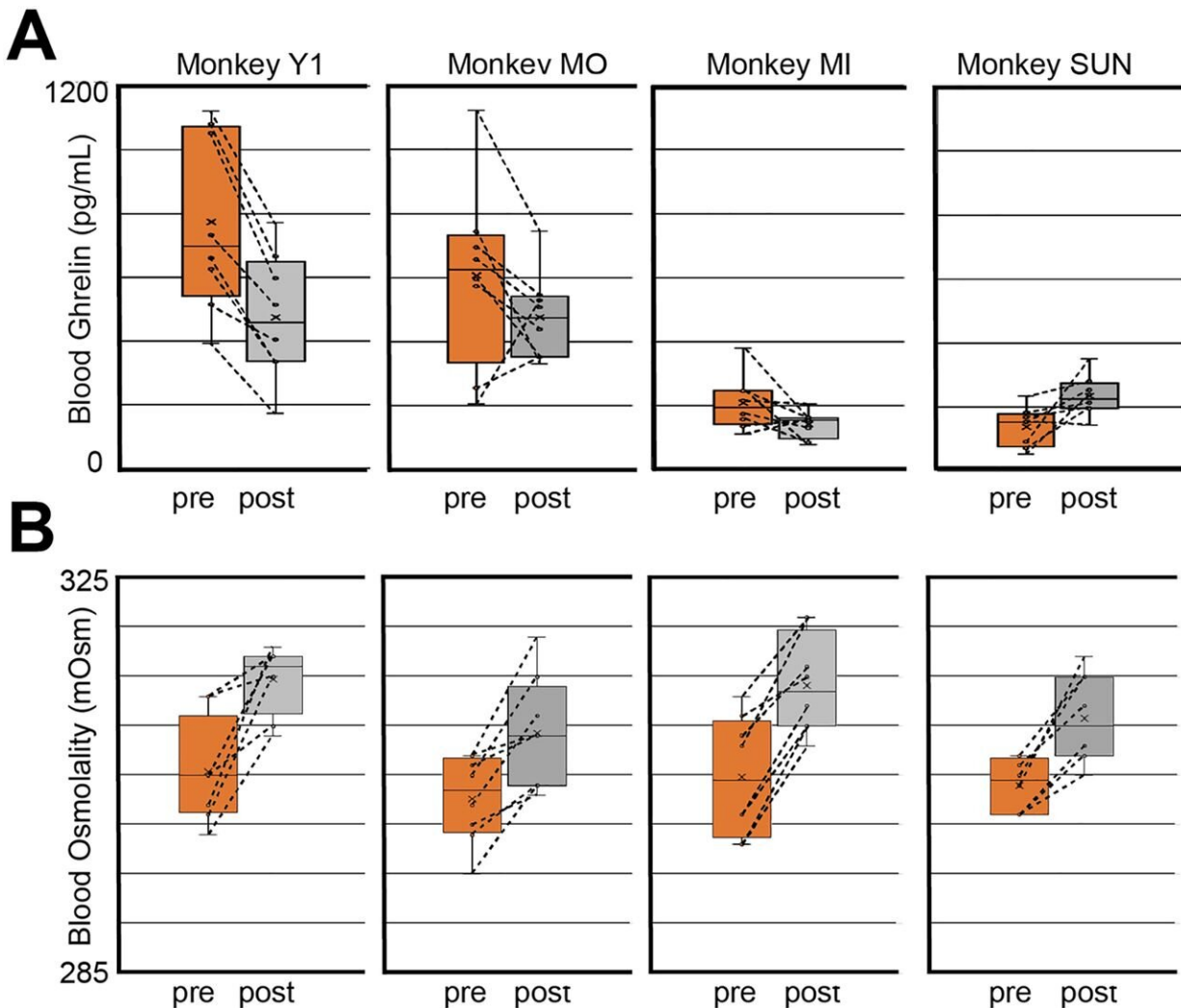


# Researchers link dry food consumption to measurable thirst levels

February 12 2025



Blood ghrelin and osmolality levels before and after dry meal intake. Credit: *eneuro* (2024). DOI: 10.1523/ENEURO.0481-23.2024

Consuming foods with low water content, such as rice crackers and cookies, often leads to increased thirst. While thirst and hunger are subjective sensations produced by the brain, they are caused by various factors. For instance, eating cookies can dry out your mouth, prompting a desire for tea; salt intake can also make one thirsty.

These eating and drinking decisions are regulated by our body's condition. However, do the sensations of thirst and [hunger](#) align with the body's physiological changes?

Researchers at the University of Tsukuba have developed a method that measures and quantifies the physiological changes occurring in the body during dry food consumption. This method might significantly contribute to health maintenance and the evaluation of diseases related to abnormal cravings, such as polydipsia and polyphagia.

In their study, [published](#) in *eneuro*, researchers quantitatively measured and evaluated whether eating dry foods triggers thirst sensation in macaque monkeys (Japanese macaque and [rhesus macaque](#)), which are laboratory animals capable of regulating eating and drinking and are closely related to humans.

Thirst sensation correlates well with blood osmolality, and hunger is well reflected by ghrelin, a hormone secreted from the stomach. Therefore, the researchers collected [blood samples](#) and measured osmolality and ghrelin alterations before and after feeding the [macaque monkeys](#) with dry crackers (a type of dry bread), which they consumed daily.

Results showed that changes in blood osmolality and ghrelin levels corresponded well with the degree of thirst and hunger, suggesting that thirst resulting from dry food consumption can be quantified.

These findings are potentially useful for evaluating diseases related to

abnormal cravings, such as excessive [thirst](#) and hunger (e.g., depression, polydipsia, and bulimia).

**More information:** Yuki Suwa et al, A Method for Evaluating Hunger and Thirst in Monkeys by Measuring Blood Ghrelin and Osmolality Levels, *eneuro* (2024). [DOI: 10.1523/ENEURO.0481-23.2024](https://doi.org/10.1523/ENEURO.0481-23.2024)

Provided by University of Tsukuba

Citation: Researchers link dry food consumption to measurable thirst levels (2025, February 12) retrieved 9 March 2025 from <https://medicalxpress.com/news/2025-02-link-dry-food-consumption-thirst.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.