



Introduction

Tea is old but somehow new and wonderful again. As a tea company, we have a wide variety of clients ranging from newcomers who are just buying tea for the first time for their own consumption to large casinos with 8 restaurants. We are honored to count coffee carts, cafes, spas, gourmet stores, restaurants, hotels, coffee roasters and distributors as part of our wonderful selection of patrons. People are curious and are seeking or rather demanding quality. They all have questions - different questions, but lots of them. Many of the answers are here.

This work is about loose leaf specialty tea. We are hoping to provide a cursory guide to clarify the world of specialty tea : what tea is and how to buy, store, make and sell tea profitably. Our intention is to be brief and briefing (quick and informative). Proper tea knowledge takes a decade of study. We hope to get that started with a couple hours of reading. And please keep asking questions.



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Definition of Specialty Tea

Every tea company defines specialty tea in its own way. We define specialty tea as any tea that has been cared for and as a result has achieved the ultimate level possible. The degree to which a tea has been cared for is what makes it wonderful. Any tea which has been brought to its peak is really special in its own right. In order to understand how a tea might be special, it is important to look at the entire process of tea, from the planting of the bush to the preparation of a cup.

To begin with, tea bushes are planted and cultivated for several years before any valuable harvesting is done. A bush is planted and tended to for these years without any economic benefit. Once the plant is ready, highly trained pluckers know exactly how and when to harvest the leaves. Many things, including weather and soil conditions are monitored to find the optimum time to pick. The growers depend on their expertise to decide which leaves will be plucked. To retain the integrity of the tea, two leaves and a bud are the most common plucking combination. Some teas are picked at twilight before the bud opens in the sun's first light. An extreme level of care is taken when harvesting specialty tea. The next step for the tea leaves is processing which is an art within itself. Years of training allow experts to see and smell subtleties and then make important decisions, for example when an oolong is ready. Processing methods and specialties vary by tea growing region (Ceylon, China, India, etc.). Each region has its own processing traditions and artisans who engage in a variety of techniques including handwork and firing to make these high quality teas. As a result, each region produces tea with a distinct aroma, look, and taste. Tea grading and evaluating is another level of specialization that occurs with specialty teas. Highly trained experts determine the quality and pricing of each years' tea. The next important step is caring for the tea in transit. Packaging is extremely important to keep the teas safe from air, heat, light, and moisture. The final step is at a consumer level. It is imperative that the tea be prepared and served properly. Specialty tea should be shown off. The qualities and benefits of the tea should be highlighted when it is being served to create a special experience for the drinker which can only be executed with knowledgeable and trained preparation.

The journey of the leaf requires many steps and the expertise of many individuals. Improper handling at any point will affect the quality of the tea and the resulting cup. For all these possibilities to come together to produce a delightful cup is truly remarkable and clearly special.

The Growth of Specialty Tea

The market for specialty tea is growing for a variety of reasons. First, tea has a great sensory appeal. It looks good on the shelf, it smells good, and of course it tastes good. People feel good when they

drink it. From a purely human perspective, tea has an appeal to the senses that naturally draws people to it. Another reason for the growth in specialty teas is economics. Tea is a great moneymaker because of the weight of the product in combination with how much you can make and sell. The economics are sound and it is a clean business. Since no one is hurt by the selling of tea, it's a good Karma business. It's easy to sleep when you are serving tea, caffeine notwithstanding. More people are drinking tea today because it appeals to a healthy lifestyle and this is the main reason for the growth of the specialty tea market. Doctors are recommending higher tea usage while reducing the consumption of coffee or soda. The change is easy to make since tea tastes good and is healthy as well. As a result, many people are moving toward tea. The health benefits are really the engine driving this shift but American consumers are also demanding much higher quality products as well. We have seen this in other markets like such as cheese, wine, and of course coffee. Tea also has a broad demographic appeal due to the huge variety available. Tea has an extensive range from the light, subtle white tea to the strong, aged puer. Tea can be naturally sweet, savory, or earthy. Children and those looking for caffeine-free alternatives or medicinal benefits have a variety of herbals to choose from. Chai, yerba mate, bubble tea and flavored teas are all popular options as well. The endless variety of tea provides something for everyone. The numerous reasons for the remarkable growth of specialty tea should continue to drive the expansion of the market for years to come.

The Role of the Coffee House in Specialty Tea

Tea houses are opening up all over the country, becoming enormously popular and growing rapidly. In general, tea houses tend to follow two basic patterns. One is based on the English style tea room with black Indian teas perhaps an English Breakfast or Earl Gray served with scones. They tend to follow the pattern and protocol of European rooms. The second popular style adheres to the Chinese or Asian tradition of tea service. They lend themselves to the Asian style of drinking tea which puts an emphasis on peace, quiet, and solitude. Green teas, the tea ceremony, calm aesthetics and harmony are part of the culture of these tea rooms. So these two types of tea rooms provide either a European or an Asian model of tea culture and whether it is traditional afternoon tea or the Japanese tea ceremony, the tea house is typically about the experience of having tea.



Coffee houses, on the other hand, come in a variety of styles. Students, suburban moms, hippies and bikers can all find a coffee shop that meets their needs. Because of their broad appeal, coffee

houses have a role to play in the furthering of specialty tea. Increasingly, consumers are drinking both tea and coffee and because of this trend coffee shops are going to have to redefine how they present themselves. Having great coffee is simply not going to be good enough. The coffee shop will have to be not only a place to get great coffee, tea, and food, but a great place to be. Good conversation, books, games, and toys for the kids are all elements of a great place to be. The business will be defined by the quality of the experience. A coffee shop can be a great space to get away from it all or to feel at home away from home. The types of coffee shops that focus on making a great space for their customers will have the most long term success because they engender loyalty and build community. People don't visit just for the coffee or tea, but because it is a great place to be. Good coffee and tea are just added incentives. So tea houses and coffee shops, while dealing with the same product, are working at completely different levels of the market. Coffee shops with their broad spectrum appeal can find success by providing a great space and catering to their customers' diverse tastes.

Advantages of Loose Leaf Tea

Specialty tea refers in general to a high quality grade of loose whole leaf tea. Loose leaf tea has several advantages which have also contributed to the growth of specialty tea:

Equivalent Loose Leaf Price vs. TeaBag Cost

Tea Bag	10 cents	15 cents	20 cents	25 cents	30 cents	35 cents
Loose Leaf	\$15.00	\$22.50	\$30.00	\$37.50	\$45.00	\$52.50

Quality

The first and most obvious advantage is quality. The vast majority of tea bags made around the world use paper as a filter and dust and fannings as the tea. Dust and fannings are of the lowest quality and the worst tea available. A tea bag is really just an ineffective portioning system and a way to dispose of low grade tea. The vast majority of tea that goes into tea bags is of inferior quality - the worst that you can get. Recently, tea bags have been manufactured that are larger which can then accommodate whole leaf tea and are being touted in the specialty tea industry. They are a great improvement over the traditional tea bags that have been manufactured in the last several decades. That having been said, however, there are still some disadvantages to these new teabags. The new pyramid style or larger nylon mesh gourmet tea bags are still a portioning system. Espresso pods are not typically used in coffee shops, but in fact tea bags are essentially the same. Tea bags don't reflect the quality that most shops strive for.

Portioning

Loose leaf tea provides the ability to make a quality cup of tea regardless of the cup size. The typical size tea bags are 1½-2 grams per pouch which really only work for 6-8 ounce servings and in this country we do not generally use that size cup. In virtually any coffee shop or store in America, the smallest size available is typically 12 ounces and still only 1 tea bag is used. A typical coffee shop may use 12, 16, 20, and 24 ounce cups but rarely use 2, 3 or 4 tea bags in order to ensure a good quality drink. Because of the cup size issue, tea bags are an ineffective portioning system. In order to meet the needs of the customer, the ability to make different size drinks is necessary, but not possible unless multiple tea bags are used. Certainly multiple tea bags can be used but then the economics of loose leaf tea come into play. Once you look at portioning sizes, the economics favor loose leaf tea.

Economics

A pound of loose leaf tea is comprised of 450 grams. A typical 6 ounce cup requires 1½ grams of tea. A 12 ounce cup which is typically the smallest serving size in any shop will require about 3 grams of tea. That number allows for about about 150 - 12 ounce cups from a pound of loose leaf tea. In order to compare tea bag prices with loose leaf tea prices, simply take the pound price and divide by 150 as you will get about 150 cups from a pound of tea. Compare that price to the price of each individual tea bag. It's not unusual for a tea bag to cost 10 or 15 cents a piece because packaging comprises so much of what goes into a tea bag. A 12 ounce cup of tea using tea bags could easily cost about 15 cents to make. For the same price one can purchase a loose leaf tea for \$22.50 per pound. Comparing the quality of a \$22.50 per pound tea versus a 15 cent tea bag clearly demonstrates the vastly superior economic advantage of loose leaf tea. It has been said that the poorest man in Afghanistan has better tea than here is the USA. That is true when one realizes the poor Afghan uses loose leaf tea instead of tea bags.

Variety & Flexibility

Another advantage of using loose leaf tea over tea bags is the great variety of teas available. Shops using teabags are limited by the selection offered by the brand of their choosing. Shops may use multiple brands to increase their variety but that can present greater challenges in maintaining inventory and also may result in a mixed presentation. When a shop uses loose leaf tea, it can easily buy tea from several different companies. Since the tea arrives in bulk, a wide variety from different companies can easily be used while still maintaining a consistent looking program. A loose leaf tea program also gives the merchant the ability to change tea. Seasonal, holiday, and event teas can be carried. The tendency might be to have heavier darker, spicier teas during the winter time and lighter, fruitier teas during the summer. Loose leaf tea gives the shop owner the ability to adjust teas based upon the season and on customer preference. The other advantage of carrying a non-branded program of loose leaf tea is that it allows for testing tea without buying a large amount. It gives you the flexibility to decide what you might want to feature. Loose leaf tea is also great for iced

tea which is the most consumed tea in America and a good way to introduce and promote tea. Another benefit to loose leaf is the possibility for unique blends. The merchant has the control and flexibility to serve different combinations of tea. Some customers may want to mix a black tea with a green tea, a white tea with an herbal tea. A loose leaf program provides the possibility of serving a great variety of drinks. A shop may carry 8 or 9 loose leaf teas, but in fact the possibilities of mixing and matching are endless.

Branding

The final advantage of using loose leaf tea is that each shop can incorporate tea into its own branded program. If loose leaf bulk tea is in a shop, it can be resold to the customer when they request their special blend. The tea at an individual shop can be branded, labeled and sold. Most bulk tea merchants don't require that their tea be sold under their label, so it can be packaged up, and sold under the shop's own label. A loose leaf tea branded program gives a merchants yet another way to promote and feature their businesses.

Defining Tea

The most consumed beverage on earth after water is tea. In the United States alone, 1.42 million pounds are consumed each day. Tea is brewed everyday all over the world. It is a soothing comfort on a cold night and a refreshing relief on a hot summer day. From its recorded beginnings, tea quickly became an important part of our rituals, celebrations and daily well being. It has been a part of our lives for nearly 5000 years.

All tea originates from the leaves of the Camellia plant, which is an evergreen shrub or tree. The tea plant was originally thought to be indigenous to China, but in recent years there has been evidence to suggest that it originated in the foothills of the Himalayas and then spread further east into China and west into India. Tea is harvested from one of two plants, the China type (*Camellia sinensis*), the Assam type (*Camellia assamica*), or a hybrid of the two.



The China tea type thrives in China, Tibet, Taiwan, Japan and Darjeeling. China tea is harvested from a shrub that is resistant to cold temperatures and grows to a height of 2.75 meters. Under the proper conditions, the bushes can produce for over 100 years. The China tea type plant produces a delicate tea with smaller, narrow leaves that are about $\frac{1}{2}$ to $\frac{3}{4}$ of an inch long. This tea is used to produce green and China black tea. The oldest living wild tea tree in China is seventeen hundred

years old and is located in Yunnan province. The oldest cultivated tea tree in China is eight hundred years old.

Tea has been cultivated commercially in India for about 160 years. India and Sri Lanka are the biggest providers of the Assam tea type that produces large, strong tasting leaves. Assam tea is cultivated from a single stem tree from 6-18 meters high with large, droopy, leathery leaves that are about 3-4 inches long. This tea is used to produce Assam (Indian) Black Tea. This tea plant, *Camellia assamica*, has a subspecies called the Cambodian variety (*lasiocalyx*), which grows in Southeast Asia. This smaller single stem tree is not cultivated commercially.

While tea is grown in thousands of tea gardens and estates all over the world, every tea plant in the world originates with *Camilla sinensis* or *assamica*. Whether the tea bushes are grown in Kenya, Ceylon, South Africa, or Argentina, they all originate with Assam, Chinese, or a hybrid of the two tea bushes. Teas can be grown anywhere from 2000 –7000 feet. Those growing around 6,000 feet are considered by many to be the best in the world. At a cooler climate and higher altitude, tea growth slows and more concentrated flavors develop in the leaves. Many good teas also grow at lower elevations, and are frequently used in blends.

Because of the variety of geographical locations and environments where tea can be grown, there is quite a variety in the outcome. Like wine, many factors affect the outcome of tea quality. The color, fragrance, and flavor of tea can vary depending on the season, altitude, climate, geographic location and soil. Each tea-growing district is known for producing tea with a unique flavor and character. The growers also affect the final product by making decisions regarding when to pluck, which leaves to pluck, and how to process the tea.

Tea is harvested and produced in different ways depending on the quality and type of tea being made. Many teas are still harvested by hand in the traditional way. Two leaves and a bud plucked by women with a delicate touch is a tea tradition. On more modern tea estates, machines take the place of human hands. After harvesting, the method of production depends on which tea is being made. Certain tea leaves are better suited to producing certain types of tea. Green, oolong, and black tea are the most common types of tea made today. Green tea is made by steaming or heating the leaves immediately after plucking to prevent fermentation. The leaves are then rolled and dried. Oolong tea is partially fermented. When the leaves wilt, enzymes naturally begin to oxidize them. The oxidation process is stopped by stirring the leaves in hot pans, then rolling and drying. Black tea is allowed to wither and then is rolled in special machines that release the leaves' enzymes and juices. The leaves are fully oxidized and then dried.

History of Tea

5000 years of history and a significant effect on the course of world events is the legacy of a drink many take for granted today. Since its discovery by humans, tea has been at the center of multiple controversies, tragedies, and remarkable events. The following is a brief overview of the history of tea.

Origins

In 2737, according to Chinese legend Emperor Sheng Nun, a scientist called the 'Divine Healer', discovered tea when a leaf drifted into his pot of boiling water. The emperor felt invigorated and refreshed by the drink and was impressed by the taste and aroma of the tea. He was inspired to do further research and found that tea had medicinal properties. This serendipitous legend, unfortunately, cannot be verified by any written record. Historians agree that the first written description of tea is found in a dictionary written by Kuo P'u, the Duke of Chou, in 350 A.D. where tea is described as a medicinal beverage made by boiling leaves. The Chinese character for tea first appeared in 725 A.D.

It is said that the Chinese associate the adoption of tea with the introduction of Buddhism from India. Some believe that a Buddhist Monk, Gan Lu (Sweet Dew) who was in India on a pilgrimage, brought tea back to China in the first century. The seven "fairy tea trees" he planted can still be seen on Mengding in Sichuan.

Another legend claims that the tea plant sprouted from the eyelids of Bodhidharma, the first patriarch of Zen. After coming to China from India, he sat down to meditate for nine years. Near the end of his meditation, he briefly fell asleep. Upon awakening, he was so upset with himself that he sliced off his eyelids. The first tea plants emerged from the ground where his eyelids landed and were meant to honor his sacrifice and to assist others on the path of enlightenment. This tale is frequently associated with the Japanese character for tea, which is the same as eyelids.

Whatever legend one associates with the origin and discovery of tea, Buddhism and tea have a strong relationship. As Buddhist priests started to move around China and Japan, the spread of tea cultivation and tea drinking followed them. Most teas are named after the mountains that held monasteries as well as tea. Monks have been responsible for innovations in growing, processing, and using tea. Preparing tea became a ritual for the monks as it was used to aid in meditation and for ceremonies.

Outside of the monasteries, tea was used medicinally until the 5th century when propagation and trading began. Once tea became a recognized and valuable commodity, it was used as currency by

rural populations. Finally, in the 7th century tea became known as China's national drink and the growing popularity of tea as refreshment resulted in a government imposed tea tax.

Tea's popularity in China can be partially attributed to Lu Wu, an orphan come scholar, and his work Ch'a Ching or The Classic of Tea. The emerging tea industry in 780 A.D. hired Lu Wu to write a book that would spread the popularity of tea. Lu Wu wrote the first ever book about tea, which was as technical as it was romantic and popular. It provided valuable and cultural information about tea and made Lu Wu a celebrity.

The Spread of Tea

In the 9th century, tea made its way across the sea to Japan with a Japanese Buddhist monk who had been introduced to tea while studying in China. As more monks returned to Japan with tea and tea seeds, small tea plantations began growing around monasteries throughout the country. Because there was a break in relations between China and Japan, many years passed before, a Japanese monk called Eisai reintroduced tea to Japan in the form of a book called A Record of Tea Drinking for Good Health. Since its inception, tea has played a variety of important roles in Japan. Tea has been used for medicinal, ceremonial, and social purposes. The Japanese transformed the tea ceremony into an event that embraces harmony and purity and has affected art, landscape, and architecture.

Around the 9th century, references were made in Arab trade documents implying that tea had spread west. Tea was being traded throughout China, and it may have passed through to Central Asia and the Middle East. Marco Polo alluded to tea in his travel writings, and it was the Arabs who are rumored to have first brought tea to Europe via Venice in the 1500s. However, it is the Portuguese and Dutch who take the credit for bringing tea and tea drinking to Europe.

In 1557, the Portuguese, after much effort, convinced the Chinese to open up to trade. The emperor finally granted them the peninsula of Macao and limited trade began. For years, Europeans had heard rumors of tea. In 1610, the Dutch East India Company finally delivered the first shipments of Chinese and Japanese tea to Europe. At around the same time, tea was flowing into Russia via the Silk Road. Initially, because of its high cost, tea was only consumed by the royal classes and aristocrats. By the end of the century the fashionable tea trend had ended on the European continent and while tea remained an available beverage, most people returned to their traditional drinks. In England, however, the popularity of tea was growing.

In the late 1500s, the English became aware of the growing wealth of their European neighbors through trade with far-off lands. As a result, England entered the trade via the East India Company, or the John Company as it was known, on the last day of the year 1600. Tea finally arrived in England in September of 1658. Because of the aggressive trade practices and political power of the John Company, England overcame its competitors by 1700 with a strong hold in India and significant trade with China.

When tea arrived, coffee was the beverage of choice in England. The Portuguese Princess, Catherine de Braganza, married Charles the II in 1662. The Princess was a tea lover and introduced the court to the concept of tea time. However, tea had not quite caught on in the general population and coffee houses were a popular male-only location for smoking, reading, and conversing. Tea was introduced in coffee houses, but didn't take off until 1714 when Thomas Twining transformed his coffee house into an establishment that sold to both men and women. Tea sales outstripped coffee sales and new social customs emerged. Tea gardens, tea parties, and porcelain from China would become a significant part of English culture.

Opium Wars

The Chinese government never welcomed foreign traders and placed strict regulations on the whole enterprise of trading. Because China was unknown and appeared to have many interesting commodities, the outside world was anxious to trade. The British didn't have much to offer in trade, and the Chinese demanded silver as payment. In order to get around this, the British began selling India's opium harvest at auction in India knowing that it would go directly through traders to China. In 1800 when widespread abuse of the drug became a problem, the emperor made it illegal to import opium. The British illegally traded drugs for tea and made huge profits from the growing number of Chinese addicts.

In 1839, after years of looking the other way, the Chinese authorities in Canton finally acted against the smugglers and confiscated and burned an opium shipment. The British occupied positions around Canton and used opium as the conflict to force increased trade rights. The British forces were superior to the Chinese, so in 1842 China was forced to agree to the Treaty of Nanking. The treaty required that China open to free trade and that Hong Kong be leased to the British. The tea for opium trade continued and by 1844 the British were importing 53 million pounds of tea year.

Tea in India

When China was forced to open up to trade, The East India Company's monopoly was over. The British were drinking huge amounts of tea and the John Company was accustomed to making a great deal of money from tea. Not only was China the only supplier of tea in the world, but the methods of tea cultivation and manufacture had been kept secret. Tea production was a state secret in China and the cost of revealing it was one's life. In 1834, when the monopoly was lost, the Tea Committee was appointed to make sure the British continued to get their tea. They sent a botanist, Robert Fortune, undercover into China to collect secrets about farming and processing and to bring back samples. These samples were the beginning of experimentation with Chinese tea in India.

What the Tea Council didn't know was that they already had possession of tea, a different type of tea, but tea just the same. Ten years before the Tea Committee was appointed, a Scottish

adventurer named Robert Bruce had come across tea in Assam, a remote area between India and Burma, while living with the indigenous people. This was not the Camilla Sinensis of the mountains of China, but another type. It was the Camilla Assamica plant that thrives at lower altitudes in jungle type conditions. It was not what the British were looking for, so they missed it. After Robert's death, his brother Charles sent branches to the tea committee. It wasn't until they received seeds, live plants, and manufactured tea that they agreed that Camilla Assamica was indeed tea. This began a new chapter in the history of tea. India had a new industry and the British would continue to have an abundance of tea.

Tea in America

The Dutch brought tea to their colony New Amsterdam in the 1600s where it was very popular particularly with the women and wealthy colonists. When the English took over the colony they renamed it New York, and continued to supply tea. The tea, however, was taxed. The John Company needed to boost their financial position, and so convinced the English Parliament to enact the Tea Act which allowed shipments of tea duty-free directly from the company to the colonists. It excluded colonial merchants and placed a tax on the tea. The colonists were annoyed, to say the least, to be taxed without having representatives in parliament. In 1773, they refused all shipments of tea. The most popular revolt was the Boston Tea Party. Colonists, dressed as Native Americans, dumped 342 chests of tea into the harbor. The rebellion was copied in ports all over the east coast. Tea was sent back to England, dumped, or burned. The colonists renounced tea, and sent a message to England. Independence was close at hand.

In the 1800s tea was fashionable again; tea parties and afternoon tea played significant roles in American society. In 1904, at the World's Fair in St. Louis, ice tea was invented and became an American tradition. Richard Blechynden, a tea merchant from India, came to the fair to promote tea drinking. It was a hot summer day and there was no interest in his hot tea. In order to boost sales, he added ice to his tea and created iced tea, one of America's favorite drinks. A few years later in 1908, another innovative salesman would inadvertently change the world of tea. In order to cut back on costs, but still get samples of tea to prospective retailers, tea importer Thomas Sullivan sent out small silk bags full of tea for potential customers to sample. Without instruction, the retailers brewed the tea within the silk bags. When Sullivan received requests for more bags, he realized he had stumbled onto something significant. He changed the bags to gauze and made a nice profit. While the pre-measured, self-straining bags have become the most common way to make tea, the tea used in bags is typically of the lowest quality.

Tea has a long and complex history. Enlightenment, art, war, oppression, and revolution are just a few aspects of human history that are closely linked with the most popular drink on earth.

Tea consumption

As one would expect, the countries that grow the most tea, drink the most tea. India and China produce and consume the most tea in the world. Indians consume about 23% of the world's tea while the Chinese drink 16%. Both countries grow enough to satisfy their own consumers, and have tea left over to export. With a long tradition of tea drinking, the British consume 3.5 – 4 cups a day. Americans only consume about 4% of the world's tea, however that number is growing. In 2004, Americans drank over 2.25 million gallons of tea. About 87% of the tea was black, 12.5% was green, and the rest was Oolong. Ice tea is the most popular tea in the US; 85% of the tea consumed is iced. With the increasing popularity of tea and the studies regarding its health benefits, the consumption of tea is expected to increase not only in the US, but all over the world.

Health Benefits of Tea

For centuries, people have known and understood the health benefits of drinking tea. Today, researchers all over the globe are finding that many of the traditional uses of tea can be supported with scientific fact. Tea is a complex plant full of compounds that are beneficial to the human body. Hundreds of studies have been done on the health benefits of tea and the research continues. For those who don't need research to support what they already know, tea continues to promote health and well-being.



Antioxidants

An antioxidant is a chemical compound or substance that can protect the body's cells by hindering the damaging effects of oxidation. Well known examples of antioxidants are vitamins A, C, and E. Without the protection of antioxidants, cell damage can result in several illnesses like heart disease, stroke, and types of cancer. Tea contains antioxidants (flavonoids and catechins), as well as other compounds that can protect and benefit the body. While most plants contain antioxidants, tea contains extremely high levels. Daily tea consumption is the perfect way to get the antioxidants you need to defend your body and stay healthy.

Cancer

Catechins, one of the antioxidants in tea, have been shown to be a powerful hindrance to cancer growth. In recent studies, catechins were found to stop oxidants before cell injury could occur, reduce the incidence and size of tumors, and constrain the growth of tumor cells. In the summer of 2005, the American Institute for Cancer Research presented evidence to indicate that one particular catechin in green tea (EGCG) is able to target and stabilize unruly proteins in a way that no cancer drug is currently able to do. These findings also suggest that EGCG may be an effective aid in many different kinds of cancer because of the way it affects the proteins. Studies are ongoing in Asia, Europe, and the US and many have found reason to believe that tea is likely to prevent or inhibit multiple types of cancer. Many studies have shown that tea is beneficial for diet related cancers (stomach, pancreas, small intestine) and several others have shown a positive effect between green tea and the reduction of skin cancer.

Cholesterol & Blood Pressure

High levels of 'bad' cholesterol (LDL) in the blood are frequently attributed to heart attack and stroke. Tea has been shown to reduce cholesterol levels. Studies have shown that tea drinkers have a lower risk of heart attack than non-tea drinkers. The flavonoids in tea may increase coronary flow. There is also research indicating that drinking tea lowers total cholesterol levels, as well as improving the ratio of good (HDL) cholesterol to bad (LDL) cholesterol. Like high cholesterol levels, high blood pressure can lead to heart disease and stroke; however, recent studies have shown that drinking as little as a half-cup of green or oolong tea per day may lower the risk of high blood pressure by nearly 50%. Researchers believe that the catechins in tea may suppress the production of angiotensin II, which leads to high blood pressure.

Blood Sugar

Several years ago, a Japanese doctor noticed a decrease in the sugar levels of his patients who had participated in tea ceremonies. Recently, the idea that tea decreases blood sugar levels has been confirmed by scientific studies. The catechins in tea have insulin-enhancing activity, which means the body has better control of blood sugar. Ordinary tea or tea with lemon was shown to increase insulin activity significantly. In another study, catechins were shown to suppress blood sugar

because they suppressed the enzymes that turn starch into sugar. In both cases, tea appears to have valuable implications in controlling blood sugar.

Immune System

Because it contains the amino acid L-theanine, tea is able to detoxify the body and boost the immune system. Once in the body, L-theanine breaks down and increases the ability of T-cells to defend the body against many types of bacteria, viral, fungal, and parasitic infections. Multiple studies have shown how tea consumption stimulates the immune system and helps fight a variety of illnesses.

Bones

Tea consumption has been shown to reduce bone fractures and increase bone density. Researchers believe this may be a result of the antioxidants found in tea. A study that compared tea drinkers to non-tea drinkers found that regular tea consumption for 10 or more years resulted in higher bone mineral density in the spines of the tea drinkers.

Relaxation

Tea has always been thought of as a soothing beverage, and now researchers have discovered that the reason lies with the amino acid L-theanine. Our mood is affected by this amino acid because it influences chemicals in our brains such as dopamine and serotonin. Research on L-theanine has shown that it causes relaxation without drowsiness. When L-theanine is combined with the caffeine in tea, the result is an invigorated calm.

Hydration

Although it is caffeinated, tea can be part of your daily fluid intake. In that past, it was believed that caffeinated beverages could not contribute to fluid needs. However, recent research states that unless the levels of caffeine are extremely high (the equivalent of 5-6 cups of tea in one sitting), tea consumption does not hinder, but contributes to hydration.

Oral Health - While tea grows, it extracts fluoride from the soil. As a result the fluoride naturally occurring in tea can provide a significant percentage (up to 70%) of our daily fluoride intake. The flavonoids in tea may help reduce plaque, which can reduce the chance of cavities and gum disease.

Metabolism

Studies on tea show that regular consumption can raise metabolic rates and increase fat oxidation. Researchers say that in the case of green tea, the catechins raise the rate of calories being burned and the overall expenditure of energy. Research subjects that drank 5 cups of green tea a day burned 70-80 calories more each day.

Nutritional Value

- Vitamins - C, K, B12, B6 and E
- Minerals - Trace amounts of potassium, manganese, magnesium, calcium, and fluoride.
- Amino Acids - Tea provides a strong source of amino acids including L-theanine which influences chemicals in the brain and affects mood.

Stimulants in Tea

All real tea contains some level of caffeine, which is a mild stimulant. Caffeine, however, is not the only stimulant in tea. Tea contains a group of alkaloids called xanthines. The three important derivatives of this group are called methylated xanthines and include caffeine, theophylline, and theobromine. These compounds have some similar properties, but each has a unique effect on the body.

Caffeine

Caffeine is the most commonly known of the xanthines in tea. It is likely the most popular addictive substance on earth. It is a concern for many people because when overused it can cause physical dependence and unpleasant symptoms. When used in moderation, however, one may feel alert and content. The effects of caffeine on the user vary from person to person. Similarly, the caffeine content of tea varies depending on the type and the method of preparation. While guidelines exist, there are a number of factors that affect the amount of caffeine in a single serving of tea. The type of tea and the length of brew are the most obvious. The more complex factors are things like where the tea was grown, the size of the leaf, and the location of the leaf on the plant. In general, the things to consider if concerned about caffeine are the following.

A prepared cup of tea contains $\frac{1}{2}$ to $\frac{1}{3}$ less caffeine than a cup of coffee.

When making tea, the length of the infusion affects caffeine content. Shorter brewing time results in less caffeine in the cup.

- Black tea infused for 5 minutes = 40-50 milligrams
- Black tea infused for 3 minutes = 20-40 milligrams
- Smaller tea leaves result in higher levels of caffeine. Because tea bags contain very small pieces of broken leaves, they contain more caffeine than loose leaf tea.

Theophylline

The next important xanthine is Theophylline. It is a bronchodilator, which means that theophylline aids with muscle relaxation in the lungs, decreases sensitivity to allergens, and improves one's ability to breathe. It is licensed as a medical treatment for respiratory diseases such as asthma, bronchitis, and emphysema. A recent study into caffeine suggests that it could be a useful bronchodilator as well. Research subjects given caffeine were found to breathe more efficiently for up to 4 hours. So caffeine, like theophylline, may turn out to be of use to those with respiratory diseases.

Theobromine

Finally, theobromine is the chemical that is likely responsible for the feeling of calm or well-being that tea drinkers experience. It is a mild stimulant with a mood improving effect. It is most commonly associated with chocolate and has recently been proven to be superior to codeine as a cough suppressant.

Types of Tea

Tea is currently grown all over the world. However, the best quality teas are grown in Asia where there is a tremendous variety of high quality tea available. There are 3 main types of tea (green, oolong, and black) with some wonderful variations within each category. How the leaves are processed determines their final classification as green, oolong or black tea. The distinction between tea varieties is a result of how much oxygen the leaves are allowed to absorb during processing. White and yellow tea leaves are not permitted to absorb any oxygen. A small amount of oxygen absorption results in green tea, and high levels of oxygen result in black tea.

White

White tea is grown only in the high mountains of the Northern part of the Fujian Province of China and is quite rare. White tea is harvested briefly each spring from a specific type of tea plant. When the smallest and youngest buds are picked the leaves are covered in fine white hairs. Authentic white tea is lightly steamed immediately after being picked and is processed in a way that is unique to the region of China in which it grows. White tea is the least processed of all teas and many tea experts consider it to be one of the finest teas in the world. The Chinese consider white teas to be cooling, detoxifying, and refreshing. Recent research shows that white tea has less caffeine than other teas as well as the highest concentration of antioxidants. White tea is delicate and pure with a light color and gentle taste.

Yellow

Yellow Tea (Golden Needles) is another very rare tea from China. Young, tender buds are handpicked before they open. The buds are then stacked into piles where the heat generated from

their decomposition, slowly stops the oxidation process. The finished leaves have a light yellow color which was once associated with royalty in China. From the Song dynasty to the Qing Dynasty (1644 – 1912 AD) yellow tea with its pale yellow hue and delicate, sweet taste was considered a treasure.

Green

Green tea originated in China and it is known as the first type of tea ever produced. It is grown in every tea producing province of China and in Japan. Each country and region has its own special method for harvesting and processing green tea. The highest quality green teas are harvested in the spring. Within China, green tea is classified by its region and plant variety. In order to process green tea, the buds and tips at the top of the plant are plucked. Green tea is often referred to as the unfermented tea because after harvesting the leaves are dried and then heated to stop the fermentation. The method of heating green tea varies. In China, the leaves are pan-fried in a wok or heated drum to stop the oxidization process, but in Japan the leaves are steamed. The next step in the process is rolling. Rolling, which can be done by hand or machine, determines the size and shape of the leaf. The shape and style of the rolled leaf is dependant on the tradition of the tea growing region. The leaf may be twisted, flat, or ball shaped; the flavor of the tea is affected by style of rolling. Finally the tea is dried. Preservation of the leaf's flavor is acquired by a gentle heating. Because green tea is grown in so many regions and the processing can vary, each variety of green tea has a unique flavor. In general, green tea has a vegetable-like taste and is very refreshing. Innumerable health benefits are also attributed to green tea.



Oolong

Oolong tea is a partially oxidized tea that is frequently described as being neither green nor black, but tea in the middle. Authentic oolongs are grown in Taiwan and the Fujian and Guangdong provinces of China. The history and origin of oolong are unclear, but most believe that it came about during the late 17th century in the Fujian province. The production and consumption of oolong became popular in the middle of the 18th century. In 1850, Lin Fengchi introduced the oolong tea plant to Taiwan from the Fujian province in China. The tea was cultivated so successfully in the hills of northern Taiwan that in 1860, British tea merchant John Dodd began exporting the Taiwanese oolong to New York. Today many of the highest-grade oolongs in the world are grown in Taiwan. Oolong tea is separated into many categories based on the tea plant variety, the growing region, the degree of oxidation, and the method of processing. When harvesting oolong, three to four leaves and a bud are usually picked and then the withering process begins. When the leaves have wilted, they are shaken in baskets until bruised and torn. The leaf is then exposed to air and oxidation occurs. The amount of time the leaves are oxidized depends on the style of oolong. The leaves are then heated to stop the oxidization. Traditional oolongs are oxidized to a 10-15% level, but others can be oxidized up to 70%. Depending on the level of oxidization permitted, oolong tea can

resemble either a green or a black tea. Because of the possible variety within oolong, the flavor and color can also vary tremendously. Oolong is frequently served with meals and is known to aid in weight loss and digestion.

Black

Black or red tea is believed to have originated in the Fujian Province of China in the 16th century. While it is the least popular tea in China, it is the most consumed tea in the world and is grown in several countries around the globe. Black tea spread with the British Empire and as a result it is the most commonly known tea. Because black tea is cultivated all over the world in a variety of environments, it has a wide range of quality. Like other teas, the season, harvest, leaf size and method of production all affect the final product. There are thousands of black tea types grown each year. "China Black" and "Anglo-Indian Black" are the two distinct categories of black tea. Black teas are also categorized by the method of harvest, either "orthodox" (by hand) or "CTC" (mechanized - cut, tear, curl). Orthodox teas are typically superior to CTC teas and the best come from China, India, and Sri Lanka. After black tea is harvested, it is allowed to wither for 14 - 24 hours before being rolled in machines. The leaves are rolled, twisted and broken up, so that the naturally occurring enzymes in the leaves will be released. Next, the leaves are placed in a cool, humid area to oxidize. The period of time the tea oxidizes is dependent on the type of tea that is being produced. When the leaves have reached the appropriate point, they are fired in ovens where the oxidation is stopped and the flavor is sealed in. The leaves turn black at this stage as well. Black tea is available in so many varieties that it can vary in color from light amber to dark reddish brown and the flavor can range from light, fruity and refreshing to malty, dark and strong.

Pu-her

Puer (also called pu-er or pu-erh), a dark black tea is ancient, rare, and mysterious. Like wine, Puer is an aged tea and its unique taste makes it appealing to serious tea drinkers. It originated very early in Chinese tea history and the process by which it is manufactured has always been a closely guarded secret. Puer is grown in a small area in Yunnan province in Southwestern China. It is made from a specific tea plant with broad leaves. The leaves are harvested and then completely fermented, possibly twice. The tea is then compressed into brick and disc-like shapes. Puer can be stored for many years and its flavor actually improves with age. Old vintages of Puer are rare and can be extremely expensive. In China, Puer is very popular and is considered a medicinal tea. It is known to reduce cholesterol and aid with digestion. When prepared, Puer can be steeped for long periods of time and in some cases is boiled. The color of the brewed tea is dark red or brown. It has an earthy smell and a rich, mellow taste.

Herbal Teas

Several other plants are used to make beverages that we call tea but in fact do not have their origins in either China or Assam teas. An herbal tea or tisane is an infusion made using fresh or dried flowers, leaves, seeds or roots. Herbal teas come from plants all over the world and are included in the world of tea. Many of the health benefits attributed to herbal teas have been passed down for generations and are considered folk remedies. Others, however, have been researched and documented.

Rooibos

Native to South Africa is Rooibos (*Aspalathus linearis*). Rooibos means “red bush” in Afrikaans and was first harvested by the indigenous people of South Africa’s Western Cape about 300 years ago. The plant was harvested, bruised, fermented, and finally dried in the sun. In 1772, botanists first recorded Rooibos, a shrubby legume, after being introduced to it by the Khoi people. Later the European settlers learned how to harvest and ferment the sweet-flavored red bush. The world’s only supply of Rooibos comes from the Cedarburg area of South Africa where it originates. The popularity of Rooibos is growing today. Its red color and taste make it a caffeine free substitute for black tea and it has significant health benefits. It contains flavanoids that can be used to treat skin and circulatory disorders and recent studies indicate it may relieve insomnia, irritability, headaches, nervous tension, and hypertension. In South Africa, it has commonly been used for colic in infants and stomach cramps in adults. Research supported this usage by showing that Rooibos has anti-spasmodic agents. The minerals: copper, iron and potassium, calcium, fluoride, zinc, manganese, alpha-hydroxy, and magnesium are also components of this tea.

Honeybush

Related to Rooibos, but much sweeter is the honeybush (*Cyclopia intermedia*), a small, wild legume shrub that produces yellow honey-scented flowers. It is native to the mountainous coastline around the cape of South Africa. As with Rooibos, the indigenous people used a honeybush infusion for tea. This knowledge was passed on to the Dutch farmers at the Cape of Good Hope in the 18th century. The leaves of the honeybush are cut, bruised, and left in the sun to oxidize. Honeybush is prepared with the flowers, leaves and stems of the bush and has a honey-scent and a sweet, smooth flavor. It still grows and is collected primarily in the wild, but cultivation is becoming necessary because of the growing demand. Honeybush is caffeine free, low in tannins, and contains antioxidants. Honeybush, like so many other infusions, has long been known to have medicinal properties; however, most are just beginning to be recognized by researchers. Current studies are finding that honeybush may be useful for coughs as an expectorant, to lower blood sugar, and, because it is leguminous like soy, to treat menopausal symptoms.

Yerba Mate

In South America, an extremely popular infusion is yerba mate (*Ilex paraguarensi*). The indigenous Guarani people introduced this drink to the Europeans, and in the 17th century, the Jesuits began cultivating the wild plant. It initially didn't gain popularity in Europe as coffee, tea, and cocoa had flooded the market, but yerba mate spread throughout South America. The drink is an infusion of the dried leaves and stems from an evergreen plant belonging to the holly family. The plant parts are dried, chopped, and ground into powder. Traditional ceremonies surrounding yerba mate include a hollowed gourd, a bombilla (a special metal straw with a strainer at the bottom), and a circle of guests or a "Mate Circle". The host makes mate in a gourd, sips until it is gone, refills the gourd, and passes it on. This process is continued until all the guests have had mate. Yerba mate is abundant in Paraguay where it is cultivated, but also grows wild in Argentina, Chile and Brazil. It thrives with high humidity and abundant rainfall. Yerba mate has a mature flavor, sweet and bitter that has been described as a cross between green tea and coffee. It is invigorating, but only has half the caffeine of coffee, and has innumerable health benefits. The Guarani Indians have used yerba mate to boost immunity, cleanse and detoxify the blood, aid the nervous system, combat fatigue, control appetite, reduce stress, and decrease insomnia. Mate contains several vitamins and minerals such as potassium, magnesium, manganese. It also contains xanthines (caffeine, theophylline, and theobromine), which are stimulants. While yerba mate has always been a favorite in South America and is popular in Europe and the Middle East, it has just recently received attention in the United States.



Chamomile

One of the most popular herbs in the world is chamomile. The two main types of chamomile are Roman and German. An apple-like taste and aroma give chamomile its distinctive taste. The first recorded mention of chamomile was in ancient Egypt where it was used to cure the sick and as an offering to the gods. Today, chamomile is commonly used for its soothing properties. The tea is made out of the small daisy-like flowers that are native to Western Europe and North Africa. Chamomile has been used in many traditional remedies for generations. Many of these cures are being reinforced by the scientists of today. Current research suggests that chamomile is an effective anti-inflammatory, sedative and ulcer-fighter. It may also act as an antioxidant and anti-microbial.

Hibiscus

Hibiscus (*Hibiscus sabdariffa*), also known as Sorrel, is another age-old infusion. The flowering shrub from the Malvaceae is the species most commonly used for tea. The outer portion of the flower buds also known as calyces are used in tea blends. The buds are steeped to make a deep crimson colored tart tea. Hibiscus tea is said to have been consumed by the Pharaohs of the ancient Nile.

Today it plays an integral role in the cultures and celebrations of several African nations and the Caribbean. Hibiscus tea is refreshing and tends to be popular in hotter climates because of its “cooling” properties. Studies done on hibiscus have demonstrated that it may lower bad cholesterol and blood pressure.

Rosehips

From the ever-popular and romantic rose comes rosehip tea. This infusion can be highly aromatic and has a fruity, mildly tart flavor. Rosehip tea is made from the intensely red berry-like fruits of the wild rose bush. Each hip is made up of a fleshy outer layer with seeds inside. Rosehips are rich in vitamin C and flavonoid antioxidants. Rosehip tea is considered soothing and is regarded as a mild sedative and anti-depressant. It is recommended for treating nervous tension, peptic ulcers, and heart disease.

Lemon Grass

Lemon grass (*Cymbopogon citratus*), is a native of India and Southeast Asia. It is a member of the grass family (Gramineae). It grows quickly and can reach the height of 6 feet in the ideal conditions of the tropics. It produces green flowers tinged with red on the end of a curving stalk. When lemon grass stalks reach about 2 1/2” long and 3/4” wide at the base, they are ready to use. Lemon grass has a lemony perfume and taste, but without the sour bite of an actual lemon. It also has a slight taste of ginger. Lemon grass is used in teas to combat depression and nervous disorders. It is also used to fight fever and relief digestive disorders. Studies show that lemon grass has antibacterial and anti-fungal properties.

Mint

Mint is a popular herb that is commonly used to flavor black and herb teas. It is native to the Mediterranean and has been used at least since the days of ancient Greece. According to Greek mythology, mint emerged as a result of a scorned wife. Pluto’s wife Persophone was furious about his affair with the nymph Minthe. In a jealous rage, Persophone turned Minthe into a lowly plant to be walked on. Because Pluto was not able to undo the spell, he gave Minthe a sweet aroma and she became the herb we know today as mint. Beyond that, mint was used by the Arabs, Egyptians, Greeks and Romans. There are over 30 species of mint with peppermint and spearmint being the most common. All mints contain menthol oil, which results in a cool, cleansing, relaxing feeling. Menthol is also said to help with stomach problems and headaches which is why mint tea is considered to have medicinal properties. Mint also contains vitamin B, calcium, and potassium.



Other Tea Varieties

Scented Teas

Jasmine tea is the most commonly known scented tea and became popular in China in the 3rd century. Many years have been devoted to perfecting the techniques for creating this scented tea. Scented teas can be either white or green teas that have been infused with flowers to create a subtle taste and lovely fragrance. Fresh flowers are added to the tea during the drying process. The teas are infused with the flowers 3-6 times before they are removed. In high quality teas, a few flowers may be left in the finished product. The result is a wonderfully scented tea. The aroma instills the dry tea, and rises from the cup when brewed. Other scented teas include, but are not limited to wild rose, lotus, and citrus blossom.

Flavored Teas

Flavored teas are a relatively recent addition to the world of tea. Essential oils or fruits and flowers are added to create flavored teas. Any type tea can be a flavored, but black and green are the most common varieties. Because of recent flavoring technology, it is possible to create nearly any flavored tea imaginable. Some of the most popular flavors are earl grey (bergamot), black currant, raspberry, strawberry, passion fruit, apricot, mango and peach.



Decorative/Presentation

Decorative and presentation teas are just starting to become widely available in the United States. The vast majority of these teas come from China but some are starting to arrive from India as well. These teas are comprised of balls, rosettes and other shapes that have a certain performance element when steeped. Many tea balls unfurl slowly when placed in hot water revealing differently colored flowers inside. These teas are rarely removed from the cup during consumption. The quality of the tea leaves is usually good but not of the highest quality. The focus is the show or performance and not on the tea quality. These teas are also quite expensive as they require a great deal of handiwork performed by highly trained artisans.



Iced Tea

Iced tea is an important category of tea in that 85% of all tea consumed in the United States is iced. Usually the highest margin item in most food service establishments is iced tea. Almost all tea can be iced although black tea is most popular especially if flavored. In capable hands, other categories of tea also result in exceptional cups. It may also be used to assist with inventory management – teas that are not moving as well or are reaching the end of their freshness can be made into iced tea batches for quicker sale. Shops may also use it as an additive for smoothies and iced tea lattes. Iced tea shows off the versatility of tea and brings in needed cash flow during warm months when hot drink sales may have eased.

Chai

Chai is a type of tea typically served in India. It is comprised of black tea along with some combination of spices called masala and mixed with milk and sugar. Typical chai masala can contain a variety of spices including ginger, cloves, cardamom, cinnamon, vanilla, saffron, coriander, black pepper, anise, and others. In India the taste of chai can vary greatly based on the quality of the tea and the choice of masala. Each home has its own favorite recipe. India has always been known for its fine quality teas. Indians have consumed chai for centuries but this form of Indian tea has been relatively unknown in the Western world. Recently however, chai has been gaining in popularity. With the recent increase of specialty coffee consumption, coffee drinkers are looking for more alternatives. It is a natural transition to look to teas. Chai is an interesting and exotic alternative for those looking for a tea option with more robust flavors than traditional tea.



Bubble Tea

Bubble tea originated in Taiwan about 15 years ago when a tea vendor began adding fruit flavoring to her teas to please her young customers. In order to mix the tea and flavor, the beverage was shaken which resulted in bubbles and the original bubble tea. Later, tapioca pearls were added to the fruit and tea drink and the bubble tea of today was created. The ingredients for bubble tea can vary, but the basic recipe consists of flavoring (powder, syrup, fresh fruit, fruit purees), creamer (powdered creamer, any milk product), sweetener (sugar, fructose, honey, etc.), liquid (water, milk, tea) and the tapioca pearls. The tapioca pearls sit on the bottom of the drink and when sucked through a large straw taste like gummy candy. Bubble tea is a sweet and refreshing. Because of the 'candy' at the bottom it's also a special treat. The diversity of ingredients possible in bubble tea allows the consumer to create a healthy or decadent version of this tea. Bubble tea is known by a variety of names such as pearl tea drink, boba ice tea, pearl milk tea, pearl ice tea, BBT, and PT among others.



Tea Grading

While green and oolong teas are not typically graded, there are a variety of grades used to describe black tea. These descriptions are of the dry cured leaf. All tea is graded according to leaf size to ensure consistency and to prevent small particles from interfering with the flavor of the brewed tea. In order to grade tea, tea growers use mechanical sorters that separate whole leaves, broken leaves, fannings and dust.

Most people recognize the term "Orange Pekoe," but don't realize that this label refers to a tea grade and not a tea type. Orange Pekoe is the name for a thin wiry black tea leaf. Tea grading categories are broken down by the size of the leaf. The categories also refer to things like unopened buds or colorful leaf tips. Different size leaves are used for different types of tea and the taste and body of the tea will vary depending on the size of the leaf. A larger size leaf does not necessarily indicate a better cup of tea. It is true, however, that the shape and size of the leaf influences the final character of the tea. Tea grading is not about quality, but simply about the type and size of the leaf.

Whole Leaf Teas

- F.O.P. – Flowery Orange Pekoe – High quality whole leaf tea made from the first two leaves and bud of the shoot.
- G.F.O.P. – Golden Flowery Orange Pekoe – Colorful tips at the end of the top bud are called golden
- T.G.F.O.P. – Tippy Golden Flowery Orange Pekoe – F.O.P. with more tips.
- F.T.G.F.O.P – Finest Tippy Golden Flowery Orange Pekoe – A higher quality T.G.F.O.P.
- O.P. – Orange Pekoe – A high quality thin, wiry leaf. Picked later in the year and rolled more tightly than F.O.P.
- S – Souchang – A Chinese produced twisted leaf picked from the bottom of the tea bush.

Broken leaf teas

- P – Pekoe – A wiry, large broken leaf usually without golden tips.
- B.O.P. – Broken Orange Pekoe – A small flat broken leaf.
- F.B.O.P. – Flowery Broken Orange Pekoe
- G.B.O.P – Golden Broken Orange Pekoe
- F.G.B.O.P. – Flowery Golden Broken Orange Pekoe

Fannings and Dust

- F – Fannings – Crushed leaf particles
- D – Dust – Smallest grade used for mass-marketed tea bags.

How to Rate Tea

The variety of tea available can be overwhelming and there is no rating system to assist the curious tea drinker. In general, however, tea is considered similar to wine and can be judged by four basic attributes:

Aroma

Each type of tea has its own smell or 'bouquet' and this is one of the primary attributes to consider when judging tea. Dry tea should have an obvious aroma. If there is no discernable smell, the tea could be either be old or of low quality. Green tea should have a light, fresh, vegetal aroma. Black tea should be sweet and floral. The smell of dry oolong tea can range from fruity to floral. When brewed, the fragrance of the tea should rise from the cup. High quality teas have a significant aroma. If a brewed tea has a weak smell or loses its aroma quickly, it is likely a lower quality tea.

Briskness

Briskness refers to the 'lively' taste and astringency of the tea. The different types of tea vary in their briskness. Black teas tend to be strong and brisk while green and white teas are light. All tea should taste fresh, go down smoothly, and have a pleasant aftertaste. Tea has complex and subtle flavors that are worth discovering and savoring.

Body

The heaviness, fullness and strength of a tea are the characteristics that make up its body. A full-bodied tea is strong and thick while a very thin cup of tea is light and refreshing and can be similar to water.

Appearance

While many teas (blacks, oolongs, and blends) are meant to be broken or bruised to increase flavor, unbroken leaf is typically an indication of a high quality tea. The shape, color, and details of a leaf are all important elements that indicate the quality of a tea. The highest quality teas or full bloom teas have an obvious glaze and fine hairs on the body of the tea.

As the quality decreases the glaze on the leaves disappears and the tea seems dry.

When a tea is brewed, the appearance of the leaves and the color and brightness of the infusion are indicators of quality. The color of the fully opened leaf can indicate how the leaf was processed. For example, hand fired green tea leaves are a bit yellow, steamed green tea leaves look like a leafy green vegetable, and baked green tea is very dark green. The quality of tea can be assessed from the color of the infusion as well. Brewed tea should be bright and clear.

Water

Water makes up 99% of any cup of tea. Good water is essential to any decent cup of tea. Exceptional tea can't compensate for poor quality water while superb water will produce a good cup of even the lowest of teas. To create a definition of good water, one can begin with what is certainly not good water – chlorinated or distilled water produce poor beverages of any sort. Pure water (H₂O) is also not favorable. Ideally, water has an attractive combination of total dissolved solids and minerals (calcium, sodium, magnesium, iron and others) which provide flavor and reactivity. The pH of water is also an important measurement. Water which is hard and has a high pH is likely to make tea cloudy, especially iced tea. The tannins in tea make the water even more acidic thereby making calcium less soluble and more visible. The solution for clearing up iced tea is to make the water softer through filtration and use less tea which lowers the overall pH.

The best solution for clear, superb tea usually involves the assistance of a local water professional. Water quality varies dramatically depending upon location. A local professional should have the knowledge of the regional water tendencies and provide a solution of filtration and treatment to produce great beverages. NOTHING is more important than water for brewing great tea.

Brewing Loose Leaf Tea in Shops

For many businesses the most daunting aspect preventing their use of loose leaf tea is the perceived difficulty of brewing the tea in their shop. The variety of devices and gadgets certainly adds to the confusion. A certain degree of mysticism perpetuated by the tea manufacturers for the sake of marketing also further clouds the issue.

Brewing great tea is actually quite simple. There are only three things to manage: tea amount, steep time, and water temperature. When these three factors are properly managed, a superb brew is almost guaranteed. Below is a basic chart identifying some agreed upon averages for water temperature and steep times for different types of tea:

Tea Type	Water Temperature	Steep Time	Infusions
White Tea	150 F – 160 F	1-2 minutes	3
Yellow Tea	160 F – 170 F	1-2 minutes	3
Green Tea	170 F – 180 F	1-2 minutes	4-6
Oolong Tea	180 F – 190 F	2-3 minutes	4-6
Black Tea	190 F – 200 F	2-3 minutes	2-3
Pu-her Tea	200 F – 210 F	Limitless	Several
Herbal Tea	210 F	3-6 minutes	Varied

If the above chart seems confusing and complicated, that is because it is. There virtually no way a shop can engage in trying to follow the above guidelines for making tea. No wonder people are scared to make loose leaf tea! The reality is that of the three factors that need to be managed, a shop only needs to be good at one – measuring the appropriate amount of dry leaves.

We have never seen a shop with the ability to have water at 6 different heated temperatures. Most shops make their tea using water available from a spout off the coffee machine. That means that only heated water temperature is available to make tea with. Most shops also have no control over steep time. Either the brewing machine decides how much time the leaves will steep or the customer becomes responsible for removing the leaves from the tea at their discretion. Most establishments simply have no way to control steep time or temperature. The only factor that a shop can control is the amount of dry leaves used to make the tea. A terrific tea can still be had so

long as the amount of tea is measured properly. To provide a better picture of how this can be done, we must examine the different ways tea can be served.

Hot Tea Brewing

Hot tea can be brewed in a shops in three ways:

Airpot Service

Serving hot tea by the airpot essentially links tea to an existing coffee service. An airpot is brewed and placed next to the coffee of the day, where customers can then help themselves. As with coffee service, more than one tea can be available and the tea selection can rotate from day to day. Hot tea can be brewed for airpot service by hand or by machine.

- Hand Brewing - Brewing by hand requires a 32 ounce brewing pitcher/pyrex measuring cup and a strainer. Use the 10-15 grams of tea, steep for 2 minutes and strain a batch into an airpot. Make a second batch using 32 oz of fresh hot water but the same leaves. Most good tea can be re-infused and still produce a superb cup.
- Airpot Brewer - If one is to use this method, it is important to have a separate brew cone for tea, so the coffee residue doesn't permeate into the flavor of the tea. For a typical 64 ounce airpot brew, one can use between 20-30 grams of tea. Simply place the loose tea into a paper brew filter and brew a 64 oz cycle into an airpot. If the tea is bitter then the amount of tea used should be reduced until the taste is acceptable.

Table Service

There are 2 ways to do table service, either by the cup/glass or by the teapot/french press. In both cases, one must decide whether to use disposable filters or permanent infusers. Two companies, T-sac or Mini-minit, make disposable paper filters that can be used to make tea. T-sac also makes larger tea bags for tea pots. If tea is served by the pot, we recommend using a clear tea pot with a built in infuser. A French press is also a great alternative. If tea is served by the cup, a permanent infuser like a tall cylindrical cup infuser with sufficient room for tea to infuse is preferred. Generally tea balls and spoons are too restrictive for good infusion. The instructions are quite simple. Place the correct amount of tea (see chart below) into the infuser/filter, fill the chosen vessel with hot water to begin the steeping process and hand to the customer. It is a good idea to tell the customer at that point what the best steep time is for their tea selection but the strength of the brew ultimately should be decided by the customer. It is also wise to invite the customer to return for a second or even a third infusion using the same leaves. All that is required is fresh hot water.

Tea Service To Go

For any drive-thru or to go tea service, disposable filters must be used. Two companies, T-sac and Mini-minit make disposable filters that are essentially disposable pouches that can hold large amounts of tea for effective steeping and then be thrown away. Fill the filters with the correct amount of tea (see chart below), place in a to go cup with fresh hot water and hand to the customer. Recommended steep times should be conveyed to the customer but again the customer has the freedom to choose their own brew strength.

Dry Tea Measurement for Hot Tea Service Cup/Glass or Teapot/French Press

Size	6 oz	8 oz	12 oz	16 oz	20 oz	24 oz	28 oz	32 oz
Amount	1.5 g	2 g	3 g	4 g	5 g	6 g	7 g	8 g

Dry Tea Measurement for Iced Tea Brewers and Airpots

Brewing Method	Airpot Brewer	Iced Tea Brewer	Iced Tea Brewer
Tea Type	64 oz iced tea	1½ gallon	3 gallon
White/Green	20-30 grams	30-35 grams	60-70 grams
Oolong/Black	30-40 grams	45-50 grams	90-100 grams
Herbal	40-50 grams	50-60 grams	100-120 grams

Iced Tea

The decision by which a shop chooses to brew ice tea is dependent on their volume. High volume shops that go through several gallons would do best with a dedicated ice tea brewer. Most brew 1 ½ or 3 gallon batches and just require the appropriate amount of tea (see chart below). They automatically brew a tea concentrate and add cold water which brings tea to room temperature.

Brewing iced tea in the coffee machine is much like it is for tea service. Use a brew cone dedicated to tea brewing, use the appropriate amount of tea and brew into a gallon pitcher filled with iced. Pouring it over ice gets the temperature down and stops the brewing process. The pitcher of iced tea can then be put into the refrigerator to be used as needed.

Iced tea pitchers can also be brewed by hand. This method requires a 32 oz pyrex measuring cup/brewing pitcher and a strainer. Use twice the amount of tea recommended for hot brewing and add fresh hot water. Steep and strain into a gallon pitcher filled with ice. Steep a second batch using the same leaves and strain into the gallon pitcher. Refrigerate the pitcher for use later.

Making ice tea by hand one glass at a time is really a unique service. It allows a customer to request more than one tea and makes for endless combinations. The tea is amazingly fresh and the service allows for an increased glass price. The method requires that you fill the requested size glass with ice. Use the appropriate amount of tea as would normally be used to make hot tea for that size glass. In a separate glass, steep the leaves in half the amount of water. (Example: A customer requests a 24 oz glass of iced tea made by hand. Fill a 24 oz glass with ice. Get 9 g of tea which would be the correct weight for 24 oz of tea. Place the tea in a 12 oz cup and make a double strength brew.) Then strain this strong brew into the glass with ice and as the ice melts, keep adding ice until the glass is topped off. This is really a great show and makes wonderful iced tea.

The idea of brewing loose leaf tea may seem complicated at first. With a bit of practice and some proper guidelines for measurements, loose leaf becomes a cinch and the quality of the product is certain to stand out.



How to Buy Tea

Initial Tea Selection

In selecting tea, the 4, 3, 2, 1 rule works nicely. Four black and flavored teas (including Earl Grey), three green and oolong teas, two herbal teas and one special tea (perhaps a white or Puer) is a general guide for tea selection. This should never replace the feedback from your customer base. Always address the needs of your customers. Health conscience customers may demand more green tea. In the warmer months, there might be a higher demand for flavored and iced teas. The 4-3-2-1 rule works nicely because it provides variety and reflects the selection available in the tea market but should only be considered a starting point which should be allowed to evolve with customer requests.



Inventory Management

When buying tea, the most important thing to remember is to buy as much as needed, but only that which can be used in two months time. Higher volume shops can certainly buy once or twice a month. The main concerns are profitability and cash flow. If a tea hasn't sold within 2 months, either too much was purchased or it's not selling which just ties up money in inventory and slows down cash flow. When ordering tea, it is not unusual to expect a one week turn around because a good tea vendor may have to engage in some level of manufacturing.

An efficient buyer will work with the tea vendor to project volumes needed. May is a good time to review the coming year's tea selection and project volumes to ensure a proper supply. This allows the tea vendor plenty of time to procure the teas that will be needed for the upcoming year.

Tea Storage

Tea has four enemies: air, moisture, light, and heat. To optimally protect tea, store it in a cool, dry place shielded from light in an airtight container. Steel canisters are ideal for tea storage. Fresh tea stored this way is good for up to a year. Display jars which may feature the tea at the counter or on a shelf should also be shielded from direct sunlight and excessive heat. Teas stored in glass jars that are frequently opened should be turned over in one month's time. It is better to keep the jars partially empty and frequently fill them than to have them completely filled with tea lose freshness and potency.

Qualifying Your Tea Vendor

There are several things to look for when choosing a good tea vendor:

Personality

Your tea vendor will be an important part of your business. A genuine interest in your business will be a good barometer of the quality of the relationship you will have in the future. That interest will naturally extend to responsive customer service, timely samples and positive ongoing dialogue.

Knowledge

A good general working knowledge of tea means that the tea vendor should know about the products they carry, origins, growing conditions, transportation modes and any specifics about the tea. Tea vendors should be able to provide the vintage of the tea (the year and growing season) as well as adequate descriptions. If tea is bought from coffee roasters who may not be able to answer questions regarding tea, they should at least be able to refer you to someone who can.

Packaging

Tea should be delivered in foil bags with an airtight seal. If stored properly tea will keep for up to a year, however freshness is important. One sign that a tea vendor is devoted to freshness is if they run out of tea especially between January and April. The tea harvest begins in April and many teas are unavailable until close to May and June. While the thought of running out of your favorite tea may seem troublesome, the indication that your tea vendor is maintaining fresh stocks should be of some comfort.

Extended Assistance

When working with specialty teas, there are a variety of things a tea vendor can assist with. At a very basic level, tea vendors should help merchants choose tea and make adjustments to stock levels. A good tea vendor might also be able to assist with promotion, education, and marketing support. Making visits for in-store seminars, tastings, and demos are all services a local qualified tea vendor might be able to provide.

Selling Tea

What to Charge for Tea

Determining the cost of ones products and then calculating the final price is an important and vital exercise for any business. For any tea that your serve for consumption, simply take the cost of the product, in this case tea, and add 35-60 cents for labor and usage (cups/washing) and then multiply by four.

Tea Service Price Chart

CUP SIZE	8 oz	12 oz	16 oz	20 oz	24 oz	32 oz
SERVICE CHARGE	\$0.35	\$0.40	\$0.45	\$0.50	\$0.55	\$0.60
\$8 per LB	\$1.93	\$2.27	\$2.61	\$2.94	\$3.28	\$3.62
\$12 per LB	\$2.02	\$2.40	\$2.79	\$3.17	\$3.55	\$3.92
\$16 per LB	\$2.11	\$2.53	\$2.96	\$3.39	\$3.82	\$4.23
\$20 per LB	\$2.19	\$2.67	\$3.14	\$3.61	\$4.08	\$4.54
\$24 per LB	\$2.28	\$2.80	\$3.32	\$3.83	\$4.35	\$4.85
\$28 per LB	\$2.37	\$2.93	\$3.50	\$4.06	\$4.62	\$5.15
\$32 per LB	\$2.46	\$3.07	\$3.68	\$4.28	\$4.88	\$5.46
\$36 per LB	\$2.55	\$3.20	\$3.86	\$4.50	\$5.15	\$5.77
\$40 per LB	\$2.64	\$3.33	\$4.04	\$4.72	\$5.42	\$6.08
\$44 per LB	\$2.73	\$3.47	\$4.21	\$4.94	\$5.68	\$6.38
\$48 per LB	\$2.82	\$3.60	\$4.39	\$5.17	\$5.95	\$6.69
\$52 per LB	\$2.91	\$3.73	\$4.57	\$5.39	\$6.22	\$7.00
\$56 per LB	\$2.99	\$3.87	\$4.75	\$5.61	\$6.48	\$7.31
\$60 per LB	\$3.08	\$4.00	\$4.93	\$5.83	\$6.75	\$7.62

The chart above demonstrates the importance of quality - large increases in quality can be had with relatively small increases in the selling price. The trick is to find the price where your customers are no longer willing to pay for increased quality. The taste difference between a tea selling for \$8 and one selling for \$60 is obscenely wide yet the final price of goods sold is about twice as much. Increased quality generally leads to improved sales and customer loyalty. Poorer quality goods certainly can do much more harm than good.

For retail and private label, take the cost of goods and multiply by two. For finished goods, any labor and shipping costs should be included in the determination of costs of goods. The costs of goods for private labeled packaging done on site should include packaging and labor as well as the product.

The Importance of Retailing Tea

Over 2/3 of all tea is consumed at home and there is no reason for a shop not to be in the retail business. Customers may not be able to visit a shop every day but they may still want something of that experience at home. It's a false notion that selling retail tea will result in lost business. Customers come into a shop for a larger, more meaningful experience than drinking a beverage. Retailing should be considered an important facet of any shop's business. And of course, if you are going to sell bulk tea, you should sell the accompanying tea pots, infusers, and accessories for making bulk tea as well as books on tea and tea culture.

Promoting Tea

The most important promotion anyone can engage in to sell more loose leaf tea is the education of their employees regarding the product. Providing employees with books, magazine articles and opportunities to visit trade shows will greatly improve employee knowledge and overall sales. A tea vendor may also be able to provide some educational materials to further enhance employee skills.

Presentation

The presentation of tea is one of the simplest and most effective ways to promote tea. Display jars that allow the customer to see, smell and touch the teas and engage their senses will increase buying. Good point-of-sale materials are also invaluable. Providing a tea list with accurate descriptions further empowers customers to make good choices and try new things. Drink presentation is also important. We recommend clear cups and tea pots for tea service. Interest is generated when other customers can see the tea. Serving ice tea in fluted or pilsner glasses also

adds charm to the overall experience. And as always – sample, sample, sample. This might be the cheapest way to increase the exposure of virtually anything that you serve.

Special Events

Special events also go a long way to promote tea within the community. The most intimate thing a shop can do to promote tea is to have seminars and tea tastings which provide an opportunity for patrons to sample and become more knowledgeable about teas. People buy what they know and at the very least what they don't fear. Education helps demystify tea. The best forms of promotion for tea tastings include press releases for local media and perhaps some advertising. Try to enlist the support of your tea vendor for this type of promotion. Participating in food or health related events in your community is an outstanding way to promote tea outside of the shop. Examples of this are health fairs, farmers' markets, cancer runs, spa and beauty shows, and culinary festivals. Serving tea at wine tastings as the non-alcoholic beverage is also a very successful way to promote your product and business.

Partnering

Partnering with like minded retailers and service providers in some cross promotion is an economical way to increase exposure. Music stores, health food retailers, gyms, spas and salons are all examples of possible affiliations which could quickly spread the word about your business and vice versa. The main goal is to determine your most common demographics among your customer base and team up with other businesses catering to the same. Linking up with such partners allows for joint events, promotional opportunities and combined advertising which can reduce overall marketing costs while increasing exposure.

Ultimately, having really great tea will be the best promotional tool at your disposal. We have shown that having great product cost more but the difference is more than worth it. Average tea is hardly newsworthy. Terrific product and vibrant service always shines through and word of mouth will spread faster than one can even imagine. People are looking for a great place to be. Do all you can to be that place and success is virtually guaranteed.