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consumption, but this message was not clear or specific to age, gender, quantity and/or frequency. Latin America and the Caribbean will face a challenge that will affect their optimal fluid intake. Estimates predict a rise of 4 °C in temperature for the next years, according to the study “Turning down the Heat” from World Bank. Another challenge is the need of surveying populations in the Latin American region to assess the intake patterns of different types of fluids (water and all other beverages) across gender and the life cycle. This requires developing the water and fluids intake references for the Latin American population for different climatic conditions.

Key words: water, hydration, food, Latin American countries

Evidence behind daily water and beverage intake recommendations

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Water requirements to meet hydration needs can be met by plain water, by water from caloric and non-caloric beverages, and by moisture from foods. The Dietary Reference Intake (DRI) values for water, established by the Institute of Medicine (IOM) in the US and the European Food Safety Authority (EFSA) in Europe, are based in part on observed population intakes of plain drinking water (tap and bottled); water from other caloric and non-caloric beverages, and on moisture from foods. For children, the US IOM recommendations for adequate intakes (AI) for water are 1,700 mL/d for boys and girls aged 4-8y and 2,100 mL/d for girls and 2,400 mL/d for boys aged 9-13.

Being mostly water, beverages contribute more to hydration than they do to energy intakes. Based on the national food consumption data for the US, plain drinking water and beverages accounted for up to 75% of total water intakes, with the remaining 25% provided by moisture in foods. By contrast, solid foods provided as much as 81.3% of daily calories for people aged >4y, whereas caloric beverages provided only 18.7%. Among the key beverages consumed in the US are plain drinking water, milk, juices, sodas and fruit drinks, coffee and tea.

Most data on beverage consumption patterns and consumption trends in the US come from federal agencies. The ongoing National Health and Nutrition Examination Survey (NHANES) conducted by the National Center for Health Statistics is the prime source of beverage consumption data, based on one or 2-day food recalls. The NHANES data are based on a representative sample of the US population, spanning different demographics and age groups. The US Department of Agriculture maintains national food availability data, useful for tracking long-term time trends by beverage category.

Consumption patterns of different beverages vary sharply by age. Young children are more likely to drink milk, whereas older adults are more likely to drink coffee. The consumption of citrus juices and sodas reaches a peak in adolescence but declines in adult life. Consumption patterns can also vary by socioeconomic status (SES). In the US, the consumption of plain tap water, bottled water, skim milk, and diet soft drinks has been linked to higher education and to higher incomes. By contrast, the consumption of regular soda and whole milk was linked to lower SES.

Nutrient density of beverages has been expressed in nutrients per calorie and nutrients per serving. While drinking water, tap and bottled, contains no calories and no nutrients, other beverages are important dietary sources of vitamin C, potassium, calcium and other vitamins and minerals. Although sweetened beverages are the biggest source of added sugars, they are not the biggest source of dietary calories. Added sugars account for about 13-18% of total daily calories in the American diet, depending on age. Sugar sweetened beverages (SSBs) account for about 40% of added sugars, on the average. Thus, the mean contribution of SSBs to total daily calories in the US has been estimated at 6-7%. Recent national data for the US point to a sharp decline in energy intakes from sugar sweetened beverages. The consumption of added sugars has also declined.

In summary, relying on food moisture does not come close to satisfying daily hydration needs. Water and beverages supplied 75% of daily water intakes, depending on age. Importantly non caloric plain water, both tap and bottled, contributed between 30% and 37% of total water intakes. Drinking plain drinking water and beverages is the key to satisfying hydration needs.

Key words: drinking water, beverages, hydration, calories, trends

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