The impact of inulin fiber consumption on appetite sensations and food intake in acute settings in college age females in Kuwait: A randomized, double-blind, placebo-controlled study

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Animal studies have shown that inulin, a fermentable fiber results in reduced energy intake and weight loss. This study aims to compare the effect of inulin supplementation on appetite profile and food intake. Forty college age females (20.3±3.7 years (Mean ± SD)) recruited from the University of Kuwait were randomized in double-blind fashion to an inulin-drink (16 g/day in 330 ml water) or 330 ml water (placebo). Both drinks were iso-caloric and artificially flavored in identical opaque water bottles. Drinks were consumed daily for 7 days (adaptation period) and Visual Analogue Scales (VAS) was used for reporting appetite profiles on the 8th day in a feeding lab. Fasted volunteers were administered the VAS at various time points throughout day. There was no significant difference in age or weight between the two groups. The placebo group consumed significantly more energy at lunch compared to the fiber group (670±174 kcal vs. 554±217 kcal, p<0.05). VAS scores indicated that the placebo group had a significantly higher desire for food in the morning compared to the inulin group (p<0.05) and this desire remained significant for at least 2 hours and 45 minutes. The placebo group experienced a sharp increase in hunger and desire for eating food early in the day and also experienced significantly weaker fullness and satisfaction ratings during that period (p<0.05). In conclusion, 16 g/day of inulin has a beneficial effect in reducing appetite and food consumption as supported by favorable VAS ratings and lower food consumption during the day.

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