

A man of great fibre

Toronto researcher Vladimir Vuksan's combo of natural fibres has created a buzz among the most hardened of diet skeptics — scientists and medical workers

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SPECIAL TO THE STAR

A made-in-Canada diet aid has science geeks and medical workers buzzing despite their natural inclination to skepticism. It's called PolyGlycoplex, or PGX, and it's a word-of-mouth phenomenon among people in the know.

Developed at the University of Toronto, PGX is a blend of three natural fibres. Not only does it help people lose weight, studies show, it also stabilizes blood sugar and lowers cholesterol.

"It sounds miraculous, doesn't it?" laughs Vladimir Vuksan, associate professor in the nutritional sciences department at the University of Toronto's Faculty of Medicine and the lead researcher who developed the compound.

Vuksan, who is also associate director of the Risk Factor Modification Centre at St. Michael's Hospital, came to Canada from Croatia 18 years ago to work on novel therapies for diabetes, obesity and cardiovascular disease. He brought with him, packed carefully in his suitcase, a little bottle of a natural-fibre blend, the beginnings of what is now called PGX.

For more than 10 years, Vuksan and his colleagues at the university experimented with a variety of dietary fibres to see which provided the greatest health benefits. It has long been understood that dietary fibre affects metabolism; it inhibits carbohydrate absorption, stabilizes blood sugar, lowers cholesterol and may even induce weight loss. Fibre-rich foods swell and linger in the stomach, creating a sensation of fullness that can help curb overeating.

But, says Vuksan, a single type of fibre — even one of those considered most beneficial, such as oats and psyllium — isn't strong enough by itself to get maximum benefits. Further, people would have to consume large amounts of a single fibre to produce a meaningful result, he says, and the side effects — stomach discomfort, frequent bowel movements and flatulence, among others — would be a deterrent.

Years of tinkering with different dietary fibres resulted in PGX, a blend that provides all the benefits of being on a high-fibre diet without the side effects. It's a compound of three fibres — non-starch, water-soluble polysaccharides — from natural sources, one of which is konjac mannan, or glucomannan, from the Japanese root konjac. When the fibres are combined, they magnify one another's effects.

"This fibre blend affects metabolism in a serious way — beyond medication," says Vuksan. "There is nothing more powerful than this blend."

His studies confirmed that PGX can improve cholesterol levels, as well as improve insulin resistance and lower blood sugar, which helps people with diabetes better control the disease.

There was another result, too: "After one study, we noticed a whole group of participants were losing



BERNARD WEIL/TORONTO STAR

Vladimir Vuksan says there is no fibre more powerful than the blend he developed known as PGX, which can expand its volume 600 times in water and can be baked into a loaf of bread.

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weight," Vuksan recalls. "We thought, what the heck, there must be something there."

Dr. Michael Lyon also took note.

The medical and research director of the Canadian Centre for Functional Medicine, an independent research facility in Coquitlam, B.C., learned about PGX four years ago after reading about the research results in medical journals. He contacted Vuksan and asked him to send him a sample of the fibre blend. Lyon started taking PGX and, after a few days, found he had a remarkable reduction in his appetite. He was hooked.

Once he learned that Vuksan had no immediate plans to investigate whether PGX was suitable for the marketplace, Lyon decided to bring it to the masses.

He found a company to fund the research, conducted clinical trials and taste tests at his clinic and worked to improve the qualities of the fibre.

"At first it wasn't suitable for human consumption," he says. "It was very grainy and had a strong taste. It had to be improved so it could be put in food products and be palatable."

Lyon brought on board InovoBiologic Inc., a Calgary-based ingredient supplier and distributor to the natural health, nutraceutical and functional food sectors. They came up with a proprietary technology to refine PGX and the company now manufactures it for the marketplace.

"It's very smooth, it doesn't have any taste and it has almost no texture," he says. "When you add it to food, it's almost invisible."

Joanne Thiessen, a 49-year-old from Coquitlam, participated in a clinical trial at Lyon's centre last year investigating the weight-loss benefits of PGX. At the end of the three-month trial, which included a healthy diet and physical exercise, the single mom had lost close to 15 pounds and whittled her waistline by four inches. Her cholesterol levels also went down.

She is still ecstatic about the results and continues to take a teaspoonful of PGX twice a day.

"I call it my magic powder," she laughs. "I can drink it in a glass of water first thing in the morning or sprinkle it on my soup for dinner."

Thiessen, who has a background in nursing, says she doesn't notice the fibre in her meals or beverages and has never experienced any side effects while taking it. And, she adds, PGX fits her busy lifestyle.

Fibre is a good thing in diet and any way to get more is considered healthy, says Madelyn Fernstrom, director of the Weight Management Center at the University of Pittsburgh's Medical Center.

The biological composition of fibre is important, she says. The thicker and more able it is to expand when consumed will help sustain a person's sense of being full.

"Fibre gives the brain a perceived sense of fullness," says Fernstrom. "And this particular (fibre) composition supposedly helps people to stay fuller longer."

But, she cautions, not everyone will respond to a fibre blend like PGX in the same way; some might experience digestive problems.

Fernstrom also points out that while it might help people lose weight, it's not a miracle compound that will whisk away the calories you've consumed.

"I'm not sure that this is any different than other fibres, but it's always good to see new fibre compounds become available."

The University of Toronto holds proprietary rights to PGX and the fibre blend is now being sold over the counter. So far, only one Canadian company, Natural Factors of Coquitlam, B.C., has a licence to use it.

Approximately 1,200 Canadian retail outlets carry the two lines that feature PGX: WellBetX and SlimStyles. These products, sold in capsule form and as a powdered supplement, are also available in

most natural food stores in the U.S.

Perhaps the greatest testimony to the effectiveness of PGX is that the researchers who study the fibre use it themselves.

"I pretty well have to use it every day," says Lyon.

"I was an obese child and have always struggled with my weight. But PGX has bought me freedom. I don't have to constantly feel like my body is crying out for food."

Vuksan also uses PGX. He drinks a SlimStyles meal replacement shake every day for lunch.

"Before I tried that, I would go home starving, ready to eat anything, even a shoe," he says. "Now, I go home laughing."

Most people only achieve healthy sustainable weight loss when their hunger pangs are kept in check, explains registered dietitian Veronica Kacinik, who is the director of research and educational programs at InovoBiologic, the company that manufactures PGX. "With the majority of diets, appetite goes up and people break their diets," she says.

Vuksan points out that very few people can — or are willing to — change their lifestyle.

"It's difficult to change well-established dietary habits. People who discover they have health problems change their diet for a little while because they're scared, but the majority go back to what they typically eat."

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