



**World Health
Organization**

Radiation and health – UV radiation

AIDE-MÉMOIRE

For enhanced country action to reduce the health impacts of
ultraviolet radiation



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Ultraviolet (UV) radiation is a type of radiation emitted by the sun and various human-made sources, such as tanning beds used for cosmetic purposes, UV lamps utilized in disinfection and other applications, and welding arcs.

Small amounts of UV radiation are beneficial to health and essential for the production of vitamin D. However, overexposure may result in both acute and chronic health effects, including skin cancers, eye conditions like cataracts, and effects on the immune

system. UV radiation is the leading cause of skin cancers, with over 1.5 million cases diagnosed and more than 120,000 deaths reported globally in 2020.

Although everyone is potentially at risk, certain subpopulations, such as children, fair skinned individuals, and outdoor workers, are at particular risk of skin cancer.

Fortunately, skin cancer and other health issues related to overexposure to UV radiation can be prevented with simple and effective measures to protect against excessive UV radiation.

✓ Checklist

Policies & actions

- ☐ National sun protection policies or action plans in place.
- ☐ Affordable UV-protective products promoted.
- ☐ Exposure limits and protective measures for indoor and outdoor workers implemented.
- ☐ National statistics on UV radiation-induced skin and eye diseases provided.
- ☐ Shaded areas in schools, workplaces and public places provided.
- ☐ Artificial tanning services and devices regulated.

Awareness raising & capacity building

- ☐ Risk communication strategy on the health impacts of natural UV radiation exposure implemented.
- ☐ Personal protection measures against UV radiation promoted.
- ☐ UV Index included in public awareness campaigns.
- ☐ Information about the health risks of artificial tanning devices provided.

WHO support to countries

- Provides tools for personal protection from UV radiation, such as the UV Index through the SunSmart Global UV App.
- Provides evidence-based guidance and tools on sunbed management.
- Compiles information on national regulations on sunbeds.
- Provides a compendium of available interventions for the protection from excessive UV radiation.
- Promotes research on the health effects of UV radiation, and effective protective measures.
- Highlights co-benefits of reduced UV radiation exposure in other settings, such as outdoor workplaces, schools and recreational areas.
- Promotes advocacy and communication materials to increase public understanding of the effects of UV overexposure.

Key elements for country action

Governance

- Increase awareness about the effects and risks of UV overexposure among the health sector, decision makers, and the public, and inform them about protective measures.
- Ensure health considerations are integrated into all relevant policies outside the health sector, such as tourism, education, urban planning, and workplaces to raise public awareness of the health effects of overexposure to UV radiation and reduce health impacts.

Policies & action

- Establish national sun protection policies and action plans to reduce health risks.
- Support the production, labelling and distribution of affordable UV-protective products, using national or international protection labels/standards (e.g., sunscreens, clothing, and sunglasses) to ensure clear and safe guidelines for manufacturers and consumers.
- Establish and enforce exposure limits and protective measures for indoor and outdoor workers.
- Compile national statistics on UV radiation-induced skin and eye diseases.
- Support the provision of shaded areas in schools, workplaces, and in public places such as playgrounds, parks and swimming pools.
- Ban artificial tanning services and devices. If banning is not possible, regulate their use, impose taxes on sunbed sessions, and inform users about health risks through warning signs.

Awareness raising & capacity building

- Develop a risk communication strategy to sustainably raise awareness and educate the public about the health risks of skin cancer and eye diseases due to UV radiation exposure.
- Promote personal protection against UV radiation.
- Use the UV Index through media campaigns as part of public awareness programmes.

Additional information:



<https://www.who.int/health-topics/ultraviolet-radiation>

Main resources:

- [WHO Fact sheet. UV radiation](#)
- [Global solar UV index: a practical guide](#) (WHO, 2002)
- [SunSmart UV App](#)
- [Artificial tanning devices: public health interventions to manage sunbeds](#) (WHO, 2017)
- [GHO. UV radiation](#)
- [The Global Health Observatory data repository – legislation of artificial tanning sunbeds](#) (WHO, 2021)
- [Compendium of WHO and other UN guidance on health and environment](#) (WHO, 2024)

Please note: This aide mémoire provides summary information on ultraviolet radiation and health. More detail radiation and other environmental health topics is provided in various other materials.