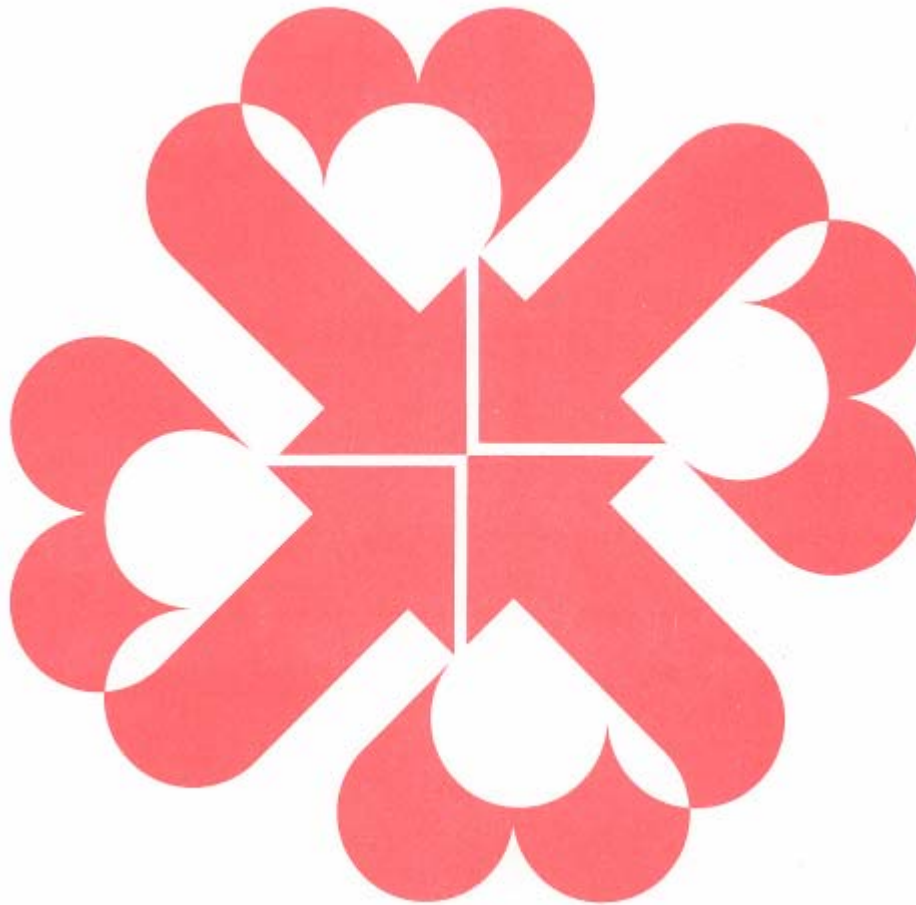


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# healthy heart beats



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# Healthy Heart Program Updates

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## *In This Issue*

With the holidays rapidly approaching, everyone starts to be concerned about adding those extra inches from over indulgence of the many culinary temptations. It is very important to retain an exercise routine despite the many demands being made on us as we dash from place to place.

A study reported in the *Journal of the American College of Cardiology* on September 16, 2008 showed that obesity has overtaken smoking as the leading cause of premature heart attack. This recent research has shown that a heart attack occurs earlier in people who are overweight or obese. While the study determined a heart attack occurs 3.5 years earlier in overweight people than in normal weight people, those who were obese (BMI over 30) had a first heart attack 6.8 years earlier than those with lower weight. Someone who was severely obese had a heart attack 12 years earlier. Fitness matters regardless of BMI. This further indicates the need to keep weight under control, stay active, and take those walks after a big holiday dinner to maintain fitness while enjoying the holiday season.

Adequate vitamin D is of interest and concern to many. It will no doubt be a topic of much discussion at the Dietary Guidelines Advisory committee meetings that are noted in this issue of *Healthy Heart Beats*. While the recommended intake by many is 800 – 1,000 IU per day, that amount is difficult if not impossible to obtain through foods. Very few foods naturally contain vitamin D. Orange juice is now being fortified with vitamin D along with other foods. Be cautious of your intake of high fat foods such as oils and spreads

where vitamin D may be present naturally. Those high fat foods will boost your intake to higher levels that may not be prudent.

However, oily fish that we have recommended for years is an excellent source. Some of you may recall a speaker at the 2006 Lillian Fountain Smith conference who raised our awareness of vitamin D. The message was one of awareness and the link between vitamin D nutritional status and health. This issue of the newsletter adds more credence to this concern. We'll keep you posted, but watch the work from the Dietary Guidelines scientific committee as they begin their work.

Enjoy the healthier choices such as veggies and salmon at holiday parties and remember to stay active and avoid those extra pounds in the New Year.

Happy Holiday season from us!

*Jennifer Anderson, Ph.D., R.D.*  
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# Nutrition and Research Updates

## Heart Attack Risk Increases with ‘Western’ Diet

Though diet is accepted to be a major modifiable risk factor for cardiovascular disease, dietary patterns vary according to different regions of the world. The INTERHEART study examined the dietary patterns of 16,000 participants in 52 countries by analyzing 5,761 heart attack cases (experimental group) and compared them to 10,646 people without known heart disease (control group). The researchers were able to identify three dietary patterns in the world:



- Oriental – higher intake of tofu, soy and other sauces
- Prudent – higher intake of fruits and vegetables
- Western – higher intake of fried foods, salty snacks, eggs and meat

"The objective of this study was to understand the modifiable risk factors of heart attacks at a global level," said Salim Yusuf, professor of medicine at McMaster University and director of the Population Health Research Institute at Hamilton Health Sciences in Ontario, Canada and the study's senior author. The researchers created a dietary risk score questionnaire including both “healthy” and “unhealthy” foods for heart attack patients and adjusted it for dietary preferences for each country. Trained medical personnel interviewed both groups. After adjusting for known risk factors, researchers found:

- People consuming a Prudent diet of more fruits and vegetables had a 30 percent lower risk of heart attack compared to people who ate little or no fruits and vegetables.
- People consuming a Western diet had a 35 percent greater risk of having a heart attack compared to people who consumed little or no fried foods and meat.
- The Oriental dietary pattern showed no relationship with heart attack risk. Researchers said that while some components of the Oriental pattern may be protective, others such as the higher sodium content of soy sauces may increase cardiovascular risk, resulting in neither positive nor negative relationships.



The dietary pattern recommended by the American Heart Association is similar to the Prudent diet described in this study. This study helped confirm current dietary recommendations that emphasize the consumption of more fruits and vegetables to help reduce the risk of having a heart attack in populations worldwide, he said. "At the same time, an unhealthy dietary intake, assessed by a simple dietary risk score, accounts for nearly one-third of the world population's attributable risk," Yusuf said.

Source: American Heart Association, October 20, 2008—*Circulation: Journal of the American Heart Association*  
<http://circ.ahajournals.org/cgi/content/abstract/CIRCULATIONAHA.107.738716v1?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=Yusuf+western+diet&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>

## Mediterranean Diet Protective

Greater adherence to a traditional Mediterranean diet rich in fish, fruits and vegetables, olive oil and low in red meat, dairy products and moderate consumption of red wine especially during meals offers substantial protection against cancer, heart disease and degenerative diseases, Italian researchers concluded.

This is the first known study which reviewed all the available data for a possible association between sticking to the Mediterranean diet, premature death, and the occurrence of chronic diseases in the general population. Previous research on the Mediterranean diet suggests that it has a protective role in cardiovascular disease and cancer, but no study has reviewed all the available data for a possible association between sticking to the Mediterranean diet, premature death, and the occurrence of chronic diseases in the general population. People who did this had a 9 percent drop in death from heart disease, a 13 percent reduction in incidence of Parkinson's and Alzheimer's disease and a 6 percent reduction in cancer compared to those who were not as diligent, their study found.



Francesco Sofi, a clinical nutrition researcher, and colleagues at the University of Florence reviewed 12 international studies which included more than 1.5 million people whose eating habits and health were followed for periods of three to 18 years. All the studies examined the concept of using a numerical score to estimate how much people stuck to the diet, called an “adherence score.” Using a random effects model, the researchers found a two point increase in the adherence score for a Mediterranean diet, which was significantly associated with a reduced risk of mortality from any cause.

"These results seem to be clinically relevant for public health, particularly for encouraging a Mediterranean-like dietary pattern for primary prevention of major chronic diseases," wrote Sofi. The researchers suggested this tool could be used by doctors to help educate patients to eat better resulting in better health and increased longevity. The findings confirm the current guidelines and recommendations from all major scientific institutions.

Source: *British Medical Journal*, 2008, 337:a1344. (September)

## Fiber Reduces Risk of Coronary Heart Disease

In a study investigating the effect of dietary fiber on coronary heart disease and long term mortality, data was collected from 1,373 men born between 1900 and 1920. During a 40-year period (1960 to 2000) the subjects were examined. Out of the 1,130 who died during that 40-year period, 348 died of coronary heart disease. Mortality due to coronary heart disease was reduced by 17 percent and all-cause mortality was reduced by 9 percent for every additional 10 grams of dietary fiber consumed daily.



The strength of the association between long-term dietary fiber intake and all-cause mortality decreased from age 50 years to age 80 years. The study authors were unable to draw conclusions regarding specific associations for different types of dietary fiber. The authors concluded that "a higher recent dietary fiber intake was associated with a lower risk of both coronary heart disease and all-cause mortality. For long-term intake, the strength of the association between dietary fiber and all-cause mortality decreased with increasing age."

Source: *American Journal of Clinical Nutrition*, 2008, 88(4): 1119-1125. (October)

## Vitamin D Critical to Longevity

The risk of death from all-cause mortality may increase by 26 percent due to inadequate vitamin D according to a study investigating levels of vitamin D in a nationwide survey examining mortality in the overall population. The results showed 41 percent of men and 53 percent of women in the United States were not getting enough vitamin D. "The importance of vitamin D may be underappreciated," said lead author Dr. Michal Melamed, a clinical fellow at Johns Hopkins University. "There are studies that link low vitamin D levels to the development of cardiovascular disease (CVD), peripheral arterial disease, diabetes, hypertension and different cancers," she said.

The researchers collected data on more than 13,000 men and women who took part in the Third National Health and Nutrition Examination Survey. Levels of vitamin D were collected in 1988 and 1994, and the participants were followed through 2000. During more than eight and a half years of follow-up, 1,806 people died. Among these, 777 died from cardiovascular disease. Of these, 400 were found to be deficient in their vitamin D levels.

"Those who had the lowest levels of vitamin D had a 26 percent higher risk of death from all causes compared to those with the highest vitamin D levels," Melamed noted. Among other things, vitamin D is essential for maintaining levels of calcium and phosphorus in the body. "Vitamin D may be very important for overall health," Melamed said.



Melamed explained that when the subgroups were analyzed, the risk for mortality was more evident in those who did not have CVD at the beginning of the study compared with those who did have CVD. "This suggests to us that maybe, if vitamin D is playing a role in CVD, it is acting before the disease is established," she said, adding that the time has now come for a randomized controlled trial with vitamin D looking specifically at cardiovascular events or mortality as an end point.

Source: *Archives of Internal Medicine*, 2008, 168(15):1629-1637. (August)

# Resources

## Isoflavones Database

A newly updated food composition database of plant chemical compounds called isoflavones is now accessible online. Isoflavones are a subclass of flavonoids found in large amounts in soybeans and soy foods as well as in small amounts in some other foods. They have mild estrogen-like properties and other biological characteristics which may reduce the risk of some chronic diseases. The new database provides analytical values for three individual isoflavone compounds--genistein, daidzein and glycitein--in nearly 550 foods. These are grouped under 21 separate categories, such as "Legume Products," "Vegetables," "Baked Products," and "Baby Foods."

The updated database was compiled by searching the scientific literature for various databases. In assembling the database, the researchers conducted an extensive review of various data sources and evaluated scientific articles published in peer-reviewed journals since 1999. All the data were evaluated by a data quality evaluation system.

The new Isoflavone Database has been made available by the Agricultural Research Service (ARS) and can be accessed online at: <http://www.ars.usda.gov/nutrientdata/isoflav>.

## Dietary Guidelines 2010

In a press release issued by the USDA Agricultural Secretary, Ed Schafer, and Health and Human Services Secretary, Mike Leavitt, revealed the names and expertise for each of the 13 individuals selected to join the 2010 Dietary Guidelines Advisory Committee. These two agencies meet every five years to issue a new set of guidelines. To see the press release, go to <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/DGACpressrelease10-24-08.pdf>.

“Since 1984 the Department of Agriculture has developed and issued food guidance for the American public. In this long evolution of providing the most up-to-date dietary guidance, the *Dietary Guidelines for Americans* have become recognized as the Nation’s cornerstone of Federal food policy. The *Dietary Guidelines* are of particular importance to nutrition education of the general public and in strengthening the Nation’s food assistance programs which include SNAP (Supplemental Nutrition Assistance Program formerly known as the Food Stamp Program), and the School Lunch and WIC Programs,” said Secretary Schafer. “Additionally, I want to emphasize that this will be an open and transparent process. All meetings are open to the public, and all meeting minutes and transcripts will be posted on-line at [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).”



“While the *Dietary Guidelines* are designed for a healthy population, they become increasingly important as we aim to reduce the burden of disease and death related to public health

problems such as obesity, diabetes, cardiovascular disease, cancer, and other chronic illnesses. This Committee will consider the most current and sound scientific literature as the members develop their *Report*. From this Report, the Departments of Agriculture and Health and Human Services will jointly develop the *2010 Dietary Guidelines for Americans* as well as a consumer publication,” said Secretary Leavitt. “Updating the Dietary Guidelines supports the President’s *HealthierUS Initiative* which promotes eating a nutritious diet, physical activity, preventive screenings and making healthy choices. We are committed to ensuring that the public receives the best nutrition guidance available that will help them live longer, healthier lives.”

## Physical Activity Guidelines



Health and Human Services has released the most current Physical Activity Guidelines which may be viewed online at <http://www.health.gov/paguidelines/>.

- **2008 Physical Activity Guidelines for Americans** – for policy makers and health professionals
- **Be Active Your Way: A Guide for Adults** – for adults aged 18—64
- **2008 Physical Activity Guidelines for Americans Toolkit** – for organizations and communities
- **2008 Physical Activity Guidelines Advisory Committee Report** – for health professionals and researchers

Guidelines were issued for the following groups:

- Children and adolescents—should include bone-strengthening exercises in addition to moderate or vigorous physical activity
- Adults—should do moderate to vigorous physical activity as well as muscle strengthening activities
- Older adults—should follow the guidelines for older adults unless modifications are necessary due to health status
- Pregnant women—encouraged to be moderately physically active at a minimum
- Adults with disabilities—encouraged to follow guidelines for adults within their ability
- Adults with chronic medical conditions—should follow guidelines set by health care provider

## Feeding Kids Newsletter

Check out the latest Feeding Kids Newsletter by Connie Evers, MS, RD. It is published quarterly (January, April, September, and November) for parents, educators and health professionals. To subscribe, go to – <http://nutritionforkids.com/Subscribe2.htm>.

## Handouts Updated

Food and Health Communications has updated their free handouts which may be accessed at: <http://www.foodandhealth.com/handout.php>. The list of free handouts for 2009 include –

- 100 Calorie Snack Guide
- 10 Commandments of Weight Loss
- Best Quick Meals
- Carbohydrate 101
- 15 Ways to More Fruits and Vegetables
- Fruit and Vegetable Puzzle
- Lean Meal Planner
- MyPyramid - Get the Facts
- Whole Grain Guide

Additionally, free holiday nutrition education materials are available:

- Free Holiday Issue of Communicating Food for Health:  
<http://www.foodandhealth.com/holidayCFFH.pdf>
- Free Handout—“Holiday Eating Without the Weight”  
<http://www.foodandhealth.com/Nov03-6.pdf>



## Free PowerPoint and Brochure

The University of Nebraska-Lincoln Extension has released several new free resources:

- The PowerPoint "Supermarket Savings: 16 Tips that Total BIG Bucks!" may be downloaded at: <http://lancaster.unl.edu/food/supermarket-savings.shtml>.
- A downloadable brochure, “Fitness Indulgence,” is available at <http://lancaster.unl.edu/food/fitness.shtml>. The brochure inspires enthusiasm for physical activity by changing how you think about it.

## Team Nutrition Newsletter

The November issue of the Team Nutrition Newsletter developed by USDA and/or state agencies may be viewed at:

[http://healthymeals.nal.usda.gov/hsmrs/TN\\_Newsletters/TN\\_Newsletter\\_Nov\\_2008.pdf](http://healthymeals.nal.usda.gov/hsmrs/TN_Newsletters/TN_Newsletter_Nov_2008.pdf).

The newsletter shares ideas which may be used to promote healthy eating and physical activity for all children. For more information regarding USDA's Team Nutrition and how to enroll the schools in your community as a Team Nutrition School, go to the USDA Web site at <http://teamn nutrition.usda.gov/team.html>. Resources are available through Team Nutrition to schools and child care facilities that participate in Federal Child Nutrition Programs. These resources are available to the following:

- Foodservice Professionals
- Educators
- Parents
- Child Care Providers

**Please remember** to credit the source for free resources used as PowerPoint presentations, handouts, articles, etc.

## Did You Know . . . ?

**Q.** I have read that vitamin D is important for my heart as well as my bones. What are the current recommendations? Can I get enough just from sunlight—especially in the winter?

**A.** During the winter months our exposure to sunlight is more limited, which decreases our vitamin D intake naturally from the sun. During the summer months ten to fifteen minutes of unprotected sun exposure is adequate for sufficient vitamin D.

Recent research studies have suggested a possible link to our blood vessels though the underlying mechanism isn't fully understood. [See Nutrition Research and Updates in this issue of *Healthy Heart Beats*, "Vitamin D Critical to Longevity."] In this study led by Dr. Melamed, the researchers concluded that those in the lowest quartile of vitamin-D levels had a 26% higher risk of all-cause mortality and a similar increased risk of cardiovascular disease (CVD) mortality.

Whether vitamin D supplements are effective isn't yet known, Melamed said. "That's the million-dollar question," she said. "I think people should optimize their diet and sun exposure to get an adequate level of vitamin D without taking supplements," Melamed said. "It may be a good idea for people who are at risk for vitamin D deficiency, including African-Americans and people who don't spend a lot of time in the sun, to get their vitamin D levels checked by their doctor."

Vitamin D has been promoted as essential for bone health to help us avoid the risk of osteoporosis and fractures. New studies are showing that vitamin D is critical to risk factors for heart disease including hypertension, diabetes, obesity and high triglycerides. It may also be linked to the risk for autoimmune diseases, certain cancers, infections, depression, and mortality. Though more studies are needed to determine the extent of vitamin D's health benefits, the latest evidence strongly suggests getting adequate vitamin D. Current recommendations for vitamin D up to age 50 are 200 IU, 400 IU between the ages of 51 and 70, and 600 IU after age 70. These amounts are based on the need for vitamin D to prevent bone disease. Some experts now suggest optimal intakes should be higher, with at least 800 to 1,000 IU recommended for healthy adults.

Supplements can help you meet the recommended level of vitamin D of 800 to 1000 IU if the sun is not a reliable source, your diet is lacking, or your physician makes the recommendation. Be particularly vigilant of your intake if you're over the age of 50. Keep in mind the recommended daily intake according to your age and avoid taking more than 2000 IU as excess amounts of this fat soluble vitamin may be toxic. "It's tempting to think that an essential nutrient is safe at any level—that if some is good, more is better—but that isn't always true," said Dr. Paul M. Coates, director of the NIH Office of Dietary Supplements. "There are potential harms associated with high levels of many nutrients." When supplements are taken, total the amount of vitamin D from all supplement sources.

The American Heart Association recommends healthy people get adequate vitamin D by eating a variety of foods in moderation rather than by taking supplements. Certainly, supplements aren't a substitute for consuming a balanced diet and shouldn't be the first line of defense. Salmon and tuna are good natural sources. Check the labels of milk, cheese, yogurt, orange juice, and breakfast cereal for added vitamin D. Take a self-inventory of your own diet, and make the best choices to ensure you are getting adequate vitamin D for strong bones and a strong heart. For more information, see the Office of Dietary Supplements Fact Sheet: <http://ods.od.nih.gov/factsheets/vitamind.asp>.

Source: *Amer J Clin Nutr*, 2008, 87(2):323-331. (February); <http://enews.tufts.edu/stories/101399BlueberriesMayImproveMemory.htm>.

# Spotlight

## Laura Bellows, Ph.D., M.P.H., R.D.

Laura Bellows, Ph.D., M.P.H., R.D. received her bachelor's in Exercise Science and Health Promotion from Miami University in Ohio, her Masters of Public Health in Human Nutrition from the University of Michigan and her Doctorate in Nutrition from Colorado State



University. Dr. Bellow's research interests include childhood obesity; development, implementation, and evaluation of theory-based nutrition education and physical activity programs and materials; and chronic disease prevention.

Dr. Bellows is a research scientist and interim Extension specialist in the Department of Food Science and Human Nutrition at Colorado State University (CSU). She started her career with CSU in 2000 as an Extension agent in Boulder County with the Food Stamp Nutrition Education Program (formerly FSNE, now known as SNAP: Supplemental Nutrition Assistance Program). In 2001 she began working at CSU with the *Food Friends*<sup>®</sup> and *Mighty Moves*<sup>™</sup> programs for preschoolers. Both *Food Friends*<sup>®</sup> and *Mighty Moves*<sup>™</sup> have been extensively evaluated and have been published in several peer-reviewed journals.

More recently, Dr. Bellows has been working with and supporting Extension agents across Colorado as the interim Extension specialist for Nutrition and Health Promotion. She is a co-leader for the Core Competency Area: Health Promotion and Chronic Disease Prevention. Dr. Bellows adds that she is excited about her work with Extension agents and the collective effort to make Colorado healthier.

Dr. Bellows is a native of New Jersey and has slowly moved her way west (and lost her Jersey accent). She and her husband, Ryan, live in Boulder. Together, they enjoy being active in the Colorado outdoors hiking, skiing, camping, and spending time with their two dogs. Their true passion is traveling. Having been to many countries and continents, they never tire of experiencing other cultures and customs.

# Dining a la Health

## Avoid Risky Drinking During the Holidays

Many people choose to celebrate the holidays with alcohol. Certainly social occasions lend themselves to both serving and consuming alcohol. Some people drink during the holidays to relieve stress. Others select special drinks, such as hot buttered rum or eggnog, for the holidays and may drink little at other times of the year. In moderation, alcohol consumption is not a problem.

“The main problem with holiday drinking is that people are often drinking for longer periods of time than they normally do, and they’re staying up later than they normally do. They may not have a good frame of reference for how the alcohol will affect them,” says Dr. Dennis Twombly, a scientist at NIH’s National Institute on Alcohol Abuse and Alcoholism.

Low levels of alcohol can act as a stimulant. “At low doses, alcohol has effects that the brain perceives as positive and rewarding,” Twombly explains. “It can cause euphoria and relieve anxiety and stress.” At higher levels, alcohol’s impact on the brain begins to take a downturn. It can act as a depressant and make you sleepy. Twombly says, “You start to see effects on other areas of the brain like the cerebellum, which causes people to lose their balance and coordination. Their reaction times may become slower. Their ability to speak may become somewhat impaired.” Inhibition and judgment are also affected, and emotions can become unstable.



Alcohol quickly moves from your stomach into your bloodstream, where it travels to all your major organs and tissues. Eating before you drink helps slow down this process. When alcohol reaches your liver, it is converted to other substances. Liver enzymes, however, can only break down about half of an alcohol-containing beverage per hour.

If you drink alcohol faster than your liver can clear it, the alcohol levels in your blood will climb. Binge drinking in particular—for men, defined as 5 or more drinks over a 2-hour period; for women, 4 or more—can quickly raise your blood alcohol above the legal limit. This excess alcohol continues to circulate throughout the body long after your last drink, affecting your heart, brain and other organs. For those who overdo it the worst consequence is drunk driving—especially if it causes a deadly traffic accident.

If you choose to drink alcohol during a holiday celebration:

- Drink responsibly. Limit yourself to half of an alcohol-containing drink per hour.
- Eat something to avoid drinking on an empty stomach.
- Alternate alcohol-containing drinks with non-alcoholic ones such as water, soda or juice.
- Choose a designated driver to get everyone home safely after the celebration.

*Source:* NIH News in Health