Medical Expenditure Panel Survey

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #364

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Obesity in America: Estimates for the U.S. Civilian Noninstitutionalized Population Age 20 and Older, 2009

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Introduction

This Statistical Brief presents data from the 2009 Medical Expenditure Panel Survey (MEPS) concerning the prevalence of obesity in the adult (age 20 and older) population. Obesity is a serious medical condition which is associated with a number of additional serious conditions including heart disease, bone and joint problems, diabetes and high cholesterol, among others.

Obesity, calculated from an individual's height and weight as reported by household respondents in the MEPS, is not distributed evenly across all subgroups of adults. This Brief examines variation in the percentage of healthy weight, overweight, and obese adults by various socioeconomic and demographic characteristics of the population, and by selected comorbidities. Only differences that are statistically significant at the 0.05 level are discussed in the text.

Findings

Based on MEPS data for 2009, 33.2 percent of adults 20 and older had a healthy weight, 35.8 percent were overweight, 25.1 percent were obese and 4.5 percent were extremely obese[1]. The following sections describe variations in these percentages by selected characteristics.

Demographic and socioeconomic characteristics (see figures 1 through 6)
In 2009, there were significant differences by gender, race, age, and geographic region in the proportion of adults who were overweight or obese (figures 1 through 4). Men were less likely to have a healthy weight than women (27.4 percent versus 38.6 percent) and more likely to be overweight (42.6 percent versus 29.4 percent, respectively). Non-Hispanic blacks were more likely than other race/ethnic groups to be obese (31.0 percent) or extremely obese (8.0 percent), compared to 24.8 percent and 4.1 percent for non-Hispanic whites, 27.6 percent and 4.3 percent for Hispanics, and 13.4 percent and 2.6 percent for all other races combined (most of which were Asian). Adults ages 20 to 24 were the least likely to be overweight (26.1 percent) or obese (15.3 percent) when compared to all other age groups. Regionally, the West (35.6 percent) and Northeast (36.0 percent) had a higher percentage of adults with a healthy weight as compared to the South (30.8 percent) and Midwest (32.2 percent).

[1]3.7 percent of cases were excluded due to missing data needed to categorize by weight category.

Highlights

- Over one-third of adults 20 and older (35.8 percent) were overweight, 25.1 percent were obese, and another 4.5 percent were extremely obese in 2009[1].
- Men were less likely than women to have a healthy weight (27.4 percent versus 38.6 percent) and more likely to be overweight (42.6 percent versus 29.4 percent, respectively).
- Non-Hispanic blacks were more likely than other race/ethnic groups to be obese (31.0 percent) or extremely obese (8.0 percent), compared to 24.8 percent and 4.1 percent for non-Hispanic whites, 27.6 percent and 4.3 percent for Hispanics, and 13.4 percent and 2.6 percent for all other races combined (most of which were Asian).
- Persons (ages 20-64) with public health insurance were more likely to be extremely obese (10.4 percent) than were persons with either private insurance (4.0 percent) or those uninsured (4.7 percent).
- Adults classified as being obese or extremely obese were more likely to have heart conditions, high cholesterol, diabetes, and joint pain reported.
- Obese and extremely obese adults were less likely to have regular exercise reported (50.0 percent and 30.9 percent, respectively) compared to healthy weight and overweight adults (66.8 percent and 61.7 percent, respectively).

There were also significant differences in the percentage obese by education and income levels (figures 5 and 6). Adults with a college degree were less likely to be obese (19.9 percent) than high school graduates (26.8 percent) or those with less than a high school degree (28.5 percent). High income adults were less likely to be obese (23.6 percent) than middle income (26.0 percent), low income (25.9 percent), and poor or near poor adults (26.4 percent).

Health insurance status (see figure 7)
Adults ages 20–64 with public insurance only were more likely to be classified as obese or extremely obese (29.8 percent and 10.4 percent, respectively) than those with private insurance (25.1 percent and 4.0 percent) or uninsured (23.6 percent and 4.7 percent) but were less likely to be classified as overweight (29.6 percent versus 35.5 percent and 36.6 percent for private insurance and being uninsured, respectively). Adults age 65 and older with Medicare and other public insurance were the least likely to be overweight (29.5 percent), but were the most likely to be extremely obese (8.0 percent) when compared to those having Medicare only (39.2 percent overweight and 3.3 percent extremely obese) or Medicare and private insurance (40.4 percent and 2.8 percent).

Comorbidities (see figure 8)
Adults classified as being obese or extremely obese were more likely to have heart conditions, high cholesterol, diabetes, or joint pain reported. Heart conditions were reported for 41.5 percent of the obese and 50.0 percent of those classified as extremely obese. High cholesterol was reported for 41.9 percent of the obese and 39.5 percent of those classified as extremely obese. Diabetes was more likely to be reported in those defined as obese (15.0 percent) and extremely obese (22.8 percent) versus those of other body mass index classifications. Those reported to be obese and extremely obese were the most likely to have joint pain reported (58.4 percent and 68.8 percent, respectively) as compared to those with other body mass index classifications.

Exercise activity and doctor's advice (see figures 9 and 10)
Obese and extremely obese adults were less likely to exercise regularly (50.0 percent and 30.9 percent, respectively) than healthy weight (66.8 percent) or overweight adults (61.7 percent) (figure 9). Obese and extremely obese adults were more likely to have been advised by a doctor or health professional to increase exercise frequency (58.7 percent and 70.6 percent, respectively) compared to those with other body mass index classifications (overweight, 38.7 percent, healthy weight, 21.0 percent, and underweight, 12.9 percent). Adults identified as being obese or extremely obese were the most likely to have been advised by a doctor or other health professional to eat fewer high fat foods (51.3 percent and 61.1 percent, respectively) as compared to those classified as overweight (36.6 percent), healthy weight (20.2 percent), or underweight (15.6 percent) (figure 10).

Data Source

The estimates shown in this Statistical Brief are drawn from MEPS public use file, MEPS HC-129: 2009 Full Year Consolidated Data File.

Definitions

Body Mass Index (BMI) is calculated from individual's height and weight as reported by household respondents in the MEPS and categorized as follows:

- Underweight = BMI is less than 18
- Healthy weight = BMI is greater than or equal to 18 and less than 25
- Overweight = BMI is greater than or equal to 25 and less than 30
- Obese = BMI is greater than or equal to 30 and less than 40
- Extremely obese = BMI is 40 or greater

Education level
Respondents were asked to report the highest grade or year of schooling ever completed by each family member as of the date of the interview: not a high school graduate (grade less than 12), high school graduate/graduate equivalency diploma (GED)/other (grade 12 or equivalent, or some college), and college graduate.

Poverty status
Each person in the survey sample was classified according to the total yearly income of his or her family. Within a household, all individuals related by blood, marriage, or adoption were considered to be a family. Personal income from all family members was summed to create family income. Poverty status is the ratio of family income to the federal poverty thresholds, which control for family size and age of the head of family. Categories are defined as follows:

- *Poor/Near poor*: This refers to persons in families with incomes under 125 percent of the poverty line, including persons with negative income.
- *Low income*: This category includes persons in families with income equal to or greater than 125 percent but less than 200 percent of the poverty line.
- *Middle income*: This category includes persons in families with income equal to or greater than 200 percent but less than 400 percent of the poverty line.
- *High income*: This category includes persons in families with income equal to or greater than 400 percent of the poverty line.

Health insurance status
Based on household responses to health insurance status questions, adults ages 20–64 were classified in the following three insurance categories:

- *Private health insurance*: Individuals who, at any time during the year, had insurance that provides coverage for hospital and physician care (other than Medicare, Medicaid, or other public hospital/physician coverage). Coverage by TRICARE (Armed Forces-related coverage) was also included as private health insurance. Insurance that provides coverage for a single service only, such as dental or vision coverage, was not included.
- *Public coverage only*: Individuals who met both of the following criteria: 1) not covered by private insurance at any time during the year, 2) were covered by any of the following public programs at any point during the year: Medicare, Medicaid, or other public hospital/physician coverage.
- *Uninsured*: Persons not covered by private hospital/physician insurance, TRICARE, Medicare, Medicaid, or other public hospital/physician programs at any time during the entire year (or period of eligibility for the survey if that was less than a year).

Individuals age 65 and older were classified into the following three insurance categories:

- *Medicare and private insurance*: This category includes persons covered by Medicare and a supplementary private policy.
- *Medicare and other public insurance*: This category includes persons classified as Medicare beneficiaries who were not covered by private insurance at any point during the year but were covered by Medicaid or other public hospital/physician coverage at some point during the year.
- *Medicare only*: Persons classified as Medicare beneficiaries but not classified in either of the two categories above.

A small proportion of persons age 65 and over (about 1 percent) were not classified into one of these categories for various reasons (e.g., uninsured, private insurance only).

Heart conditions
Persons who reported, on two or more provider visits, to have been told they had hypertension (high blood pressure), or were told by a doctor or other health professional that they had coronary heart disease or had had a stroke or transient ischemic attack (ministroke), were classified as having a heart condition.

Joint pain
Persons reported to have pain, aching, stiffness, or swelling around a joint in the past 12 months or reported having ever been told by a doctor or other health professional that they had osteoarthritis or arthritis not specified were classified as having joint pain.

Diabetes
Persons reported having ever been told by a doctor or other health professional that they had diabetes or sugar diabetes were classified as having diabetes.

High cholesterol
Persons reported having ever been told by a doctor or other health professional that they had high cholesterol were classified as having high cholesterol.

Exercise three times weekly
Person reported to have spent, at time of interview, half an hour or more in moderate or vigorous physical activity at least three times a week.

Told to exercise
Person reported ever advised by a doctor or other health professional to exercise more.

Told to eat fewer high fat foods
Person reported ever advised by a doctor or other health professional to eat fewer high fat or high cholesterol foods.

About MEPS-HC

The Medical Expenditure Panel Survey (MEPS) collects nationally representative data on health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS). More information about MEPS can be found on the MEPS Web site at http://www.meps.ahrq.gov/. For a detailed description of the MEPS survey design see Methodology Report #22: *Sample Design of the Medical Expenditure Panel Survey Household Component, 1998–2007*.

References

For a detailed description of the MEPS-HC survey design, sample design, and methods used to minimize sources of nonsampling error, see the following publications:

Cohen, J. *Design and Methods of the Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 1. AHCPR Pub. No. 97-0026. Rockville, MD: Agency for Health Care Policy and Research, 1997. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.pdf

Cohen, S. *Sample Design of the 1996 Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 2. AHCPR Pub. No. 97-0027. Rockville, MD: Agency for Health Care Policy and Research, 1997. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr2/mr2.pdf

Cohen, S. Design Strategies and Innovations in the Medical Expenditure Panel Survey. *Medical Care*, July 2003: 41(7) Supplement: III-5–III-12.

Ezzati-Rice, T. M., Rohde, F., Greenblatt, J. *Sample Design of the Medical Expenditure Panel Survey Household Component, 1998–2007*. Methodology Report No. 22. March 2008. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr22/mr22.pdf

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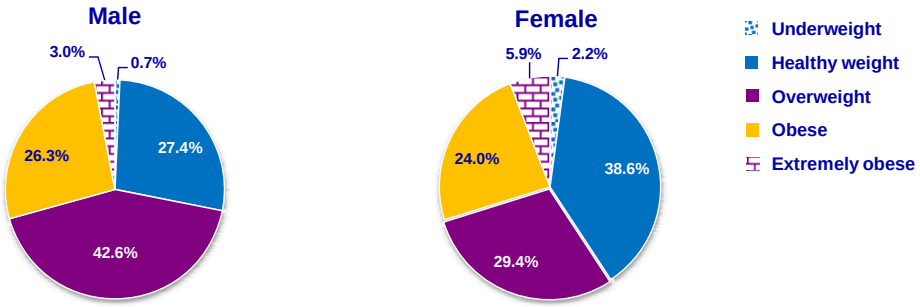
AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other MEPS data and tools and to share suggestions on how MEPS products might be enhanced to further meet your needs. Please e-mail us at MEPSProjectDirector@ahrq.hhs.gov or send a letter to the address below:

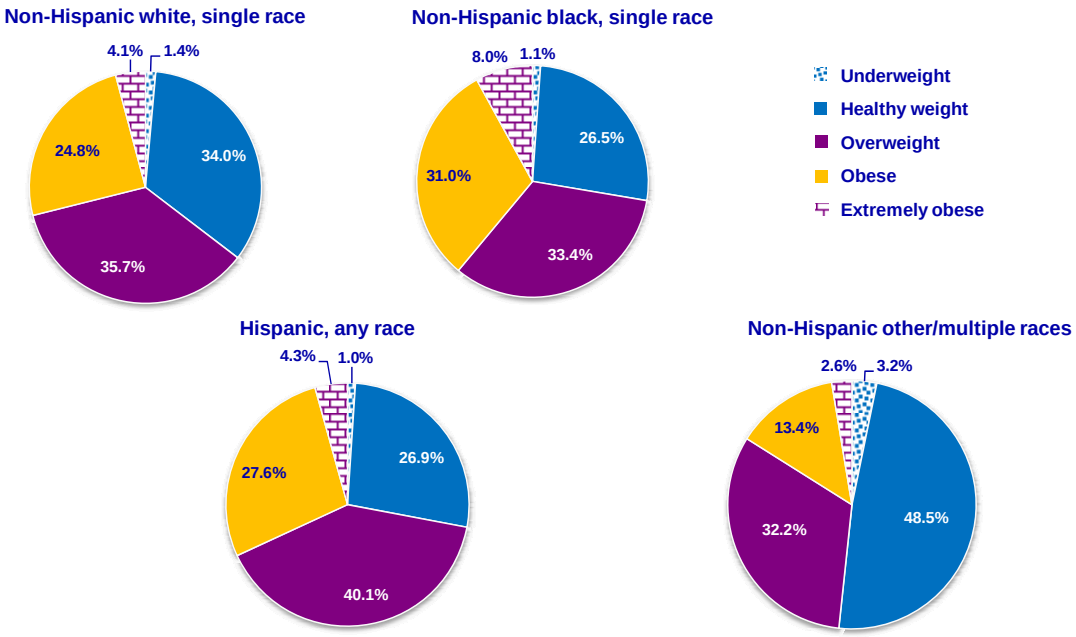
Steven B. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850

Figure 1. Distribution of BMI categories by sex, adults age 20 and older, 2009 MEPS



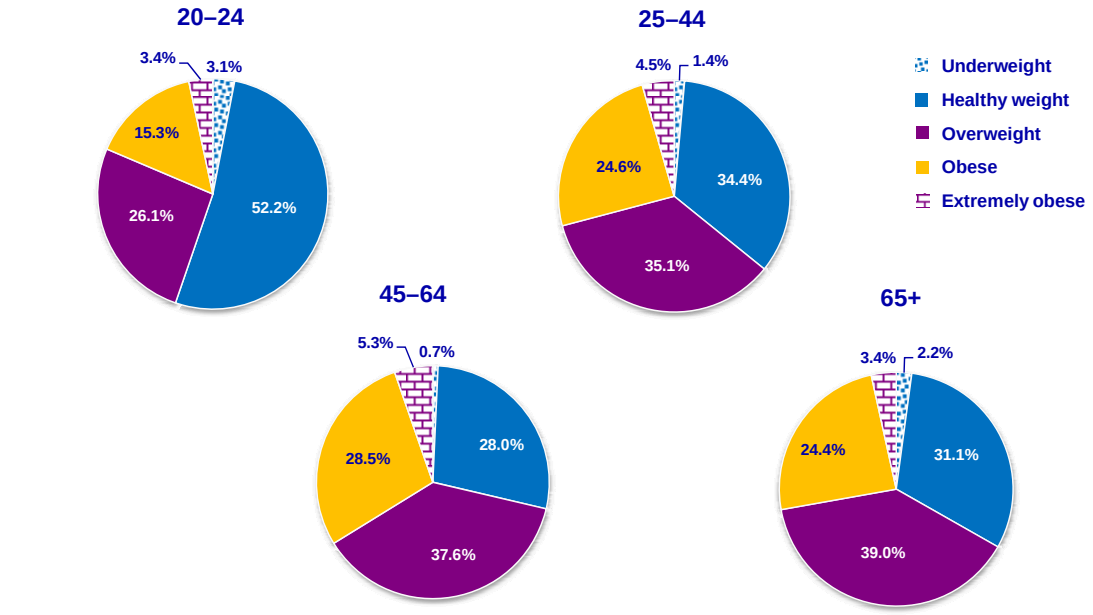
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 2. Distribution of BMI categories by race/ethnicity, adults age 20 and older, 2009 MEPS



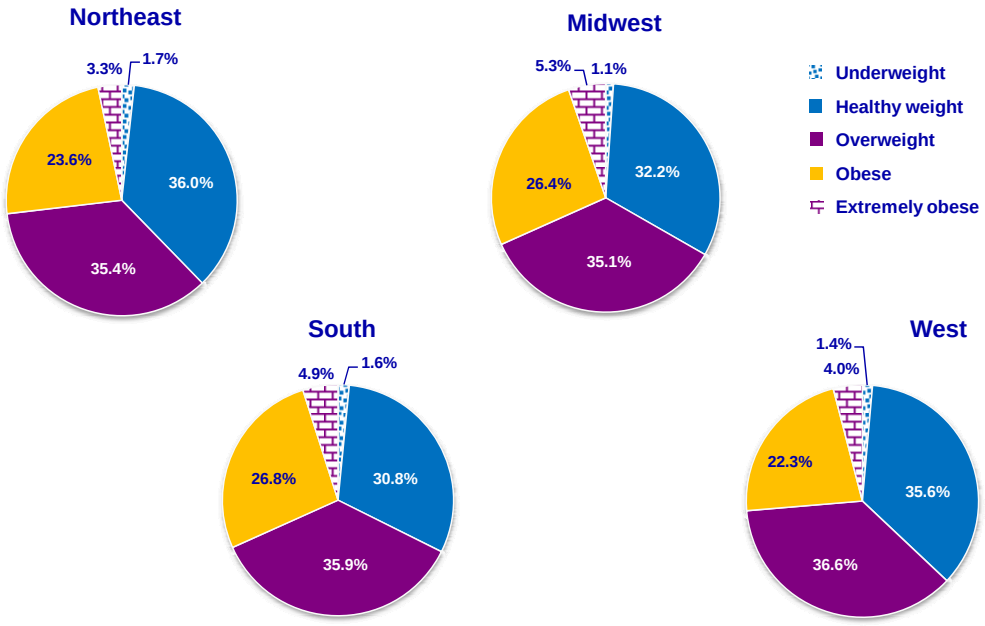
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 3. Distribution of BMI categories by age, adults age 20 and older, 2009 MEPS



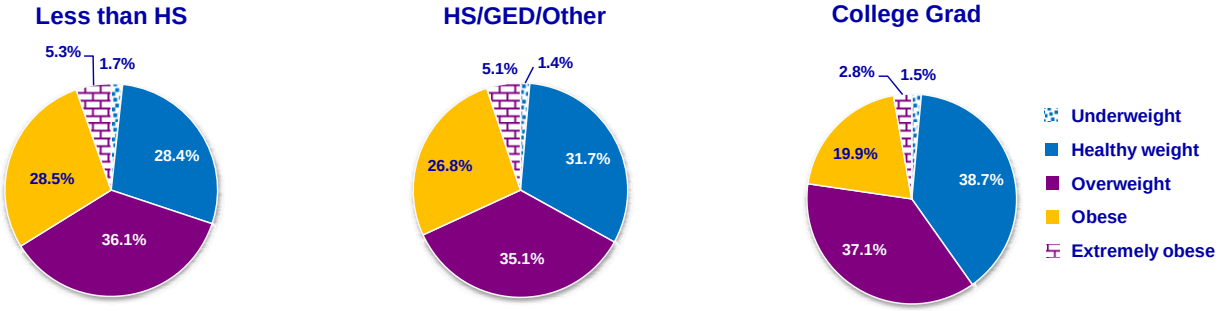
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 4. Distribution of BMI categories by region, adults age 20 and older, 2009 MEPS



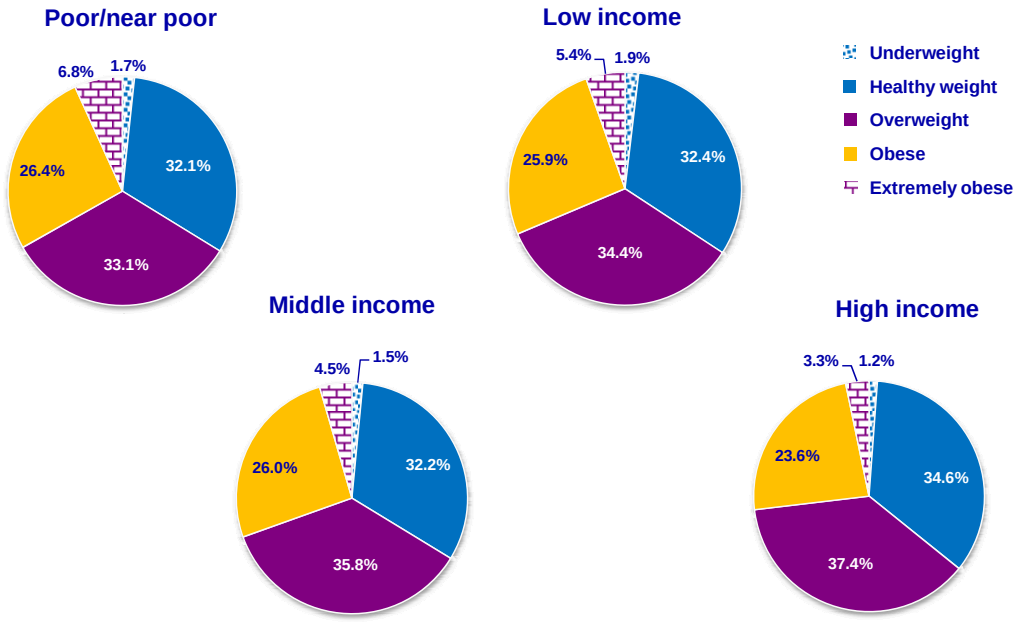
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 5. Distribution of BMI categories by education, adults age 20 and older, 2009 MEPS



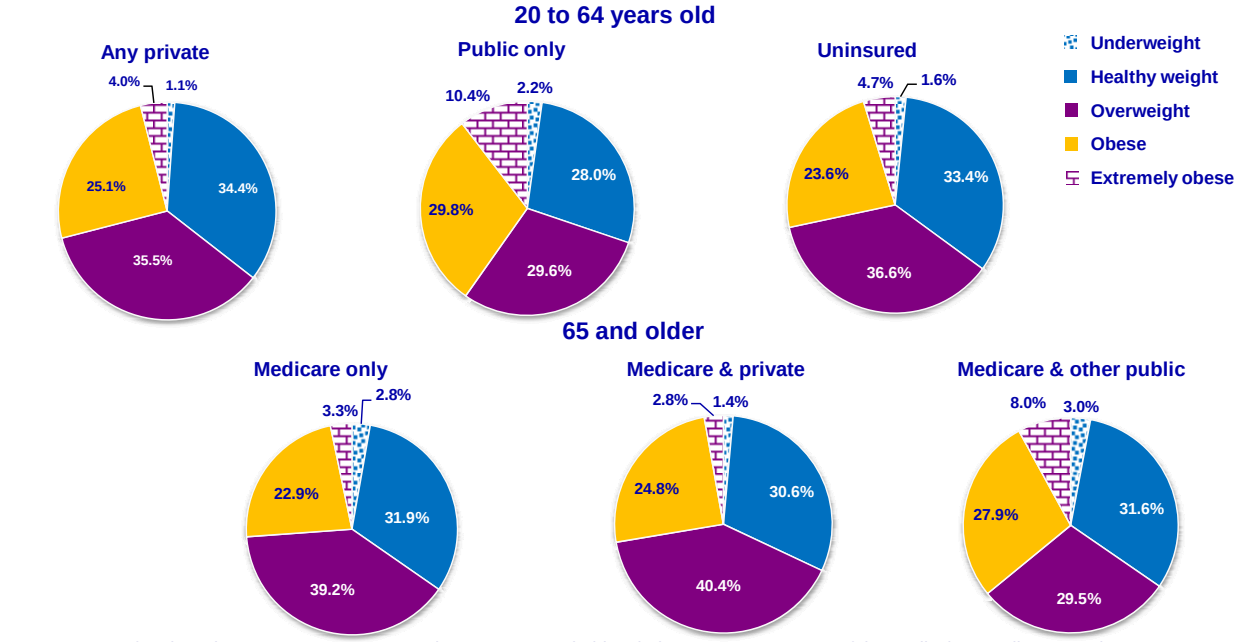
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 6. Distribution of BMI categories by income, adults age 20 and older, 2009 MEPS



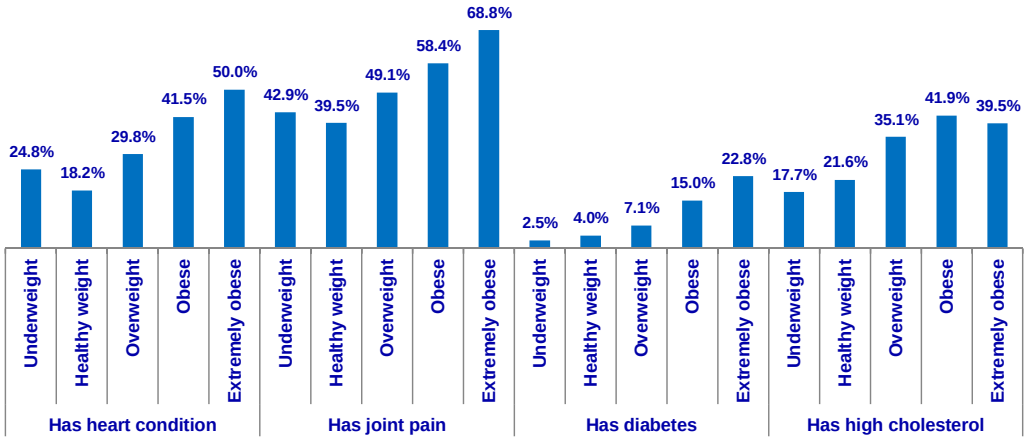
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 7. Distribution of BMI categories by age and health insurance categories, adults age 20 and older, 2009 MEPS



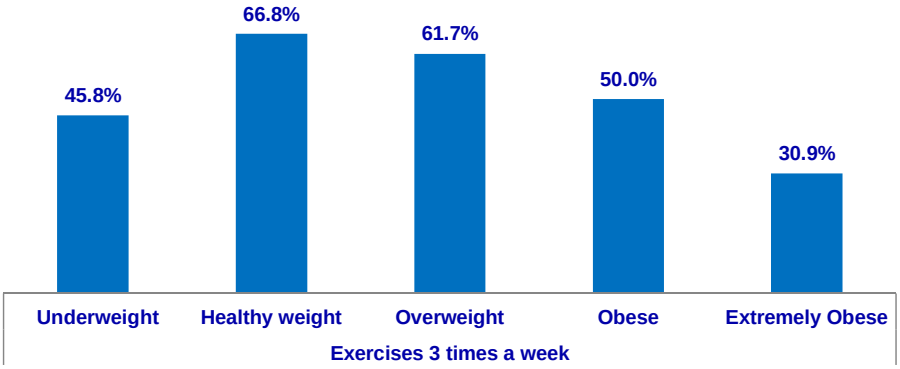
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 8. Percentage with selected comorbidities by BMI categories, adults age 20 and older, 2009 MEPS



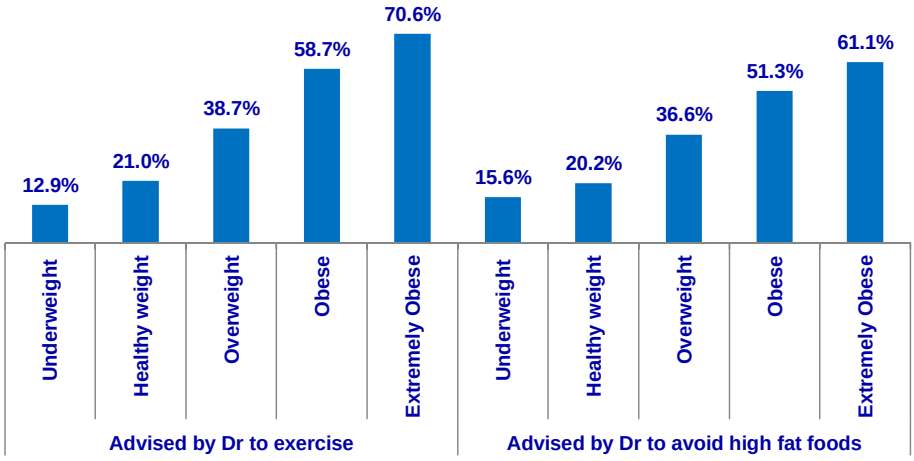
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 9. Percentage with exercise activity by BMI categories, adults age 20 and older, 2009 MEPS



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009

Figure 10. Percentage with doctor's advice by BMI categories, adults age 20 and older, 2009 MEPS



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household and Pharmacy Components of the Medical Expenditure Panel Survey, 2009