

# Sun Protection

The sun's rays can cause early aging of the skin and skin cancer. Sunlight enters the skin and damages skin cells. This causes visible and invisible injuries to the skin.

"Sunburn" is a visible type of damage. It appears just a few hours after sun exposure. Other visible signs of sun damage include freckles and other dark spots.

Sunlight also causes invisible damage to skin cells. This damage adds up year after year. Over time, the built-up damage appears as wrinkles, age spots, and even skin cancers.

## HOW TO PROTECT YOUR CHILD'S SKIN FROM THE SUN

### 1. Avoid the strongest sun exposure.

The sun's rays are strongest between 10 a.m. and 4 p.m. During these times, consider indoor activities. If you are outside at midday, seek shade under trees, umbrellas, or tents.

### 2. Wear sun-protective clothing, hats, and glasses.

Covering the skin is even more effective than sunscreen. Choose [sun-protective clothing](#), hats, and sunglasses. A wide-brimmed hat is best to protect the face, scalp, ears, and neck. When choosing sunglasses, look for a pair with UV protection. This will help protect the eyes and eyelids from the harmful effects of UV light.

### 3. Apply sunscreen to exposed skin.

Sunscreen should be used in combination with sun avoidance and protective clothing.

## HOW DO I SELECT THE RIGHT SUNSCREEN FOR MY CHILD?

### 1. Check the active ingredients.

Sunscreen ingredients are divided into **two categories**:

### 2. Choose a sunscreen with an SPF 30 or higher.

Sun Protection Factor (SPF) measures the ability of sunscreen to protect from sunburn. The higher the SPF, the stronger the protection.

### 3. Choose a broad-spectrum sunscreen.

These protect against burning rays and the tanning rays that cause less visible damage.

### 4. Choose a sunscreen that is "water resistant", especially if you will be swimming or sweating.

### 5. Choose a sunscreen that your child will wear.

- » Choose a sunscreen that works for your family. It should not sting, burn, or irritate the skin.
- » Choosing a brand is up to personal preference.

## HOW SHOULD I APPLY SUNSCREEN?

- Apply before going outdoors. Most sunscreens take 20 minutes to start working.
- Spread sunscreen evenly over all exposed skin. Don't forget the ears and the tops of the feet!
- Remember to reapply every two hours – sooner if you are sweating or swimming.

## TWO CATEGORIES OF ACTIVE SUNSCREEN INGREDIENTS:



**MINERAL SUNSCREENS:** These sit on top of the skin and reflect sunlight. They are also called "physical sunscreens" or sunblocks.

- » Mineral sunscreens work immediately after application. They are generally recommended as safest for children, including infants. They are also recommended for individuals with sensitive skin.
- » These sunscreens can sometimes be harder to rub on the skin and can leave a white film on the skin surface. Tinted and "clear" options are also available to more closely match the user's skin tone.
- » Examples: *titanium dioxide*, *zinc oxide*



**CHEMICAL SUNSCREENS:** These are absorbed into the skin and absorb sunlight.

- » These sunscreens take time to work and need to be applied 20 to 30 minutes prior to being in the sun.
- » These sunscreen ingredients tend to be easier to rub in without a white film on the skin.
- » Examples: *oxybenzone*, *avobenzone*, *octisalate*, *octocrylene*, *octinoxate*

# HOW CAN I MAKE SURE I AM USING SUNSCREEN SAFELY?

While sunscreen is meant to protect us from the sun, we want to make sure we are using it safely. Here are some common concerns and how to make sure you are protecting your child.

## Can sunscreen ingredients damage coral reefs?

Certain sunscreens like oxybenzone and octinoxate can damage coral reefs. If you are swimming in these areas, mineral sunscreens are best. Other chemical sunscreens may also be less damaging.

## Are sunscreens absorbed into the body?

Some chemical sunscreen ingredients have been found to be absorbed through the skin into the body. It is unknown if this has an impact on health. One chemical sunscreen, oxybenzone, has been shown in animal studies to have effects on hormones. At the same time, oxybenzone has been used as a sunscreen for over 40 years without any reported side effects in humans.

If you are worried about absorption of sunscreens, mineral sunscreens are recommended. The ingredients zinc oxide and titanium oxide have not been shown to be absorbed. And, don't forget about hats and sun-protective clothing.

## Can sunscreens cause allergic skin reactions?

If you or your child is allergic to preservatives, read labels carefully to avoid your particular allergens.

Being allergic to sunscreen is less common but can happen. Many patients who are concerned about sunscreen allergy are actually irritated by sunlight, heat, swimming, or certain pollens in the air.

If you are concerned about sunscreen allergy, try applying the sunscreen on a day you won't be going anywhere. If it does not cause a rash, an allergy is less likely.

## What about vitamin D?

Vitamin D is an essential vitamin. Our skin makes vitamin D most effectively when we are in the sun. Studies show that regular use of sunscreen does not affect vitamin D levels. Most children get enough sun, even through sunscreen, to make enough vitamin D.

Children with darker skin are more likely to have low vitamin D. This is even more likely if they live in cooler climates with less strong sun exposure. If you are concerned your child has low vitamin D, talk with your doctor. Vitamin D supplements can be considered. In this case, your doctor may also recommend applying sunscreen after 15 minutes of sun exposure rather than before. A moderate approach is often recommended.

## Are spray sunscreens safe and effective?

Most dermatologists recommend lotion or cream sunscreens over sprays. Sprays often don't cover the skin as well as lotion sunscreens; and, there is concern that babies and children can inhale the product.

If you have no other products available, make sure to use your spray sunscreen safely. Spray the sunscreen on your hands before rubbing it in and never spray directly onto the face. Some spray sunscreens may contain flammable ingredients like alcohol. Be sure you will not be around an open flame when using.

## What if my child gets a sunburn through sunscreen?

Most people don't apply enough sunscreen. Adults should apply about one ounce each time (a shot glass size). Studies show that people typically use about a quarter of this amount.

Also remember, sunscreen should be applied at least every two hours. For a family of four, this would mean a 6-ounce bottle of sunscreen would only last 3-4 hours! Most people don't use this much, which makes it less effective.

If your child gets a sunburn, there are some ways you can help them feel better. Make sure your child drinks a lot of water to stay hydrated. Cool baths or showers can help, and you can also use a cool, damp cloth on the sunburned skin. You can apply aloe vera or oatmeal products to soothe the skin. Your doctor may recommend over-the-counter medicine like ibuprofen to reduce pain and swelling.

If the sunburn is very bad and your child has a fever, blisters, a lot of pain, or signs of infection, you should see a doctor for more help.



The Society for Pediatric Dermatology  
8365 Keystone Crossing, Suite 107  
Indianapolis, IN 46240  
(317) 202-0224  
[www.pedsderm.net](http://www.pedsderm.net)

**Author:**  
Lacey Kruse, MD  
Christine Lauren, MD

**Reviewer:**  
Leslie Soccio-Castello, MD

The Society for Pediatric Dermatology and Wiley Publishing cannot be held responsible for any errors or for any consequences arising from the use of the information contained in this handout. Handout originally published in *Pediatric Dermatology*; Vol. 33, No. 3 (2016). Handout revised (2024).

© 2024 The Society for Pediatric Dermatology