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During weight loss, supplementation with calcium and vitamin D may reduce central obesity (visceral fat) which is associated with many degenerative and metabolic diseases.

SUPPLEMENTATION WITH CALCIUM AND VITAMIN D DECREASES CENTRAL OBESITY IN OVERWEIGHT ADULTS DURING WEIGHT LOSS

Many previous studies have indicated that calcium and vitamin D may play a role in the regulation of abdominal fat mass (visceral fat). Unlike subcutaneous (under the skin) and intermuscular fat, there is a strong correlation between visceral fat and many diseases (cardiovascular disease, type 2 diabetes, insulin resistance, inflammatory diseases, and other obesity-related diseases).

In a new study, researchers analyzed the effect of calcium/vitamin D fortified orange juice on weight loss and reduction in visceral adipose tissue (VAT) in overweight and obese adults.

Two parallel, double-blind, placebo-controlled trials were conducted at the same time with either regular or reduced calorie (lite) orange juice (OJ). There were 171 study subjects randomly assigned to one of two groups. The trials were conducted over a period of 16 weeks.

The treatment groups consumed three 8 ounce glasses of OJ (regular or lite) fortified with 350 mg Ca and 100 IU vitamin D per serving, and the control groups consumed either unfortified regular or lite OJ. Measurements of VAT and subcutaneous adipose tissue were performed before and after the trials.

The average weight loss after 16 weeks was 2.45 kg did not differ significantly between groups. In the regular OJ trial, the reduction of VAT was significantly greater in the calcium/vitamin D group than in the control group. In the lite OJ trial, the reduction of VAT was also significantly greater in the calcium/vitamin D group than in the control group. When the results of the two trials were combined, the difference between the supplemented groups and controls was even more statistically significant.

The findings of the current study suggest that calcium/vitamin D supplementation may contribute to a specific and beneficial reduction of VAT in overweight adults.

Jennifer L Rosenblum et al. Calcium and vitamin D supplementation is associated with decreased abdominal visceral adipose tissue in overweight and obese adults. Am J Clin Nutr January 2012 vol. 95 no. 1 101-108.