

Scientists uncover dietary strategy to address obesity using component in red chili

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Scientists have discovered a dietary strategy that may address obesity by

reducing endotoxemia, a major contributor to chronic, low-grade inflammation (CLGI). The researchers uncovered an interaction between dietary capsaicin (CAP), the major pungent component in red chili, and gut microbiota. This novel mechanism for the anti-obesity effect of CAP acts through prevention of microbial dysbiosis and the subsequent gut barrier dysfunction that can lead to CLGI.

The research is published May 23rd in *mBio*, an open access journal of the American Society for Microbiology.

Little is known about the role of gut microbiota in the anti-obesity effect of CAP. High throughput 16S rRNA gene sequencing revealed that CAP significantly increased gut health-beneficial butyrogenic bacteria and decreased LPS-producing bacteria and LPS biosynthesis. By using antibiotics and microbiota transplantation, the investigators showed that [gut microbiota](#) plays a causal role in dietary CAP-induced protective phenotype against high-fat-diet-induced CLGI and obesity.

Moreover, cannabinoid receptor type 1 (CB1) inhibition was partially involved in the beneficial effect of CAP. Together, these data suggest that the [gut microbiome](#) is a critical factor for the anti-obesity effects of CAP.

Provided by American Society for Microbiology

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