



Breaking News on Supplements & Nutrition - North America

Vitamin D could halve pancreatic cancer risk

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Supplements of the sunshine vitamin could cut the risk of pancreatic cancer in half, says a study led by researchers at Northwestern and Harvard universities.

"Because there is no effective screening for pancreatic cancer, identifying controllable risk factors for the disease is essential for developing strategies that can prevent cancer," said lead researcher, Halcyon Skinner of Northwestern.

According to Cancer Research UK, about 7,000 new cases of pancreatic cancer are diagnosed every year in the UK, while the American Cancer Society estimates that there will be about 34,000 new cases in the US during 2006. The cases are split almost 50-50 between the sexes.

The new study, published in the September issue of the journal *Cancer Epidemiology Biomarkers & Prevention*, is said to be one of the first known studies to use a large-scale epidemiological survey to examine the relationship between the nutrient and this type of cancer.

The link between vitamin D intake and protection from cancer is not new however and dates from the 1940s when Frank Apperly demonstrated a link between latitude and deaths from cancer, and suggested that sunlight gave *"a relative cancer immunity."*

The study examined data from on 46,771 men aged 40 to 75 years who took part in the Health Professionals Follow-up Study, and 75,427 women aged 38 to 65 years who participated in the Nurses' Health Study. Overall 365 cases of pancreatic cancer were identified.

It was found that people taking the Recommended Daily Allowance (RDA) of vitamin D (400 IU/day) reduced the risk of pancreatic cancer by 43 per cent. Less than 150 IU/day was associated with a 22 per cent risk reduction. Increased intake of the vitamin above 400 IU per day was not linked to any increased benefit.

No link between calcium and/or vitamin A intake was observed in this study.

Skinner said that further research is necessary to determine if vitamin D ingestion from dietary sources, like eggs, liver and fatty fish or fortified dairy products, or through sun exposure are preferable to multi-vitamin supplements.

"In concert with laboratory results suggesting anti-tumor effects of vitamin D, our results point to a possible role for vitamin D in the prevention and possible reduction in mortality of pancreatic cancer. Since no other environmental or dietary factor showed this risk relationship, more study of vitamin D's role is warranted," said Skinner.

The vitamin's protection is proposed to be multifaceted, by reducing the formation of blood vessels in tumours (angiogenesis), stimulating the mutual adherence of cells, and enhancing intercellular communication through gap junctions. All this adds up to stop proliferation of cancerous cells by contact inhibition.

Vitamin D refers to two biologically inactive precursors - D3, also known as cholecalciferol, and D2, also known as ergocalciferol. The former, produced in the skin on exposure to UVB radiation (290 to 320 nm), is said to be more bioactive. The latter is derived from plants and only enters the body via the diet.

Both D3 and D2 precursors are hydroxylated in the liver and kidneys to form 25- hydroxyvitamin D (25(OH)D), the non-active 'storage' form, and 1,25-dihydroxyvitamin D (1,25(OH)2D), the biologically active form that is tightly controlled by the body.

There is growing evidence that 1,25(OH)2D has anticancer effects, but the discovery that non-kidney cells can also hydroxylate 25(OH)D had profound implications, implying that higher 25(OH)D levels could protect against cancer in the local sites.

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