Study Suggests Skin Bacteria May Help Protect Against Cancer

Study highlights the importance of foreign microbes in the prevention of disease throughout the body.

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A type of bacterium commonly found on the human skin appears to produce a substance that may help prevent the development of skin cancer, according to new research from the University of California, San Diego, The Guardian reports.

Researchers say their surprise discovery around the effects of a strain of Staphylococcus epidermidis further highlights the importance of foreign microbes in the prevention of disease throughout the body. Although it's not clear whether the absence of this bacterium could increase the risk of skin cancer, the team said the findings might help in the development of a new preventive treatment for at-risk patients. Originally published in the journal Science Advances, the study also suggests that modern obsessions with cleanliness may be harming our health.

For the study, researchers performed two tests. First, they applied S. epidermidis to mice and exposed them to UV rays, one of the leading causes of skin cancer. They found that certain strains of the bacterium that produced a chemical called 6-HAP inhibited tumor growth in the artificially sunbathing mice. In another test, scientists gave mice with an aggressive form of melanoma an injection of 6-HAP and similarly observed that tumor growth was suppressed by more than 50 percent compared with the control mice that did not receive the treatment.

Investigators made the discovery somewhat accidentally after deciding to follow up on research that showed certain chemicals produced by staphylococcus could kill off certain harmful bacteria on the skin. They did not expect their study to find a potential treatment for cancerous tumors.

"The presence of this strain may provide natural protection or it might be used therapeutically to inhibit the growth of various forms of cancer," said Richard Gallo, PhD, a coauthor of the UC San Diego study.

However, while S. epidermidis is commonly found on the human skin, only about 20 percent of the healthy human population is likely to have a strain that produces 6-HAP specifically, said researchers. The next stage of this study would be to translate the findings to human clinical trials.

In the meantime, there’s just one more reason to love the skin you’re in.
