

A Tea By Any Other Name...

All tea comes from the *Camellia sinensis* plant, a warm-weather evergreen. How the fresh leaves of the tea plant are processed and their length of contact with oxygen determine the resulting types of tea. During oxidation, tea leaves undergo natural chemical reactions that result in distinctive color and taste characteristics. Green and white teas are not oxidized at all – the leaves are steamed, rolled and dried, while black tea is allowed to oxidize for two to four hours. Oolong tea falls somewhere between green and black teas, in that the leaves are only partially oxidized.

Tea is grown in thousands of tea gardens or estates around the world, resulting in an unlimited number of flavorful varieties. Like wines, each tea takes its name from the district in which it's grown, and each district is known for producing tea with unique flavor and character. Tea is also divided by grades, determined by leaf size. Smaller sized leaves are generally used in tea bags and to make bottled tea while the larger sized leaves can be found in packaged loose tea.

Herbal teas do not come from *Camellia sinensis*, but are an infusion of leaves, roots, bark, seeds or flowers of other plants. They lack many of the unique characteristics of tea and are not linked with the research on the potential health benefits of traditional teas.



Healthy Beverage Guidelines



When it comes to a healthy diet, many people focus on what they eat but not on what they drink. Given that beverages now account for more than 20 percent of total daily calories, about twice as many kcal calories as an average recommendation, this has become an issue of concern. Recently a panel of leading nutrition experts created "Healthy Beverage Guidelines" that apply the nutrition principles of balance, variety and moderation to beverages, to help consumers make better choices. The Guidelines emphasize consuming water first because of its ability to hydrate – the primary goal of fluids – without adding calories. The beverage recommended after water is tea. Up to eight servings of unsweetened tea per day are recommended because tea is naturally calorie-free and provides the added health benefit of antioxidant flavonoids. Non-fat milk is also recommended for the nutrients it provides, while beverages that should be consumed less often due to their higher calorie per nutrient ratio include sports drinks and 100% fruit juices. Regular soda and juice drinks should be limited the most, to no more than one serving per day. For full details about the Healthy Beverage Guidelines, visit www.teacouncil.org.



This tea brochure is brought to you by The Tea Council of the USA
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Tea and Health Deliverables:
For more information about tea and health and a complete list of references, log onto www.teacouncil.org.

TEA To Your HEALTH

Did You Know...

Tea is the second most popular beverage in the world next to water?

Tea was discovered by accident nearly 5,000 years ago?

Tea contains naturally occurring plant compounds that may be good for your health?

Tea is an ancient beverage that is loved by people around the world. Green tea is most popular in Asian countries, while black tea is the brew of choice for folks in the U.S. and Western Europe. Whether it's enjoyed hot with milk and sugar or in a tall glass over ice, tea's popularity continues to grow.

According to legend, the custom of tea drinking began around 2737 BC when some tea leaves accidentally blew into a pot of boiling water belonging to the Chinese Emperor Shen Nung. Always savored as a flavorful refreshment, ancient people believed that the brew of the *Camellia sinensis* plant cured a variety of ailments. Today, scientists are finding that those early perceptions of tea's healthfulness may have merit.

Recent studies conducted with both black and green tea have yielded exciting results suggesting that natural compounds in tea may, in fact, help to maintain good health.

TEA AND A HEALTHY LIFESTYLE

Like fruits, vegetables and other plant-based foods, tea has been shown in numerous studies to have significant health benefits. Some scientists believe that tea's beneficial effects may be the result of the naturally occurring compounds in tea called flavonoids, which have antioxidant properties. Flavonoids are present in fruits and vegetables, but are concentrated in tea. Both decaffeinated and regular tea provide substantial amounts of these natural antioxidant flavonoids.



TEA & HEART HEALTH

Heart disease is the leading cause of death among both men and women in the U.S., afflicting nearly one quarter of all Americans. There are many ways to help fight the disease, and a healthy diet and exercise are among them.

For years, research in populations has suggested that tea drinking is associated with improved cardiovascular health. Recently, both clinical and population studies also have found heart health benefits from drinking tea.

- A combined analysis of 13 published studies found an average estimated 11 percent lower rate of heart attacks among study participants who drank three or more cups of tea per day.

- A large Japanese population study found that, among men and women, those who drank just over two cups (about 17 ounces) of green tea per day reduced their risk of death from cardiovascular disease by 22 to 35 percent, compared to those who drank less than a half-cup (3.5 ounces) of green tea daily.

Scientists believe tea provides heart health benefits in a variety of ways. Research has associated tea drinking with reduced risk for hypertension, stroke and atherosclerosis, or hardening of the arteries. Other studies suggest that tea may improve blood vessel and endothelial function and help to control blood clotting, thereby supporting healthy blood flow and circulation.

Sipping tea for your health

BONE HEALTH A cup of tea may not only taste great, it may be good for bone health as well. While tea is no replacement for low-fat or skim milk or other calcium rich foods associated with bone health, preliminary research suggests that tea drinkers may have stronger bones later in life. One European study found that women who drank tea actually had higher bone mineral density measurements than women who did not drink tea. While it is unclear how tea provides a bone-strengthening function, tea is a source of fluoride, which supports healthy bones. More studies need to be conducted to truly understand the connection between compounds in tea and bone health. In the meantime, having a splash of skim or low-fat milk in your cup of tea can certainly help boost bone-building minerals in your diet.

TYPE 2 DIABETES Preliminary research suggests that drinking tea may reduce the risk of Type-2 Diabetes. Several laboratory studies have isolated potential mechanisms by which tea may decrease the risk of diabetes, including changes to energy balance, food intake, lipid and carbohydrate metabolism and the antioxidant activities of flavonoids. Population-based studies also have found a reduction of risk for this disease among tea drinkers compared to non-tea drinkers.

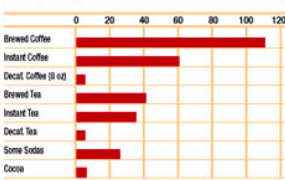
ORAL HEALTH Tea – black or green, white or oolong – may contribute to oral health. Some experts believe that the flavonoids in tea may inhibit the ability of oral bacteria to form harmful plaque deposits. In addition, tea's naturally occurring fluoride may support healthy tooth enamel.

ENDURANCE AND LEAN BODY MASS Some animal model studies have shown that tea flavonoids help prevent excess calories from being stored as body fat while others have found that tea improves endurance during exercise. In human studies, tea flavonoids have been shown to increase resting energy expenditure, while increasing fat metabolism, making it easier to achieve a lean body mass.

TEA HAS HALF THE CAFFEINE

Caffeine is a natural component of tea and is generally considered safe when consumed in moderation. A serving of tea usually contains less than half the caffeine of an equal size serving of coffee (or 40mg). Actual caffeine levels are dependent upon the specific blends and strength of the tea brew.

Average Milligrams Caffeine per Standard Beverage Serving



Source: US Food and Drug Administration & Tea Council of the USA

TEA & CANCER RESEARCH

Preliminary research suggests that the flavonoids in tea could play a role in reducing human cancer risk, possibly by combating free radical damage; inhibiting uncontrolled cell growth (cell proliferation); promoting programmed cell death (apoptosis); and boosting the immune system to help fend off the development and promotion of cancer cells. While not all studies have found a reduced risk of cancer with tea drinking, there are promising preliminary results suggesting a correlation between tea drinking and reduced risk of breast, prostate, lung and skin cancers and cancers of the mouth and digestive tract. In addition, research suggests that tea flavonoids may be useful as an adjunct to cancer pharmaceuticals, such as taxanes for breast cancer treatment.

While the majority of clinical and human population studies on tea and cancer are related to green tea and green tea extract, emerging research suggests that both green and black teas would provide similar benefits. For example, population studies in Europe and Asia have correlated a lower incidence of prostate cancer with those who drink the most tea. A recent study in Sweden found that women in the study who drank two or more cups of tea a day, either green or black, had a 46 percent reduced risk of ovarian cancer compared with non-tea drinkers. In addition, some studies in Asia and Europe have reported a reduced risk of breast, stomach and lung cancer among women who drink the most tea. And, among Asian women with breast cancer, risk of metastasis was reduced among those who drink the most green tea.

BREWING FOR PERFECTION

FOR THE BEST CUP OF TEA:

Bring fresh cold tap water to a full, rolling boil. Use one teaspoonful of loose tea or one tea bag per cup (five to eight ounces) of water. Pour the boiling water over the tea. Steep three to five minutes. If you prefer your tea less strong, add more water after the steeping period.



FOR ICED TEA:

For small quantities, proceed as for hot tea and pour over ice. For large quantities, prepare a concentrate as follows: Bring one quart of cold water to a rolling boil. Remove from heat and add 8-10 tea bags per quart of tea desired. Steep 3-5 minutes and pour into remaining cold water or over ice cubes to prepare quantity desired. To serve, pour into a tall glass filled with ice, garnish and sweeten as desired.



(Note: This recipe uses 50 percent more tea than needed to make hot tea to allow for dilution by ice.)