



**American Heart Association Comments on the World Health Organization's
"Guideline: Sugars intake for adults and children"**

DALLAS, March 31, 2014 -- The American Heart Association (AHA), including the American Stroke Association (ASA) and more than 22.5 million AHA and ASA volunteers and supporters applaud the efforts by the World Health Organization (WHO) to reduce the global burden of disease. In fact, AHA has adopted the WHO global goal to reduce premature mortality of non-communicable diseases (NCD) by 25% by 2025. We welcome the opportunity to contribute comments to the WHO Nutrition Guidance Expert Advisory Group (NUGAG) Subgroup on Diet and Health draft Guideline: *Sugars intake for adults and children*.

The WHO guidance document is a major advance towards improving global health and reducing non-communicable disease risk. WHO strongly recommends reducing consumption of free sugars throughout the life-course based on prevention of dental caries and the prevention and control of unhealthy weight gain. WHO also strongly recommends that both adults and children do not consume more than 10% of total energy as free sugars and conditionally recommends a further reduction to less than 5% of total energy consumed as free sugars; for a 2,000 calorie diet this would limit sugar intake to 12.5 or 6.25 teaspoons of free sugars, respectively. WHO defines free sugars as monosaccharides and disaccharides added to food or naturally present in honey, syrups, fruit juices, and fruit concentrates.

The WHO based its recommendations on a systematic review of studies that examined the association between excess energy intake from sugars and body weight. It is noteworthy that the evidence on the relationship between sugar intake and weight has burgeoned over the last several years. Further, there are several recent influential studies which support the WHO recommendations. In particular, the AHA wishes to highlight 3 studies published in the *New England Journal of Medicine* which demonstrate a robust direct association between higher dietary sugars intake from sugar-sweetened beverages (SSB) and weight gain in children, adolescents, and adults.

- De Ruyter and colleagues determined that replacing 104 kilocalories (kcal) of energy from SSBs with a non-caloric beverage significantly reduced weight gain and fat accumulation in 4-11 year old children¹.
- In a study of overweight and obese 9th and 10th graders, Ebbeling and colleagues showed that replacing SSBs with non-caloric beverages significantly slowed weight gain after one year of intervention and the effects persisted one year after follow-up in Hispanic adolescents².

¹ De Ruyter, JC. et al., A Trial of Sugar-free or Sugar-Sweetened Beverages and Body Weight in Children. *NEJM*. September 21, 2012.

² Ebbeling, CB. et al., A Randomized Trial of Sugar-Sweetened Beverages and Adolescent Body Weight. *NEJM*. September 21, 2012.

- In a prospective analysis of 33,097 non-obese adults, Qi and colleagues demonstrated that the genetic associations with adiposity were more pronounced with higher SSB intake³.

Several health organizations and dietary guidance documents, such as the Dietary Guidelines for Americans, echo the WHO's recommendation that consumers should limit consumption of added sugars. In the 12 years since the Institute of Medicine (IOM) established that the Dietary Reference Intake (DRI) for added sugars should not exceed 25% of energy⁴, many researchers have demonstrated evidence of the harmful effects of added sugars, especially SSBs. It is widely accepted by nutrition experts that the DRI for sugars, released in 2002, is extremely outdated.

In 2009 the AHA developed a scientific statement on sugars and cardiovascular health. AHA's recommendations are based on research that shows foods and beverages high in added sugars tend to displace nutritious foods and are generally high in calories and low in nutritional value. Further, the AHA statement summarized evidence that added sugars are associated with many of the major risk factors for heart disease including overweight and obesity, dyslipidemia including elevated triglycerides, chronic inflammation and hypertension.

AHA's recommendations align well with the WHO recommendations. AHA recommends that no more than half of a person's discretionary calorie allowance (daily empty calorie allowance) should be spent on added sugars and that most women should not eat more than 100 calories from added sugars, or about 6 teaspoons, per day and most men no more than 150 calories, or about 9 teaspoons, per day of added sugars⁵. AHA defines added sugars according to the US Department of Agriculture and the Dietary Guidelines for Americans: sugars and syrups that are added to foods or beverages when they are processed or prepared⁶.

AHA strongly supports and welcomes this WHO guideline to help direct Member States to limit the amount of sugars in children's diets and halt the rise of global obesity and other chronic diseases associated with high added sugars consumption, especially SSBs. AHA has an aggressive goal of improving the cardiovascular health of the US population by 20% by 2020, and we are measuring our achievement of that goal through seven heart health factors, including blood pressure, glucose, cholesterol, physical activity, tobacco use, body weight, and healthy diet. An important component of

³ Qi, Q. et al., Sugar-Sweetened Beverages and Genetic Risk of Obesity. *NEJM*. September 21, 2012.

⁴ Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. September 5, 2002. Available: <http://www.iom.edu/Reports/2002/Dietary-Reference-Intakes-for-Energy-Carbohydrate-Fiber-Fat-Fatty-Acids-Cholesterol-Protein-and-Amino-Acids.aspx>. Accessed March 24, 2014.

⁵ Johnson, RK. et al., Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association. *Circulation*. August 24, 2009, U.S. Department of Agriculture. What Are Empty Calories? Available: <http://www.choosemyplate.gov/weight-management-calories/calories/empty-calories.html>. Accessed March 24, 2014.

⁶ U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans 2010. Available: <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>. Accessed March 27, 2014.

the AHA healthy diet metrics is to limit SSBs to 36 ounces or 450 calories a week, based on a 2000 calorie diet and should be scaled accordingly for other levels of caloric intake⁷.

In their draft guidance, WHO focused its analysis and recommendations on two health outcomes: excess weight gain and dental caries. The Expert Advisory Group did not focus on other cardiovascular outcomes because “measures aimed at reducing overweight and obesity are likely to also reduce, for example, the risk of developing type 2 diabetes and CVD, and the complications associated with those diseases.” Based on a robust body of scientific evidence, AHA strongly recommends that WHO include these important outcome measures in the final guidelines. Recent studies, most published after the AHA Scientific Statement on Added Sugars, have shown that dietary sugars are independently associated with higher blood pressure in an analysis of U.S. adults without a history of hypertension⁸ and that reducing consumption of SSBs and dietary sugars are associated with reduced blood pressure⁹. Similarly, researchers have demonstrated that dietary sugars are independently associated with coronary heart disease¹⁰ and that there is a significant relationship between added sugars consumption and increased risk of cardiovascular mortality in a recent prospective analysis of U.S. adults¹¹.

Global SSB consumption increased from 9.5 gallons to 11.4 gallons per person per year during the past 2 decades¹². As Gross Domestic Product (GDP) increased and low- to middle-income countries urbanized, sugar consumption and sedentary lifestyle increased¹³. Increased SSB and sugar intake significantly associated with higher incidence of overweight, obesity, diabetes, and hypertension and these findings were robust in low- and middle-income countries.

While Americans’ consumption of added sugars decreased between 2000 and 2007, intake remains high and well above our AHA recommendations. On average, American children consume 17 percent of their total energy per day from added sugars and adults consume 22 teaspoons - or 352 calories - of added sugars per day. In an effort to reach the dietary sugar goals, AHA supports listing added sugars on the nutrition fact labels to better inform consumers when they are making food purchasing decisions. The recommendations in the WHO draft guidance document to reduce sugar intake below 10% of total energy are needed to achieve important global public health goals.

We believe that setting specific, quantitative goals for reducing added sugars consumption is critical for reducing non-communicable disease burden across the globe. Importantly, there is no adverse effect from reducing sugar intake.

⁷ American Heart Association. (2014). Life's Simple 7®: Eat Better. Available: http://www.heart.org/HEARTORG/Conditions/More/MyHeartandStrokeNews/Lifes-Simple-7-Eat-Better_UCM_449577_Article.jsp. Accessed March 27, 2014.

⁸ Jalal, DI. et al., Increased Fructose Associates with Elevated Blood Pressure. *J Am Soc Nephrol*. September, 2010.

⁹ Chen, L. et al., Reducing Consumption of Sugar-Sweetened Beverages Is Associated With Reduced Blood Pressure A Prospective Study Among United States Adults. *Circulation*. May 24, 2010.

¹⁰ Liu, S. et al., A prospective study of dietary glycemic load, carbohydrate intake, and risk of coronary heart disease in US women. *Am J Clin Nutr*. June, 2000.

¹¹ Yang, Q. et al., Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults. *JAMA Internal Medicine*. February 03, 2014.

¹² Basu, S. et al., Relationship of soft drink consumption to global overweight, obesity, and diabetes: a cross-national analysis of 75 countries. *Am J Public Health*. November, 2013.

¹³ Siervo, M. et al., Sugar consumption and global prevalence of obesity and hypertension: an ecological analysis. *Public Health Nutr*. March, 2014.

In closing, AHA appreciates the work of the WHO and the NUGAG in developing and requesting public comment on the Draft Guideline on Sugars Intake for Adults and Children. Thank you for considering our comments about including information in the final report about the adverse effects of added sugars on cardiovascular disease. We look forward to the release of WHO's final recommendations on dietary sugar consumption. If you have any questions, please feel free to contact Dr. Kathryn Taubert, Vice President of Global Strategies (Kathryn.taubert@heart.org).