

Vitamin D may cut prostate cancer risk, suggests sunlight study

15/06/2005 - **High sun exposure halved the risk of prostate cancer in men participating in a US trial, said researchers today, likely because of their body's higher vitamin D stores, writes Dominique Patton.**

If future studies continue to show that sunlight lowers prostate cancer risk, men may be advised to increase their vitamin D intake from diet and supplements as a safer option to sunbathing, they say.

Writing in today's issue of *Cancer Research*, researchers led by Esther John of the Northern California Cancer Center noted that in men with certain gene variants, high sun exposure reduced prostate cancer risk by as much as 65 per cent.

Previous research has shown that the prostate uses vitamin D to promote the normal growth of prostate cells and to inhibit the invasiveness and spread of prostate cancer cells to other parts of the body.

"The genes involved are those that determine the type of vitamin D receptors a person has," said co-author Gary Schwartz of Wake Forest University. *"These receptors, which function with vitamin D like a lock and key, vary in their ability to bind vitamin D and thus to influence cell behaviour."*

The body manufactures the active form of vitamin D from exposure to sunlight but the researchers said that men should not try to reduce their risk of prostate cancer by sunbathing because that increases the risk of sun-induced skin cancer, especially melanoma.

"If future studies continue to show reductions in prostate cancer risk associated with sun exposure, increasing vitamin D intake from diet and supplements may be the safest solution to achieve adequate levels of vitamin D," they said.

The trial compared 450 non-Hispanic white patients in the San Francisco Bay area who had advanced prostate cancer with a matched control group of 455 men who did not have prostate cancer.

The scientists measured sun exposure by comparing pigmentation of underarm skin, which is usually not exposed to sunlight, with forehead pigmentation, which is, using a portable reflectometer.

Because it is hard for the sun to reach the underarm area, there was no difference in the underarm measurement between the prostate cancer cases and the control group. But when the forehead colour was compared to the underarm colour, the control group had significantly darker pigmentation than the cancer patients.

"Increasing darkness was associated with a trend of decreasing risk of prostate cancer," they said.

The scientists also obtained a sun exposure history from each participant so they

could track outdoor activity.

"Reduced risk of advanced prostate cancer was associated with high sun exposure determined by reflectometry and high occupational outdoor activity," they said.

"Further studies in large populations, including non-whites, are warranted to confirm the combined effects of sun exposure and genotype and define the exposure period that is important in influencing prostate cancer risk."

A number of previous studies have demonstrated a link between higher vitamin D levels and reduced risk of prostate cancer.

The disease is the second most common cancer in men after lung cancer. It was the most common form of cancer diagnosed among men in the European Union during 2004, representing 15 per cent of male cancers and 238,000 new cases, according to the International Agency for Research on Cancer (IARC).