

THE EFFECTS OF ACUTE CITRUS AURANTIUM INGESTION ON ENERGY EXPENDITURE IN MILDLY OBESE SUBJECTS.

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Americans spend billions of dollars each year in hopes of losing weight and changing body composition. Sympathomimetic compounds (i.e. ephedrine) are often used as the primary active ingredient in weight loss supplements. The problem with using ephedrine-type compounds is that HR and BP may increase, which may lead to complications associated with hypertension. Citrus aurantium (CA) is a thermogenic compound, and is often called synephrine. It is an alkaloid compound that has a shorter half-life and stimulates the CNS and cardiovascular system less than ephedrine.

PURPOSE: To investigate the effects of CA ingestion, in an herbal blend, on mildly overweight individuals.

METHODS: Fourteen females and nine males (Mean (\pm SD) age 24.7 ± 7.4 yrs, BMI: 26.6 ± 3.8) volunteered in this placebo controlled, crossover design study. Subjects refrained from exercise for 24 hours before their trials and entered the laboratory following an overnight fast. Following pretest baseline data collection, subjects were given 3 treatment capsules to ingest on Day 1. They ingested 1 more capsule the morning of the Day 2 collection. Subjects then sat quietly for 60 min. Expired air was analyzed during the final 10 min of that session. Heart rate and BP were recorded at 60 min.

RESULTS: Caloric expenditure increased by 8% from pretest on Day 1 to posttest on Day 2 with CA ($1.18 \pm .24$ to $1.28 \pm .27$ kcal/min, $p < .05$). No change was observed for PL ($1.26 \pm .25$ to $1.24 \pm .28$ kcal/min). Oxygen uptake increased from 230 ± 50 to 250 ± 50 mL/min for CA but was unchanged for PL (250 ± 50 and 250 ± 50 mL/min). No differences were observed for HR, BP, or RER during the CA and PL trials.

CONCLUSIONS: The results of this study indicate that acute CA ingestion increases resting metabolic rate while not affecting the cardiovascular indices of heart rate and blood pressure. Supported by Enforma Natural Products