



# Summertime *Safety*

Keeping Kids Safe from Sun and Smog

**I**f you spend time with kids in the summer, you want to keep them safe while providing fun outdoor experiences. Did you know that overexposure to the sun and air pollution can pose serious health effects, especially to children? You can take several simple actions to protect kids—and yourself.



## What's the Problem?

Ozone can be protective or harmful, depending on where it is found in the atmosphere. Ozone is a naturally occurring gas in the upper atmosphere (the stratosphere) that protects us from the sun's ultraviolet (UV) radiation. However, certain man-made chemicals released during the last 100 years have destroyed some of this protective ozone. Because there is less ozone in the stratosphere to protect us, it is more important than ever to be safe from the summer sun's rays.

Ozone at ground level (the troposphere) is formed from pollutants emitted by cars, power plants, refineries, and other sources. Ground-level ozone is a primary component of a chemical soup known as "smog." Breathing can be difficult, especially for asthmatics and older adults, when the strong summer sun causes more smog to form. Your chances of being affected by these higher smog levels increase the longer you are active outdoors and the more strenuous the activity.

## Health Effects

Overexposure to UV radiation can cause sunburns now, but also can lead to skin cancer, cataracts, and premature aging of the skin. Because kids spend so much time in the summer sun, and unprotected exposure during youth puts them at increased lifetime risk for skin cancer, protecting kids from the sun is especially important.

Kids and teenagers who are active outdoors—especially those with asthma or other respiratory problems—are particularly sensitive to ground-level ozone. Ozone can cause coughing, throat irritation, and pain when taking a deep breath. It also can reduce lung function, inflame the lining of the lungs, and even trigger asthma attacks the day after ozone levels are high. Repeated inflammation over time may permanently scar lung tissue.

**Ozone:**  
"Good up high, bad nearby."

Check your daily UV Index and Air Quality Index (below), and follow the simple steps on the back of this fact sheet to protect kids' health.

## UV Index (UVI)

Exposure Category	UVI Range
Low	< 2
Moderate	3 to 5
High	6 to 7
Very high	8 to 10
Extreme	11+

## Air Quality Index (AQI)\*

AQI Number	Health Concern	Color Code
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for sensitive groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very unhealthy	Purple

\*Ozone reports are usually only for metropolitan areas, but ozone blown by the wind can also create health problems in rural areas.

## The UV Index

Developed by EPA, in partnership with the National Weather Service, the UV Index is a daily forecast of the strength of the sun's UV radiation on a scale of 0–11+.

The higher the number, the greater the potential for damage to the skin and eyes, and the less time it takes for harm to occur.

### Actions You Can Take

- **Model SunWise behavior.**

- **Teach kids to *Slip, Slop, Slap, and Wrap*:**

**Slip on a shirt.** Less skin exposed means less skin damage.

**Slop on sunscreen.** Twenty minutes before heading outside, generously apply products of at least SPF 15, and re-apply every 2 hours or after swimming or sweating.

**Slap on a hat.** Find a hat you like and wear it.

**Wrap on sunglasses.** Look for ones that block 99–100% of UVA and UVB rays.

- **Seek shade.** Especially when the sun is most intense, from 10 a.m. to 4 p.m. Rotate players to allow breaks in the shade. This is most important when the UV Index is 6 or above.
- **Check the UV Index.** Find out the risk every day.
- **Get SunWise Certified.**

#### Coaches and counselors:

Get free training on-line:  
<http://cfpub.epa.gov/sunwiserec/>

**Parents:** Encourage those looking out for your kids to get certified to demonstrate their knowledge of safety procedures.



## The Air Quality Index

The Air Quality Index (AQI) is a scale used by state and local air agencies to report how clean or polluted the air is. Ground-level ozone is one pollutant reported. An AQI under 101 (green or yellow) means the air is acceptably clean, but as it rises into the 101-150 range (orange) people with conditions that make them sensitive to air pollution may be at risk. Air with an AQI over 150 (red or purple) is considered unhealthy for everyone.

### Actions You Can Take

- **When the AQI reports unhealthy levels, limit physical exertion outdoors.** In many places, ozone peaks between mid-afternoon and early evening. Change the time of day of strenuous outdoor activity to avoid these hours, or reduce the intensity of the activity.

- **Pay attention to symptoms.**

Know how to recognize symptoms of respiratory discomfort, such as coughing, wheezing, and breathing difficulty, and reduce exposure if these occur.

- **Rotate players in physically exerting games.** Rest players to reduce exertion.
- **Provide alternative activities.** Allow kids that have asthma or other respiratory problems to participate in activities that are less physical when pollution levels are high. If pollution levels are particularly high, move physical activities indoors where the air is filtered by an air conditioning system.
- **Be vigilant about asthma management.** People with asthma should have adequate medication on hand and follow their asthma management plans.



### Know the day's UV Index...

#### Visit EPA's UV Index Web Page

[www.epa.gov/sunwise/uvindex.html](http://www.epa.gov/sunwise/uvindex.html)

**Use EPA's widget found on many web sites to get the UVI for your ZIP code**

**Get the free UVI smartphone app from EPA at**

<http://www.epa.gov/enviro/mobile/>

**Check the UV Index on Facebook and share it with your friends**

[http://apps.facebook.com/epa\\_uvindex/](http://apps.facebook.com/epa_uvindex/)

**Check it wherever you get your weather reports: TV, radio, newspaper, and online.**

### To find the Air Quality Index...

#### Visit EPA's AIRNOW Web Page

[www.epa.gov/airnow/](http://www.epa.gov/airnow/)

Choose your state and local area for real-time animated maps, forecasts, and the previous day's peak ozone level.

Check local newspapers or listen to local radio and TV weather forecasts.

#### Visit EPA's EnviroFlash Web Page

<https://enviroflash.epa.gov>

Sign up to receive the daily UV Index, Air Quality Index, and occasional UV Alerts directly by e-mail.

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