Evaluation of the Influence of Raw Almonds on Appetite Control: Satiation, Satiety, Hedonics and Consumer Perceptions

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Abstract:
Snack foods can be substantial contributors to daily energy intake, with different types of snacks exerting potentially different effects on satiety per calorie consumed. The present research compared the effect of consuming almonds as a mid-morning snack compared to an energy and weight-matched comparator snack (savoury crackers) or the equivalent weight of water (zero energy control). In a crossover design, 42 female participants (age: 26.0 ± 7.9, BMI: 22.0 ± 2.0) consumed a fixed breakfast then a mid-morning snack. Appetite, 24-h energy intake, food hedonics, and consumer perceptions of the snack foods were assessed under laboratory conditions. AUC analyses revealed a lower overall hunger drive after consuming almonds compared to crackers or water. There was no difference in 24-h energy intake in the almond compared to the cracker or the zero-energy control condition, however participants consumed more energy in the cracker condition compared to the zero-energy control condition. In addition, almonds suppressed hedonic preference (implicit wanting) for consuming high-fat foods and demonstrated a higher satiety quotient (SQ) than crackers. Almonds were perceived to have a more favourable consumer profile aligned with successful weight management. In conclusion, these findings demonstrate that in the context of a 24-h period of objectively measured energy intake, raw almonds are effective for controlling appetite compared to an energy matched alternative snack.