Tea and Exercise

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Green tea catechins improve exercise-induced abdominal fat loss

An article published in the February, 2009 Journal of Nutrition reported the outcome of a clinical trial which found a lowering effect for green tea catechins on abdominal fat and triglycerides in overweight adults. Increased abdominal fat is a factor associated with metabolic syndrome, which increases the risk of diabetes and heart disease.

Kevin C. Maki of Provident Clinical Research in Bloomington, Indiana, along with coauthors including Jeffrey B. Blumberg of Tufts University in Boston, randomized 132 overweight or obese adults to receive a beverage containing approximately 625 milligrams green tea catechins (including gallocatechin, epigallocatechin, catechin, epicatechin, EGCG, gallocatechin gallate, epicatechin gallate and catechin gallate) and 39 milligrams caffeine, or a beverage containing the same amount of caffeine without catechins daily for twelve weeks. Participants were requested to maintain the same amount of caloric intake and to engage in at least 180 minutes per week of exercise, including at least three supervised sessions each week. Body composition, serum lipids, and other factors were assessed at the beginning and end of the study.

Both groups lost weight by the end of the study, yet participants who received catechins experienced a greater amount of weight loss than those who consumed the control beverage. When fat mass was considered, the percentage lost was greater in the catechin group, although the amount was not considered significant. However, total abdominal fat area, subcutaneous abdominal fat and serum triglycerides were significantly lower in subjects who received green tea catechins.

Tea catechins' most commonly studied mechanisms of action on body composition are that of improving thermogenesis and increased fat oxidation. "Our results are not inconsistent with the possibility that catechin consumption increases energy expenditure to a degree that

could produce clinically important changes in body fat over time," the authors write. "Larger and/or longer trials will be needed to test this hypothesis.