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Sunburn: How to treat and prevent it

Sunburn is caused by overexposure of the skin to the ultraviolet (UV) rays of the sun or a sunlamp. Unfortunately, the symptoms of sunburn do not begin until two to four hours after the sun's damage has been done. The peak reaction of redness, pain, and swelling does not occur for 24 hours. Minor sunburn is a first-degree burn that turns the skin pink or red. Prolonged sun exposure can cause blistering and a second-degree burn. Sunburn never causes a third-degree burn or scarring.

Repeated sun exposure and suntans cause premature aging of the skin (wrinkling, sagging, and brown sunspots). Repeated sunburns increase the risk of skin cancer in the damaged area. Each blistering sunburn doubles the risk of developing malignant melanoma, which is the most serious type of skin cancer.

Home Care

Treat the symptoms. The sensation of pain and heat will probably last for 48 hours. An ibuprofen product (such as Advil, Motrin, or Nuprin) started early and continued for two days can reduce discomfort. Nonprescription 1.0% hydrocortisone cream or moisturizing creams applied three times each day may also cut down on swelling and pain, but only if used early. Apply these creams later if the sunburn becomes itchy.

For broken blisters, trim off the dead skin with fine scissors and apply an antibiotic ointment. Wash it off and reapply it twice daily for three days.

Taking cool baths or applying cool, wet compresses to sunburned areas several times a day also helps relieve pain and burning. Adding 2 oz. of baking soda to a tubful of water may help. Showers usually cause too much pain to be helpful. Encourage your child to drink extra fluids to replace the fluid lost into the swelling of sunburned skin and to prevent dehydration and dizziness. These measures are usually needed only during the first two days of the sunburn.

Peeling usually occurs in about a week. Apply a moisturizing cream. Encourage your child not to peel off the dried skin before the skin underneath is completely healed.

Avoid these common mistakes. DO NOT apply petrolatum or other ointments or butter to sunburns because they prevent heat and sweat from escaping from the skin and are painful to remove. Don't use first aid creams or sprays that contain benzocaine on burns because they can cause an allergic rash.

Prevention

The best way to prevent skin cancer is to prevent sunburn. Although skin cancer occurs in adulthood, it is caused by sun exposure and burns during childhood. Every time you apply sunscreen to your child, you are helping to prevent skin cancer down the line.

Choose and use a good sunscreen. There are good sunscreens on the market that prevent sunburn but still permit gradual tanning. Don't confuse sunscreens that block the sun's burning rays with

suntan lotions or oils that mainly lubricate the skin. The sun protection factor (SPF) or filtering power of the product determines what percent of UV rays get through to the skin. An SPF of 15 allows only 1/15 (7%) of the sun's rays to get through and thereby extends safe sun exposure from 20 minutes to five hours without burning. Higher SPFs further increase the period of safe sun exposure. The simplest and safest approach is to use a sunscreen with an SPF of 15 or higher on ALL children and adults. For practical purposes, an SPF higher than 30 is rarely helpful.

Apply sunscreen any time your child is going to be outside for more than 30 minutes. Apply it 30 minutes before exposure to the sun to give it time to penetrate the skin. Give special attention to the areas most likely to become sunburned, such as the child's nose, ears, cheeks, neck and shoulders. Apply sunscreen generously. Most people apply too little (the average adult requires 1 oz. of sunscreen per application). Most products need to be reapplied every three to four hours, as well as after swimming or profuse sweating. A "waterproof" sunscreen stays on for about 30 minutes in water. Some of the newer formulations stay on longer. If your child is not cold, ask him not to towel off after swimming to avoid rubbing off the sunscreen.

To prevent sunburned lips, apply a lip coating that contains a sunscreen. If your child's nose or some other area has been burned repeatedly, protect it from all the sun's rays with an opaque zinc oxide ointment.

Avoid sun exposure between the hours of 10 a.m. and 3 p.m., when the sun's rays are most intense. Don't let overcast days give you a false sense of security. More than 70% of the sun's rays still get through the clouds. More than 30% of the sun's rays can also penetrate loosely woven fabrics, such as a T-shirt.

Sun exposure increases by 4% for each 1,000 feet of elevation. A sunburn can occur quickly when hiking above the timberline. Water, sand, and snow also increase sun exposure by reflecting the sun's rays. A hat or umbrella won't protect your child from reflected rays.

Take extra precautions for babies and fair-skinned children. The skin of infants is thinner and more sensitive to the sun than that of older children. In general, babies under 6 months of age should be kept out of the sun. If they must be outdoors, use sunscreens, clothing that covers the arms and legs, and a hat with a brim. Since more than 50% of skin cancer occurs on the face, wearing a baseball cap or other hat with a brim is important for children of all ages.

About 15% of white people have skin that never tans but only burns. Fair-skinned children who don't tan need to be extremely careful about the sun throughout their lives. The big risk factors for sunburn are red hair, blond hair, blue eyes, green eyes, or freckles. Children with these characteristics are also at increased risk for skin cancer. They need to be reminded repeatedly to use a sunscreen throughout the summer and to avoid the sun whenever possible.

Protect your child's eyes. Long-term exposure to ultraviolet light increases the risk of cataracts. Buy sunglasses with lenses that absorb 99% to 100% of UV radiation. Look for labels that say "UV absorption up to 400nm," "Maximum or 99% UV protection or blockage," "special purpose," or "meets ANSI (American National Standards Institute) UV requirements."

Set of good example. Use sunscreen and wear sunglasses yourself.

Call our office immediately if:

- Your child becomes unable to look at light because of eye pain (he may have a sunburn of the cornea).
- Your child develops an unexplained fever over 102 degrees F.
- The sunburn becomes infected.
- Your child starts acting very sick.

Call during regular hours if:

- You have other questions or concerns.

Contemporary Pediatrics, Adapted from Schmitt BD: Your child's health, ed 2, New York, Bantam Books, Inc. 1991.