

World of Tea: Types, Tastes and Traditions

(*Jyoti Uppar)

Dept. of Plantation, Spices, Medicinal and Aromatic Crops,
Uttar Banga Krishi Viswavidyala, Pundibari, West Bengal

*Corresponding Author's email: jyotiuppar255@gmail.com

Tea, is a most popular caffeine content aromatic beverage in the world which comes from cured *Camellia sinensis* leaves when infused with hot water. It is originated in china and spread worldwide as social beverage and is most prevalent in India is



Fig.1 Tea leaves (Source: TRA Tocklai)

due to its sensory properties, affordable cost and its health benefits, hence popularly called as Queen of beverages. The Britishers introduced tea to India from China in the 1850s to break the monopoly of tea production in China and at beginning planted in the mountainous area of Darjeeling, which is situated on the foot hills of the Himalayas. Presently, it is considered as one of the most common and cheapest beverages, which is consumed in more than 65 countries of the world. There are different types of tea in the world which varies in the level of oxidation and comes in several varieties and textures, with their different tastes and strengths. These include green tea, black tea, oolong tea, white tea, yellow tea, matcha tea and pu-erh tea.

Types of Tea

- 1. Green Tea:** Green tea is made from freshly harvested unoxidized tea leaves by quickly heating or steaming of leaves to prevent oxidation, preserving their natural antioxidants and nutrients. It is popularly known for its fresh, vivid green colour and light, grassy flavour. Due to presence of high concentration of catechin, which is a type of antioxidant, green tea globally popularized. Consuming green tea is associated with many health benefits such as protecting heart and bone health, increased metabolism and also lowers cholesterol.
- 2. Black Tea:** It is the fully fermented sort and renowned by its red liquid. Here the leaves are withered, rolled and fully oxidized, then fired to stop the oxidation process. It makes the produce into dark colour and strong flavour. Majority of the people who drink black tea are from western world and in India it is often enjoyed with milk and sugar. Black tea contains 2 – 4 % caffeine, theaflavins, thearubigins and antioxidants that may play health benefits such as improved focus and alertness.
- 3. Oolong Tea:** Oolong tea takes only 2% of the global tea consumption and it is most popular beverage in China and Taiwan. It is partially oxidized/fermented, which comes between green and black tea in terms of level of oxidation. Oolong tea leaves contains various bioactive constituents such as polyphenols and phenolic acid and has antispasmodic properties, which helps to relieve digestive troubles. Its flavour can range from light to full bodied, floral to grassy, and sweet to toasty and the colour of the leaves vary from green to golden to brown because of varying level of oxidation.

4. **White Tea:** White tea is one of the expensive types and least produced variety of tea which got attention in the last decade. Fresh leaves/buds are collected prior to the full opening, when the young buds are still covered by fine white hairs, hence the name “white tea” and undergoes least amount of processing by simple drying. For that reason, this type of tea maintains a high amount of its polyphenols, especially catechins that green tea. White tea shows mechanistic effects in anticancer, antiobesity, antiaging and acts as a antioxidant. The white is described as light, sweet delicately floral flavour and soft finish.

5. **Yellow Tea:** Yellow tea is expensive, less well known type of tea which is hardly ever find and produced in really tiny quantities. The process of making yellow tea mimics that of green tea but it is subjected to a special processing technique called as ‘Yellowing’ or ‘Wrapping’. Freshly picked buds/very young leaves wither slowly and then be treated by heating like green tea, but, for shorter period of time and at a lower temperature. While the leaves are still warm and moist, then they are ‘yellowed’ by wrapping the tea, which allows the leaves to release and reabsorb moisture. After a day or two days, the leaves are unwrapped and the tea will be dried at low temperatures which makes the yellow tea. It can be considered as a tea which falls in-between white and



Fig.2: Six types of tea (Source: University of Waikato)

green tea.

6. **Pu-erh Tea:** It is a variety of fermented tea which is popular and traditionally produced in Yunnan Province, China and it is available in raw (sheng) and ripe (shou) varieties. Pu-erh tea is post fermented type which means after processing, it goes through microbial fermentation, which gives it a rich, earthy flavour and aroma. Pu-erh tea can be used for long years which enhances its peculiar taste and complexity. It is highly valued for its health advantages, which include increased elimination of cholesterol and improved energy metabolism.

7. **Matcha tea:** It is particular kind of green tea originated in China and developed in Japan which is made by fine grinding into powder of specially grown and processed tea leaves. Matcha tea tastes slightly bitter, having vibrant green colour and intense flavour. It is traditionally used in tea ceremonies especially in Japan, typically known as "chanoyu" and gained popularity worldwide for its health benefits such as antioxidant nature, improves liver and heart health, boost brain function. Matcha tea has caffeine, which provides gentle energy boost without the jitters that come with coffee.

Bioactive compounds present in tea

The chemistry of tea is complicate. Tea leaves on the bush have thousands of chemical compounds in them. When tea leaves are subjected to processing, the chemical components in tea leaves break down and form new compounds. In this polyphenols and caffeine are more important. Among the polyphenols, flavanols, flavandiols and phenolic acids are predominant and these are derivatives of catechin and gallic acid. Some important compounds are discussed here under-

Flavan-3-ols: Flavan-3-ols and catechins, mostly present in green tea and among them, epigallocatechin 3-gallate (EGCG) is the major compound.

Caffeine: Generally Caffeine (1, 3, 7 – trimethyl xanthine) content in the tea leaves varies from 2-5% which is major purine responsible for the taste and briskness of tea. Green tea leaves contains less caffeine than black tea.

Proanthocyanidins: Present in fresh tea leaves in the range of 1-2g/kg of leaves.

Flavonols (3 %): These are present in plants as glycoside by-products such as quercetin, kaempferol, and myricetin and are present in the form of sugars such as glucose, galactose and rhamnose.

Theaflavins (2-6 %): Includes theaflavin-3-O-gallate and theaflavin-3,3-di-O-gallate which are responsible for briskness of the tea infusion.

Thearubigins: Account for between 30 and 60% of the solids and impart colour to the tea infusions

Gallic acid: Gallic acid is a phenolic acid present in tea in different forms and amounts of gallic acid are comparatively higher in black tea than in green tea.

Vitamins and minerals: Tea leaves contain 0.3 % of vitamin C, vitamin E and K. Trace amounts of aluminium, fluorine and manganese.



Fig.3: Tea plantation (Source: TRA Tocklai)

Conclusion

Tea is popular lifestyle habit beverage after fresh water, which is consumed by 2/3rd of the world's population. In recent years a number of investigations showed positive results on the effect of regular consumption of tea associated with the enhanced cardiovascular and metabolic health. In world, there are variety of teas available, offering its distinct flavours, aroma, peculiar taste and potential health benefits. Tea is consumed in more than 65 countries of the world and people drink 4 billion cups in daily morning. Whether you prefer the boldness of black tea, the delicacy of green tea, the earthiness of pu-erh tea, incorporating different types of teas into your daily routine can provide a healthful addition to your lifestyle and also gives insight into the traditions, histories with this beloved beverage.

References

1. Chung, S.Y. and Janelle M.L. (2000). Effects of Tea Consumption on Nutrition and Health. *J. Nutr*, 130: 2409–2412.
2. Bhattacharjee, J. (2015). A Study on the Benefits of Tea, *Int. j. humanit. soc. sci. stud*, 2(2): 109-121.
3. Karori, S. M., Wachira, F. N., Wanyoko, J. K. and Ngure, R. (2007). Antioxidant capacity of different types of tea products *J. Biotechnol*, 6(19): 2287-2296.
4. Verma, R., Kumar, L., Kurba, V.B. and Sudhakar, G.K. (2013). An overview on tea. *Int. J. Pharmacol*, 3(3): 2277-3312