You’re in the supermarket eyeing a basket of sweet, juicy plums. You reach for the conventionally grown stone fruit, then decide to spring the extra $1/pound for its organic cousin. You figure you’ve just made the healthier decision by choosing the organic product — but new findings from Stanford University cast some doubt on your thinking.

“There isn’t much difference between organic and conventional foods, if you’re an adult and making a decision based solely on your health,” said Dena Bravata, MD, MS, the senior author of a paper comparing the nutrition of organic and non-organic foods, published in the Sept. 4 issue of Annals of Internal Medicine.

A team led by Bravata, a senior affiliate with Stanford’s Center for Health Policy, and Crystal Smith-Spangler, MD, MS, an instructor in the school’s Division of General Medical Disciplines and a physician-investigator at VA Palo Alto Health Care System, did the most comprehensive meta-analysis to date of existing studies comparing organic and conventional foods. They did not find strong evidence that organic foods are more nutritious or carry fewer health risks than conventional alternatives, though consumption of organic foods can reduce the risk of pesticide exposure.

The popularity of organic products, which are generally grown without synthetic pesticides or fertilizers or routine use of antibiotics or growth hormones, is skyrocketing in the United States. Between 1997 and 2011, U.S. sales of organic foods increased from $3.6 billion to $24.4 billion, and many consumers are willing to pay a premium for organic foods can be significantly more expensive, but this doesn’t translate to significant health benefits.
these products. Organic foods are often twice as expensive as their conventionally grown counterparts.

Although there is a common perception — perhaps based on price alone — that organic foods are better for you than non-organic ones, it remains an open question as to the health benefits. In fact, the Stanford study stemmed from Bravata’s patients asking her again and again about the benefits of organic products. She didn’t know how to advise them.

So Bravata, who is also chief medical officer at the health-care transparency company Castlight Health, did a literature search, uncovering what she called a “confusing body of studies, including some that were not very rigorous, appearing in trade publications.” There wasn’t a comprehensive synthesis of the evidence that included both benefits and harms, she said.

“This was a ripe area in which to do a systematic review,” said first author Smith-Spangler, who jumped on board to conduct the meta-analysis with Bravata and other Stanford colleagues.

For their study, the researchers sifted through thousands of papers and identified 237 of the most relevant to analyze. Those included 17 studies (six of which were randomized clinical trials) of populations consuming organic and conventional diets, and 223 studies that compared either the nutrient levels or the bacterial, fungal or pesticide contamination of various products (fruits, vegetables, grains, meats, milk, poultry, and eggs) grown organically and conventionally. There were no long-term studies of health outcomes of people consuming organic versus conventionally produced food; the duration of the studies involving human subjects ranged from two days to two years.

After analyzing the data, the researchers found little significant difference in health benefits between organic and conventional foods. No consistent differences were seen in the vitamin content of organic products, and only one nutrient — phosphorus — was significantly higher in organic versus conventionally grown produce (and the researchers note that because few people have phosphorous deficiency, this has little clinical significance). There was also no difference in protein or fat content between organic and conventional milk, though evidence from a limited number of studies suggested that organic milk may contain significantly higher levels of omega-3 fatty acids.

The researchers were also unable to identify specific fruits and vegetables for which organic

Organic (Continued from page 1)

Organic produce was found to have higher phosphorus than conventionally grown, however few people have phosphorus deficiencies.
appeared the consistently healthier choice, despite running what Bravata called “tons of analyses.”

“Some believe that organic food is always healthier and more nutritious,” said Smith-Spangler, who is also an instructor of medicine at the School of Medicine. “We were a little surprised that we didn’t find that.”

The review yielded scant evidence that conventional foods posed greater health risks than organic products. While researchers found that organic produce had a 30 percent lower risk of pesticide contamination than conventional fruits and vegetables, organic foods are not necessarily 100 percent free of pesticides. What’s more, as the researchers noted, the pesticide levels of all foods generally fell within the allowable safety limits. Two studies of children consuming organic and conventional diets did find lower levels of pesticide residues in the urine of children on organic diets, though the significance of these findings on child health is unclear. Additionally, organic chicken and pork appeared to reduce exposure to antibiotic-resistant bacteria, but the clinical significance of this is also unclear.

As for what the findings mean for consumers, the researchers said their aim is to educate people, not to discourage them from making organic purchases. “If you look beyond health effects, there are plenty of other reasons to buy organic instead of conventional,” noted Bravata. She listed taste preferences and concerns about the effects of conventional farming practices on the environment and animal welfare as some of the reasons people choose organic products.

“Our goal was to shed light on what the evidence is,” said Smith-Spangler. “This is information that people can use to make their own decisions based on their level of concern about pesticides, their budget and other considerations.”

She also said that people should aim for healthier diets overall. She emphasized the importance of eating of fruits and vegetables, “however they are grown,” noting that most Americans don’t consume the recommended amount.

In discussing limitations of their work, the researchers noted the heterogeneity of the studies they reviewed due to differences in testing methods; physical factors affecting the food, such as weather and soil type; and great variation among organic farming methods. With regard to the latter, there may be specific organic practices (for example, the way that manure fertilizer, a risk for bacterial contamination, is used and handled) that could yield a safer product of higher nutritional quality.

“What I learned is there’s a lot of variation between farming practices,” said Smith-Spangler. “It appears there are a lot of different factors that are important in predicting nutritional quality and harms.”

Reference:


Parents know it’s important for children to eat a wide variety of fruits and vegetables, low-fat dairy products, and whole grains. But it’s less clear whether spending the extra money on organic foods will bring a significant benefit to their children’s health.

To offer guidance to parents – and the pediatricians caring for their children’s health – the American Academy of Pediatrics (AAP) has conducted an extensive analysis of scientific evidence surrounding organic produce, dairy products and meat (1). The conclusion is mixed: While organic foods have the same vitamins, minerals, antioxidants, proteins, lipids and other nutrients as conventional foods, they also have lower pesticide levels, which may be significant for children. Organically raised animals are also less likely to be contaminated with drug-resistant bacteria because organic farming rules prohibit the non-therapeutic use of antibiotics.

However, in the long term, there is currently no direct evidence that consuming an organic diet leads to improved health or lower risk of disease. However, no large studies in humans have been performed that specifically address this issue.

“What’s most important is that children eat a healthy diet rich in fruits, vegetables, whole grains, and low-fat or fat-free dairy products, whether those are conventional or organic foods. This type of diet has proven health benefits,” said Janet Silverstein, MD, FAAP, a member of the AAP Committee on Nutrition and one of the lead authors of the report. “Many families have a limited food budget, and we do not want families to choose to consume smaller amounts of more expensive organic foods and thus reduce their overall intake of healthy foods like produce.”


The report outlines the research that has been conducted on organic foods, including convincing evidence of lower exposure to pesticides and less contamination of livestock with drug-resistant bacteria.

“At this point, we simply do not have the scientific evidence to know whether the difference in pesticide levels will impact a person’s health over a lifetime, though we do know that children – especially young children whose brains are developing – are uniquely vulnerable to chemical exposures,” said Joel Forman, MD, FAAP, a member of the AAP Council on Environmental Health and one of the lead authors of the AAP clinical report.

If cost is a factor, families can be selective in choosing organic foods, Dr. Forman said. Some conventionally grown fruits and vegetables tend to have lower pesticide residues. The AAP cites organic shopper’s guides like those provided by Consumer Reports and the Environmental Working Group as references for consumers.

The AAP found no individual health benefit from purchasing organic milk, but emphasizes that all milk should be pasteurized to reduce the risk of bacterial infections. Raw milk increases the risk of serious infection with bacteria including Salmonella, E. coli, Listeria, Campylobacter and Brucella.

Purchasing meat from organic farms that do not use antibiotics for nontherapeutic uses has the potential to reduce antibiotic resistance in bacteria that infect people. The AAP calls for large, well-designed, prospective cohort studies that directly

Children continued on page 5
measure environmental exposures such as estrogen at low levels to understand the impact of hormonal exposure of children through milk and meat.

The AAP report also notes that the motivation to choose organic produce, meat and dairy products may be reasonably based on larger environmental issues, as well as human health impacts like pollution and global climate change.

“Pediatricians want families to have the information they need to make wise food choices,” said Dr. Forman. “We hope that additional research will improve our understanding of these issues, including large studies that measure environmental exposures and neurodevelopment.”

Reference:


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**Can Eating Tomatoes Lower the Risk of Stroke?**

Eating tomatoes and tomato-based foods is associated with a lower risk of stroke, according to new research published in *Neurology*. Tomatoes are high in the antioxidant lycopene.

The study found that people with the highest amounts of lycopene in their blood were 55 percent less likely to have a stroke than people with the lowest amounts of lycopene in their blood.

The study involved 1,031 men in Finland between the ages of 46 and 65. The level of lycopene in their blood was tested at the start of the study and they were followed for an average of 12 years. During that time, 67 men had a stroke. When researchers looked at just strokes due to blood clots, the results were even stronger. Those with the highest levels of lycopene were 59 percent less likely to have a stroke than those with the lowest levels.

“This study adds to the evidence that a diet high in fruits and vegetables is associated with a lower risk of stroke,” said study author Jouni Karppi, PhD, of the University of Eastern Finland in Kuopio. “The results support the recommendation that people get more than five servings of fruits and vegetables a day, which would likely lead to a major reduction in the number of strokes worldwide, according to previous research.”

The study also looked at blood levels of the antioxidants alpha-carotene, beta-carotene, alphatocopherol and retinol, but found no association between the blood levels and risk of stroke.

Reference:


Omega-3 Fatty Acid Supplementation Not Associated With Lower Risk of Major Cardiovascular Disease Events

In a study that included nearly 70,000 patients, supplementation with omega-3 polyunsaturated fatty acids was not associated with a lower risk of all-cause death, cardiac death, sudden death, heart attack, or stroke, according to an analysis of previous studies published in the September 12 issue of JAMA (1).

“Treatment with marine-derived omega-3 polyunsaturated fatty acids (PUFAs) for the prevention of major cardiovascular adverse outcomes has been supported by a number of randomized clinical trials (RCTs) and refuted by others. Although their mechanism of action is not clear, their postulated effect on cardiovascular outcomes may be due to their ability to lower triglyceride levels, prevent serious arrhythmias, or even decrease platelet aggregation and lower blood pressure. Current guidelines issued by major societies recommend their use, either as supplements or through dietary counseling, for patients after myocardial infarction [MI; heart attack], whereas the U.S. Food and Drug Administration has approved their administration only as triglyceride-lowering agents in patients with overt hypertriglyceridemia, and some (but not all) European national regulatory agencies have approved the omega-3 administration for cardiovascular risk modification. The controversy stemming from the varying labeling indications causes confusion in everyday clinical practice about whether to use these agents for cardiovascular protection,” according to background information in the article.

Evangelos C. Rizos, M.D., Ph.D., of the University Hospital of Ioannina, Ioannina, Greece, and colleagues performed a large-scale synthesis of the available randomized evidence by conducting a systematic review and meta-analysis to determine the association between omega-3 PUFAs and major cardiovascular outcomes.

Of the 3,635 citations retrieved, 20 studies with 68,680 randomized patients were included, reporting 7,044 deaths, 3,993 cardiac deaths, 1,150 sudden deaths, 1,837 heart attacks, and 1,490 strokes. Analysis indicated no statistically significant association with all-cause mortality, cardiac death, sudden death, heart attack, and stroke when all supplement studies were considered.

“In conclusion, omega-3 PUFAs are not statistically significantly associated with major cardiovascular outcomes across various patient populations. Our findings do not justify the use of omega-3 as a structured intervention in everyday clinical practice or guidelines supporting dietary omega-3 PUFA administration. Randomized evidence will continue to accumulate in the field, yet an individual patient data meta-analysis would be more appropriate to refine possible associations related to, among others, dose, adherence, baseline intake, and cardiovascular disease risk group,” the authors conclude.

Reference:

Source: JAMA News Releases; Sep. 11, 2012; http://media.jamanetwork.com/news-item/
Although treatment strategies for high triglyceride levels in the blood are well established, new clinical practice guidelines from the Endocrine Society released in the *Journal of Clinical Endocrinology and Metabolism* recommend that more attention should be paid to the ways each person’s unique history, physiology and lifestyle interact to affect risk.

High triglyceride levels in the blood, or hypertriglyceridemia, greatly increase the likelihood of heart disease, but the causes of elevated levels and the degree of risk they pose can differ from person to person, the researchers stress. Genetics, for example, may play a critical role for one patient while the interaction of different drugs may be key for someone else.

The guidelines emphasize the need to scrutinize the way each patient’s genetic profile, diet, lifestyle and medications interact to determine net risk.

"The take-home is that we need to look at all these things in a more personalized way to understand a patient’s risk," said Lars Berglund, a prominent endocrinologist, senior associate dean for research and director of the Clinical and Translational Science Center at UC Davis Health System. Berglund chaired the task force that assessed the current state of diagnosis and treatment for high blood triglyceride levels to set the new guidelines.

Triglycerides are fatty molecules that circulate in the blood as a natural result of the breakdown of food in the gut. They are essential for providing energy to muscles and other tissue. But like LDL cholesterol, excess triglycerides can lodge in arterial walls and increase the risk for atherosclerosis and other cardiac diseases.

The task force pointed out that the causes of excess triglycerides in the blood are not fully understood, but that many aspects of diagnosis and treatment are well established. Fatty foods, smoking and poor exercise, for example, all clearly contribute to risk for high triglyceride and high LDL cholesterol levels. But a diet high in simple sugars, such as from eating lots of white bread or sugary sodas, boosts triglyceride levels without affecting cholesterol.

Similarly, alcohol is a boon to healthy levels of HDL — the "good" cholesterol — but alcohol consumption leads to higher triglyceride counts, the task force reports. Patients who share some of the same risk factors can face different levels of overall risk because of unique differences between them. Understanding the importance of a given risk requires a full profile of each patient.

Certain inherited genetic mutations also can contribute to overall risk, but lifestyle, diet and other factors appear to account for more cases of high triglyceride levels than do genetics, Berglund said. When combined with smoking, poor diet or limited exercise, genetic vulnerabilities pose particularly high risks.

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Triglycerides (Continued from page 7)

The task force pointed out that statins are effective against high triglyceride levels, but unusually high levels call for stronger medicines. Drugs known as fibrates are the first line of defense against excessive triglyceride levels, which can cause pancreatitis, an inflammation that poses severe health problems and is often fatal.

A concern that is often under the radar is how drugs prescribed to treat other medical conditions can interact to raise blood triglyceride levels, the report stresses. For example, a drug called a bile acid sequestrant, prescribed for high LDL, can raise borderline triglyceride to potentially dangerous levels.

"Perhaps the most pressing under-addressed concern is the need to consider all of a patient’s history and risk-factor burden in assessing vulnerability to atherosclerosis," Berglund said.

Reference:


Changes in Sleep Increase Hunger, Eating

A new study shows that both length of time and percentage of overall sleep spent in different sleep stages are associated with decreased metabolic rate, increased hunger, and increased intake of calories (specifically from fat and carbohydrates). The findings suggest an explanation for the association between sleep problems and obesity.

Researchers from St. Luke’s-Roosevelt Hospital and Columbia University investigated the effects of sleep architecture on hunger to determine whether specific stages of sleep, rather than simple duration, would affect changes in appetite and food desires in healthy adults.


Researcher Ari Shechter and colleagues designed a laboratory-based, randomized crossover study of 27 healthy adults between the ages of 30 and 45. Participants underwent two six-day periods of laboratory observation—a “habitual sleep” phase, during which they were allowed nine hours to sleep, and a “short sleep” phase, during which they were...
allowed four hours to sleep. Each phase was separated by four weeks to ensure full recuperation from the short sleep condition and to ensure that women were observed at the same phase of their menstrual cycle under each condition. Sleep duration and composition were assessed using polysomnographic recording. The amount of time spent in each sleep phase—stage 1, stage 2, slow wave sleep (or SWS—stage 3 and 4 combined) and REM sleep—was determined and expressed in minutes and as a percentage of total sleep time.

For the first four days in both phases, participants ate meals calibrated to meet their energy requirements for weight maintenance. On day four, participants were asked to rate their hunger and level of desire for different foods. Resting metabolic rate (RMR) was measured in the fasted state on day five, and participants were then allowed to select their own foods for the final two days. Researchers compared participants’ sleep architecture in the short sleep and habitual sleep condition, and analyzed the relationships between their sleep architecture, RMR, food intake and appetite-satiety ratings.

Shechter and colleagues found that, compared to habitual sleep length, the short sleep condition resulted in reductions in the duration and percentage of stage 2 and REM sleep and increased the percentage of total sleep time spent in SWS. Some of these changes were related to decreased RMR, increased feelings of hunger, and increased intake of calories, fat, and carbohydrate. Specifically, there was a positive association between stage 2 sleep duration and RMR, and an inverse relation between stage 2 sleep percentage and calories consumed—i.e., the less stage 2 sleep, the lower RMR and more calories consumed. There was an inverse relationship between REM sleep duration and hunger, and an inverse relationship between the amount of stage 2 sleep and desire for sweet and salty food. Reduced percentage of sleep time spent in REM sleep, as well as SWS, was also associated with greater fat and carbohydrate intake.

The results reinforce that sleep duration is important, but show that the composition of sleep—the time and percentage of overall sleep spent in each stage—is also playing an important role in the relationship between sleep and obesity. “Any number of various factors like obstructive sleep apnea, certain drugs/medications, chronic exposure to short sleep duration, shift work, jet lag, and changes in the scheduling of the sleep episode, can affect sleep stage quantity and distribution,” said Shechter. “Our data may provide an explanation for the greater obesity prevalence observed within some of these conditions.”

Reference:

Prenatal Maternal Smoking Associated With Increased Risk of Adolescent Obesity

Prenatal exposure to maternal cigarette smoking appears associated with an increased risk for adolescent obesity, and is possibly related to subtle structural variations in the brain that create a preference for eating fatty foods, according to a report published by Archives of General Psychiatry (1).

“Prenatal exposure to maternal cigarette smoking is a well-established risk factor for obesity, but the underlying mechanisms are not known,” the authors write as background information. “Preference for fatty foods, regulated in part by the brain reward system, may contribute to the development of obesity.”

Amirreza Haghighi, M.D., of the Hospital for Sick Children, Toronto, Canada, and colleagues, studied 378 adolescents age 13 to 19 years who were recruited through high schools in one region of Quebec, Canada, as part of the ongoing Saguenay Youth Study. Participants were grouped as exposed to maternal smoking (n=180) or nonexposed to maternal smoking (n=198) and participants in each group were matched at recruitment by maternal education and participant’s school attendance to minimize confounding influence of socioeconomic status (SES), and did not differ by sex, age, puberty stage or height.

The authors defined exposed as having a mother who smoked more than one cigarette a day during the second trimester of pregnancy, and nonexposed as having a mother who did not smoke one year before (and throughout) the pregnancy.

Exposed versus nonexposed participants weighed less at birth and were breastfed for shorter periods of time. At the time of analysis, exposed participants had a marginally higher body weight and BMI, and a significantly higher total body fat compared with nonexposed participants. These differences persisted after adjustment for age, sex, and height (when appropriate), and were still significant when adjusting for additional variables frequently associated with maternal smoking during pregnancy (i.e., lower birth weight, shorter duration [or lack of] breastfeeding, and lower SES).

Exposed versus nonexposed participants also exhibited a significantly lower volume of the amygdala (part of the brain that plays a role in processing emotions and storing memories), and the authors found that, consistent with its possible role in limiting fat intake, amygdala volume correlated inversely with fat intake.

“Prenatal exposure to maternal cigarette smoking may promote obesity by enhancing dietary preference for fat, and this effect may be mediated in part through subtle structural variations in the amygdala,” the authors conclude.

Reference:


Older Overweight Children Consume Fewer Calories Than Their Healthy Weight Peers

A new study by University of North Carolina School of Medicine pediatrics researchers finds a surprising difference in the eating habits of overweight children between ages 9 and 17 years compared to those younger than 9 (1).

Younger children who are overweight or obese consume more calories per day than their healthy weight peers. But among older overweight children the pattern is reversed: They actually consume fewer calories per day than their healthy weight peers.

How to explain such a seemingly counterintuitive finding?

“Children who are overweight tend to remain overweight,” said Ashley Cockrell Skinner, PhD, assistant professor of pediatrics at UNC and lead author of the study published by the journal Pediatrics.

“So, for many children, obesity may begin by eating more in early childhood. Then as they get older, they continue to be obese without eating any more than their healthy weight peers,” Skinner said. “One reason this makes sense is because we know overweight children are less active than healthy weight kids. Additionally, this is in line with other research that obesity is not a simple matter of overweight people eating more — the body is complex in how it reacts to amount of food eaten and amount of activity.”

These results also suggest that different strategies may be needed to help children in both age groups reach a healthy weight. “It makes sense for early childhood interventions to focus specifically on caloric intake, while for those in later childhood or adolescence the focus should instead be on increasing physical activity, since overweight children tend to be less active,” Skinner said. “Even though reducing calories would likely result in weight loss for children, it’s not a matter of wanting them to eat more like healthy weight kids — they would actually have to eat much less than their peers, which can be a very difficult prospect for children and, especially, adolescents.”

These findings “have significant implications for interventions aimed at preventing and treating childhood obesity,” Skinner said.

In the study, Skinner and co-authors Eliana Perrin, MD, MPH, and Michael Steiner, MD, examined dietary reports from 19,125 children ages 1-17 years old that were collected from 2001 to 2008 as part of the National Health and Nutrition Examination Survey (NHANES). They categorized the weight status based on weight-for-length percentile in children less than 2 years old, or body mass index (BMI) percentile for children between 2 and 17, and performed statistical analyses to examine the interactions of age and weight category on calorie intake.

Reference:

Higher Levels of BPA in Children and Teens Associated With Obesity

In a nationally representative sample of nearly 3,000 children and adolescents, those who had higher concentrations of urinary bisphenol A (BPA), a manufactured chemical found in consumer products, had significantly increased odds of being obese, according to a study in the September 19 issue of JAMA, and theme issue on obesity.

“In the U.S. population, exposure [to BPA] is nearly ubiquitous, with 92.6 percent of persons 6 years or older identified in the 2003-2004 National Health and Nutrition Examination Survey (NHANES) as having detectable BPA levels in their urine. A comprehensive, cross-sectional study of dust, indoor and outdoor air, and solid and liquid food in preschool-aged children suggested that dietary sources constitute 99 percent of BPA exposure,” according to background information in the article. “In experimental studies, BPA exposure has been shown to disrupt multiple metabolic mechanisms, suggesting that it may increase body mass in environmentally relevant doses and therefore contribute to obesity in humans.” BPA exposure is plausibly linked to childhood obesity, but evidence is lacking.

Dr. Trasande and colleagues conducted a study to examine association between urinary BPA concentrations and body mass in children. The study consisted of a cross-sectional analysis of a nationally representative subsample of 2,838 participants, ages 6 through 19 years, randomly selected for measurement of urinary BPA concentration in the 2003-2008 National Health and Nutrition Examination Surveys. Body mass index (BMI), converted to sex- and age-standardized z scores (indicates how many units [of the standard deviation] a child's BMI is above or below the average BMI value for their age group and sex) was used to classify participants as overweight (BMI 85th percentile or greater for age/sex) or obese (BMI 95th percentile or greater). The median (midpoint) urinary BPA concentration for participants in the study was 2.8 ng/mL. The prevalence of obesity was 17.8 percent (n = 590), and overweight 34.1 percent (n = 1,047). The BPA concentrations of the participants were divided into quartiles (four groups). Controlling for race/ethnicity, age, caregiver education, poverty to income ratio, sex, serum cotinine level, caloric intake, television watching, and urinary creatinine level, children in the lowest urinary BPA quartile had a lower estimated prevalence of obesity (10.3 percent) than those in quartiles 2 (20.1 percent), 3 (19.0 percent), and 4 (22.3 percent). Compared with the first quartile, participants in the third quartile had approximately twice the odds for obesity. Participants in the fourth quartile had a 2.6 higher odds of obesity.

Further analyses showed this association to be statistically significant in only 1 racial subpopulation, white children and adolescents. The researchers also found that obesity was not associated with exposure to other environmental phenols commonly used in other consumer products, such as sunscreens and soaps.

“To our knowledge, this is the first report of

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BPA (Continued from page 12)

an association of an environmental chemical exposure with childhood obesity in a nationally representative sample,” the authors write.

The researchers note that advocates and policy makers have long been concerned about BPA exposure. “We note the recent FDA ban of BPA in baby bottles and sippy cups, yet our findings raise questions about exposure to BPA in consumer products used by older children. Last year, the FDA declined to ban BPA in aluminum cans and other food packaging, announcing ‘reasonable steps to reduce human exposure to BPA in the human food supply’ and noting that it will continue to consider evidence on the safety of the chemical. Carefully conducted longitudinal studies that assess the associations identified here will yield evidence many years in the future.”

Reference:


You Have to Eat Except When You're Not Hungry

When compared to their normal-weight siblings, overweight and obese children ate 34 percent more calories from snack foods even after eating a meal, reports a University of Pennsylvania School of Nursing researcher in the American Journal of Clinical Nutrition (1). That can be enough calories, if sustained over time, to continue excess weight gain.

In a study of 47 same-sex sibling pairs, the research showed that, even after eating a meal they enjoyed until they were full, overweight and obese children were more prone to overeating when presented with desirable snack foods than their normal-weight siblings.

The study also showed that normal-weight siblings ate less of the meal when provided with a calorie-dense appetizer just before the meal. In comparison, overweight and obese siblings did not lessen the amount they ate at the meal enough to offset the additional calories from the appetizer.

“‘The overweight and obese siblings showed an impaired ability to adjust for calorie differences and consumed more snacks even when satiated,’” said lead author Tanja Kral, Ph.D., an assistant professor at Penn Nursing. “These findings suggest some children are less responsive to their internal cues of hunger and fullness and will

Hungry continued on page 14
Hungry (Continued from page 13)

continue eating even when full.”

This inability may be inherited and exacerbated by an environment that offers large portions of desirable foods, said Dr. Kral, explaining that the full siblings in the study were more similar in their eating behaviors than the half-siblings, suggesting a genetic influence underlying these traits.

In the study, siblings ate a standardized dinner of pasta with tomato sauce, broccoli, unsweetened applesauce, and two percent milk once a week for three weeks. When presented with desirable post-meal snack foods, the overweight and obese siblings ate an average of 93 calories more than their normal-weight siblings. This additional calorie intake over time is considered enough to lead to excess weight gain.

“These findings may represent a behavioral inclination for obesity in children,” Dr. Kral said. “Future studies should test whether teaching children to focus on internal satiety cues and structuring the home food environment in a healthy way may prevent at-risk children from overeating.”

Reference:


Source: Penn Nursing Science In Action; Sept. 24, 2012; http://www.nursing.upenn.edu/sia/Pages/You-Have-to-Eat-Except-When-You%27re-Not-Hungry.aspx

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Study Finds Rural Residents More Likely To Be Obese Than Urban Counterparts

A new study finds that Americans living in rural areas are more likely to be obese than city dwellers (1). Published in the National Rural Health Association’s Fall 2012 Journal of Rural Health, the study indicates that residential location may play an important role in the obesity epidemic.

Led by researchers at the University of Kansas, the study analyzed data collected by the National Center for Health Statistics and is the first in more than three decades to use measured heights and weights. Previous studies have relied on self-reported data, which typically underestimate the prevalence of obesity.

Christie Befort, assistant professor of

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preventive medicine and public health at the University of Kansas Medical Center, believes there may be two significant reasons why rural residents are more likely to be overweight: cultural diet and physical isolation.

“There is a definite cultural diet in rural America, full of rich, homemade foods, including lots of meat and dessert,” said Befort, who led the study. The study, which also examined demographic and lifestyle factors, found that rural Americans typically consume a diet higher in fat.

Rural residents also face challenges to accessing health care, prevention and lifestyle activities.

“Access is often about travel time in a rural area, but it can also be that there’s no place to go—literal physical isolation,” said Befort. “It’s tough to get to a gym if you live outside of a town without one.”

The research demonstrated that the rural-urban obesity disparity existed in younger Americans, ages 20-39, but not in older age groups. Befort believes this can be partially attributed to increased mechanization of previously labor-intensive jobs.

“Physical activity is now needed to compensate for diet and technology,” said Befort. “That requires cultural change because rural areas typically don’t have a culture of physical activity as leisure time.”

Befort examined several factors which are thought to affect obesity, including diet, physical activity, age, race, gender and education. The researchers discovered that even when other contributing factors are held constant, rural residents were more likely to be obese.

“Living in a rural area isn’t always recognized as a category for obesity-related health disparities, but, according to our study, it should be,” said Befort.

“We simply cannot ignore the link between obesity and poverty, and the disproportionate impact this is having on rural America,” said Alan Morgan, the National Rural Health Association’s CEO. “If we truly want to decrease health care costs and improve the nation’s health status, we are going to have to start viewing obesity as a top-tier public health concern for rural Americans.”

Reference:


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