

## A little lupin improves the bread of life

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Lupin flower. Credit: Sloanep, Wikimedia Commons

You can lower your risk of heart disease significantly, just by using flour containing 40 per cent lupin beans in the place of conventional wholemeal flour, according to research by Victoria University dietitian Dr. Regina Belski and colleagues from the University of Western Australia.

Over the course of a year, working with the Centre for <u>Food</u> and Genomic Medicine in Perth, the researchers monitored more than 100 <u>overweight</u>, but otherwise healthy, Western Australian men and women



to whom they provided everyday foods made either with wholemeal flour or incorporating lupin flour.

"Consuming lupin flour lowered blood pressure and reduced the risk of heart disease," she said. "It's as simple as that."

Regina's work is being presented for the first time in public through Fresh Science, a communication boot camp for early career scientists held at the Melbourne Museum. She was one of 16 winners from across Australia.

Lupins are legumes often grown ornamentally in gardens for their flowers, but their beans have been eaten since Roman times. About 80% of the world's commercial lupin crop is produced in Western Australia where it conditions the soil and is sold for livestock feed.

Recently, Regina says, there has been renewed interest in using lupin flour in regular foods, because of its unique high protein, high fiber composition and its ability to be incorporated easily into typical food products such as bread. But the West Australian Country Womens' Association produced a cookbook of recipes using lupin flour decades ago.

Those taking part in the study were put on a weight loss diet and split into two groups. For a year, one group ate foods incorporating the 40-percent lupin flour, and the other foods made solely with wholemeal flour. During the course of the experiment, Regina and her team monitored heart disease risk factors, including blood pressure, and the level of fats, sugar and insulin in the blood.

The foods provided to participants during the study included bread, pasta and biscuits. The researchers found that while both the lupin group and the wholemeal group lost similar amounts of weight, the lupin group



displayed bigger improvements in several heart disease risk factors.

"So simply consuming foods incorporating lupin flour can improve heart health in overweight people at higher risk of heart disease," Regina says.

The study suggested that lupin flour might also be good for those suffering from Type 2 or adult onset diabetes, because even in non-diabetic individuals sensitivity to insulin improved during the trial.

In Western Australia, Regina says, commercial food manufacturers have already begun making and selling products which incorporate lupin flour.

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