

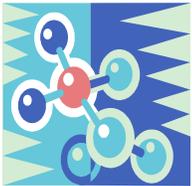


Earth Gauge™ - UV Safety Month

Environmental Information for Broadcast Meteorologists

July is UV Safety Month! Summer is the perfect time to remind viewers about the dangers of exposure to ultraviolet (UV) radiation, and how to protect themselves in the sun. Learn more about UV Safety and find the UV forecast at EPA's SunWise Program Web site - www.epa.gov/sunwise.

The sun emits radiation in the form of ultraviolet (UV) light, which is classified into three types by wavelength: UVA, UVB, and UVC. In the stratosphere there is a protective layer known as the ozone layer which blocks all UVC light (shortest wavelength), but UVB and UVA light can pass through the atmosphere. Because UVB and UVA light can reach the Earth's surface, it is important to protect yourself when you will be exposed to sunlight.



UVA versus UVB

Both UVA and UVB reach the Earth's surface because they are not fully absorbed by the ozone layer. UVA penetrates deeply into the skin, and is the type of UV radiation that causes wrinkling or leathering of the skin — the effects associated with “photoaging.” UVB is the type of radiation that causes sun burns. Both types can cause skin cancer.

When is UV radiation at its highest?

UV radiation is at its highest when and where the sun's rays are the strongest. This means that UV levels will be highest around noon on a clear sunny day, as well as during the summer months. UV levels will also be highest near surfaces that reflect sunlight, such as snow or sand. Radiation bouncing off a reflective surface is particularly dangerous because the reflection intensifies the light. Although these are times when UV radiation will be strongest, you must take precautions whenever you are exposed to sunlight.



How does UV radiation affect you?

Overexposure to UV radiation has negative health effects which range from short-term effects, such as sunburns, to long-term effects, such as skin cancer. Every year in the United States over one million people are diagnosed with skin cancer and as a result of skin cancer, one person dies every hour. Over exposure to UV radiation can also cause eye cataracts, eye damage, skin aging, growths on the skin, and suppression of the immune system.

Who is at risk?

Although the sun can adversely affect everyone, some people are at a higher risk for skin cancer when overexposed to UV radiation. People who are at the highest risk for skin cancer are those who spend excessive amounts of time in the sun, as well those who get sun burns easily or frequently. Even though the risk of skin cancer is not equal for all people, everyone should take precautions. It is also important to remember that everyone is equally at risk for eye damage due to overexposure to the sun's ultra violet radiation.



UV affects plants and animals

UV radiation not only impacts humans, but also plants and animals. Overexposure to UV radiation affects the rate at which a plant carries out photosynthesis. This can affect the growth of the plant, which can ultimately lead to a decrease in biodiversity and a decline in the structure of ecosystems. Animals, especially those with little or no hair, are susceptible to sunburn – this is why pigs (and their hippo and warthog relatives) often coat their skin with mud, which acts like a sunscreen!



Earth Gauge

A National Environmental Education Foundation Program

4301 Connecticut Avenue, NW, Suite 160
Washington, DC 20008
www.neefusa.org www.earthgauge.net

Stay safe in the sun!

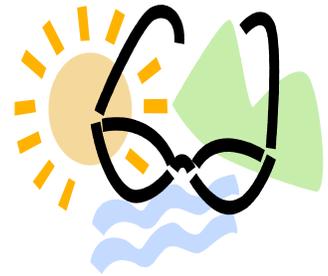


Wear Sunscreen

Sunscreens with SPF (Sun Protection Factor) 15 and above provide protection from both UVA and UVB by preventing ultra violet radiation from reaching your skin. Sunscreens provide protection by prolonging the amount of time it takes for the sun's rays to cause reddening of the skin. The higher the SPF, the more protection you get. It is important to note that sunscreen must be applied every two hours to remain effective and continue providing protection. The longer the amount of time that you plan to spend outdoors, the higher your sunscreen's SPF should be.

Wear Sunglasses

UV radiation can damage your eyes as well as your skin. The sun's UV rays can burn the cornea of your eyes, which can result in cataracts that may ultimately cause blindness. Even short periods of exposure can lead to serious damage. To protect your eyes, wear sunglasses that have 100 percent UV protection. Don't be fooled by how dark or how expensive the glasses are. Even some of the most expensive sunglasses don't provide full UV protection. Check the label to be sure.



Seek Shade

UV radiation is the strongest during the day from about 10 am to 4 pm, as well as during the summer months. Seek shade during these times to protect yourself. If you must be outside, wear tightly woven clothing and a wide brimmed hat to reduce the amount of UV radiation coming into contact with your skin. Remember that pets need shade, too.

Check the UV index

The UV Index (www.epa.gov/sunwise/uvindex.html) is a forecast that lets you know if you are at risk for overexposure to the sun. Index levels range from two to 11+, where level two is low risk and levels six and above are high risk. Check your UV index before going out to protect yourself from sun related illness.



Sources:

Cornell Center for Materials Research, Cornell University. "Ask a Scientist: Can Animals Get a Sunburn?" <http://www.ccmr.cornell.edu/education/ask/index.html?quid=336>

EPA SunWise Program. 2006. "The Sun, UV, and You: A Guide to SunWise Behavior." <http://www.epa.gov/sunwise/doc/sunuvu.pdf>

EPA SunWise Program. "What is the UV Index?" <http://www.epa.gov/sunwise/uvwhat.html>

Kids Health (Nemours Foundation). "Sun Safety." http://www.kidshealth.org/parent/firstaid_safe/outdoor/sun_safety.html

Smithsonian Environmental Research Center. "It's All in the Watershed: A Collection of Stories from Your Ecological Home – UV Radiation." <http://www.serc.si.edu/education/resources/watershed/stories/UVradiation.jsp>

The Skin Cancer Foundation. "Sun Smart Living." www.skincancer.org