

Mice on high-carb diets show high levels of tumour growth

Counterparts given low-carb meals have clean bill of health

By Denise Ryan, Vancouver Sun June 15, 2011

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It's another blow for the bagel and the baguette: a new study shows a dramatic link between high-carb diets and the growth and spread of cancerous tumours in mice.

"It's possible that by simply changing our diet to a low-carb, low-fat, high protein diet, we can starve the cancer by eliminating the glucose the tumours need to grow," said Dr. Gerry Krystal, the research scientist at the BC Cancer Agency who authored the study along with Dr. Victor Ho.

Krystal and his team fed one group of mice a typical Western diet, and another group of mice a high-protein, low-carb diet.

"On the Western diet, half of the mice had tumours by middle age. On the low-carb diet, none of the mice had the tumours."

Krystal said the mice used in the experiment were genetically predisposed to breast cancer, and had a normal life expectancy of two years.

About 70 per cent of the mice on the Western diet developed cancer by the time they died, compared with 30 per cent of those on the low-carb diet.

"Only one of the mice on the Western diet reached a normal lifespan, and half of the other mice reached or exceeded the expected lifespan."

The mice on the Western diet ate 55-per-cent carbs, 23-percent protein, and 22-per-cent fat. Mice on the low-carb, high-protein diet ate 15-percent carbs, 25-per-cent fat and 60-per-cent protein.

Interestingly, said Krystal, "we kept the diets the same number of calories, the mice on the Western diet gained a lot of weight."

Although the study hasn't yet been conducted on humans, the link between growth of cancer cells and glucose has long been known, said Krystal. Carbs, whether complex or simple, convert quickly to glucose in the bloodstream.

"It's yet another indicator that a higher protein, lower carb diet will reduce not just the incidence but the growth rate of cancer."

In another finding, Krystal said the low-carb, high-protein diet is even more effective when combined with a Cox-2 inhibitor (a non-steroid anti-inflammatory), or Aspirin or Motrin.

Krystal said that he has made significant changes in his own diet since seeing the results of the research.

"I would like to see people go up to 35-per-cent protein," said Krystal. To boost protein without increasing fat levels, he drinks whey protein mixed with water.

Any changes people can make to lower carb levels and increase protein without increasing fats would have a beneficial effect, said Krystal.

"Avoid things that are white: white pasta, white potatoes, they are just starch."

Anyone with Type One or Type Two diabetes should consult their physician before making any dietary changes, cautioned Krystal.

The study will appear in the July issue of Cancer Research.

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