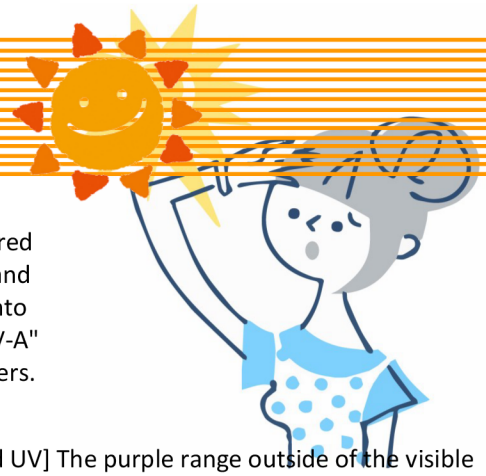
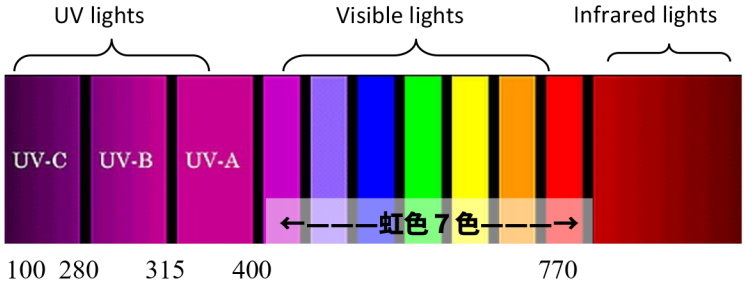
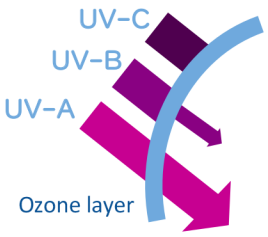
About ultraviolet rays



The light that reaches the earth from the sun is divided into infrared rays, ultraviolet rays, and visible rays (rainbow colors). Visible lights are purple, indigo, blue, green, yellow, orange, and red in ascending order of wavelength, but ultraviolet rays with a shorter wavelength than purple and infrared rays with a wavelength longer than red are invisible. .. Ultraviolet rays are classified into three types according to the length of the wavelength, and are called "UV-C", "UV-B", and "UV-A" in ascending order of wavelength. The numbers are wavelengths and the unit is nm: nanometers.



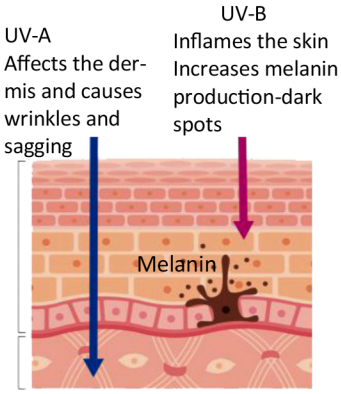
[Ultraviolet rays and UV] The purple range outside of the visible lights in the illustration are the UV lights;
They are called "ultraviolet rays" in the sense that they are outside the visible violet range. In English, the words "ultra", "violet" and "ray" are combined to form ULTRA VIOLET RAY, which is abbreviated as UV. By the way, light with a wavelength longer than red in the visible light range shown on the illustration.



UV-C, which is said to be the most harmful, is absorbed by the ozone layer and does not reach the earth, but UV-A and UV-B exposure in excess are concerns for eyes and skin. Ultraviolet rays are also reflected from the ground surface, and the reflectance is said to be 80% for fresh snow, 25% for sandy beaches, and 10% for asphalt, for example.

■ UV Rays and Vitamin D

Ultraviolet rays tend to attract attention only for their adverse effects, but they also have the effect of producing vitamin D. When the skin is irradiated with "UV-B", vitamin D is produced subcutaneously. Vitamin D is widely known to promote calcium absorption and increase bone formation and muscle strength.



■ UV Rays and Skin cancer

It is not good to get sunburned unnecessarily as it may cause skin cancer. It is believed that this is because UV light damages genes and suppresses the ability to repair cells.

■ UV Rays and Vision

Ultraviolet rays are also said to have an effect on the eyes. For example, one of the immediate symptoms is UV keratitis, which causes the cornea to become inflamed when exposed to strong UV light. This is what happens when you spend time in the snowy mountains without goggles and your eyes become red and painful.

■ Melanin and skin discoloration

Melanin is the pigment that is responsible for our beautiful variety of skin tones and shades, eye colors, and hair colors. Not only does melanin provide pigmentation for human skin, hair, and eyes, it also provides protection against the harmful effects of ultraviolet (UV) rays.
When our skin is exposed to ultraviolet rays, it makes melanin at the melanocytes in the epidermis to stop the harm to the skin. However, if this melanin is overproduced, it may cause "blemishes". In other words, it is important to prevent the overproduction of melanin in order to prevent the formation of dark spots. To do so, we use UV protectors or sun blocks.
The melanin accumulated in the epidermis deteriorates the metabolism of the skin due to various factors such as aging and causes dark spots, so not only UV care but also diet, exercise and supplements are used to improve the metabolism of the skin and whole body

参考資料：https://www.kindai.ac.jp/health/about/ultraviolet-rays/ www.env.go.jp/chemi/matsigaisen2015/full.pdf) www.who.int/uv/publications/en/UVIGuide.pdf)

Did you know?

● Is UV light hot?
Tanning is due to UV rays that we cannot feel. The heat we feel is due to infrared rays, not ultraviolet rays.

● Won't you get a tan on a cloudy day?
Even on cloudy days, there is about 60% of UV rays that reach us. 50% of UV rays reach us even in the shade.

● Does the white color block UV rays?
The effective color to block UV rays is black. On the contrary, white easily let ultraviolet rays pass through, so be careful!

● Do you need SPF50 for sunscreen?
We recommend that you choose SPF 10 to 20 for daily life, SPF 20 to 30 for outdoor light sports and leisure, and SPF 30 or higher for marine sports and leisure under the scorching sun. In addition, sunscreen is not permanent once it is applied, and it can be easily come off due to sweat or clothes, so it is important to reapply it frequently to maintain the effect.

Skin protection:
① UVmilk $35SRP／skin protection
② VitaminC $16SRP／antioxidant
③、④ NanoCollagen $60SRP/ea /skin nourishing