

## Word Is Out: Windows Need Sun Protection, Too

This winter, if your skin starts to turn pink on the sunny slopes, we suggest that you retire to the ski lodge for a nice hot cocoa. Just don't sit near the windows.

If you haven't heard, the sun's ultraviolet radiation (UVR) can go through glass. It can exacerbate skin damage you've sustained outdoors, and can even burn your skin if you never leave your room.

### Trouble in transit

Fortunately, the "window film" revolution is gaining momentum. It began with automobiles in the 1990s. Research showed that drivers with left-hand drive developed more skin damage on the left side of their bodies, while those with right-hand drive developed more damage on the right. The reason? UVR streaming through the driver-side windows. "Long-time drivers are found to have rougher, more pigmented skin with greater solar damage on their driver's side," notes Albert Kligman, MD, PhD, emeritus professor of dermatology, University of Pennsylvania Medical school, Philadelphia

Only the windshield in cars comes partially treated against the sun's UVA rays (long-wave radiation between 320 and 400 nanometers). The other windows let most of these rays through. However, for several years in all 50 states, transparent UVA filtering film has been available for vehicles' side and back window glass. Professionally installed, it screens out almost 100 percent of UVB and UVA, without reducing visibility. It combines chemical UVA absorbers such as benzophenones and benzotriazoles in varying strengths.

### Inside Jobs

And now, UVA-protective films have moved indoors big-time. Over the past few years, they have become available for homes and offices through an increasing number of companies, with sales growing substantially.

As in cars, the windows in homes and buildings generally do not screen out UVA. The protective films can solve the problem. Residential and commercial films come in flat sheets, in varied

tints, cutting down glare by more than half while allowing 30-80 percent of visible light to get through, depending on the customer's wants. Like the automobile films, they block out up to 99.9 percent of UVR. This helps prevent not only sunburn, but also the brief daily UV exposures that cumulatively accelerate skin aging (UVA rays are considered the main aging rays) and multiply skin cancer risks. In addition, the films can be life-savers for people with diseases involving dangerous photosensitivity, such as xeroderma pigmentosum and lupus.

The combination of glare prevention and UV absorption also protects the eyes. "Chronic sun exposure is linked to cataracts and macular degeneration," says Paramus, NJ, ophthalmologist Douglas Liva, MD. "Window film helps prevent these conditions and other UV-related eye diseases, including ocular melanomas."

### Fringe Benefits

Along with their clear health benefits, window films today offer other advantages:

- In hot weather, they cut down heat within the home, which can reduce air conditioning expenses.
- In cold weather, they reflect interior heat back into the house, reducing heating costs.
- They help keep sunshine from fading fabrics and home furnishings.
- Some new "safety" films help hold residential and commercial glass in place if shattered. Several times thicker than the standard sun-protective film, they greatly reduce the chances of break-ins, property damage, and even personal injury that can result from broken glass.

While such extras can be nice in window film, the main point is still UV protection. "Most of us have always felt safe from the sun when we're inside, but we weren't as safe as we thought," says Diane Berson, MD, assistant professor of dermatology at Weill Medical College of Cornell University, New York City, and a member of The Skin Cancer Foundation's Medical Council. "The window film provides protection where we never knew we needed it."



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