Link confirmed between a healthy diet and prostate cancer prevention

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The Canadian Cancer Society estimates that more than 23,000 Canadians will be diagnosed with prostate cancer in 2020. Among other risk factors, more and more studies point to diet as a major factor in the development of prostate cancer, as it is for cardiovascular disease, diabetes, and obesity. Using data from a study conducted in Montreal between 2005 and 2012, a research team led by Professor Marie-Élise Parent of Institut national de la recherche scientifique (INRS) has shown a link between diet and prostate cancer in the article "Dietary Patterns Are Associated with Risk of Prostate Cancer in a Population-Based Case-Control Study in Montreal, Canada," published in *Nutrients* in June.

Three main dietary profiles analyzed

INRS Ph.D. student Karine Trudeau, the lead author of the study, based her analysis on three main dietary profiles: healthy diet, salty Western diet including alcohol, and sugar-rich Western diet with beverages. The first profile leans heavily towards fruits, vegetables, and plant proteins like tofu and nuts. The salty Western diet with alcohol includes more meat and beverages such as beer and wine. The third profile is rich in pasta, pizza, desserts, and sugary carbonated drinks. The study took age, ethnicity, education, family history, and date of last prostate cancer screening into account.

Marie-Élise Parent and Karine Trudeau found a link between a healthy diet and a lower risk of prostate cancer. Conversely, a Western diet with sweets and beverages was associated with a higher risk and seemed to be a factor in more aggressive forms of cancer. The study did not show any clear link between a Western diet with salt and alcohol and the risk of developing the disease.

Moving away from the typical approach used in epidemiological studies, which involves looking at one nutrient or food group at a time, the researchers collected data from a broader dietary profile. "It's not easy to isolate the effect of a single nutrient," explained Ms. Trudeau. "For example, foods rich in vitamin C, such as citrus fruits, promote iron absorption. Calcium is often found in dairy products, which also contain vitamin D. Our more targeted approach takes this synergy into account to produce more meaningful results that public health authorities can use to formulate recommendations. Rather than counting on one miracle food, people should look at their overall diet."

"For a long time we've suspected that diet might play a role in the development of prostate cancer, but it was very hard to pinpoint the specific factors at play," said Professor Parent. "This study is significant because it looks at dietary habits as a whole. We've uncovered evidence that, we hope, can be used to develop prevention strategies for prostate cancer, the most common cancer among men in Canada and many other countries."

In addition to INRS faculty and students Marie-Élise Parent, Karine Trudeau, Christine Barul, and Marie-Claude Rousseau, Ilona Csizmadi (Cumming

School of Medicine) participated in the research. The study was funded by the Canadian Cancer Society (CCS), the Cancer Research Society (CRS), Fonds de la recherche du Québec—Santé (FRQS), and Ministère de l'Économie et de l'Innovation (MEI).

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