

Plant Extracts May Be Key to Preventing Obesity

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GRANADA, Spain—New research from the University of Granada has found four plant extracts that show great promise in preventing and fighting obesity. The researchers cited ongoing research and confidentiality reasons for not disclosing the name of the extracts; however, they were derived from vegetables commonly consumed by humans.

In vitro assays revealed that two of the extracts inhibited the activity of one of the key enzymes involved in the breakdown of dietary lipids, which would eventually reduce lipid absorption. Cell assays revealed that another two extracts induced the hydrolysis of the triglycerides accumulated within fat cells, reducing their fat content.

The researchers used Wistar rats as a model for study of the absorption of a fat-rich diet, and Zucker rats, characterized for being obese rats, as a model for studying the effects of the extracts on body weight and plasma lipid levels in obese animals.

Two extracts were selected as they demonstrated to have potential inhibiting effects on dietary fat absorption. Rats were fed with a fat-rich diet supplemented with the extracts during three days; they showed a 6% to 8% increase in the fat excreted in feces, as compared to the fat excreted by rats fed with a fat-rich diet without any supplementary extract. The results suggest that this extract inhibits fat absorption. Obese rats were administered the two extracts that were found to reduce cell fat contents during 10 weeks; lipid concentrations in plasma improved as did the parameters associated with the metabolism of glucose.

Dietary administration of one of the extracts to obese rats significantly reduced triglyceride and cholesterol levels in plasma by 67% and 49%, respectively, compared to a control group of obese rats that received no extracts. Glucose and insulin levels in plasma were also significantly improved. Another extract reduced free fatty acid levels in plasma by 68% compared to a control group of obese rats receiving no extract.