<https://www.foxnews.com/health/cancer-immunity-gets-boost-one-common-nutrient-study-finds-intrigue-optimism>

Cancer immunity gets a boost from one common nutrient, study finds: ‘Intrigue and optimism’

Eating a diet rich in one vitamin has been shown to improve responses to immunotherapy and reduce tumor growth

Melissa Rudy By Melissa Rudy Fox News

Published April 29, 2024 5:00pm EDT

Vitamin D could be a surprise weapon against cancer, new research suggests.

A study of mice published in the journal Science last week found that eating a diet rich in vitamin D changed the gut microbiome in a way that boosted cancer immunity.

The micronutrient increased levels of the bacterium Bacteroides fragilis, which has been shown to improve cancer immune response.

BE WELL: PREPARE A DINNER RICH IN VITAMIN D FOR GOOD HEALTH

The mice that received vitamin D showed improved responses to cancer immunotherapy and greater immunity to new tumor development, according to researchers at the Francis Crick Institute in London, the National Cancer Institute (NCI) of the U.S. National Institutes of Health (NIH), and Aalborg University in Denmark.

"What we’ve shown here came as a surprise — vitamin D can regulate the gut microbiome to favor a type of bacteria that gives mice better immunity to cancer," said senior study author Caetano Reis e Sousa, head of the Immunobiology Laboratory at Crick, in a press release.

"This could one day be important for cancer treatment in humans."

The researchers aren’t yet sure why vitamin D seems to foster a "good" microbiome.

WHY IMMUNOTHERAPY IS EMERGING AS THE ‘FOURTH PILLAR’ OF CANCER TREATMENTS, EXPERTS SAY

"If we can answer this, we might uncover new ways in which the microbiome influences the immune system, potentially offering exciting possibilities in preventing or treating cancer," said co-author Evangelos Giampazolias, former postdoctoral researcher at the Crick and now group leader of the Cancer Immunosurveillance Group at the Cancer Research UK Manchester Institute, in the release.

Shama Farooq, M.D., a neuro-oncologist at Hackensack Meridian Neuroscience Institute at Jersey Shore University Medical Center, was not involved in the study but shared his comments on the findings.

"As a doctor who treats patients with cancer, my initial reaction to this study was one of intrigue and optimism," he told Fox News Digital.

IN POTENTIAL CANCER BREAKTHROUGH, NEWLY FOUND ‘KILL SWITCH’ TRIGGERS DEATH OF CANCER CELLS: ‘ONE-TWO PUNCH'

"The findings suggest a potential link between vitamin D levels, the microbiome and cancer immunity, offering potential new avenues for improving cancer treatment and prevention strategies."

Continued research into improving the body’s immunity against cancer is "crucial," Farooq noted.

"Cancer is a complex disease with diverse mechanisms of evasion," he said.

The micronutrient increased levels of the bacterium Bacteroides fragilis, which has been shown to improve cancer immune response. (iStock)

"By exploring new ways to boost the immune system's ability to recognize and destroy cancer cells, researchers can develop more effective and targeted treatments, ultimately improving patient outcomes and survival rates."

Based on the findings of this study, Farooq said he recommends people make sure their vitamin D levels are adequate, "as part of a comprehensive approach to potentially lowering their risk of cancer."

"While more research is needed to fully understand the relationship, maintaining optimal levels of vitamin D is generally beneficial for overall health and may contribute to reducing cancer risk," he added.

Studies in humans are needed to learn more about the link between vitamin D and cancer immunity, the researchers acknowledged.

Vitamin D has been linked to improved responses to cancer immunotherapy and greater immunity to new tumor development. (iStock)

"More work is needed before we can conclusively say that correcting a vitamin D deficiency has benefits for cancer prevention or treatment," said Sousa.