Green Tea vs Black Tea

From the teas.co.uk wiki

> **Green vs black, in summary:** Green tea vs black tea: same plant, different processing, different cup. UK independent tea guide. Free UK delivery £35+, free sample.

Last reviewed by the teas.co.uk team in February 2026.

Green tea and black tea come from the same plant (*Camellia sinensis*) but oxidation processing turns them into dramatically different drinks. Green tea is unoxidised, producing a lighter, grassier, more vegetal cup with lower caffeine and higher antioxidants in their original form. Black tea is fully oxidised, producing a deeper, maltier, bolder cup with higher caffeine and oxidised polyphenols (theaflavins and thearubigins) that suit milk and food. Neither is "better"; they're complementary tools for different times of day and different drinking contexts.

This guide covers the actual differences in processing, flavour, brewing, caffeine, health evidence, and practical use cases.

The headline differences

	Green tea	Black tea
Plant	Camellia sinensis	Camellia sinensis (same plant)
Oxidation	None (steamed or pan fired immediately after picking)	Full (rolled and oxidised before drying)
Cup colour	Pale yellow to deep jade green	Amber to deep mahogany
Flavour character	Vegetal, grassy, sometimes floral or marine	Malty, strong, full bodied, sometimes fruity
Caffeine per cup	20 to 35mg	40 to 70mg
L theanine	Moderate to high	Lower (some lost in oxidation)
Brewing temperature	70 to 80°C (never boiling)	95 to 100°C (just off the boil)
Brewing time	1 to 3 minutes	3 to 5 minutes
With milk	Generally no, except chai style	Standard, especially in British style
Best time of day	Morning to mid afternoon	Morning to early afternoon

The oxidation difference

Oxidation is the single processing step that turns the same green tea leaf into either green tea or black tea (with white, yellow, oolong, and pu erh sitting at various points along the spectrum).

Green tea is processed to prevent oxidation. Within hours of picking, the leaves are heat treated (steamed in the Japanese tradition, pan fired in the Chinese tradition) to deactivate the enzymes that would otherwise cause oxidation. The result is a leaf that retains most of its original colour, its catechins (especially EGCG) in unmodified form, and its grassy vegetal character.

Black tea is processed to maximise oxidation. The leaves are withered, rolled (which breaks the cell walls and exposes the inner enzymes to oxygen), then left to oxidise for several hours until they turn dark brown or black. The catechins are partially converted to theaflavins and thearubigins (the compounds responsible for black tea's amber colour and astringent character), and the flavour profile shifts dramatically toward malt, depth, and richness.

For more on the green and black tea families see the green tea overview and the black tea overview.

Flavour and cup character differences

Green tea tastes vegetal, grassy, and sometimes marine or floral. Japanese sencha tastes of fresh cut grass and seaweed; Chinese dragonwell tastes of toasted chestnut and gentle sweetness; jasmine green has a perfumed floral character; gunpowder has a smoky, bold profile. The unifying thread is a fresh, light, often slightly sweet finish that reflects the unoxidised leaf.

Black tea tastes malty, bold, and full bodied. Assam tastes of malt, honey, and biscuit; Ceylon tastes brisk and citrusy; Darjeeling tastes of muscatel grapes; Yunnan tastes of cocoa and pepper. The unifying thread is a deeper, fuller cup that holds up to milk and pairs well with substantial food.

The styles are really different drinks for different occasions: green tea is the quiet morning cup or the lighter afternoon drink; black tea is the breakfast brew or the substantial meal partner.

Caffeine difference

Black tea typically delivers roughly twice the caffeine of green tea per equivalent cup (40 to 70mg vs 20 to 35mg). The reasons are partly inherent (the cultivars used for black tea production tend to have slightly higher caffeine content) and partly methodological (black tea is brewed at higher temperatures for longer times, extracting more caffeine).

For caffeine sensitive drinkers, green tea is often the easier daily habit. For drinkers who specifically want a strong morning lift, black tea is the more reliable delivery. Both are well below coffee on the caffeine scale; for the family by family map see the ultimate caffeine guide.

The L theanine difference also matters. Green tea retains more L theanine because the unoxidised leaf preserves the amino acid in its natural form; black tea loses some L theanine during oxidation. The practical effect: green tea produces a more "relaxed focus" feeling per mg of caffeine; black tea produces a slightly more "alert energetic" feeling per mg of caffeine.

Brewing comparison

The brewing approaches diverge sharply.

Green tea brewing:

1. Cool the kettle water to 70 to 80°C (boiling water destroys the L theanine and turns the cup bitter)
2. Use 1 teaspoon of loose leaves per 200ml or 1 tea bag per cup
3. Steep for 1 to 3 minutes depending on variety (sencha is shorter, dragonwell longer)
4. Remove leaves promptly to avoid bitterness
5. Drink neat, no milk

Black tea brewing:

1. Use water just off the boil (95 to 100°C)
2. Use 1 teaspoon of loose leaves per 200ml or 1 tea bag per cup
3. Steep for 3 to 5 minutes for full character
4. Remove leaves or bag, add milk and sugar to taste

The biggest mistake new green tea drinkers make is using boiling water (which is the standard for black tea) and then concluding "green tea tastes bitter and unpleasant". Cooler water is non negotiable for green tea. See the water temperatures guide for the family by family detail.

A note on health

Both green and black tea have been studied a great deal, mostly for general antioxidant and heart-health interest. The picture is broadly similar:

- **Green tea:** gets the larger share of the headlines, usually for its unoxidised catechins (the much-discussed EGCG).
- **Black tea** is less studied but has its own polyphenols, the theaflavins, which only form during oxidation.
- **Both** are caffeine-moderate, low-calorie, polyphenol-rich drinks that count towards your daily fluid.

The "green tea is healthier than black tea" framing common in marketing is overstated. The gap between the two is far smaller than the gap between either tea and a sugary soft drink. Drink the one you enjoy and will actually keep drinking; consistency matters more than the type.

Variety within each family

Both green and black tea include enormous internal variety. Green tea ranges from delicate Japanese gyokuro through bold Chinese gunpowder; black tea ranges from light Darjeeling through hearty Assam. The within family variety is often greater than the green vs black difference for any given pair of teas.

For drinkers exploring either family, working through 4 or 5 distinct varieties is the best way to find the styles you really prefer. A "green tea drinker" who's only tried supermarket green tea bags has barely scratched the surface; same for a "black tea drinker" who's only had English Breakfast and Earl Grey.

Which one for which situation?

- **Heavy traditional British breakfast:** black tea (Yorkshire, Tetley, English Breakfast)
- **Lighter morning meal or just toast:** green tea or lighter black tea
- **Afternoon focus without sleep impact:** green tea (lower caffeine, higher L theanine)
- **With cake or scones (afternoon tea)** black tea (the body holds up to sweet food)
- **With sushi or Asian cuisine:** green tea (the cleaner profile pairs better)
- **Hot summer day, iced:** both work; iced green tea is more refreshing, iced black tea is more substantial
- **Building a workplace tea cupboard for variety:** both, plus herbal options
- **Avoiding caffeine impact on sleep:** green tea (lower caffeine and earlier elimination)
- **Want milk in your tea:** black tea (green tea with milk doesn't work)

What we stock

Browse the green tea range and the black tea range. The most bought versions of each:

Green tea

- True English Tea (T.E.T) Everyday Green Tea, 20 Tea Bags 35g
- San Benedetto Matcha Green Tea, 400ml
- True English Tea (T.E.T) British Mix Collection, 30 Tea Bags 57.5g
- Dilmah Ceylon Pure Green Loose Leaf Tea, 100g

Black tea

- True English Tea (T.E.T) Everyday English No 1, 20 Tea Bags 40g
- Typhoo QT One Cup Instant Tea With Whitener, 125g
- Hyson Peach Infused Black Tea, 32 Tea Bags 32g
- Yorkshire Tea Original Loose Leaf Tea, 250g

Brand level archives: Twinings, Teapigs, Yorkshire Tea, Clipper, Pukka, Hyson.

The verdict

Green tea and black tea are not competitors; they're complements. The right answer for most drinkers is "both, for different occasions". Black tea handles the morning brew, the food pairing, and the milk in your cup tradition; green tea handles the afternoon focus drink, the lighter meal pairing, and the lower caffeine evening cup.

If you've never tried serious green tea (loose leaf sencha, dragonwell, jasmine pearls), it's worth doing so before forming a strong opinion; supermarket green tea bags are not representative of what the family can offer. Similarly, if you've only ever drunk supermarket bag tea, a quality whole leaf English Breakfast or single origin Assam will show you what black tea can really do.

For the wider context see the green tea overview, the black tea overview, the matcha vs green tea comparison, the water temperatures guide, and the caffeine across teas.

Studies cited

- EFSA Scientific Opinion on the Safety of Caffeine (2015)

Related teas worth a look: English Breakfast, Earl Grey, green tea, loose leaf tea, Darjeeling, oolong, and herbal tea. Have a wander through the tea range; spend above £35 and we cover UK delivery.

FROM THE CURATOR

teas · Pick one plain green and one plain black, then see which suits your day. The wider varieties can wait until week two.

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