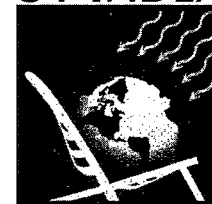


UV RADIATION

UV INDEX



The sun gives out energy over a broad spectrum of wavelengths. Ultraviolet (UV) radiation, which has a shorter wavelength than either visible blue or violet light, is responsible for sunburn and other adverse health effects. Fortunately for life on earth, stratospheric ozone screens most harmful UV radiation. However, what gets through the ozone layer can cause a number of problems, particularly for people who spend substantial time outdoors:

- skin cancer
- cataracts
- immune suppression
- premature aging of the skin

Because of these adverse health effects, limit your exposure to UV radiation and protect yourself when working or recreating outdoors.

TYPES OF UV RADIATION

Scientists have classified UV radiation into three types or bands — UVA, UVB, and UVC. The stratospheric ozone layer absorbs some but not all of these types of UV:

UVA

Not absorbed by the ozone layer

UVB

Mostly absorbed by the ozone layer, but some does reach the earth's surface

UVC

Completely absorbed by the ozone layer

UVA and especially UVB penetrate the surface of the skin and can cause the adverse health effects listed above.

UV LEVELS DEPEND ON A NUMBER OF FACTORS -

STRATOSPHERIC OZONE

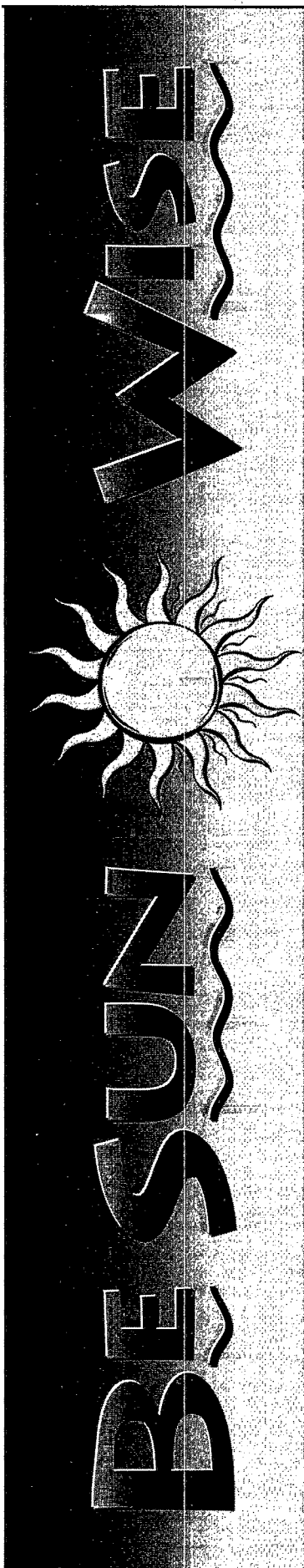
The ozone layer absorbs most of the sun's harmful UV rays, but varies depending on the time of year and changing weather patterns. The ozone layer has thinned in certain areas due to emissions of ozone-depleting chemicals widely used in industry.

TIME OF DAY

The sun is at its highest in the sky around the noon hour. At this time, the sun's rays have the least distance to travel through the atmosphere and UVB levels are at their highest. In the early morning and late afternoon the sun's rays pass obliquely through the atmosphere and the intensity of UVB is greatly reduced. UVA levels are not sensitive to ozone and vary throughout the day much like visible sunlight does.

TIME OF YEAR

The sun's angle varies with the seasons, causing the intensity of UV rays to vary. UV intensity tends to be highest during the summer months.



LATITUDE

The sun's rays are strongest at the equator where the sun is most directly overhead and UV rays must travel the least distance through the atmosphere. Ozone is also naturally thinner in the tropics compared to the mid- and high-latitudes, so there is less ozone to absorb the UV radiation as it passes through the atmosphere. At higher latitudes the sun is lower in the sky, so UV rays must travel a greater distance through ozone-rich portions of the atmosphere and in turn expose those latitudes to less UV radiation.

ALTITUDE

UV intensity increases with altitude because there is less atmosphere to absorb the damaging rays.

WEATHER CONDITIONS

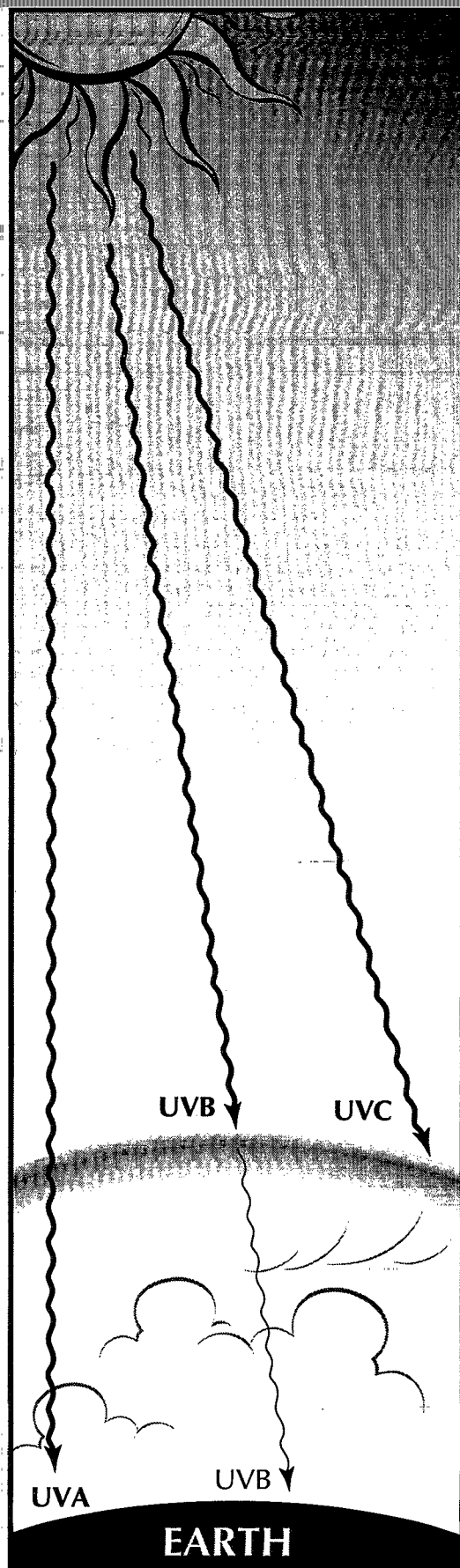
Cloud cover reduces UV levels, but not completely. Depending on the thickness of the cloud cover, it is possible to burn on a cloudy summer day even if it doesn't feel very warm.

ABOUT THE UV INDEX

The UV Index, developed by the National Weather Service and the Environmental Protection Agency, provides a forecast of the expected risk of overexposure to the sun and indicates the degree of caution you should take when working, playing, or exercising outdoors. The UV Index predicts exposure levels on a 0 - 10+ scale, where 0 indicates a minimal risk of overexposure, and 10+ means a very high risk of overexposure. Calculated on a next-day basis for dozens of cities across the U.S. by the National Weather Service, the UV Index takes into account clouds and other local conditions that affect the amount of UV radiation reaching the ground in different parts of the country.

FOR MORE INFORMATION...

To learn more about the UV Index, the ozone layer, and actions being taken to prevent ozone depletion, call EPA's Stratospheric Ozone Hotline at (800) 296-1996.



THE STRATOSPHERIC OZONE LAYER SCREENS OUT MUCH OF THE SUN'S HARMFUL UV RADIATION