

# Adding milk to tea can prevent stained teeth

14 August 2015, by Tarwinder Rai



Ava Chow found that adding milk to tea significantly reduces the tea's ability to stain teeth.

The next time tea drinkers steep another cup, they may want to consider adding a splash of milk if they want to keep their teeth white.

"Tea is the second most consumed drink in the world, and the way it's processed affects how [teeth](#) are stained. The more the tea is processed or oxidized, the higher its staining properties are," says Ava Chow, an assistant professor in the University of Alberta's School of Dentistry. "But we've found that the addition of milk to tea reduces the tea's ability to stain teeth."

Chow designed her study on prevention of tea-induced extrinsic tooth stain as a way to introduce undergraduate dental hygiene students to research. But her findings give a whole new meaning to the term "double-double."

Casein, the main protein in milk, was found to bind to the tannins—water-soluble compounds that are responsible for much of the staining properties of tea—and prevent teeth staining, explains Chow.

Using already extracted [human teeth](#) as samples, Chow and her students first recorded and

determined the colour of the natural teeth before exposing them to the staining procedure. They excluded teeth that had fillings, signs of tooth decay, or obvious cracks and fractures.

The teeth were then divided and placed in either a controlled solution of tea, or a solution of tea with milk for 24 hours at 37 C. Colour readings were then taken again.

"The results we found showed that casein is the component of milk that is responsible for the reduction of tea-induced staining," Chow says. "The magnitude of the colour change observed in our experiments is comparable to the colour change seen by vital bleaching products and more effective than whitening toothpastes."

But Chow notes that the social context of tea may have to be considered before dentists start recommending that patients take milk with their tea.

"Adding milk to tea is a culture-specific phenomenon. Some cultures may refuse to add it and others only drink [tea](#) with [milk](#)."

**More information:** "Prevention of tea-induced extrinsic tooth stain." *International Journal of Dental Hygiene* DOI: 10.1111/idh.12096

Provided by University of Alberta

APA citation: Adding milk to tea can prevent stained teeth (2015, August 14) retrieved 12 May 2021 from <https://medicalxpress.com/news/2015-08-adding-tea-teeth.html>

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