Pilot study supports raspberry potential for oesophageal cancer

By staff reporter

10/12/2007 - Freeze-dried black raspberries have received a new boost for their role in preventing oesophageal cancer, with a pilot human study reporting a reduction of oxidative stress in patients with condition Barrett’s oesophagus.

Barrett’s oesophagus (BE) is a pre-cancerous condition that usually arises as a result of gastro-oesophageal reflux. People with BE have a 30 to 40 per cent increased risk of developing oesophageal cancer, which has only a 15 per cent five year survival rate.

The results of the new study were presented at the American Association for Cancer Research’s conference Frontiers in Cancer Prevention. They have been called "encouraging", and although a randomised placebo-controlled trial has yet to be conducted, Laura Kresty, PhD, assistant professor at The Ohio State University said that raspberries, as a food administered in a non-traditional manner, do not come with the potential side effects of a new drug.

Patients were seen to be amenable to such a food-related approach to managing their health, which is in keeping with the general sway towards eating healthily so as to retain wellbeing.

What is more, symptom relief treatments are available for BE, but according to the association none of these have been shown to cure the condition or prevent progression to cancer.

Kresty and her team hypothesised that black raspberries could modulate markers of DNA or oxidative damage (the desecration of cells by oxygen ions or reactive molecules containing oxygen) following positive results in animal models.

A team from Ohio recently reported in the journal Acta Pharmacologica Sinica (2007 September; 28 (9): 1422-1428) that indicated freeze-dried back raspberries could help prevent the formation of tumours of the oesophagus in rats, but were not seen to aid tumour regression.

In the new work, the researchers gave freeze-dried (lyophilised) black raspberries to a group of 20 patients with BE every day for 26 weeks.

The women received 32g of the raspberries a day, and the men 45g of the raspberries over the same period.

The researchers assessed tissue, urinary and blood biomarkers before and after the intervention. They found that 58 per cent of the patients had a significant reduction in 8-isoprostane, an indicator of global oxidative stress and DNA damage, both of which have been linked to BE and EAC damage.

Thirty-seven per cent were seen to have increased expression of GSTpi in their tissue - and enzyme that detoxifies carcinogens and reactive oxidants.

"These results are encouraging and support conducting a randomized placebo controlled trail in this patient cohort to more fully assess LBR as inhibitors of esophageal adenocarcinogenesis," concluded the researchers.

NutraIngredients.com has not seen the full methodology or results of the studies, and publication status is unknown.

American Association for Cancer Research’s Sixth Annual International Conference on Frontiers in
Cancer Prevention, December 5 to 8 2007.
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Title: "Dietary administration of black raspberries modulates markers of oxidative stress in patients with Barrett's esophagus."

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