

## Press Release

2021.1.8 | International Institute for Integrative Sleep Medicine (WPI-IIIS)

---

# Beating the Bulge with a Nice Cup of Tea

## Researchers led by the University of Tsukuba find that drinking two cups of oolong tea a day can stimulate fat breakdown while you sleep

Tsukuba, Japan - Does losing weight while you sleep sound too good to be true? According to a study by the University of Tsukuba, it seems that drinking oolong tea might help you do just that. While all tea comes from the same plant, *Camellia sinensis*, the degree of oxidation, a chemical reaction that turns tea leaves black, defines its specific type. For example, green tea is unoxidized and mild in flavor, while the distinctive color of black tea comes from complete oxidation. Oolong tea, being only partially oxidized, lies somewhere in between and displays characteristics of both green and black tea. But while green tea is lauded for its health benefits, oolong tea remains more of an unknown.

"Like all teas, oolong contains caffeine, which impacts energy metabolism by increasing our heart rate. However, studies suggest that tea consumption may also increase the breakdown of fat, independent of the effects of caffeine," explains senior author of the study Professor Kumpei Tokuyama. "We therefore wanted to examine the effects of oolong consumption versus caffeine alone on energy and fat metabolism among a group of healthy volunteers."

Publishing their results in a recent issue of the journal *Nutrients*, the researchers found that both oolong tea and pure caffeine increased fat breakdown by about 20% in the healthy volunteers compared with the placebo, and that oolong tea continued to have an effect while the

participants were asleep. Interestingly, neither treatment caused an increase in energy expenditure, indicating that the volunteers developed a tolerance to the stimulatory effects of caffeine over the 2-week study period.

Because a lack of sleep can impact energy metabolism, and because caffeine is known to inhibit sleep, the researchers also studied the sleep patterns of the volunteers. Significantly, there was no noticeable difference in sleep patterns or the time it took participants to fall asleep between the treatment and placebo groups, indicating that drinking oolong tea is unlikely to prevent you from getting a good night's rest.

So should we all be downing copious cups of oolong tea to counteract the indulgences of the festive season?

According to Professor Tokuyama, the answer is maybe. "The stimulatory effects of oolong tea on fat breakdown during sleep could have real clinical relevance for controlling body weight. However, we need to determine whether the effects we observed in the 2-week study translate into actual body fat loss over a prolonged period. In addition, we want to trial a decaffeinated oolong tea to better distinguish the effects of caffeine from other components of tea, which will help us understand exactly how oolong helps with fat breakdown."

### **About IIS**

IIS was launched by the Ministry of Education, Culture, Sports, Science and Technology of Japan with the aim of building globally visible research centers with high research standards and excellent research environments to accommodate globally prominent researchers. IIS is the world's premier institute aiming to elucidate the fundamental principles of sleep/wake biology, develop new strategies to diagnose, prevent, and treat sleep disorders, and contribute to promote human health through research activities. The research was funded by the Japan Society for the Promotion of Science and the Japan Science and Technology Agency.

---

**Bibliographic information**

Zhang S, Takano J, Murayama N, Tominaga M, Abe T, Park I, Seol J, Ishihara A, Tanaka Y, Yajima K, Suzuki Y, Suzuki C, Fukusumi S, Yanagisawa M, Kokubo T, and Tokuyama K, (2020) Subacute Ingestion of Caffeine and Oolong Tea Increases Fat Oxidation without Affecting Energy Expenditure and Sleep Architecture: A Randomized, Placebo-Controlled, Double-Blinded Cross-Over Trial.

***Nutrients***

doi: 10.3390/nu12123671

**Media Contact**

Alliance and Communication Unit, International Institute for Integrative Sleep Medicine (WPI-IIIS), University of Tsukuba, Japan

E-mail: [wpi-iiis-alliance@ml.cc.tsukuba.ac.jp](mailto:wpi-iiis-alliance@ml.cc.tsukuba.ac.jp)