

Put on Your Broccoli: Juice Better Than Sunscreen

An extract made from broccoli sprouts can help protect skin from the sun's damaging rays, according to researchers at the John Hopkins School of Medicine.

Although a commercial product is still in the early stages of development, it would have definite advantages over sunscreens:

" **First**, the natural product would not contain cancer-causing chemicals found in typical sunscreens.

" **Second**, it would not interfere with the body's production of vitamin D. Sunscreens now block sunlight from the skin, thus keeping the body from making vitamin D.

A chemical found in broccoli known as sulforaphane gives the vegetable its anti-cancer prowess. The broccoli product would not be a sunscreen because it would not block the sun's rays from entering the skin. In fact, it would penetrate the skin and turn on the body's natural cancer-fighting mechanisms. And once those mechanisms were stimulated, they would work for days even after the extract was washed away.

Sulforaphane works by activating the production of phase 2 enzymes in cells. One of these enzymes, glutathione S-transferase, neutralizes the DNA damage from the sun's ultraviolet radiation. In addition, sulforaphane reduces inflammation, which is proving to be a key in the development of cancer.

Tests on humans showed the broccoli extract reduced redness and inflammation from exposure to ultraviolet light as much as **78 percent**, although the average was **37 percent**. "Treatment with this broccoli sprout extract might be another protective measure that alleviates the skin damage caused by UV radiation and thereby decreases our long-term risk of developing cancer," said Dr. Paul Talalay, co-leader of the study.

The chemical sulforaphane is found in cruciferous vegetables including cabbage, Brussels sprouts, and kale, but the highest amounts are found in broccoli sprouts.

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