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Tea Fact Sheet – 2024

Tea is the most widely consumed beverage in the world next to water and can be found in more than 80% of all U.S. households. It is the only beverage commonly served hot or iced, anytime, anywhere, for any occasion. On any given day, some 160 million Americans are drinking tea.

Annual Consumption: (U.S.)

In 2023, Americans consumed almost 86 billion servings of tea, or close to 4 billion gallons. About 86% of all tea consumed was black tea, 13.6% was green Tea, and the small remaining amount was oolong, white, and dark tea.

Year-on-year full year imports were lower in 2023 than 2022 with both green and black teas declining in volume vs. 2022 imports by some -8.2% and -12.5% respectively. However, it should be noted that the import declines in 2023 were due to supply chain issues experienced in 2021-2022, not to an equivalent reduction in consumption. In fact, traditional tea bag markets generally held their own while out of home and specialty tea improved. While some tea category volumes declined, dollar values increased year on year. Consumers drank tea to ease stress, relax, calm and center themselves. Additionally, research validating tea's ability to boost immune systems certainly helped, as did a recent peer reviewed paper on bio-actives in tea highlighting tea as the best source of these important compounds.

The U.S. continues as the third largest importer of tea in the world after Russia and Pakistan.

More than four in five consumers drink tea, with millennials being the most likely (87%+ of millennials drink tea) consumers. However, Gen Z's are making a strong move to tea, a particular outcome from the pandemic.

Daily Consumption: (U.S.)

On any given day, more than one half of the American population drinks tea. On a regional basis, the South and Northeast have the greatest concentration of tea drinkers.

Iced Tea Consumption:

Approximately 75 - 80% of tea consumed in America is iced.

Ready-To-Drink Iced Teas:

The RTD tea category growth resumed with an estimated growth of some 3 – 5% despite competition from other beverages and COVID impacts. Volume declined slightly but dollar growth was evident.

Tea Bags, Herbal & Loose Tea:

The bagged/loose leaf tea segment through traditional channels continued to hold on to much of share advances achieved in 2020, when consumers turned to tea to help them get through the pandemic.
The Foodservice sector grew from low levels due to COVID in 2020 and has continued its volume gains throughout 2023, with many companies reporting that they are back to pre-pandemic volumes. High-end specialty teas continue to grow, providing opportunities for consumers to enjoy unique teas and indulge in quality, straight from origin products.

Current Sales:

In 2023, total U.S. black and green tea imports were 230 million pounds. This represents year on year decline vs. 2022 of some -12.9%. As mentioned previously, much of the decline was due to extensive inventory builds through 2022-23 to defend against global supply chain issues

Hot tea, foodservice/OOH (out of home) and specialty tea continue their growth and consumer appeal, although on a volume basis tea bags, pods and RTD all had slight declines.

Green tea has declined to ~13.6% of total tea imports.

Organic tea grew in 2023 by 2.6% and makes up 2.1% of total imports. Green Organic represents 86.8% of this category.

Anticipated Sales: (U.S.)

Despite the impact of COVID and reduced imports, the tea industry returned to its recent pattern of growth, with an anticipated $ CAGR of 3 -5%. This growth will continue to be tested in 2024 as inflation continues to impact all consumers, producers, importers and packer. The return to work that was anticipated towards the end of the pandemic has instead driven employees to demand hybrid home/office concessions. This trend continues, despite many efforts to encourage employees to return full time to the office. This continues to bode well for in-home tea consumption and should help support Grocery / DMM channels. Tea's variety, convenience, health benefits, sustainability efforts, availability, continued innovation, and the discovery of unique, flavorful, and high-end specialty teas will provide the fuel. Long term success relies on the continued adoption of tea by new consumers who constantly seek healthy food and beverage choices. We are seeing this exact behavior, particularly from millennials, gen Z's and baby boomers.

Varieties:

Black, green, oolong, dark, and white teas all come from the same plant, a warm-weather evergreen named *Camellia sinensis*. Differences among the five types of tea result from the various degrees of processing and the level of oxidization. Black tea is fully oxidized and oolong teas are partially oxidized. After withering and rolling, the tea leaves undergo natural chemical reactions resulting in taste and color changes which develop the tea's distinguishing characteristics. Green & white teas are not oxidized after leaf harvesting. Oolong tea's level of oxidation is midway between that of black and green teas, and also lies in the middle in its strength and color. Dark teas may or may not be oxidized but are microbially fermented after manufacture.

Grown In:

Much of the world's tea is grown in mountainous areas 3,000 – 7,000 feet above sea level, situated between the Tropics of Cancer and Capricorn in mineral-rich and acidic soil. Over 30 countries grow tea with leading tea-producing countries being Argentina, China, India, Indonesia, Japan, Kenya, Malawi, Sri Lanka, Tanzania, Taiwan, Turkey and Vietnam.

History:

Tea is nearly 5,000 years old, purportedly discovered in 2737 BC by Chinese Emperor Shen-Nung, aka "The Divine Healer". As legend tells us, some tea leaves accidentally blew into the Emperor's pot of boiling water and created the first tea brew. According to Chinese tea scholars, the Emperor, as a botanical explorer, accidentally poisoned himself some 85 times, each time being cured by this wonderful brew.

In the 1600's, tea became highly popular throughout Europe and the American colonies. Tea played a dramatic part in the establishment of the United States of America. In 1767 the British Government passed the Revenue Act (one of the Townshend Acts) putting a tax on tea, as well as any British china, glass, lead, paint, and paper, imported to America. In 1770, after much protest, the Townshend Acts were repealed, and all taxes removed with the exception of the tax on tea. In 1773, the passage of the Tea Act, granting a monopoly to the British East India Company on all tea sales to the American Colonies, effectively raised tea prices. Protesting this monopoly, which drove tea prices higher, as well as "taxation without representation" re: the tax on tea by Parliament, an incensed group of colonists, the Sons of Liberty, took actions in their own hands. On the night of December 16, 1773, men dressed as Native Americans (Mohawk Indians) boarded British ships in Boston Harbor and threw more than 300 chests of tea into the sea. While not the only instance of tea being thrown overboard or otherwise destroyed in protest throughout the

colonies, this most famous Boston Tea Party was said to be a principal act leading to the Revolutionary War.

Anna, Duchess of Bedford, is credited with creating *Afternoon Tea* in 1840, when she began taking tea with a light snack around 4:00 p.m. to ward off "that sinking feeling."

High Tea originated with the rural and working-class British, who would return to their homes at about 6:00 p.m. for a meal of potted meats, fish, cheese, salads, sweets, and a pot of strong tea. The U.S. played a significant role in the history of tea, inventing the tea bag and popularizing iced tea in 1904. Recently, the U.S. has led the rest of the world in marketing convenient ready-to-drink forms of tea in bottles and cans. The U.S. is also the only country in the world that consumes most of its teas chilled.

Environmental Qualities:

Tea is an all-natural and environmentally sound product from a renewable source. Tea supports sustainability in three ways: ecological, social, and economic. Hundreds of thousands of workers are involved with the growing, production and manufacturing of the tea that you consume every day. The tea plant is naturally resistant to most insects; oxidation of the tea leaf is a natural process; and many tea packers use recycled paper for packaging. The Tea industry is currently on the path to achieve carbon neutrality.

Health Qualities:

Teas derived from the *Camellia sinensis* plant naturally contains health-promoting bioactive compounds mainly comprised of flavonoids.

Tea is a refreshing beverage that contains no sodium, fat, carbonation, or sugar. It is virtually calorie-free. Tea helps maintain proper fluid balance and may contribute to overall good health.

Every day, new findings from the international scientific community lend credibility to tea's healthy properties. Recent research has explored the potential health attributes of tea through studies in humans, animal models and through *in vitro* laboratory research. For the most part, studies conducted on green and black tea, which both come from the *Camellia sinensis* plant, have yielded similar results. Recent research suggests that tea and tea flavonoids may play important roles in various areas of health and may operate through several different mechanisms still being explored.

Research continues, and the list of key areas of research are as follows:

Flavan-3-ols:

In 2022, this first ever daily bioactive recommendation was developed by an international expert panel of scientists convened by The Academy of Nutrition and Dietetics, funded through The Institute for the Advancement of Food and Nutrition Science.[1] The scientific panel followed a four-step framework designed to develop evidence-based recommendations for safe and effective intakes of bioactives that have broader effects on promoting health rather than primarily preventing deficiency or decreasing chronic disease risk.[2]

Tea is an excellent source of bioactive flavan-3-ols. Two cups of green or black tea supplies 400-600 mg flavan-3-ols, which is the recommended daily intake shown to help reduce risk associated with cardiovascular disease and diabetes and improve a number of metabolic markers including blood pressure, cholesterol, and blood sugar.[1]

Caffeinated Tea and Hydration:

Both caffeinated and decaffeinated tea are hydrating beverages. Adequate water intake is important to maintain hydration and vascular volume, absorb metabolic heat, transport nutrients and waste, and as a solvent for biochemical reactions in the body.[3] The Food and Nutrition Board of the Institute of Medicine reference intakes for water state that caffeinated beverages appear to contribute to the daily total water intake at rates similar to that of non-caffeinated beverages. Caffeinated tea supplies up to approximately 50 mg of caffeine per cup, and evidence shows no effect on hydration with intakes of up to 400 mg of caffeine per day or the equivalent of eight cups of tea.[4,5]

Health Equity:

With rates of heart disease, type 2 diabetes, and overweight and obesity at an all-time high, especially among underserved socially, culturally, and economically diverse (SCED) populations, it is important to examine accessible, health-promoting beverage recommendations for all Americans. Heart disease is the number one cause of death in the United States.[6,7] Thirty eight percent of people aged 18 and older have prediabetes, 11.6% have diabetes, with an estimated 23% of

people going undiagnosed. Higher rates of diabetes are found among American Indian and Alaska Native adults with rates at 13.6%, while 12.1% of non-Hispanic Blacks and 11.7% of adults of Hispanic origin have diabetes.[8] Obesity prevalence is estimated at 41.9% among adults in the United States, with higher rates of obesity for non-Hispanic Blacks at 49.9% and Hispanic adults at 45.6%.[9]

Tea consumption can be an affordable, available way to incorporate flavonoids into the diet of underserved SCED populations to positively impact several biological systems that impact risk of these chronic diseases.[1]

Heart Health:

Human population studies have found that people who regularly consume three or more cups of black tea per day have a reduced risk of heart disease and stroke.[10-14]

Beverages rich in flavan-3-ols, like tea, have a positive impact on blood pressure, a marker of cardiovascular health.[13] Randomized, controlled trials find that black and green tea helps maintain healthy blood pressure and healthy endothelial function.[15,16]

A 2021 umbrella review revealed that a consistent intake of two cups of tea per day has the potential to decrease risk of cardiovascular disease and its progression.[17]

A scientific panel examined 157 randomized controlled trials and 15 cohort studies to form daily dietary recommendations for flavan-3ol intake. The findings showed that consumption of 400-600 mg of flavan-3-ols daily, the amount found in two cups of green or black tea, can help improve a number of metabolic markers including blood pressure, cholesterol, and blood sugar.[1] Here is the summary estimate of several of the outcome measures followed by the reported mean difference: systolic blood pressure -1.29 mmHg (-2.45, -0.13), diastolic blood pressure -1.24 mmHg (-2.13, -0.34), total cholesterol -0.06 mmol/L (-0.11, -0.001), and high-density lipoprotein cholesterol (HDL-c) -0.29 (-0.48, 1.0).[1] Each 2 mmHg increase in systolic and diastolic blood pressure increases mortality due to ischemic heart disease and stroke by 7% and 10%, respectively.[18] A 0.026 mmol/L increase in HDL-c has been reported to reduce CVD risk by 2-3%.[19]

A 2020 review found adults who drink two to three 8 oz. cups of tea per day may lower their risk of death from heart disease by approximately 8-12% and may lower their risk of all-cause mortality by approximately 4-6%, compared to nonconsumers.[20] Each 8 oz. cup of tea consumed by those over

65 years old was associated with a 10% lower risk of death from heart disease.[20] The current body of research suggests that drinking tea can offer significant heart health benefits including reducing the incidence of cardiovascular events, slowing the progression of disease, lowering low density lipoprotein (LDL) cholesterol, or "bad" cholesterol, and improving blood pressure – with benefits seen with just one cup and upwards of six cups a day. Using survey data from Multi-Ethnic Study of Atherosclerosis, a 2016 investigation found that those who drank more than one cup of tea per day had a lower incidence of cardiovascular events and a slower progression of coronary artery calcification.[21] This result is supported by other cohorts.[22,23] For example, data from the Dongfeng-Tongji cohort, found that of the 19,471 middle-aged and older Chinese individuals who drank green tea (~36% of participants) had a reduced risk of coronary heart disease (CHD). After 5-year follow-up there were significantly lower levels of total cholesterol, LDL, and mean platelet volume and increased HDL and uric acid levels among green tea consumers.[22,23]

A Harvard study found that those who drank a cup or more of black tea per day had a 44% reduced risk of heart attack.[24] In a large population-based study published in the *Journal of the American Medical Association*, found that adults who drank just over two cups of green tea per day reduced their risk of death from cardiovascular disease by 22-23%.[25] A U.S. Department of Agriculture study found that participants who consumed five cups of black tea per day along with a diet moderately low in fat and cholesterol reduced their LDL cholesterol by about 11% after three weeks.[26] A 2023 meta-analysis of 9 studies of 680 healthy individuals found that consuming a green tea extract supplement reduced systolic blood pressure by 2.99 mmHg and diastolic blood pressure by 0.95 mmHg.[27] Additionally, a study published in the December 2013 issue of the *American Journal of Clinical Nutrition* found that black tea reduced blood pressure, and among hypertensive subjects, it helped counteract the negative effects of a high-fat meal on blood pressure and arterial blood flow.[28]

Certain Cancers:

More than 3,000 published research studies have evaluated the effect of tea—white, green, oolong, or black—and tea compounds, such as epigallocatechin gallate (EGCG), on the risk of a variety of cancer types. A study published in the February 2015 issue of the Journal of *Molecular Nutrition and Food Research* found that the main antioxidant in green tea, EGCG, helps kill cancer cells through the destruction of the cells' mitochondria.[29] Research has also identified an association between amount and duration of tea consumption and gastrointestinal cancer risk. One study found that women who

consumed the equivalent of 2.5 cups of tea per day had a 60% reduction in rectal cancer risk, compared with women who drank less than 1.2 cups of tea daily.[30] Another study found tea drinkers to have a 42% reduced risk for colon cancer compared to non-tea drinkers. Men who drank more than 1.5 cups of tea per day were found to have a 70% lower colon cancer risk.[31] An animal study suggests that 500 mg/kg/day of Niaowangzhong green tea extract may be chemo preventive for digestive and intestine cancers.[32]

A review of studies on tea consumption and the activity of tea catechins showed potential anticarcinogenic effects on gynecological cancers, digestive tract cancers, incident glioma, liver and gallbladder cancers, and lung cancer. Tea catechins are shown to inhibit cell proliferation, reduce oxidative damage, and improve immune activity.[33]

Tea consumption has been linked to lower skin cancer risk. One study showed that participants who drank iced black tea and citrus peel had a 42% reduced risk of skin cancer and hot black tea consumption was associated with a significantly lower risk of the most common form of skin cancer, squamous cell carcinoma. [34,35] More recently, green tea polyphenols have been suggested as a chemo protective or chemotherapeutic option in skin cancer. A recent review paper of *in vitro*, *in vivo* and human studies highlights the various mechanisms by which consumption of green tea and topical application may have preventative effect against skin cancer. EGCG, along with other polyphenols, act by increasing DNA repair mechanisms, reducing UVB mediated inflammation and oxidative stress and down regulating pathways involved in carcinogenesis. Green tea polyphenol EGCG may also suppress the action of p53, which is involved in tumor suppression. Studies have shown that the topical application, as well as dietary supplementation of green or white tea extracts may protect the skin from UV damage by increasing DNA repair. Last, epigenetic modification is caused by UVB exposure, research shows that EGCG may reduce tumor incidence and decrease tumor multiplicity and size.[36]

Scientists suggest that EGCG, in addition to its antioxidant and anti-inflammatory properties, may act at various points in the cell cycle and control apoptosis.[37-40] A recent review found that EGCG has beneficial effects against several types of matrix metalloproteinases, which are shown to be involved in various diseases, including cancer tumor growth, invasion, and metastasis.[40] A recent review of *in vivo, in vitro* and clinical trials by Rahmani et al demonstrated that green tea may suppress tumor growth. Notably, the clinical trials reviewed

indicated that green tea may specifically slow prostate cancer progression.[38]

Using bioinformatics, researchers Xinqiang et al analyzed the targets of EGCG on human genes through an Ingenuity Pathway Analysis which suggests that EGCG acts on several genes involved in the cell cycle, cell growth and proliferation, cell survival and death and DNA replication in ovarian cancer.[37] EGCG was shown to have an anti-carcinogenic effect on cervical cancer. This review illustrated that EGCG may modify several critical processes in the cell cycle as well as induce cervical cancer cell apoptosis and inhibit telomerase activity.[39] A 2023 review summarized *in vivo*, *in vitro*, and epidemiological studies to examine the effects of EGCG from green tea on ovarian, cervical, endometrial, vaginal, and vulvar cancers. Although more studies are needed, the evidence suggests a beneficial effect of green tea on reproductive cancers.[41]

Neurological Decline:

Research has identified several modifiable factors that may help slow the progression or reduce the risk of age-related neurological declines and diseases.[42,43] Tea may be one of the modifiable factors as the antioxidants in tea may protect brain cells from environmental insults from free radical exposure. [44-46] A recent review found that green tea has neuroprotective effects mostly due to bioactive components L-theanine and EGCG.[47] In addition, L-theanine in tea has been shown to directly affect areas of the brain that control attention and ability to solve complex problems. [48-50] A study of The Ohsaki Cohort suggested that green tea consumption (of five cups of tea daily vs. one cup) was associated with lower risk of incident dementia or new diagnosis of dementia.[51] A long-term study of nearly 30,000 adults found that drinking three or more cups of tea per day led to a 69% reduced risk of developing Parkinson's disease.[52] According to research presented at the 2007 Scientific Symposium on Tea and Health, theanine, an amino acid that is for the most part uniquely found in tea (green and black), may help prevent age-related memory decline. This human-based data is supported by data from animal models.[45]

A 2023 meta-analysis of seven cohort studies covering more than 400,000 individuals showed that consuming green or black tea daily can be a protective factor in reducing the risk of all-cause dementia, Alzheimer's disease, or vascular dementia.[53]

Some investigations evaluated the role of EGCG in neurological health. EGCG was also found to increase levels of intracellular antioxidants, which inhibited reactive oxygen species and had a protective effect on neuronal cells. This evidence suggests that

EGCG may be therapeutic option to help attenuate amyloid-β induced neurological decline.[54]

The role of tea in Alzheimer's disease has also shown positive potential.[46] A review authored by Molino, et al., analyzed the neuroprotective effects of tea catechins. The benefit of tea catechins may stem from their antioxidant activity, interaction with cell signaling pathways and anti-inflammatory effects. In addition, the green tea catechins may be effective in iron chelation which suppresses the translation of amyloid precursor protein and is linked to Alzheimer's disease.[55] A recent animal study on the effect of EGCG on the Nrf2 pathway demonstrates that EGCG may have the ability to increase protein clearance to attenuate Alzheimer's Disease progression, especially early on in disease diagnosis.[56]

Beyond neurocognitive decline, tea has been shown to have several other benefits on the brain. Research has shown that lower contributors of caffeine equal to one to two cups of tea daily may benefit cognitive function and sports performance based on adult studies.[57] A 2017 review indicates that tea consumption may be related to reduction in anxiety, benefits in memory and attention, and brain function.[58]

Factors Related to Diabetes:

In a randomized control trial of 30 subjects, Mahmoud et al found that three cups of black tea consumption resulted in lowered hemoglobin A1C, decreased expression of tumor necrosis factor-α and increased expression of anti-inflammatory cytokines, which may reduce oxidative stress. This suggests black tea may have a positive effect on long-term diabetes management.[59] A randomized control trial of 66 subjects with type 2 diabetes and nephropathy found that drinking three cups of green tea had beneficial effects on total cholesterol, high-density lipoprotein cholesterol, and hemoglobin A1C levels with no adverse effects on renal function.[60] In an animal study, obese rats given green tea polyphenols were found to have lower levels of hyperlipidemia, body fat synthesis, body weight and fat deposits, compared to the control group. Rats given the treatment also had AMPK activation which resulted in greater insulin sensitivity, reduced de novo lipogenesis and decreased liver fat content.[61] A recent review found higher habitual intakes of flavan-3-ol monomers, like those found in tea, were associated with a reduction in risk of T2DM (10%) and stroke (18%); and these data were calculated to be of moderate strength.[62]

A 2019 study found that substituting just one serving of unsweetened coffee or tea (about 150 grams or 5.3 fluid

ounces) for one serving of a sugar sweetened beverages (about 250 grams or 8.8 fluid ounces, representing a standard portion size of these drinks) is associated with a 20% reduced incidence of type 2 diabetes. The case cohort analysis examined more than 340,000 people over eight European populations for 3.99 million person-years of follow up.[63]

A 2023 observational study of individuals without type 2 diabetes suggests that drinking green tea (mean intake = 443 mL, or about two to three cups per day) may improve glucose metabolism, marked by measures of fasting blood glucose, hemoglobin A1C, insulin, and homeostatic model assessment for insulin resistance (HOMA-IR) levels. The study suggests that the catechins in green tea help suppress the abundance of the gut microbiota species *P. vulgatus,* which is shown to be associated with high blood glucose levels in this population.[64]

Weight Management:

Several studies suggest drinking calorie-free tea may help with weight management.[65-77] Preliminary research suggested that tea flavonoids help elevate metabolic rate, increase fat oxidation and improve insulin activity.[65,68,70,75-78] Tea catechins can also provide modest shifts in metabolism that may improve weight loss and maintenance.[65,70,76,77] In one review, researchers concluded that subjects consuming green tea and caffeine lost an average of 2.9 pounds within 12 weeks while adhering to their regular diet. The results of another meta-analysis suggest the increase in caloric expenditure is equal to about 100 calories over a 24-hour period. The weight loss benefits of tea vary based on many factors, but studies have found benefits with the equivalent of as little as 2.5 cups of green tea.[78] Using data from the Polish *Health, Alcohol and Psychosocial Factors In Eastern Europe (HAPIEE)* cohort study, tea consumers who drank more than three cups daily, had a lower body mass index (BMI) and waist circumference.[79] Research has also found that tea consumption was associated with lower BMI values.[80]

Tea and Bone Health:

A recently published meta-analysis analyzed the potential link between tea consumption and bone mineral density (BMD). Across the studies there was a significant increase in BMD for tea drinkers verses non-drinkers.[81] A second meta-analysis verified this relationship – 0.62 odds ratio was calculated from 17 studies indicating that higher tea consumption was associated with a lower risk of osteoporosis.[82] A cross-sectional study of Chinese women over the age of 40 from the Guangzhou Nutrition and Health Study found that tea drinking was significantly and independently associated with higher BMD.[83] Compared to non-tea drinkers, tea drinkers have been

found to have a higher BMD.[84] Another trial linked tea consumption with a 30 percent reduction in the risk for hip fractures among men and women 50 years of age or older.[85] Although high caffeine intake has been implicated as a risk factor for reduced BMD, drinking tea is associated with higher BMD and has been shown to boost bone-building markers and improve muscle mass, both of which may reduce the risk for osteoporosis and fracture.[86-90]

Emerging research suggests that consuming white, black, and green tea may benefit bone health by increasing osteoblast mineralization.[91]

Immune Function:

There has been research on tea's potential impact on immune function. Research from Brigham and Women's Hospital and Harvard University indicated that tea contains a component that can help the body ward off infection and disease and that drinking tea may strengthen the immune system. L-theanine, found in tea, primes the immune system in fighting infection, bacteria, viruses, and fungi.[92] A human clinical trial showed that certain immune cells of participants who drank five cups of black tea a day for two to four weeks secreted up to four times more interferon, an important part of the body's immune defense, than at baseline. The study suggests that drinking black tea provides the body's immune system with natural resistance to microbial infection.[92]

Current research indicates that tea's catechins provide potential preventive effects on influenza and common cold, although more research is needed.[93] Emerging research suggests a possible protective effect of tea consumption on symptomatic COVID-19 infection.[94]

Dietary Patterns:

An analysis of NHANES 2011–2016 data explored unsweetened tea consumption and 7 other beverage categories as it relates to an individual's diet quality and health outcomes. When compared to those who do not consume tea, unsweetened tea consumers have a higher Healthy Eating Index, indicating a more nutrient-rich diet that contained more recommended food groups and more nutrients to encourage.

Unsweetened tea consumption was also associated with better dietary choices, including a significantly lower consumption of high calorie beverages, alcohol, and added sugars. Daily unsweetened tea consumption is found to be associated with a statistically significant higher HDL and lower BMI in adults.[80]

Caffeine Content: Tea is naturally low in caffeine. A cup of black tea, for example, contains about 40 milligrams of caffeine.

Cost Per Serving: Prepared at home, tea costs about 3 – 5 cents per serving, cup or glass. Tea continues to remain one of the most economical beverages available, even the most expensive teas cost less than 10 cents per serving.

Tea: Tea is a refreshing beverage that tastes great and contains no sugar, sodium, or fat. In addition to being naturally calorie-free, it contributes to total water intake promoting hydration.

Key Tea Terms:

Antioxidant: A substance that helps prevent or delay oxidative damage caused by reactive oxygen and or reactive nitrogen species. Oxidative damage to the body, cells and tissues may contribute to diseases like cancer and heart disease.

Catechins: Found in foods such as berries, cocoa, and tea, catechins have antioxidant properties. The major catechins in tea are polyphenolic compounds including (-)-epigallocatechin gallate, epigallocatechin, epicatechin gallate, epicatechin (EC) and (+)-catechin.

Bioactives: Compounds found in foods, other than those needed to meet basic human nutritional needs, that influence changes in health status.[2]

Phytochemicals: Naturally occurring plant compounds. Many phytochemicals are thought to play a role in decreasing the risk of cancer and heart disease and may boost the immune system.

Flavonoids: Tea flavonoids, a class of polyphenolic phytochemicals, and related bioactive compounds in tea may play important roles in various areas of heath and may operate through a number of different mechanisms still being explored. Tea consumers have been shown to have approximately 20 times higher flavonoid intake compared with nonconsumers.[20]

Flavonols: A group of flavonoids found in tea and many fruits and vegetables and are thought to contribute to some of the potential health benefits in these plant foods. They include rutin, quercetin, and kaempferol.

Flavan-3-ols: Flavan-3-ols are a sub-type of flavonoids which have proven beneficial effects on cardiometabolic outcomes. Flavan-3-ols are found in tea, and foods such as apples, kale, green peppers, onions, berries, and cocoa, with tea having the highest concentration above all foods and beverages.

Epigallocatechin gallate (EGCG): The principle catechin in green and black teas. EGCG is a strong antioxidant and has been shown to reduce formation of lung, esophageal and skin tumors in animal models of human cancer.

Theanine: An amino acid commonly found in tea that can cross the blood-brain barrier, therefore has psychoactive properties. It may reduce mental and physical stress and may produce feelings of relaxation by increasing levels of gamma-aminobutyric acid (GABA), serotonin, dopamine, and alpha wave activity.

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