



Antioxidants May Up Women's Skin Cancer Risk

Vitamins C and E and Other Nutrients May Quadruple Risk of Melanoma



By SHARON BORD

ABC News Medical Unit

Aug. 20, 2007 —

French scientists have shown that taking antioxidant supplements, which include vitamins C and E and beta carotene, may increase a woman's risk of skin cancer by 68 percent.

The risk of melanoma, the most serious form of skin cancer, was four times greater for women taking the antioxidant supplements.

A study released in the Journal of Nutrition on Monday examined the relationship between antioxidant use and skin cancer risk.

The researchers looked at about 13,000 French adults, ages 35 to 60, half of whom took an oral daily capsule of antioxidant that contained vitamins C, E, beta carotene and selenium. The other half took a placebo.

The researchers then recorded how many got skin cancer over an average period of 7½ years.

What they found was that 51 of the women taking the antioxidants developed skin cancer, compared to only 30 percent of those taking the placebo.



The findings were a surprise to many who believed that antioxidants actually protect against sun damage that leads to skin cancer. And some researchers say more evidence is needed before a definitive verdict can be delivered on the supplements.

The Science of Skin Cancer

In theory, exposure to ultraviolet light, usually the sun, increases the amount of "free radicals" in the skin the microscopic "vandals" indicted in skin cancer.

The authors state that, "Excessive exposure to sunlight or other sources of UV light can overwhelm the skin's antioxidant power."

It is for this reason that antioxidant pills have been recommended for the prevention of sunburns and for their protective properties.

Previous studies on animals have shown that when antioxidants are given prior to exposure to ultraviolet light there is a protective effect against skin cancer.

This study, the researchers say, was different because the "antioxidants are given only after many years of exposure to sunlight." They conclude that at this stage in life ages 35 to 60 it may be too late to prevent genetic damage, hence the skin cancer.

"This study suggests that antioxidants may not be as protective for skin cancer as many believe," said Murad Alam, professor of dermatology at Northwestern University in Chicago.

Roger Clemens, doctor of pharmacy at University of Southern California, agrees, but he thinks similar information regarding lack of beneficial antioxidant effects have been found before.

"These findings are not surprising," Clemens said. "Prior studies indicated that vitamins C, E and beta carotene were not cardioprotective [heart protective] for women."

And Jeffrey Blumberg, director of the antioxidants research laboratory at Tufts University in Boston, points to a study that demonstrated that high-dose beta carotene can lead to lung cancer in individuals who smoke.

Scrutinizing the Study

Other researchers note that the findings of the study could be called into question based on the fact that the research was initially designed to find something else entirely the effects of antioxidants on reducing (rather than increasing) the incidence of cancer and heart disease.

"It is difficult to attribute much significance to this study as it was not designed to answer the question being asked," Blumberg said.

Also, critics of the study feel that the number of skin cancers reported 157 in total was too

small to draw the conclusion that antioxidants are associated with higher skin cancer risk in women.

Scientifically speaking, it is unlikely that the difference was due to chance alone. Some, however, were still wary of the study's results.

"The small number of skin cancers is concerning," said Alam.

"Different results might have been found if they gave the antioxidants to younger people and followed them for a longer period of time," said Mary Kavanagh, a nutritionist at Case Western University in Cleveland. She adds that many people do not develop skin cancer until they're in their 70s.

The Gender Gap

The other mystery is why the increased risk was seen in women, but not in their male counterparts.

The researchers found no difference in skin cancer rates among the men who were taking the antioxidant or placebo. They speculate that this may be, "attributed in part to differences in nutrient metabolism." Women, the researchers say, tend to have, "higher concentrations of antioxidants in the skin," thought to be related to a higher dietary intake when compared to men.

"Women have thinner skin than males, thus, ultraviolet damage could reach the skin more readily," said Jana Klauer, a New York-based physician who specializes in nutrition and metabolism. "There are estrogen receptors in skin, which may play a role as well."

Another Day at the Beach

Consumers continue to purchase over-the-counter antioxidants at a rapid rate despite studies, including this one, that indicate they offer no benefit and may even be harmful. Thus, the underlying question remains as to what people can do to protect themselves from skin cancer.

"The best protection against skin cancer is achieved by avoiding the sun, wearing protective clothing and using a good sunscreen," Klauer said. "This is especially important for anyone who is fair-skinned or who had a serious sunburn as a child. & Simply taking an antioxidant vitamin is folly."

Clemens thinks that the key is in eating your antioxidants in the form of fruits and vegetables rather than in pill form.

"These kinds of studies suggest that single nutrients versus those found in a food matrix may not be as effective in reducing risk for specific health conditions," he said.

Copyright © 2007 ABC News Internet Ventures