

Diet rich in fruits and vegetables can overcome genetic risk for heart disease: study

You can't change the genes you are born with but you can change the way they affect your health.

A new study suggests people genetically predisposed to a higher risk of heart attacks can overcome that risk by eating a diet rich in fruits and raw vegetables. The effect is so significant that it reduces the risk to the same level as those born without the genetic disposition.

"Nobody has reported this particular gene-diet interaction before. This is the first time we've observed it," said Dr. Sonia Anand, co-principal author and professor of medicine and epidemiology at McMaster University. "We think it's significant because to our knowledge it's the largest and most robust demonstration that health behaviour, such as certain components you consume in your diet, can actually modify the risk of genetics or the impact of genetics on heart disease."

The fact that a diet rich in fruits and vegetables is good for you is hardly news. But what is news is that, according to this study, diet can actually turn off one's genetic risk to a disease.

Considering cardiovascular disease is a leading cause of death and disability worldwide, it's another good reason to eat your greens.

The study, published Tuesday in the journal PLoS Medicine, analyzed the diets of 27,000 people from five ethnicities — European, South Asian, Chinese, Latin American and Arab. The research looked at the relationship between diet and the region of genetic variants called 9p21, known to be a strong marker of heart disease.

Dr. Jamie Engert, a cardiovascular geneticist at McGill University and joint principal investigator, said the study connects the dots between diet and genes.

The 9p21 gene is known to play a role in heart disease. Diet is known to play a strong preventive role in heart disease. But the mechanism by which either works has never really been known, said Engert.

Knowing that there is a relationship between the two can guide future research, he said. "That is what's new."

Dr. Beth Abramson, a cardiologist at St. Michael's Hospital in Toronto who was not involved in the research, said people with a close family relative who experienced early heart disease, such as a parent or sibling, have double the risk of having a heart attack or other cardiovascular event as those in the general population.

“What this study seems to imply is that you shouldn’t throw in the towel if you have a family history or are at risk for heart disease because healthy living with a healthy diet, in addition to other lifestyle changes such as exercise and maintaining a healthy body weight, can take away from the risk that genes give you,” she said.

Still, the advice to eat a diet high in fruit and vegetables — 10 servings a day is recommended — is good for everyone, said Abramson, who is also a spokeswoman for the Heart and Stroke Foundation of Canada.

With files from The Canadian Press