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Sweeping Cancer Edict: Take Vitamin D Daily

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Recommendation comes on heels of U.S. study suggesting supplement slashes risk of disease by as much as 60 per cent

The Canadian Cancer Society plans to announce Friday that all adults should start taking vitamin D, coinciding with the release of a groundbreaking U.S. study indicating the supplement cuts the risk of cancer by an astounding 60 per cent.

The move is believed to be the first time a major public-health organization has endorsed daily use of the sunshine vitamin as a cancer-prevention therapy for an entire population.

It follows a flurry of research suggesting the low-cost vitamin confers a high degree of protection against a wide variety of cancers. There are also striking study results suggesting that people who develop the disease often have low blood levels of vitamin D.

Although it is not known how many of the approximately 160,000 cancer cases diagnosed annually in Canada might be avoided by regular popping of a vitamin D pill, the cancer society said these findings are so compelling it felt it had to start urging people to act on them.

"We're hoping that in making this recommendation we'll be able to make some headway in cancer prevention," said Heather Chappell, senior manager of cancer control policy.

The society has tailored its recommendation to skin colour, which determines how much of the vitamin a person makes naturally when naked skin is exposed to strong, ultraviolet sunlight. Darker skin contains pigments that reduce production.

The society says whites should take supplements containing 1,000 international units a day during fall and winter, the six months of the year when sunlight falling on Canada isn't strong enough for skin to fulfill its vitamin D role. Those with dark skin, who don't go outside frequently or wear full body clothing for cultural or religious reasons, such as veiled women, should take 1,000 IU year-round.

It would cost as little as about \$15 for a year's supply of this amount of vitamin, indicating that, as an anti-cancer therapy, the over-the-counter supplement has extremely modest cost.

Currently, Health Canada recommends only 200 IU to 600 IU daily, depending on age. These amounts were based on vitamin D's recognized ability to prevent bone problems, but are too low to prevent cancer. Some oily fish, such as sardines, naturally contain low amounts of vitamin D, as does milk, which is fortified with small amounts. Although diet is a source, about 90 per cent of the vitamin in people comes from sunlight.

The federal government says it is watching the cancer research and intends to make the review of its recommendations a high priority.

"Health Canada is aware of recent research on the role of vitamin D and of the evidence suggesting that vitamin D insufficiency may be a concern in Canada," the federal agency said in an e-mail statement to The Globe and Mail.

There are about 200 different kinds of cells with receptors for vitamin D, which plays a strong role in boosting immune function and repairing damaged cells. These factors may explain its anti-cancer properties.

The cause of the cancer epidemic sweeping the world has long eluded researchers, but the U.S. study being released today found that the 60-per-cent risk reduction is the strongest evidence to date that many cases of the disease are linked to a vitamin deficiency. Over the past few decades, vitamin D levels in the public have likely fallen because of lifestyle changes, such as the use of sunscreen in summer and people spending more time indoors.

"It's an important component of cancer prevention," said Joan Lappe, lead author of the study and professor of medicine and nursing at Creighton University in Omaha, who added that there is "overwhelming evidence supporting the need for higher vitamin D intakes in populations throughout the world."

In the experiment, a group of women were given 1,100 IU of vitamin D a day, just a bit more than the cancer society is recommending, over a four-year period. The women taking the supplement had vitamin D blood levels more than double those typically found in Canadians in winter. Their cancer incidence was dramatically lower than another group of women receiving a dummy pill.

It is the first large-scale, randomized, placebo-controlled experiment, the gold standard for testing drug efficacy, to prove cancer-prevention effects from vitamin D. A paper outlining the finding is appearing in the current issue of the American Journal of Clinical Nutrition.

Almost every type of cancer monitored, including breast, colon and lung, was lower in the vitamin D group. In the experiment, vitamin D was accompanied by a dose of calcium, part of a separate experiment to see if the mineral helped prevent bone fractures, but the researchers believe the vitamin was responsible for driving down the cancer rate.

"This is really potentially big stuff," said Reinhold Vieth, a University of Toronto professor who is an expert on vitamin D.

There weren't any serious side effects, so the supplement also appears to be an unusually safe therapy.

The cancer society's Ms. Chappell called on health agencies to fund further vitamin D trials to confirm both the findings in the new U.S. study, and do research on higher doses, to see if this cuts risk even further.

Among the cancers linked to low levels of the vitamin in previous research are those of the breast, rectum, ovary, prostate and pancreas, as well as multiple myeloma.