

DAILY YOGURT PAIRED WITH HONEY SUPPORTS HEALTHY GUT BACTERIA.¹

A HONEY - YOGURT BEVERAGE CONTAINING B. ANIMALIS SUPPORTS THIS BENEFICIAL PROBIOTIC.

Study Overview: A study in healthy American adults supports findings from a simulated digestion study (in-vitro) showing that honey may help beneficial yogurt bacteria survive human digestion. Of four honey varieties in a simulation study, clover honey helped the probiotic B. animalis in yogurt survive simulated human digestion (see separate summary). Therefore, this clinical trial tested the effect in free living adults drinking a yogurt beverage made with B. animalis plus clover honey. The honey and yogurt pairing did not statistically improve digestive function, possibly because subjects were functioning normally at baseline. However, the study confirms that clover honey added to yogurt supports survival of the beneficial probiotic B. animalis in the human gut.

Method in Brief: Sixty-two healthy free-living adults completed a cross-over trial in which they drank a yogurt beverage containing the probiotic B. animalis paired with clover honey (6 oz yogurt + 1 Tbsp honey twice a day) for two weeks, as compared to a yogurt beverage without honey in which the probiotic was deactivated by a heat treatment (the latter serving as the control). Several indicators of normal digestive function were measured, including transit time (the primary outcome of this study). The study also characterized probiotic bacteria in the digestive system, as well as measured indicators of mood and cognition, the latter of which have been associated with healthy gut bacteria.

Findings:

<u>Digestive function</u>: Speed of transit through the digestive system was 25.8 hours compared to 27.9 hours when the yogurt - honey beverage was consumed compared to the control deactivated probiotic yogurt without honey. This difference was not statistically significant. There were no meaningful differences in self-reported digestive symptoms like burping, cramping, bloating, gas, nausea, heartburn, or rumblings. Stool frequency, ease of passage, and consistency also were similar between yogurt-honey pairing compared to control.

<u>Mood and cognition</u>: There were no differences in mood states (positive or negative affect), depression, anxiety, stress, fatigue, cognition, or other measured indicators.

<u>Probiotic survival</u>: The probiotic B. animalis was enriched in the human digestive track when a yogurt plus honey beverage was consumed compared to a negative control (deactivated bacteria in the yogurt without honey).

Conclusions: Yogurt with honey supports probiotic enrichment in healthy adult digestive systems, which is consistent with a simulated digestion study reported previously. Although probiotic enrichment in the gut did not translate into improved gastrointestinal function, cognitive performance, or better mood, the authors note it is "challenging to induce meaningful changes in human adult microbiota that further elicit changes in physiological outcomes." Individuals in this study had normal gastrointestinal function, so future research is warranted among those on the lower range of function.

1 Mysonhimer AR, MD Brown, DA Alvarado, E Cornman, M Esmail, T Abdiel, K Gutierrez, J Vasquez, cN Cannavale, MJ Miller, NA Khan, HD Holscher. "Honey added to yogurt with Bifidobacterium animalis subsp. lactis DN-173 010/CNCM I-2494 supports probiotic enrichment but does not reduce intestinal transit time in healthy adults: A randomized, controlled, crossover trial." The Journal of Nutrition. June 1, 2024 https://www.sciencedirect.com/science/article/pii/S0022316624003328