Four Plant Extracts Discovered For Possible Weight Loss

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Four plant extracts that may be effective in fighting and preventing obesity have been identified through in vitro examinations by a team of researchers from the University of Granada. The team then tested the extracts on rats.

Although results from the assays show promise, additional investigations on animals are needed in order to assess and verify the anti-obesity effects of these extracts. Once the researchers are able to confirm the extracts anti-obesity effects on animals, they will be tested in clinical trials.

The researchers found that two of these extracts restricted the activity of one of the primary enzymes involved in the breakdown of dietary lipids, which would ultimately reduce absorption of lipids.

After evaluating cells, the team also found that another two extracts reduced fat content as they activated the hydrolysis of the triglycerides accumulated within fat cells.

The names of the extracts cannot be disclosed for confidentiality reasons.

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

The researchers fed Wistar rats a fat-rich diet supplemented with two extracts that showed potential inhibiting effects of dietary fat absorption. During 3 days, the rats showed a 6-8% increase in the fat excreted in feces, compared to the fat excreted by rats on the same diet but without extract supplements, indicating that this extract restricts fat absorption.

Zucker rats received supplements of the two extracts shown to reduce cell fat contents. During 10 weeks, the researchers found that lipid concentrations in plasma improved, as well as the parameters linked to the metabolism of glucose - which is associated with obesity and diabetes.

They discovered that triglyceride was considerably reduced by 67% in Zucker rats, given one of these extracts, as did cholesterol levels in plasma (49%), compared to Zucker rats that received no extracts. In addition, the team found that Glucose and insulin levels in plasma considerably improved and that another extract reduced free fatty acid levels in plasma by 68%, in comparison to Zucker rats that received no extract.

The researchers state that current national regulations prohibit the introduction of any drug in food, although it

is legal that food is enriched with natural compounds that are commonly consumed by humans. The extracts selected in this investigation derive from vegetables prevalently consumed by individuals, therefore they can be added to food or used as nutritional supplements, once their effectiveness is examined and confirmed in clinical trials.

The study was carried out by Belén San Román Arenas, at the Biosearch Life Department of Research, in collaboration with the professor at the University of Granada Department of Biochemistry and Molecular Biology II Olga Martínez Augustín, and coordinated by doctors Mónica Olivares Martín and Oscar Bañuelos Hortigüela.

Written by Grace Rattue

References:
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