In the name of science and health, 120 GBC students, staff, and faculty bravely volunteered to eat an overwhelming amount of pizza—topped with Vitamin D fortified mozzarella.

These volunteers formed part of a study conducted by University of Toronto (U of T) in collaboration with George Brown College’s Food Innovation and Research Studio (FIRSt). The study investigated whether eating cheese fortified with Vitamin D could affect the levels of Vitamin D in the body.

U of T Researcher Banaz Al-khalidi points to the critical importance of this study for Canadians. “There is a huge gap between the dietary guidelines and our food system... most Canadians do not obtain adequate amounts of vitamin D through foods [or] even through sun.” The Institute of Medicine (IOM) recently tripled recommended vitamin D intakes—from 200 IU up to 600 IU daily—yet according to the Canadian Community Health Survey Cycle, Canadian intakes of vitamin D average to 200-300 IU vitamin D per day in foods.

Al-khalidi explains, “Cheese fortification is an excellent alternative to [vitamin D] supplementation as most Canadians do not obtain adequate amounts of vitamin D through foods [or] even through sun exposure.” Dairy industry in Canada produces roughly 137,732,000 kg of 700 cheese varieties every year. But as most people have cheese as an ingredient in a bigger meal, she decided to test whether the bioavailability of vitamin D in cheese is affected by cooking. In other words, can the vitamin D in cooked cheese still be absorbed by the body?

Study participants consumed individual pizzas prepared using Vitamin D fortified mozzarella cheese. Half the study participants received a pizza with fortified cheese at 28,000 IU vitamin D, the other half ate pizza with cheese fortified at a significantly lower level, just 200 IU.

The pizza had to be good enough to keep test subjects coming back. According to Culinary Technician Candace Rambert, “[The pizzas] couldn’t be great one week and ok the next because people would not come back. A great deal of planning and testing went into making sure that this was not the case.”

For Al-khalidi, collaborating with FIRSt “made everything much easier.” She observes, “The enthusiasm and the positive attitude of the staff and the student culture at GBC helped our project to finish in a timely manner.”

And the results are in. Al-khalidi reports that the study “…successfully showed that cheese fortification is a viable method in safely increasing the vitamin D levels of our study participants who represented different ethnic backgrounds.” The study’s results ultimately provide scientific support for commercialization of vitamin D fortified cheese in Canada. The new market opportunity is promising for the dairy industry of Canada, currently ranked third in the nation’s agricultural sector.