behavioral counseling to promote physical activity and a healthful diet to prevent cardiovascular disease in adults: a systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med* 2010 Dec 7;153(11):736-50. PMID: 21135297. <http://annals.org/article.aspx?articleid=746527>. Accessed June 26, 2015.

Office on Smoking and Health. The health consequences of smoking—50 years of progress: a report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 2014. <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/index.html>. Accessed June 16, 2015.

Satcher D, Higginbotham EJ. The public health approach to eliminating disparities in health. *Am J Public Health* 2008;98(9 Suppl):S8-11. PMID: 18687626. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2518593/>. Accessed June 16, 2015.