

Controlling obesity with potato extract

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Take a look in your pantry: the miracle ingredient for fighting obesity may already be there. A simple potato extract may limit weight gain from a diet that is high in fat and refined carbohydrates, according to scientists at McGill University. The results of their recent study were so surprising that the investigators repeated the experiment just to be sure.

Investigators fed mice an obesity-inducing diet for 10 weeks.

The results soon appeared on the scale: mice that started out weighing on average 25 grams put on about 16 grams. But mice that consumed the same diet but with a potato extract gained much less weight: only 7 more

grams. The benefits of the extract are due to its high concentration of [polyphenols](#), a beneficial chemical component from the fruits and vegetables we eat.

"We were astonished by the results," said Prof. Luis Agellon, one of the study's authors. "We thought this can't be right - in fact, we ran the experiment again using a different batch of extract prepared from potatoes grown in another season, just to be certain."

The rate of obesity due to over-eating continues to rise in Canada, affecting 1 in every 4 adults. Obesity increases the risk of cardiovascular disease and cancer. According to this study, potato extracts could be a solution for preventing both obesity and type 2 diabetes.

Extract derived from 30 potatoes

"The daily dose of extract comes from 30 potatoes, but of course we don't advise anyone to eat 30 potatoes a day," says Stan Kubow, principal author of the study, "as that would be an enormous number of calories." What the investigators envisage instead is making the extract available as a dietary supplement or simply as a cooking ingredient to be added in the kitchen. Popularly known for its carbohydrate content, the potato is also a source of polyphenols. "In the famous French diet, considered to be very healthy, potatoes - not red wine - are the primary source of polyphenols," says Kubow. "In North America, potatoes come third as a source of polyphenols - before the popular blueberries."

A low-cost solution

"Potatoes have the advantage of being cheap to produce, and they're already part of the basic diet in many countries," Kubow explains. "We chose a cultivated variety that is consumed in Canada and especially rich in polyphenols."

En route to the airport one day to catch the same flight, Stan Kubow, Associate Professor in the School of Dietetics and Human Nutrition and an expert on polyphenols, and Danielle Donnelly, Associate Professor in the Department of Plant Science and an expert on potatoes, had the bright idea of crossing their research interests, and together with Prof. Agellon, they carried out this study.

Although humans and mice metabolize foods in similar ways, clinical trials are absolutely necessary to validate beneficial effects in humans. And the optimal dose for men and women needs to be determined, since their metabolisms differ.

The team hopes to patent the [potato](#) extract, and is currently seeking partners, mainly from the food industry, to contribute to funding [clinical trials](#).

More information: Extract of Irish potatoes (*Solanum tuberosum* L.) decreases body weight gain and adiposity and improves glucose control in the mouse model of diet-induced obesity

Molecular Nutrition & Food Research, November 2014, Stan Kubow, Luc Hobson, Michèle M. Iskandar, Kebba Sabally, Danielle J. Donnelly and Luis B. Agellon, [onlinelibrary.wiley.com/doi/10...r.201400013/abstract](http://onlinelibrary.wiley.com/doi/10.1002/mnfr.201400013/abstract)

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