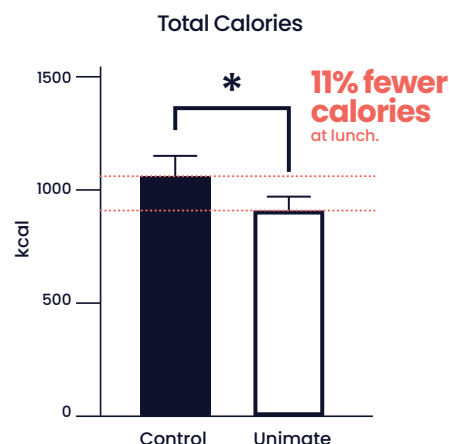
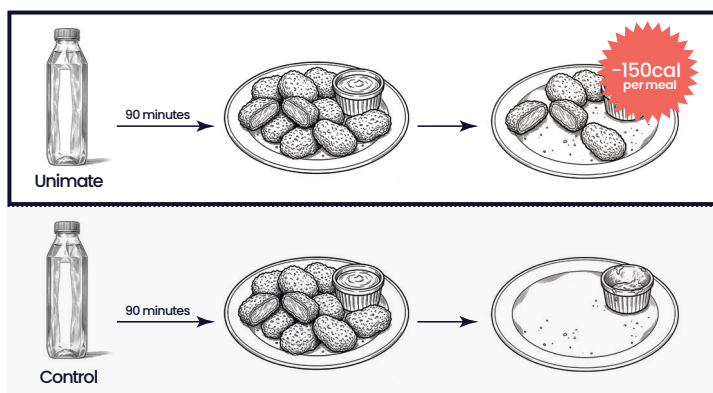


Unimate acutely suppresses appetite and reduces caloric intake in healthy adults

In this randomized, controlled crossover trial, we evaluated the acute effects of Unimate on appetite and eating behavior. In overnight-fasted subjects, Unimate increased feelings of fullness by 59% within 15 minutes and reduced caloric intake by 11%. Notably, previous preclinical research has shown that Unimate upregulates the body's GLP-1 response, a hormonal pathway that could contribute to the appetite-suppressing effects observed in this study. These findings are particularly relevant for those practicing intermittent fasting, managing caloric intake, or seeking to support long-term weight management. In a landscape where the public health burden of overnutrition and obesity continues to grow and pharmacological agents such as semaglutide have become increasingly mainstream, this study positions Unimate as a practical, evidence-based dietary strategy for appetite control and energy balance.



Background

Yerba mate (*Ilex paraguariensis*) is traditionally consumed as an herbal tea for its stimulatory and mood-enhancing properties, but is increasingly recognized for its broader effects on metabolism, satiety, and weight management. Preclinical and early clinical studies suggest that yerba mate may regulate energy expenditure, lipid metabolism, satiety, GLP-1 expression, and mitochondrial activity [1–7]. Despite this promising body of work, there remains a need for well-controlled clinical research to more precisely characterize yerba mate's acute effects on appetite and eating behavior in humans.

A previous pilot study in healthy adults found that Unimate, a concentrated yerba mate supplement, acutely reduced the desire to eat compared to a placebo control [8]. Building on those findings, the present study used a randomized, controlled crossover design to further probe the effects of Unimate on subjective appetite and to determine whether those effects would translate to measurable differences in *ad libitum* energy intake.

Methods

Eighteen healthy adults (10 men and 8 women) took part in this randomized, controlled, crossover study. Each participant completed both treatment conditions, 500 ml of Unimate and 500 ml of water, in a randomized order. Water was selected as the control condition because it represents the most realistic non-caloric alternative to Unimate in a real-world setting.

Participants arrived at the clinic each morning following a minimum 12-hour overnight fast. Baseline subjective appetite ratings assessing hunger, fullness, satiety, and prospective food consumption were collected using a validated visual analog scale (VAS). Participants then drank either Unimate or water, and ratings were repeated at 15, 30, 45, 60, and 90 minutes post-consumption. At 90 minutes, an unrestricted meal of breaded chicken, sauce, and water was presented, and participants were instructed to eat naturally until comfortably full or until 20 minutes had elapsed. Additional portions were provided in excess at irregular intervals, and total intake was calculated from the difference between food served and food remaining.

18 participants

Crossover, within-subject design

Results

Drinking Unimate resulted in participants feeling significantly fuller over the 90-minute test period compared to water only ($p = 0.020$, Figure 1A). Satiety also tended to be greater with Unimate ($p = 0.057$, Figure 1B). Prospective consumption and hunger followed similar patterns, though they did not reach statistical significance (Figures 1C–D).

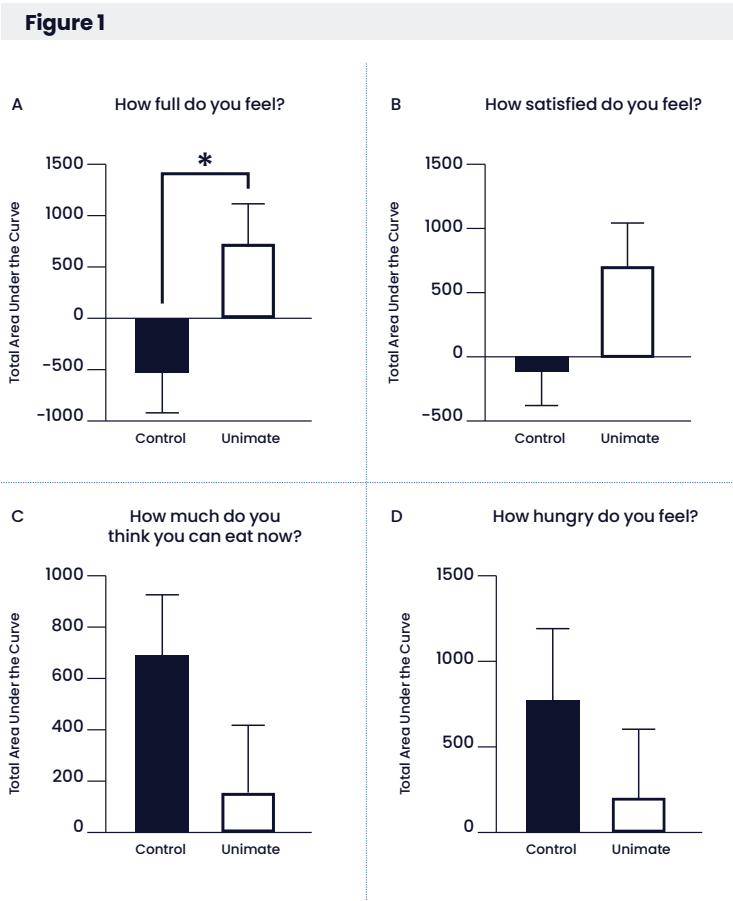


Figure 1. Control and Unimate appetite area under the curve (AUC) scores over the 90-minute test period for each appetite domain are plotted as means $\pm$ SEM: fullness (A), satiety (B), prospective consumption (C), and hunger (D). * $p < 0.05$

When examining individual timepoints, fullness was significantly greater with Unimate as early as 15 minutes after consumption and remained elevated 60 minutes later ($p < 0.05$, Figure 2). Notably, while fullness ratings in the control condition declined progressively over the 90-minute fasting period, Unimate largely attenuated this decline, suggesting that it meaningfully offset the natural rise in hunger that occurs during an extended fast.

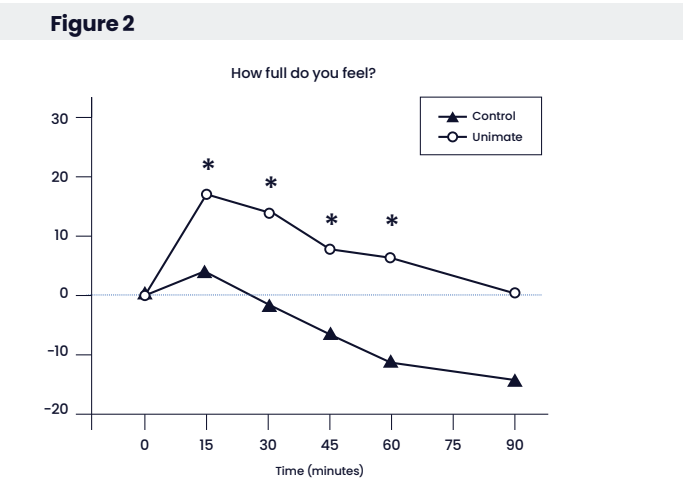


Figure 2. Fullness VAS score rating of Control and Unimate over the 90-minute test period, plotted as means $\pm$ SEM. * $p < 0.05$, Control vs. Unimate pairwise comparison.

Figure 3

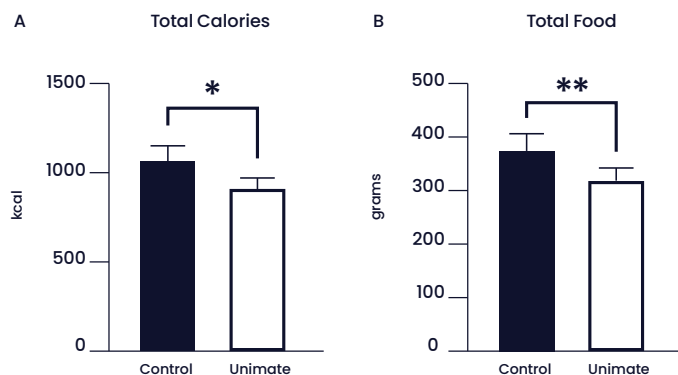


Figure 3. Total caloric intake (A) and food intake (B) during the provided meal are plotted as means $\pm$ SEM. * $p < 0.05$, ** $p < 0.01$.

Test Meal Consumption

Participants consumed significantly fewer total calories following Unimate relative to water (approximately 150 kcal, or 11% less; $p = 0.01$, Figure 3A). No significant differences were observed in sauce or water intake between conditions, while total solid food (breaded chicken) consumption was significantly lower following Unimate ($p = 0.003$, Figure 3B).

Conclusion

In this randomized, controlled crossover study, drinking Unimate significantly increased feelings of fullness throughout a 90-minute fasting period and reduced caloric intake by approximately 11% or 150 calories. These changes in both subjective appetite ratings and objective intake data indicates that Unimate's effects on satiety were both perceived and behaviorally meaningful.

The mechanisms underlying these effects have not yet been fully characterized, though the findings are consistent with previous preclinical research demonstrating that Unimate upregulates GLP-1, a hormone centrally involved in satiety signaling, suggesting a plausible hormonal pathway worthy of further investigation.

Satiety responsiveness has been identified as a meaningful and modifiable target for weight management [9], and the present findings suggest that Unimate may support this capacity naturally. Collectively, these results support Unimate as an effective dietary strategy for appetite regulation, whether used to support caloric restriction, intermittent fasting, or long-term weight management.

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