Sunscreen can help reduce the risk of malignant melanoma, contrary to the finding of a study that received considerable media attention last February, says a skin cancer specialist at Ohio State University’s Arthur G. James Cancer Hospital and Research Institute.

"If you’ve heard or read comments to the effect that sunscreens do not protect against malignant melanoma, forget them," said Ronald Siegle, a specialist in skin cancers of the head and neck. "There is very strong epidemiological evidence linking sun exposure to malignant melanoma, and there is evidence that sunscreens do provide protection."

"We know for sure that sun exposure causes the two most common forms of skin cancer--basal cell and squamous cell carcinoma--and that sunscreen protects people from these malignancies," he added.

Comparing Apples and Oranges
The February study, which was presented at a scientific conference but never published in a peer-reviewed journal, suggested that sunscreen fails to protect against melanoma and may even increase one’s risk of developing it.

"But that study was severely flawed by too many suppositions and extrapolations," said Siegle. For example, it looked at the findings of five earlier studies, four of which were concluded prior to 1980, before sunscreens with a sun protective factor (SPF) of 15--the minimum recommended protection--were available.

"It’s like comparing apples and oranges," said Siegle.

Caucasians with pale complexions are at greatest risk of sun-related skin cancers (the risk of melanoma is 70 times greater for whites than it is for dark-skinned blacks, although they, too, can develop this malignancy on the palms of the hands, soles of the feet, and under the nails).

Continue to Be Sun-Smart
"People should continue to be sun-smart," said Siegle. "Limit your amount of sun exposure, use a sunscreen of SPF 15 or greater on exposed skin, protect exposed skin with clothing if you’re going to have excessive sun exposure, and wear a hat and sunglasses."

Epidemiologic studies provide the primary evidence linking sun exposure to malignant melanoma.

"The latitude in which one lives is one major factor," he said. "The closer to the equator, the more melanoma there is. The incidence of melanoma among fair-skinned people is higher in Miami than among the same group in Sioux Falls, South Dakota, for example."

Other evidence of the association between sun exposure and melanoma comes from looking at the skin type of people who develop the malignancy: People who have the highest incidence of melanoma tend to have the most sun-sensitive skin. These people typically have light-colored hair and eyes, and light skin that tends to freckle rather than tan.

The exact mechanism by which sun exposure triggers melanoma is not known yet, but intermittent, strong exposures that result in severe sunburns are strongly associated with it.

"Again, when you look at who gets melanoma, it’s not so much the farmer or construction worker who’s outdoors all day; it’s the person who works indoors all week, then, when the weekend comes, sheds his shirt to work in the garden, or dons a swim suit and goes to the beach, and gets a sunburn. Melanoma is strongly associated with these so-called recreational exposures."

Data from Australia Confirms Protective Effect of Sunscreens
Evidence that sunscreen protects against melanoma comes from Australia, which has one of the highest rates of malignant melanoma in the world: more than 50 cases per 100,000 people vs about 12 per 100,000 people in the United States. Recently, however, the rate of melanoma in Australia has begun to plateau. Public health officials believe that the rate is slowing because of a greater use of sunscreens and protective clothing to reduce sun exposure.
"We have strong reason to believe that sunscreens protect against basal and squamous cell carcinoma, and they clearly minimize the formation of precancers and aging changes in the skin," said Siegle. "If ultraviolet light causes malignant melanoma, it's also reasonable to believe that sunscreens protect against malignant melanoma, too."

Because 20 years can elapse between a disease-causing exposure and the appearance of melanoma, definitive studies take time, said Siegle. "The sun exposure people got in 1985 is likely to be responsible for skin cancers that arise in 2005 and later."

Malignant melanoma is the least common of the three main types of skin cancer, with 41,600 new cases expected in 1998 (as compared to 600,000 new cases of basal cell carcinoma and 200,000 new cases of squamous cell carcinoma).

"Early diagnosis is important," said Siegle. "Over 80% of melanomas are cured, and when they're found early, essentially all of them are cured."