How Tea Is Made: Leaf to Cup, Explained

From the teas.co.uk wiki

> **How tea is made, in summary:** All true tea is one plant, Camellia sinensis; the differences are processing. The six steps, the role of oxidation, and the CTC versus orthodox.

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

All "real" tea, black, green, white, oolong, pu erh, comes from one plant: Camellia sinensis. The differences between them come entirely from processing. Six steps, varied in order and intensity, produce dramatically different cups from identical leaves.

The six basic processing steps

1. Plucking

Harvesting the tea leaves. Premium teas use just the bud and top one or two leaves; commodity teas use slightly more mature picks. Mostly hand plucked for premium tea; mechanical for bulk production.

2. Withering

Letting picked leaves rest for hours to reduce moisture and soften them. Critical for black tea, brief for green tea, skipped for some processes.

3. Bruising / rolling

Damaging leaf cells to release enzymes (for oxidation) or to release oils (for flavour development). Done by hand, by rolling machines, or by CTC (crush tear curl) processing.

4. Oxidation (also called "fermentation," misleadingly)

Allowing the released enzymes to convert leaf compounds. The level of oxidation determines the tea type:

- **0% oxidation:** White tea, green tea
- **10-30%:** Light oolong
- **30-70%:** Medium oolong
- **60-85%:** Dark oolong
- **80-100%:** Black tea

5. "Fixing" / drying

Heat application to halt oxidation when desired level reached. Typically pan firing, steaming, or oven drying.

6. Grading and sorting

Sorting by leaf size, quality, and characteristics. Premium grades (whole leaf, lots of bud) get one designation; lower grades (broken pieces, dust) get another.

Producing each tea type

White tea

1. Pluck (very young buds).
2. Wither extensively (24-48 hours).
3. Dry. (Skip rolling, oxidation.)

Minimal processing; preserves the youngest leaf character.

Green tea

1. Pluck.
2. Brief or no withering.
3. Fix immediately (steaming Japanese style or pan firing Chinese style) to halt oxidation.
4. Roll/shape.
5. Dry.

More on green tea production.

Yellow tea (rare)

1. Same as green tea up to fixing.
2. Wrapped briefly to allow controlled mild oxidation.
3. Dried.

Sweeter, less astringent than green. Specialty Chinese tea.

Oolong

1. Pluck (more mature leaves).
2. Wither outside, then inside.
3. Bruise the leaves (often by tossing in bamboo baskets, releases edges of cells).
4. Allow partial oxidation (10-85% depending on style).
5. Fix (pan firing).
6. Roll into ball or twist shapes.
7. Dry; sometimes roast for darker oolong.

Most complex processing in tea production.

Black tea (Western style)

1. Pluck.
2. Wither (12-24 hours).
3. Roll fully (CTC or orthodox).
4. Allow full oxidation (1-3 hours).
5. Fire/dry to halt oxidation.

The most oxidised tea. Maximum theaflavin and thearubigin formation.

Pu erh (sheng/raw)

1. Pluck (often older leaves).
2. Wither.
3. Briefly fix (less complete than green tea).
4. Roll.
5. Sun dry.
6. Compress into cakes (optional).
7. Age over years/decades, microbial fermentation continues.

Pu erh (shou/cooked)

1. Sheng pu erh process up to compression.
2. Wet pile fermentation (35-50°C, high humidity, weeks).
3. Dry.
4. Compress.

Accelerated version of sheng pu erh ageing, produces aged style character in months instead of decades.

The CTC vs Orthodox distinction

CTC (Crush Tear Curl)

Modern industrial process. Leaves passed through rotating cylinders that crush, tear, and curl them into small pellets. Faster oxidation, faster brewing. Used for most tea bag tea (Yorkshire, PG Tips, Tetley).

Orthodox

Traditional process. Leaves rolled gently to preserve whole leaf structure. Slower oxidation, slower brewing, a more detailed cup. Used for premium teas and most loose leaf.

Where the action happens

Major tea producing regions:

- **India:** Assam (CTC black), Darjeeling (orthodox black), Nilgiri (mostly black).

- **China:** All tea types, green, white, oolong, black, pu erh, yellow.
- **Sri Lanka:** Mostly black tea (Ceylon).
- **Japan:** Green tea (sencha, gyokuro, matcha) almost exclusively.
- **Kenya:** CTC black tea, high volume.
- **Taiwan:** Premium oolong, world class.
- **Vietnam, Indonesia, Nepal, Argentina:** Smaller production, mostly black.

FAQ

Are all teas the same plant? Yes, all real tea (black, green, white, oolong, pu erh, yellow) comes from Camellia sinensis. Differences are processing.

What's the difference between black and green tea processing? Black tea is fully oxidised after rolling; green tea is fixed by heat to prevent oxidation.

Why is matcha different? Matcha leaves are stone ground rather than steeped, whole leaf consumption.

What's the most processed tea? Oolong (most complex production). Pu erh (longest, including post production ageing).

What's the least processed tea? White tea, minimal handling, just pluck/wither/dry.

Curator's note: understanding tea processing transforms how you taste tea. The "fully oxidised vs unoxidised" decision at the bruising stage produces the entire difference between Yorkshire Tea and a Long Jing green. Same plant, completely different cups. Lee, teas.co.uk, Tunbridge Wells.

From leaf to cup, the six steps and the tea types

Step	What it does
Plucking	The bud and top leaves are picked; quality starts here
Withering	Leaves lose moisture and soften, ready to be worked
Rolling / shaping	Cell walls are broken to start oxidation and form the leaf
Oxidation	The master variable: none for green, partial for oolong, full for black
Fixing / firing	Heat halts oxidation and sets the style
Drying / sorting	Final moisture removed; graded, sometimes aged (pu-erh)

Taste the spectrum: a green tea, a black tea, an oolong, or browse the full tea shop.

FROM THE CURATOR

teas · Freshness beats provenance for most drinkers. Buy a smaller bag more often.

Tea processing reading

- Green tea
- black tea reference
- Oolong tea
- Pu-erh tea

More from the tea wiki

- Green tea
- Black tea
- Oolong tea
- White tea
- Herbal tea
- Caffeine in tea
- How to make tea properly
- Loose leaf vs teabag

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