

Sunlight and Your Skin

By STEPHEN E. CHIARELLO, M.D., P.A.
Dermatology & Dermatological Surgery
Diplomate of the American Board of Dermatology

Why Avoid the Sun?

Sunlight permanently damages skin. Ordinary sun exposure during tanning and outdoor sports causes permanent skin changes. These changes build up over the years, so that even moderate repeated sun exposure causes visible skin damage. Most of the wrinkling, roughening, and freckling that appears on the face, hands and arms of white adults comes from sun damage, not age. You can see this if you compare less sun-exposed areas, such as your abdomen or the undersides of your arms, with sun-exposed areas such as your face, neck, or upper surfaces of your arms. The natural coloration of your skin, pigment, protects you from the damaging effects of sunlight. Persons with fair skin, who have little pigment, are more prone to sun damage than dark-skinned individuals.

The Skin-Damaging Effects of Sunlight

The skin-damaging effects of sunlight gradually lead to roughening, freckling, and wrinkling. Many people in their 30s and 40s are unhappy because their wrinkled, roughened, sun-damaged skin makes them appear 10 or 15 years older. Unfortunately, there's no way to undo these changes. Young people should realize that they'll ultimately pay a steep price for the temporary glamour of a deep tan.

A more serious effect of sun damage is skin cancer. Sun damage is the chief cause of skin cancer. Here again, fair-skinned individuals are much more susceptible. Skin cancer rarely occurs in blacks. As you might expect, skin cancer tends to occur on sun-exposed areas such as the face, neck, shoulders, and arms. While skin cancers can usually be removed by minor surgery in a doctor's office, it's better to prevent them.

Ultraviolet Rays — The Invisible Enemy

Sunlight contains both ordinary, harmless, visible light and shorter, invisible light rays called ultraviolet light. Tanning, burning, and skin damage from sunlight are caused by ultraviolet rays. Since ultraviolet rays produce both tanning and skin damage, it's impossible to tan "safely" and avoid permanent skin damage. Discussions on sunbathing that describe "safe" tanning refer to the avoidance of sunburn. By proper timing, most persons can get a deep tan without a sunburn. However, no one can get a tan without some skin damage.

Sun-Protective Measures

There are two basic ways of protecting your skin from the damaging effects of ultraviolet rays: (1) blocking out all light with an opaque material such as clothing and (2) using a chemical sunscreen that selectively absorbs ultraviolet rays. Blocking out all light with clothing is most effective. Certain sun protectives depend on the same principle. They coat the skin with a paintlike pigment that mechanically blocks light. They work well, but they're messy and rather unsightly.

There are also many clear sunscreens that absorb ultraviolet light. These "clean" sunscreens contain either PABA (para-aminobenzoic acid) or a benzophenone compound. Some of the PABA-containing sunscreens are taken up by the skin and will provide some protection in the water, provided they're applied one or two hours before swimming. An occasional person is allergic to PABA or its derivative. So please try PABA-type sunscreens on a small area of skin before spreading it all over your body. The other chemical class of sun protectives, the benzophenones, rarely cause skin allergy. Benzophenones wash off, however, and therefore do not protect swimmers. Some benzophenones have a bitter taste that can be annoying when applied near the mouth.

There are many sun protectives on the market. If they're designed and act as "sunlight blockers" and contain a PABA derivative or benzophenone, they're probably adequate. Water removes most sunscreens. Remember to put on another coat of sunscreen after swimming or bathing. If you're sweating heavily, use some more sunscreen every hour or two. If you're in very bright sunlight, it's wise to protect your skin as much as possible with clothing (long sleeves, gloves, wide-brimmed hats) and use one of the "clean" chemical sunscreens on the parts of your skin exposed to the sun.

Protect your lips from sun damage. The darker lipstick shades are effective for women. Men — and women who don't wear lipstick — should use ultraviolet-absorbing lip pomade. Women can use make-up with a sun protective. The sun protective should be applied first, then the make-up itself — especially if heavily colored — provides some sun protection.

You should aim to minimize sun exposure, not avoid it. Being outdoors is fun and healthy; don't let fear of sun damage keep you inside during sunny weather. Do use sun protectives when enjoying sports or a walk in the sun.

Specific Sun Protection Instructions

1. Avoid the 10 a.m. to 2:00 p.m. sun whenever possible as 70% of the earth's harmful radiation reaches us at that time.
2. Wear protective clothing: a broad brimmed hat and long sleeved, tightly woven white cotton shirt.
3. Apply a sunscreen containing both PABA and Benzophenone to dry skin at least one (1) hour before sun exposure for maximum protection. Wipe or wash residual from palms. Let dry before putting on clothes.

Hydration of Skin: (Bath or Shower) Immediately before application, provides an increased "protection reservoir". Daily application maintains this "protective reservoir". Always reapply after swimming or excessive sweating.

Exposed areas of the skin most likely to suffer sun damage are the face, (especially ears and nose, the scalp if you are bald), the back of the neck, arms, top of the hands and exposed parts of the chest. ■