

# Study shows that drinking tea improves brain health

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According to a study led by Asst Prof Feng Lei, drinking tea at least four times a week improves brain efficiency. Credit: National University of Singapore

A recent study led by researchers from the National University of Singapore (NUS) revealed that regular tea drinkers have better organized brain regions—and this is associated with healthy cognitive function—compared to non-tea drinkers. The research team made this discovery after examining neuroimaging data of 36 older adults.

"Our results offer the first evidence of positive contribution of tea drinking to [brain](#) structure, and suggest that drinking tea regularly has a protective effect against age-related decline in brain organization," explained team leader Assistant Professor Feng Lei, who is from the Department of Psychological Medicine at the NUS Yong Loo Lin School of Medicine.

The research was carried out together with collaborators from the University of Essex and University of Cambridge, and the findings were published in scientific journal *Aging* on 14 June 2019.

## **Benefits of regular intake of tea**

Past studies have demonstrated that tea intake is beneficial to human health, and the [positive effects](#) include mood improvement and cardiovascular disease prevention. In fact, results of a longitudinal study led by Asst Prof Feng which was published in 2017 showed that daily consumption of tea can reduce the risk of cognitive decline in older persons by 50 percent.

Following this discovery, Asst Prof Feng and his team further explored the direct effect of tea on brain networks.

The research team recruited 36 adults aged 60 and above, and gathered data about their health, lifestyle, and psychological well-being. The elderly participants also had to undergo neuropsychological tests and magnetic resonance imaging (MRI). The study was carried out from 2015 to 2018.

Upon analyzing the participants' cognitive performance and imaging results, the research team found that individuals who consumed either green tea, oolong tea, or black tea at least four times a week for about 25 years had brain regions that were interconnected in a more efficient way.

"Take the analogy of road traffic as an example—consider brain regions as destinations, while the connections between brain regions are roads. When a road system is better organized, the movement of vehicles and passengers is more efficient and uses less resources. Similarly, when the connections between [brain regions](#) are more structured, information processing can be performed more efficiently," explained Asst Prof Feng.

He added, "We have shown in our previous studies that tea drinkers had better cognitive function as compared to non-[tea drinkers](#). Our current results relating to brain network indirectly support our previous findings by showing that the positive effects of regular tea drinking are the result of improved brain organization brought about by preventing disruption to interregional connections."

As cognitive performance and brain organization are intricately related, more research is needed to better understand how functions like memory emerge from brain circuits, and the possible interventions to better preserve cognition during the aging process. Asst Prof Feng and his team plan to examine the effects of tea as well as the bioactive compounds in tea can have on cognitive decline.

**More information:** Junhua Li et al. Habitual tea drinking modulates brain efficiency: evidence from brain connectivity evaluation, *Aging* (2019). [DOI: 10.18632/aging.102023](https://doi.org/10.18632/aging.102023)

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