

Blueberries Leave Indelible Mark On Good Health

Look out, apples – here comes the blueberry in a bid to take on the role of keeping the doctor away. Scientists continue to uncover more evidence that supports a recommendation to take a daily dose of blueberries, a rich source of compounds with arrestingly diverse health benefits.

It's in large part due to their colour, says Dr. Wilhelmina Kalt, a food researcher at Agriculture and Agri-Food Canada's (AAFC) Atlantic Food and Horticulture Research Centre in Kentville, Nova Scotia. She's been focusing her scientific lens on the nutritive qualities of blueberries for some time now, and still shakes her head in wonder at the healthy punch they pack.

Dr. Kalt's work heralds a new approach to food science at AAFC, namely, the study of linkages between specific food compounds and human health. Developing this knowledge will allow producers to select appropriate varieties, find new business opportunities and adopt health marketing strategies and help consumers to make better-informed choices about their food.

Blueberries have such a catalogue of health benefits that it's worthwhile to add it up. Citing research from 'test tube' and animal studies, scientists point to blueberries' anti-inflammatory properties, their ability to delay the onset of age-related decreases in cognitive and motor function, provide some possible Parkinson's Disease protection, aid in ischemic stroke recovery, and help reduce cholesterol and prevent colon cancer.

Biomedical evidence continues to mount in support of blueberries as a boon to health, and Dr. Kalt and her team are making efforts to further shore it up. They've made a key contribution by developing procedures to isolate the specific blueberry flavonoids to determine which of these compounds may be responsible for particular health benefits.

Thanks to the fractionation technologies coming from Dr. Kalt's research, scientists have also been able to better profile the composition of the fruit. Her research also continues to evaluate the effects of growing conditions, handling, and processing on the berries' bioactive flavonoids.

Dr. Kalt's group has just wrapped up a human clinical study in collaboration with Dalhousie University in Halifax that follows up on earlier research from Europe. The focus was on night vision, specifically to determine whether and by how much blueberry compounds could influence aspects of night vision in humans with normal vision. The results are being tabulated prior to submission for journal publication.

Another interesting study has recently been completed by Dr. Kalt and the Atlantic Veterinary College in Charlottetown, Prince Edward Island. Here researchers looked at the impact of blueberries on cholesterol levels. They observed that pigs fed a diet high in sugar and fat experienced a decrease in cholesterol levels when blueberries were added to the rations.

But the effect was more dramatic when the blueberries were added to a more sensible plant-based diet, suggesting that the benefits from blueberries come from a synergistic interaction with other plant compounds.

“Even though there are obvious benefits from eating blueberries, these things can't be taken in isolation,” says Dr. Kalt.

“Having a lot of blueberries in the diet is great” says Dr. Kalt but she also urges that blueberries be part of a diet that is rich in a variety of fruits and vegetables.

NB: AAFC scientists in Newfoundland and British Columbia are working with blueberry growers to identify emerging threats to blueberry production, provide tools for dealing with those threats, and develop management practices that make efficient use of water and nutrients. In Newfoundland research is being conducted on a new home-grown, mid-bush blueberry plant, one that combines the concentrated nutritional punch of low-bush (wild) blueberries with the harvesting ease of high-bush blueberries. The new mid-sized blueberry plant could boost commercial blueberry production in Newfoundland and give farmers greater access to a market driven by the fruit's antioxidant health benefits.