Do Microplastics From Tea Harm You?

From the teas.co.uk wiki

> **The short version:** Microplastics released by old "silken" tea bags are real but human harm at tea doses is unestablished; switch to plant-fibre plastic-free bags is cheap.

The answer separates exposure (established) from harm (uncertain). It belongs with the other teabag safety pages, next to microplastics explained.

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

General information, not medical advice; the science on microplastic health effects is still developing.

Do microplastics from tea harm you, in brief

Question	Answer
Are particles released from old-style "silken" bags?	Yes, demonstrated by 2019 McGill study
Are they released from standard polypropylene-seal paper bags?	Yes but much smaller amounts
Are they released from plant-fibre plastic-free bags?	No, the modern format eliminates the issue
Is human harm established?	No, not at the doses involved in normal tea drinking
Is precautionary action sensible?	Yes; the switch costs almost nothing
Should you panic about past tea drinking?	No, measured concern not retrospective alarm
The practical fix	Plant-fibre plastic-free bags or loose-leaf
Wider proportion	Tea is one minor exposure pathway among many

What is established

Several things are reasonably well established. Plastic teabags release very large numbers of particles when brewed: the widely cited 2019 McGill study found a single bag could shed on the order of 11.6 billion microplastic and 3.1 billion nanoplastic particles into one cup, with later reviews putting the figures higher as heat breaks the materials down. Smaller follow-up studies have found similar patterns from the same bag types. Standard polypropylene-sealed paper bags release much less; plant-fibre plastic-free bags release no

meaningful plastic. And lab work shows these particles can be taken up by human gut cells. See microplastics explained.

What is not established

What is not settled is the human health consequence at real tea doses. The particles do enter the body, but the long-term clinical effect of that, at the amounts a normal tea habit produces, is unknown. Nor is it clear whether microplastics from tea differ in harm from those in bottled water, since the alarming animal studies use doses far higher than tea drinking produces, or whether all particle sizes behave the same, since nano-scale particles cross biological membranes more readily than micro-scale ones and the implications differ. So the accurate position is high exposure, uncertain consequence, which warrants neither confident scare stories nor flat dismissal.

Why precaution is cheap here

The reason this still matters is that, unlike most exposures, it is trivially avoidable. Loose-leaf tea or a certified plastic-free (ideally home-compostable) bag removes the exposure entirely, and it costs essentially nothing, since loose leaf is usually cheaper per cup. When a precaution is that cheap, taking it while the science matures is simply sensible. See how to avoid plastic.

Keep it in proportion

It is also worth keeping proportion. Microplastics are a whole-environment issue, and tea is one controllable source among many. Bottled water, seafood, household dust and synthetic clothing all contribute more microplastic exposure than tea did even before the industry largely switched away from plastic bags. Addressing the wider picture in a measured way is more useful than fixating on the teabag, which is the same proportion-not-panic approach the rest of this cluster takes. See PFAS in proportion.

The non-alarmist conclusion

So you do not need to fear tea; you just need to choose the format. The two clean answers are loose-leaf tea (no bag, no question) or a bag explicitly certified plastic-free and ideally home compostable. That removes the exposure entirely while the research matures, and there is no need to panic about past tea drinking, which was a modest exposure unlikely to matter. See the switch guide.

Want to actually buy a good one?

Once you have decided what to avoid, the next step is to pick a good one, a plastic free bag or loose leaf chosen for how it tastes. The teas shown on this page were matched to the microplastics question, which makes them the place to begin. To see the wider range, browse tea and herbal infusions at teas.co.uk or the full tea shop. Here, as across the wiki, go by how the tea tastes and what its listing says, work out the cost of a cup, and note that UK delivery is free over £35.

Reference noted

- Hernandez et al., Plastic Teabags Release Particles (2019)
- Food Standards Scotland: Microplastics in food

FROM THE CURATOR

teas · The brew counts for more than where the bag came from. A short careful steep can lift a cheap bag past a sloppy brew of an expensive one.

More tea reading

- Microplastics explained
- PFAS in teabags
- How to avoid plastic
- Loose leaf 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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