

Kids Health for Parents

Sun Safety

Nemours Foundation

We all need some sun exposure; it's our primary source of vitamin D, which helps us absorb calcium for stronger, healthier bones. But it doesn't take much time in the sun for most people to get the vitamin D they need, and unprotected exposure to the sun's ultraviolet rays can cause skin damage, eye damage, immune system suppression, and even cancer. Even people in their 20s can develop skin cancer.

Most children rack up between 50% and 80% of their lifetime sun exposure before age 18, so it's important that parents teach their children how to enjoy fun in the sun safely. With the right precautions, you can greatly reduce your child's chance of developing skin cancer.

Facts About Sun Exposure

The sun radiates light to the earth, and part of that light consists of invisible ultraviolet (UV) rays. When these rays reach the skin, they cause tanning, burning, and other skin damage.

Sunlight contains three types of ultraviolet rays: UVA, UVB, and UVC.

- **UVA** rays cause skin aging and wrinkling and contribute to skin cancer, such as melanoma. Because UVA rays pass effortlessly through the ozone layer (the protective layer of atmosphere, or shield, surrounding the earth), they make up the majority of our sun exposure. Beware of tanning beds because they use UVA rays. A UVA tan does **not** help protect the skin from further sun damage; it merely produces color and a false sense of protection from the sun.
- **UVB** rays are also dangerous, causing sunburns, cataracts (clouding of the eye lens), and immune system damage. They also contribute to skin cancer. Melanoma, the most dangerous form of skin cancer, is thought to be associated with severe UVB sunburns that occur before the age of 20. Most UVB rays are absorbed by the ozone layer, but enough of these rays pass through to cause serious damage.
- **UVC** rays are the most dangerous, but fortunately, these rays are blocked by the ozone layer and don't reach the earth.

What's important is to protect your family from exposure to UVA and UVB, the rays that cause skin damage.

UV rays react with a chemical called **melanin** that's found in most people's skin. Melanin is your first defense against the sun. It absorbs dangerous UV rays before they do serious skin damage. Melanin is found in different concentrations and colors, resulting in different skin colors. The lighter your child's natural skin color, the less melanin it has to absorb UV and protect itself. The darker your child's natural skin color, the more melanin it has to protect itself. (But both dark- *and* light-skinned kids need protection from UV rays because *any* tanning or burning causes skin damage.) Also, people, especially kids, with fair complexions - lighter skin and eye color - are more likely to have freckles because there's less melanin in their skin. Although freckles are harmless, being outside in the sun may help cause them or make them darker.

As the melanin increases in response to sun exposure, the skin tans. But even that "healthy" tan may be a sign of sun damage. The risk of damage increases with the amount and intensity of exposure. Those who are chronically exposed to the sun, such as farmers, boaters, and sunbathers, are at much greater risk. A **sunburn** develops when the amount of UV exposure is greater than what can be protected against by the skin's melanin. {Note: Idaho data shows that people who have intermittent exposure to the sun are at greater risk than those who are in the sun regularly; perhaps because those working in the sun are more cautious about protection}

Unprotected sun exposure is even more dangerous for kids with:

- moles on their skin (or whose parents have a tendency to develop moles)
- very fair skin and hair
- a family history of skin cancer, including melanoma

You should be especially careful about sun protection if your child has one or more of these high-risk characteristics.

Also, not all sunlight is "equal" in UV concentration. The intensity of the sun's rays depends upon the time of year, as well as the altitude and latitude of your location. UV rays are strongest during summer. Remember that the timing of this season varies by location; if you travel to a foreign country during its summer season, you'll need to pack the strongest sun protection you can find.

Extra protection is also required near the equator, where the sun is strongest, and at high altitudes, where the air and cloud cover are thinner, allowing more damaging UV rays to get through the atmosphere. Even during winter months, if your family goes skiing in the mountains, be sure to apply plenty of sunscreen; UV rays reflect off both snow and water, increasing the probability of sunburn.

How to Protect Your Child From the Sun

With the right precautions, kids can safely play in the sun. Here's the lowdown on the most effective strategies:

Avoid the Strongest Rays of the Day



First, avoid being in the sun for prolonged times when it's highest overhead and therefore the strongest (normally from 10:00 AM until 4:00 PM in the northern hemisphere). If your child is in the sun between these hours, as many kids are, be sure to apply protective sunscreen - even if he or she is just playing in the backyard. Most sun damage occurs as a result of incidental exposure during day-to-day activities, not at the beach.

Even on cloudy, cool, or overcast days, UV rays travel through the clouds and reflect off sand, water, and even concrete. Clouds and pollution don't filter out UV rays, and they can give a false sense of protection. This "invisible sun" can cause unexpected sunburn and skin damage. Often, kids are unaware that they're developing a sunburn on cooler or windy days because the temperature or breeze keeps skin feeling cool on the surface.

Cover Up

One of the best ways to protect your family from the sun is to cover up and shield skin from UV rays. Ensure that clothes will screen out harmful UV rays by placing your hand inside the garments and making sure you can't see your hand through them.

Because infants have thinner skin and underdeveloped melanin, their skin burns more easily than that of older kids. But sunscreen should **not** be applied to babies under 6 months of age, so they absolutely must be kept out of the sun whenever possible. If your infant must be in the sun, dress him or her in clothing that covers the body, including hats with wide brims to shadow the face. Use an umbrella to create shade.

Even older kids need to escape the sun. Long exposure can make them feel tired and irritable. For all-day outdoor affairs, bring along a wide umbrella or a pop-up tent to play in. If it's not too hot outside

and won't make your child even more uncomfortable, you can have him or her wear a light long-sleeved shirt and/or long pants. Before heading to the beach or park, call ahead to find out if certain areas offer rentals of umbrellas, tents, and other sun-protective gear.

Use Sunscreen Consistently

There are lots of good sunscreens available for kids, including formulations for sensitive skin, brands with fun scents like watermelon, long-lasting waterproof and sweat-proof versions, and easy-application varieties in spray bottles.

What matters most in a sunscreen is the degree of protection from UV rays it provides. When faced with the overwhelming sea of sunscreen choices at drugstores, concentrate on the **SPF** (Sun Protection Factor) numbers on the labels.

The SPF number tells you how much longer you can stay in the sun without burning if you apply the sunscreen, which acts as a "block" to the sun's rays. For example, if your child would burn after 20 minutes of sun exposure, applying a sunscreen with an SPF of 15 gives him or her 15 times the protection.

For kids age 6 months and older, select an SPF of 15 or higher to prevent both sunburn *and* tanning. Choose a sunscreen that states on the label that it protects against both UVA and UVB rays (referred to as "broad-spectrum" sunscreen). To avoid possible skin allergy, avoid sunscreens with PABA, and if your child has sensitive skin, look for a product with the active ingredient titanium dioxide (a chemical-free block).

For sunscreen to do its job, it must be applied correctly. Be sure to:

- Use sunscreen whenever your child will be in the sun.
- Apply sunscreen about 30 minutes before going outside so that a good layer of protection can form. Don't forget about lips, hands, ears, feet, shoulders, and behind the neck. Lift up bathing suit straps and apply sunscreen underneath them (in case the straps shift as your child moves).
- Don't try to stretch out a bottle of sunscreen; as a guide, apply the sunscreen generously.
- Reapply sunscreen often, approximately every 2 to 3 hours, as recommended by the American Academy of Dermatology. Reapply after your child is sweating or swimming.

- Apply a waterproof sunscreen if your child will be around water or will go swimming. Water reflects and intensifies the sun's rays, so kids need protection that lasts. Waterproof sunscreens may last up to 80 minutes in the water, and some are also sweat- and rub-proof. But, regardless of the waterproof label, be sure to reapply sunscreen when kids come out of the water.

Keep in mind that every child needs extra sun protection. The American Academy of Dermatology recommends that all children - regardless of their skin tone - wear sunscreen with an SPF of 15 or higher. Although dark skin has more protective melanin and tans more easily than it burns, remember that tanning is also a sign of sun damage. Dark-skinned children can also develop painful sunburns.

Purchase Protective Eyewear for Kids



Sun exposure damages the eyes as well as the skin. Even 1 day in the sun can result in a burned cornea (the outermost, clear membrane layer of the eye). Cumulative exposure can lead to cataracts later in life (clouding of the eye lens, which results in blindness). The best way to protect eyes is to wear sunglasses.

Not all sunglasses provide the same level of ultraviolet protection; darkened plastic or glass lenses without special UV filters just trick the eyes into a false sense of safety. Purchase sunglasses with labels ensuring that they provide 100% UV protection.

But not all children enjoy wearing sunglasses, especially the first few times. To encourage kids, let them select a style they particularly like; many manufacturers make fun, multicolored glass frames or frames embossed with cartoon characters. And don't forget that kids want to be like grown-ups. If you wear sunglasses regularly, your kids may be willing to follow your example.

Ask About Your Child's Medication

Some medications increase the skin's sensitivity to UV rays. As a result, even kids with skin that tends not to burn easily can develop a severe sunburn in just minutes when taking certain medications. Fair-skinned children, of course, are even more vulnerable. Ask your doctor or pharmacist if the prescription (especially antibiotics and acne medications) and over-the-counter medications your child

is taking can increase sun sensitivity. If so, always take extra sun precautions. The best protection is simply covering up or staying indoors; even sunscreen can't always protect skin from sun sensitivity caused by medications.

What to Do if Your Child Gets a Sunburn

A sunburn can sneak up on your child, especially after a long day at the beach or park. Often, kids seem fine during the day, but then gradually develop an "afterburn" later that evening that can be painful and hot and can even make them feel sick. The best way to take care of your child is to treat the symptoms and prevent further problems.

When children get sunburned, they usually experience pain and a sensation of heat - symptoms that tend to become more severe several hours after sun exposure. Some children also develop chills. Because the sun has dried their skin, it can become itchy and tight. Burned skin typically begins to peel about a week after the sunburn. Encourage your child not to scratch or peel off loose skin because skin underneath the sunburn is vulnerable to infection.

If your child does get a sunburn, the following tips may help you make him or her more comfortable:

- Keep your child in the shade until the sunburn is healed. Any additional sun exposure will only increase the severity of the burn and increase pain.
- Have your child take a cool (not cold) bath, or gently apply cool, wet compresses to the skin to help alleviate pain and heat.
- Apply pure aloe vera gel (available in most pharmacies or taken directly from within the leaves of the plant) to any sunburned areas. It's excellent for relieving sunburn pain and helping skin heal quicker.
- Give your child a pain reliever like acetaminophen or ibuprofen and spray on over-the-counter "after-sun" pain relievers. (Do **not**, however, give aspirin to children or teens.)
- Apply topical moisturizing cream to rehydrate the skin and help reduce swelling. For the most severely burned areas, apply a thin layer of 1% hydrocortisone cream. (Do **not** use petroleum-based products, because they prevent excess heat and sweat from escaping. Also, avoid first-aid products that contain benzocaine, which may cause skin irritation or allergy.)

If the sunburn is severe and blisters develop, call your doctor. Until you can see your child's doctor, tell your child not to scratch, pop, or squeeze the blisters, which can become easily infected and can result in scarring.

What About Heat-Related Illnesses?

Heat-related illnesses such as heat syncope (fainting from heat), heat exhaustion, and heat stroke are far more serious than a sunburn. These conditions occur when kids become overheated and dehydrated, and in many cases, are accompanied by sunburn.

Call your child's doctor if:

- your child has an unexplained fever higher than 102 degrees Fahrenheit (38.9 degrees Celsius)
- the sunburned skin looks infected
- your child has trouble looking at light (This may indicate a sunburn of the eye's cornea.)

Contact your child's doctor for immediate assistance if your child has:

- nausea
- vomiting
- fainting
- delirium (seems temporarily mentally confused)
- diarrhea

Be Sun Safe Yourself

Being a good role model by wearing sunscreen and limiting your time in the sun not only reduces your risk of becoming sunburned, it reduces your child's risk, too. By using a variety of sun protection measures, such as keeping your child indoors during peak hours and encouraging your child to wear hats, sunglasses, and long-sleeved shirts, as well as using sunscreen, you can decrease your child's exposure to the damaging effects of the sun.

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http://www.kidshealth.org/parent/firstaid_safe/outdoor/sun_safety.html