

# Safety under the Sun - Protect yourself against UV Radiation



衛生署

Department of Health

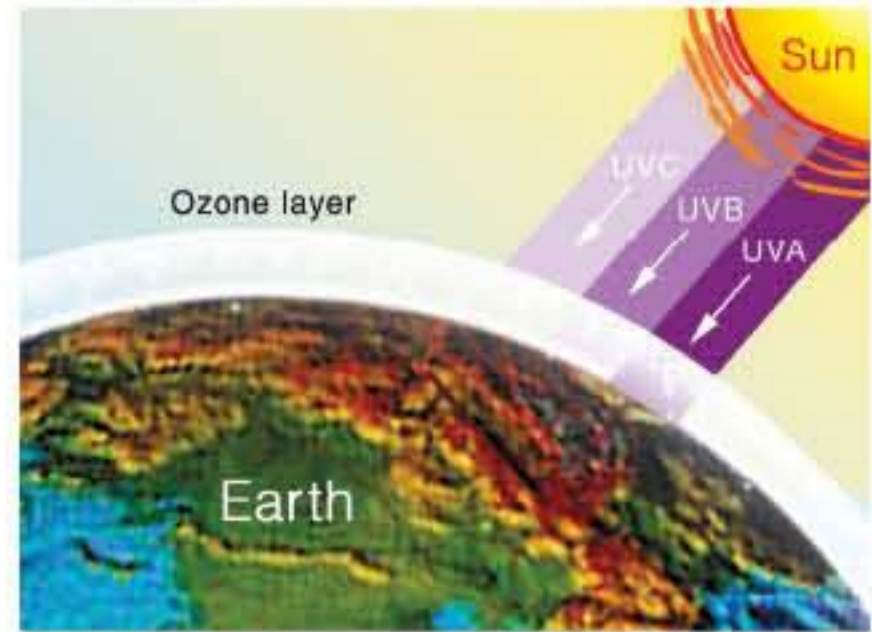


香港天文台

HONG KONG OBSERVATORY

## Ultraviolet Radiation from the Sun

Energy from the sun gives warmth and sustains all life on earth. The sun also emits radiation of different wavelengths, among which is the invisible ultraviolet (UV) radiation. Ultraviolet radiation is a form of electromagnetic wave which can be classified as UV-A, UV-B and UV-C according to the wavelength. UV radiation reaching the earth's surface consists mostly of UV-A and some UV-B, as all UV-C and most of the UV-B are absorbed by the atmosphere.



## Ultraviolet Radiation and Human Health

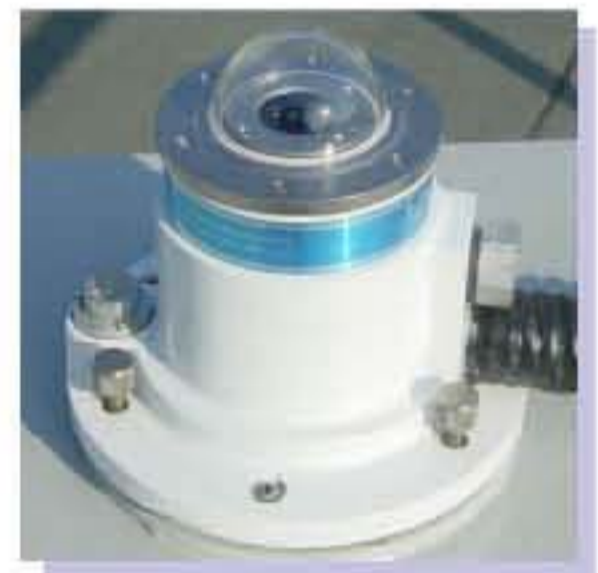
- A moderate exposure to the sun helps our body to produce vitamin D which is important for maintaining healthy bones and minimizing the risk of bone fracture.
- However, excessive exposure to UV radiation from the sun may cause painful sunburn, wrinkling and premature ageing of the skin as well as increase the risk of skin cancers and cataracts.

About 80% of all skin cancers may be attributable to excessive exposure to sunlight. Furthermore, the World Health Organization estimates that up to 20% of cataracts may be due to UV overexposure. Therefore, one must not underestimate the potential harm arising from UV overexposure.

## The UV Index and Forecast

The Hong Kong Observatory measures the UV Index at the King's Park meteorological station. The UV Index is a measure of the potential harm of UV radiation on the human skin. The higher the UV Index, the more likely the damage to our body.

The UV Index and the corresponding exposure level as categorized by the World Health Organization are shown in the table below:



UV sensor

UV Index	Exposure Level
0-2	Low
3-5	Moderate
6-7	High
8-10	Very High
≥11	Extreme

Source: The World Health Organization

The UV Index depends on a number of factors. Generally speaking, the higher up the sun in the sky, the stronger is the UV radiation. Therefore, the UV Index on a fine day is highest around noon. Water surfaces, sand on the beach and glass walls on buildings also enhance UV radiation by reflection. On the other hand, clouds, ozone and aerosols absorb or scatter UV radiation and hence will in general lower the UV Index.

The effect of clouds on UV radiation depends on the amount, type and height of the clouds. Even under cloudy situations, if the clouds are thin there may still be considerable UV radiation reaching the ground. Sometimes, cloud edges can reflect UV radiation and lift the UV Index. Members of the public may get burnt because of the lack of protection in such weather conditions.

The Hong Kong Observatory provides information on the current UV Index and forecast of the maximum UV Index for the following day through the radio, television, the Observatory's website (<http://www.weather.gov.hk> or <http://www.hko.gov.hk>), as well as its Dial-a-Weather service (Tel. No.: **1878 200**). The public is advised to avoid prolonged exposure under the sun when the index reaches or is forecasted to be 11 or above. Background information on the UV Index, important notes on the use of the UV Index forecast, as well as general precautions against UV radiation are also available on the Observatory's website.

## Protective Measures against UV Radiation

- To reduce the harm from UV radiation, the most important thing is to minimize direct exposure of the skin and the eyes to sunlight.
- On days when the UV Index is high, you should avoid staying outdoors for prolonged periods.
- If you must be out in the sun, take the following precautions:



Check what the latest UV Index is.



Wear a broad brim hat.



Seek shade.



Wear UV blocking sunglasses.



Use an umbrella.



Use a broad-spectrum sunscreen lotion blocking both UVA and UVB (with a Protection Grade of UVA (PA) of PA+ or above, and a Sun Protection Factor (SPF) for UVB of 15 or above). Apply liberally and reapply after swimming or sweating.



Wear long-sleeved and loose-fitting clothing.

## Happy Children under the Sun

Researches have shown that overexposure to sunlight during the early years will increase the chance of skin cancer occurring later in life. Thus children should not be left in the sun for extended periods of time. When taking children outdoors, parents should protect them from UV radiation by making use of hats, umbrellas, proper clothing and sunscreen lotions. Parents should also teach their children about safety measures from an early age.



If you want to know more health information, you can dial 2833 0111, the 24-hour health education hotline of the Department of Health (in Cantonese, English and Putonghua), or visit our website <http://www.chcu.gov.hk>