# Adult Obesity Rates Increased in 6 US States, Study Found

Adult obesity rates increased from 2013 to 2014 in 6 US states and decreased in no states, according to a press release detailing findings from *The State of Obesity*, a report from the Trust for America's Health and the Robert Wood Johnson Foundation.[1] The annual report found that 2 states had adult obesity rates of at least 35%, 20 states had adult obesity rates of at least 30%, and 43 states had adult obesity rates of at least 25%. No state had an adult obesity rate below 21%.

Adult obesity rates increased in Alaska, Delaware, Idaho, New Jersey, Tennessee, and Wyoming. Mississippi and West Virginia had the highest adult obesity rates (35.1%); Colorado had the lowest (21.3%). Southern states had the highest obesity rates: 9 of 10 states with the highest obesity rates were in the South.

In addition to geographic breakdowns, the report examined obesity rates based on demographics such as income, race, and age. More than 33% of adults earning less than $15 000 annually are obese, compared with 25.4% of those earning at least $50 000 annually.

Blacks and Latinos had higher obesity rates compared with whites. Obesity rates for blacks are at least 40% in 11 states, 35% in 29 states, and 30% in 41 states. Latinos' obesity rates were at least 35% in 5 states and 30% in 23. Whites had obesity rates of 30% in 10 states.

Those aged 45 to 64 had obesity rates of 35% in 17 states, and 30% in 41 states. This group had the highest obesity rates for any age group. More than 6% of adults were severely obese, and the number of severely obese adults has quadrupled in the past 30 years, the report found.

The study reported that 1 in 10 children were obese as early as ages 2 to 5, and that 5% of children between the ages of 6 and 11 were severely obese.

For adults, those with a body mass index (BMI) of at least 30 were considered obese and those with a BMI of at least 40 were considered severely obese. Children with a BMI at or above the 95th percentile for children of the same age and sex were considered obese; children with a BMI greater than 120% of the 95th percentile for children of the same age and sex were considered severely obese.

1. New Report Finds Adult Obesity Rates Increased in Six States [press release]. Washington, DC: Robert Wood Johnson Foundation; September 4, 2014.

## US Health System Not Properly Designed to Meet End-Of-Life Care Requirements, Panel Said

Changes are needed in the US health care system because it is not designed to meet the needs of patients nearing the end of life, according to a press release from the Institute of Medicine (IOM) detailing the IOM's forthcoming *Dying in America* report.[1] The IOM, an independent committee established under the charter of the national Academy of Sciences, said that increased quality, affordability, and sustainability are needed to ensure that patients and their families receive affordable, patient-desired care instead of expensive care that patients may not want.

Advance care planning by patients and clinicians could yield cost savings. Such preparation could lead to stabilizing total health care and social service cost, and could reduce them over time. By delineating goals of end-of-life care and preparing documents and medical orders that express patient preferences, the volume of acute care—and the cost of acute care—might be reduced. Such acute care services are commonly expensive, and patients may not want them, the report said. For example, end-of-life patients with Medicare coverage experiencing acute pain who call 911 must visit a hospital in order for Medicare to reimburse costs, as per Centers for Medicare and Medicaid Services policies. Without documents explaining that patients would rather receive in-home pain management or treatment by their primary care physician, patients are obligated to make visits to hospitals—visits with costs that far outweigh the costs of in-home care or attention from a primary care physician.

The IOM report also called for improved training for clinicians so they have the skills and comfort to have end-of-life care conversations with their patients. The IOM suggested that government and private insurance programs financially incentivize physicians to discuss these matters, prepare documentation detailing patient preferences, and provide the appropriate care.

1. U.S. health system not properly designed to meet the needs of patients nearing end of life [press release]. Washington, DC: Institute of Medicine; September 17, 2014.

## Weight Loss Drug Receives US Approval

The US Food and Drug (FDA) administration approved naltrexone/bupropion (Contrave, Orexigen Therapeutics) as a treatment option for chronic weight management in

addition to a reduced-calorie diet and physical activity, according to a press release from the FDA.[1] The agency approved the drug for use by adults with a BMI of at least 30, or for adults with a BMI between 27 and 30 who have at least 1 weight-related condition, such as high blood pressure, type 2 diabetes, or high cholesterol.

The FDA relied on data from clinical trials that included approximately 4500 obese and overweight patients with and without significant weight-related conditions. Researchers in those trials randomized patients to lifestyle modification (reduced-calorie diet and regular physical activity) plus placebo or lifestyle modification plus naltrexone/bupropion. Of patients without diabetes, 42% of patients in the treatment group lost at least 5% of body weight compared with 17% of those in the control group. Of patients with diabetes, 36% of patients in the treatment group lost at least 5% of body weight compared with 18% of those in the control group, and patients in the treatment group lost an average of 2% more body weight compared with those in the placebo group at 12 months.

The drug is a combination of 2 drugs already approved by the FDA: naltrexone (approved for treating alcohol and opioid dependence) and bupropion (approved for treating depression and seasonal affective disorder, and as an aid to smoking cessation treatment), which are combined in an extended-release formulation. Because it contains bupropion, the drug has a boxed warning to inform users and prescribers of the increased risk of suicidal thoughts and behaviors associated with antidepressant drugs.

1. FDA approves weight-management drug Contrave [press release]. Washington, DC: US Food and Drug Administration; September 10, 2014.

## Low-Carbohydrate Diet Resulted in Better Weight Loss in Randomized Trial

A low-carbohydrate diet resulted in greater reduction in weight, fat mass, and cholesterol levels compared with a low-fat diet, according to a study published in the *Annals of Internal Medicine*.[1]

In a parallel-group trial examining the effects of a low-carbohydrate diet versus a low-fat diet, investigators randomized 148 men and women with no clinical cardiovascular disease or diabetes to a low-carbohydrate diet or a low-fat diet. Both groups received dietary counseling during the trial. Patients randomized to the low-carbohydrate diet were told to consume fewer than 40 grams of carbohydrates per day. Those in the low-fat diet were told to acquire no more than 30% of their daily energy from fat sources.

At 12 months, 82% of patients in the low-fat group and 79% in the low-carbohydrate group had adhered to the diet. Patients' weight, fat mass, ratio of total high-density lipoprotein (HDL) cholesterol, HDL cholesterol levels, and triglyceride levels were measured at month 12.

Patients in the low-carbohydrate group had greater improvements in all areas compared with patients in the low-fat group. Patients who adhered to the low-carbohydrate diet for 12 months lost a mean 3.5 kg (95% CI, -5.6 to -1.4; $P = .002$) more than those on the low-fat diet, and they lost a mean 1.5% (95% CI, -2.6% to -0.4%; $P = .011$) more fat mass than patients in the low-fat group.

All 3 cholesterol measures improved in the low-carbohydrate group compared with the low-fat group. Ratio of total HDL decreased by a mean difference of 0.44 (95% CI, -0.71 to -0.16; $P = .002$), triglyceride levels decreased by a mean difference of 0.16 mmol/L (95% CI, -0.31 to -0.01 mmol/L; $P = .038$), and HDL cholesterol levels increased by a mean difference of 0.18 mmol/L (95% CI, 0.08-0.28 mmol/L; $P < .001$).

1. Bazzano LA, Hu T, Reynolds K, et al. Effects of low-carbohydrate and low-fat diets: a randomized trial. *Ann Intern Med*. 2014;161(5):309-318.

## Benzodiazepine Use Linked To Risk of Alzheimer Disease, Study Found

Use of benzodiazepine was associated with an increased risk of Alzheimer disease (AD), according to a study published in *The BMJ*.[1]

Researchers randomly selected patients older than 66 years from the Quebec health insurance program database for a case-control study. Researchers analyzed patients (n = 1796) with a first diagnosis of AD and follow-up of at least 6 years. Each patient with AD was matched with 4 patients for sex, age group (70-74, 75-79, 80-84, or ≥85), and duration of follow-up (6, 7, 8, 9, or 10 years) at the index date. Patients with AD in the study had an index date recorded during the study period and had no record of another type of dementia at or before the index date.

Ever using benzodiazepine was associated with an increased risk of developing AD (adjusted odds ratio [AOR], 1.51; 95% CI, 1.36-1.69). Of patients with AD, 32.9% had at least 180 prescribed daily doses; 21.8% of control patients had at least 180 prescribed daily doses. The association with AD was stronger for long-acting benzodiazepines (AOR 1.70; 1.46-1.98) than for short-acting benzodiazepines (AOR, 1.43; 1.27-1.61). Researchers found no increased risk in patients with anxiety ($P = .48$), depression ($P = .75$), or insomnia ($P = .99$).

"The stronger association observed for long-term exposures reinforces the suspicion of a possible direct association, even if benzodiazepine use might also be an early marker of a condition associated with an increased risk of dementia," the study authors concluded.

"Unwarranted long-term use of these drugs should be considered as a public health concern."

1. de Gage SB, Moride Y, Ducruet T, et al. Benzodiazepine use and risk of Alzheimer's disease: case-control study [published online ahead of print]. *BMJ*. doi:10.1136/bmj.g5205.

## Unilateral Mastectomy Associated with Higher Mortality Rate Than Radiation Therapy, Study Found

Unilateral mastectomy was associated with higher mortality rate compared with double mastectomy and breast-conserving surgery plus radiation, according to a study published in *JAMA: The Journal of the American Medical Association*.[1] Bilateral mastectomy was not associated with lower mortality compared with breast-conserving surgery plus radiation.

An observational cohort study examined data from 189 734 women diagnosed with unilateral breast cancer (stages 0-3) from 1998 to 2011. All data were stored in the California Cancer Registry.

"Compared with breast-conserving surgery with radiation (10-year mortality, 16.8% [16.6%-17.1%]), unilateral mastectomy was associated with higher all-cause mortality (hazard ratio, 1.35 [1.32-1.39]; 10-year mortality, 20.1% [19.9%-20.4%])," the study authors said.

No significant difference in mortality was found between breast-conserving surgery with radiation and bilateral mastectomy (hazard ratio, 1.02 [0.94-1.11]; 10-year mortality, 18.8% [18.6%-19.0%]).

The study authors stressed the need for such information given the increase in the number of double mastectomies performed in California from 1998 to 2011. Among the patients studied, 2.0% of patients (1.7%-2.2%) in 1998 underwent bilateral mastectomy; in 2011, 12.3% (11.8%-12.9%) underwent bilateral mastectomy. This represented at 14.3% (13.1%-15.5%) annual increase. The number of bilateral mastectomies was highest among women younger than 40. In 1998, 3.6% (2.3%-5.0%) of patients underwent a bilateral mastectomy; in 2011, 33% (29.8%-36.5%) underwent bilateral mastectomy.

1. Kurian AW, Lichtensztajn DY, Keegan THM, et al. Use of and mortality after bilateral mastectomy compared with other surgical treatments for breast cancer in California, 1998-2011. *JAMA*. 2014;312(9):902-914.

## Active Lifestyles Associated With Lower Health Care Costs, Reduced Hospital Stays, Study Found

Patients with type 2 diabetes who engaged in regular exercise had fewer hospital stays, took fewer medications, and had greater cost savings than nonactive patients, according to a study published in *Diabetes Care*.[1]

Researchers randomized 5121 overweight or obese adults with type 2 diabetes to intensive lifestyle intervention (ILI) or to a diabetes support and education course. Patients were followed for 10 years.

Compared with patients in the diabetes support and education course, patients with no history of cardiovascular disease assigned to the ILI group had an 11% annual reduction in hospitalizations ($P = .004$) and a 15% reduction in the number of days spent in the hospital ($P = .01$). These patients took 6% fewer medications ($P < .001$) and had a 10-year cost savings of $5280 (95% CI, $3385-$7175).

Patients with cardiovascular disease assigned to the ILI group did not see improvements in any of the above categories.

1. Espeland MA, Glick HA, Bertoni A, et al. Impact of an intervention on use and cost of medical services among overweight and obese adults with type 2 diabetes: the action for health in diabetes. *Diabetes Care*. 2014;37(9):2548-2556.

## Minor Infections Linked to Pediatric Stroke Risk, Study Found

Minor infections had a significant but short-lived effect on the risk arterial ischemic stroke (AIS) in pediatric patients, according to a study published in *Neurology*.[1] Total number of minor infections had no effect on the risk of AIS.

Researchers reviewed data from 2.5 million children in a large integrated health care plan from 1993 to 2007 and identified 102 with AIS and 306 age-matched controls. Cases of AIS with severe infection, such as sepsis or meningitis, were excluded from the study.

After adjusting for known pediatric stroke risk factors, researchers found an association between infection and AIS in children who had office visits for minor infections 3 days or fewer from the time of AIS (odds ratio, 12.1; 95% CI, 2.5, 57; $P = .002$). No link was found after 4 days from office visit for minor infections to time of AIS.

The sum of office visits for minor infections over a 2-year time period had no effect on the risk of AIS. Of the minor infections reported in the study, 80% were respiratory infections.

"Proposed mechanisms for the link between minor infection and stroke in adults include an inflammatory-mediated prothrombotic state and chronic endothelial injury," researchers said. "The transient effect of infection in children may suggest a greater role for a prothrombotic mechanism." ■

1. Hills NK, Sidney S, Fullerton HJ. Timing and number of minor infections as risk factors for childhood arterial ischemic stroke. *Neurology*. 2014;83(10):890-897.

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