

**FOUR CUPS OF TEA DAILY TO PROTECT YOUR SMILE: NEW STUDY REVEALS DENTAL HEALTH BENEFITS OF THE GREAT BRITISH CUPPA**

A new study[[1]](#footnote-2), to be published in *Nutrition Bulletin*, has revealed that tea could be the top drink for great dental health, thanks to its fluoride content.

The study measured fluoride levels in standardised cups made from 49 different tea bags including regular black tea, single estate, specialty and green tea. The results showed that fluoride levels ranged from 0.72 to 1.68mg per serving which provides a quarter to half of the European Recommended Daily Allowance for fluoride for a typical mug of tea.

Tea is a natural source of fluoride as the tea plant absorbs fluoride present in the soil of tea-producing countries. The level of fluoride in tea leaves will depend on where the tea is grown, with countries such as Kenya, being particularly good for fluoride-rich soils.

Author of the study, Dr Carrie Ruxton from the Tea Advisory Panel, said: “Just four cups of regular black tea per day would provide all of the fluoride recommended for good dental health. Studies show that moderate amounts of fluoride help protect teeth from decay by strengthening the enamel. While we can get fluoride from toothpaste, a third of men and a quarter of women don’t brush their teeth twice a day[[2]](#footnote-3), which is the recommended frequency.

“Dental health remains poor in the UK, with decay affecting more than eight in ten adults and a third of primary 1 children[[3]](#footnote-4). Each adult has an average of 7 fillings. As tea is the best natural source of fluoride, switching from a sugary drink to a cup of tea would be an easy way to protect your teeth. Tea may also freshen your breath as plant compounds in tea, called flavonoids, have been found to kill bacteria in the mouth which cause unpleasant odours[[4]](#footnote-5),[[5]](#footnote-6). Research shows that half the flavonoids in the British diet comes from tea[[6]](#footnote-7).

While water fluoridation continues to attract controversy, tea is more acceptable to people as the nation’s favourite drink drunk by nearly three quarters of adults and a fifth of teenagers. Tea also provides the right balance of fluoride as most tea drinkers would not reach levels which exceed the safe upper limit of intake, defined in Europe as 7mg fluoride per day over the long term.

As Dr Ruxton comments: “Average intakes of tea in the UK are just over two servings daily according to national surveys[[7]](#footnote-8). Increasing this to four cups, would be well within the safe upper limit for fluoride but above recommended levels, helping people to achieve optimal levels of fluoride and protect their teeth.

“Tea is a healthy choice for all children and young people over 5 years of age[[8]](#footnote-9) and would be a superior alternative to sugary drinks, especially if lots of milk, which boosts calcium intakes, is added to tea. Currently, up to 40% of the sugar in children’s diets comes from beverages. Switching to unsweetened tea would help improve this situation.”

ENDS

**Editor’s notes**

One mug (240ml) of black blended tea provides 1.18mg fluoride on average. The figure for single estate/speciality tea, which includes green tea, is lower at 0.72mg. Decaffeinated tea is the best provider of fluoride, at 1.68mg per mug. This is probably because decaffeinated tea contains stronger flavoured leaves which have had more opportunity to take up fluoride from the soil.

Brewing tea for longer boosts the fluoride content, according to research presented at the Nutrition Society earlier this year[[9]](#footnote-10).

**The Tea Advisory Panel:** The Tea Advisory Panel is supported by an unrestricted educational grant from the **UK TEA & INFUSIONS ASSOCIATION**, the trade association for the UK tea industry. The Panel has been created to provide media with impartial information regarding the health benefits of tea. Panel members include nutritionists; dieticians and doctors.

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1. Ruxton C & Bond T (2015) Fluoride content of retail tea bags and estimates of daily fluoride consumption from typical tea drinking in UK adults and children. Nutrition Bulletin; in press. [↑](#footnote-ref-2)
2. [www.nationalsmilemonth.org/facts-figures/](http://www.nationalsmilemonth.org/facts-figures/) [↑](#footnote-ref-3)
3. [www.nationalsmilemonth.org/facts-figures/](http://www.nationalsmilemonth.org/facts-figures/) [↑](#footnote-ref-4)
4. Zeng QC et al. (2010) The effect of green tea extract

   on the removal of sulfur-containing oral malodor volatiles in vitro and its potential application in chewing gum. Journal of Breath Research 4: 036005. [↑](#footnote-ref-5)
5. Narotzki B et al. (2012) Green tea: a promising natural product in oral health. Archives of Oral Biology 57: 429–35. [↑](#footnote-ref-6)
6. From hydration review Zamora-Ros *et al.* 2013 [↑](#footnote-ref-7)
7. Bates et al. (2014) National Diet and Nutrition Survey. London: FSA/PHE. [↑](#footnote-ref-8)
8. Ruxton CHS (2014). The suitability of caffeinated drinks for children: a systematic review of randomised controlled trials, observational studies and expert panel guidelines. Journal of Human Nutrition & Dietetics 27: 342-357. [↑](#footnote-ref-9)
9. Ruxton CHS, Bond TJ (2015) Fluoride content of UK retail tea: impact of brew time on teas of different value. Proceedings of the Nutrition Society Irish Section meeting; in press. [↑](#footnote-ref-10)