

**Managing Water for Consumers, by Nestle
USA Beverage Guidance Panel Recommendations**

	Beverages from 'most Recommended' to 'Least Recommended'					
	Water	Unsweetened Tea and Coffee	Low-fat Milk and Fortified Soy-based	Noncalorically - Sweetened	Caloric, with Some Nutrients	Calorically - Sweetened
Recommended Quantity for Daily Consumption	20 to 100% of total beverage intake daily.	Coffee: up to 32 fl oz (4 cups) Tea: up to 64 fl oz (8 cups)	Up to 16 fl oz	Up to 32 fl oz	Fruit juices: up to 8 fl oz Alcohol: up to 1 drink (women), up to 2 drinks (men) Whole milk, Sports drinks: None	Up to 8 fl oz
Positive Health Effects	Essential for normal metabolism, physiological functions; may provide essential minerals such as calcium, magnesium, fluoride.	Studies indicate a correlation between regular coffee consumption and lower risks of Type-2 diabetes, colorectal cancer, and male Parkinson's disease.	Key sources for Vitamin D, calcium; high quality protein.	None	Alcohol in moderation has some health benefits.	None
Other Health Issues	Acute dehydration results in impaired cognition, moodiness, poor thermoregulation, reduced cardiovascular function, impaired physical work capacity. Research indicates that increasing water proportion of beverages is linked to body weight and fat reductions.	Although tea provides flavonoids, antioxidants and a few micronutrients there is minimal evidence of positive systemic health benefits. Pregnant women should lower their daily caffeine intake to less than 300 mg.	Milk may provide bone health and contributes a number of essential nutrients for children and adults.	The noncalorically - sweetened beverages (diet sodas and other "diet" drinks) are preferable to calorically - sweetened beverages. Research suggests that the high-sweetness may contribute to conditioning for sweetness preference.	Vegetable juices contain excessive sodium levels. Whole milk contains more calories and saturated fat than low-fat or skim milk.	Linked to dental caries, increase energy intake, weight gain, Type-2 diabetes.

References:

- Popkin, Barry M., L. Armstrong, G.M. Bray, B. Caballero, B. Frei, and W.C. Willett. (2006) A new proposed guidance system for beverage consumption in the United States. *American Journal of Clinical Nutrition* 83: 529-542.
- Popkin, Barry M., and S.J. Nielsen (2003) The sweetening of the world's diet. *Obesity Research* 11:1325-1332.
- Rolls BJ, Bell EA, Thorwart ML (1999) Water incorporated into a food but not served with a food decreases energy intake in lean women. *American Journal of Clinical Nutrition* 70:448-455.

Level 1: Water

From 20% to 100% of each person's beverage needs can come from water. Recent research has shown an increased proportion of beverages from water is linked to reduced energy intake along with significant body weight and body fat reductions. This is from a longitudinal study where water intake was changed as part of other interventions and the in-depth nutritional and medical measures were collected bi-monthly on these adults.

Level 2: Unsweetened Tea and Coffee

Coffee: Drink up to 4 cups (32 oz.) daily. Several prospective cohort studies have observed significant inverse associations between regular coffee consumption and the risk of Type 2 diabetes. High intakes of coffee have been associated with significant reductions in colorectal cancer risk, and both coffee and caffeine consumption have been associated with significant reductions in the risk of Parkinson's disease in men but not women.

Tea: Drink up to 8 cups (64 oz.) daily. Black, green, and oolong tea are the 3 main categories of tea consumed in the world. Tea provides a variety of flavonoids and antioxidants as well as a few micronutrients, in particular fluoride. In humans, there is minimal evidence to show that tea consumption lowers cancer and heart disease risk or is biologically very active.

Caffeine intake: There are greater amounts of caffeine in coffee than tea. Human studies indicate that caffeine consumption of up to about 500 mg /day does not cause dehydration or chronic water imbalance. Pregnant women need to limit their caffeine intake to less than 300 mg /day. The magnitude of caffeine's beneficial effects is smaller at low and high levels, but greater at intermediate levels.

Level 3: Low Fat (1%) and Skim (Nonfat) Milk and Fortified Soy Beverages

Drink a total of 0-16 fl oz daily of all these beverages. Low fat and skim milk (or low fat yogurt or fortified soymilk), especially for children, are key sources of vitamin D, calcium, and high-quality protein. There is not sufficient evidence to support any effect of milk or dairy products on weight loss. Milk may improve bone health; however, the benefits of higher calcium intake on bone mineral density are not maintained if the high intake is reduced. Milk products are also important contributors to the intake of other essential nutrients in the diets of children and adolescents.

Level 4: Noncalorically-Sweetened Beverages

Drink 0 to 32 fl oz. daily of these beverages, but beware of caffeine content. The noncalorically-sweetened beverages (diet sodas and other "diet" drinks) are preferable to calorically-sweetened beverages. New literature is emerging that seems to suggest that the high sweetness in these

beverages may contribute to conditioning for a high preference for sweetness, and thus these noncalorically-sweetened beverages would be less desirable than water, tea, or coffee.

Level 5: Caloric Beverages with Some Nutrients

Drink 0-8 fl oz. daily. Fruit juices (100% juice) provide little nutrient benefit and excessive calories. Vegetable juices are healthier, but contain excessive sodium. Drink none. Whole (full fat) milk contains a large amount of calories and also excessive saturated fat and should not be consumed. Drink none. Sports drinks should be consumed sparingly because these beverages provide calories and no benefit, except for endurance athletes. Drink 0-1 glasses alcohol (women) and 0-2 glasses daily for men. Alcoholic beverages consumed in moderation have some health benefits for adults.

Level 6: Calorically-Sweetened Beverages

Drink 0-8 fl oz. daily. Heavily sweetened soft drinks, juice drinks, and other sugared- water beverages must be consumed sparingly. They have been linked to dental caries, increased energy intake, weight gain, and Type 2 diabetes.