



## UV Radiation & UV Index

### What is ultraviolet radiation?

*Adapted from the Centers for Disease Control and Prevention (CDC) Excite Program*

The sun gives us light in the form of visible radiation. It gives us warmth in the form of infrared radiation. It also gives us a third type of radiation that we can neither see nor feel: ultraviolet radiation. Ultraviolet (UV) radiation can seriously threaten our health. UV rays can cause cancer by damaging cell's genetic material. The damage allows cells to form cancerous tumors.

Ultraviolet rays do not give off heat or light. UV radiation is made up of three parts: UVA, UVB, and UVC; invisible rays that are part of the energy that comes from the sun.

### UVA

UVA rays are the longest rays and have the ability to do lasting damage to the skin. They are responsible for making skin wrinkle and age more quickly. UVA rays can also damage eyes and the immune system. The immune system protects our bodies from getting sick. It can also cause skin cancer. UVA rays are not absorbed by the ozone layer.

### UVB

UVB rays are shorter wavelength rays. UVB rays are partially absorbed by the ozone layer but some still come through normally. UVB rays affect the Epidermis (top layer of skin). UVB rays are responsible for burning our skin and causes skin cancer if we don't protect it.

### UVC

UVC rays are even of shorter wavelength and are totally absorbed by the ozone layer.

### What is the UV Index?

The Ultraviolet (UV) Index was developed in the United States by the National Weather Service and the U.S. Environmental Protection Agency (EPA) following successful use of UV alerts in other countries. The UV Index provides a daily forecast of the expected risk of overexposure to the sun. The Index predicts UV intensity levels of the sun's rays when it is at its highest (this is called "solar noon"). The Index ranges on a scale from 1 to 11+, where 1 indicates a low risk of overexposure and 11+ signifies an extreme risk. Calculated on a next-day basis



# Information Sheet UV Radiation & UV Index



for every zip code across the United States, 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.