

Learning about key sunscreen features can help you make better choices for staying safe in the sun.

Sunscreen 101: Everything you need to know



By Dr. Anatoli Freiman

With one in six Canadians expected to develop skin cancer in their lifetime, skin cancer is the most common type of cancer. Yet it is also one of the most preventable.

The primary environmental cause of premature skin aging and most skin cancers is ultraviolet (UV) radiation from sun exposure. UV radiation is composed of three wavelengths: UVA, UVB and UVC, of which UVA (320-400 nm) and UVB (290-320 nm) rays are specifically carcinogenic. Sunscreens are an integral element for sun protection since they work by absorbing or reflecting UV radiation.

There are two main types of sunscreens: organic/chemical, which absorb UV radiation, and inorganic/physical (such as titanium dioxide or zinc oxide), which physically block UV radiation. Many sunscreens combine both chemical and physical ingredients, and they are available in a variety of forms including lotions, gels and sprays.

Learning about the following key sunscreen features can help you make the best choice for staying safe in the sun:

- SPF stands for Sun Protection Factor and indicates sunscreen effectiveness against UVB rays. There is incremental protection with higher SPF, and dermatologists typically recommend using a sunscreen with an SPF of at least 30, which blocks 97 per cent of UVB. SPF does not indicate UVA protection or that the sunscreen is broad spectrum.
- Sunscreens labelled "broad spectrum" offer protection against both UVA and UVB rays and are therefore the best choice. A critical wavelength of at least 370 nm is a laboratory measure of broad-spectrum protection.
- The photostability of sunscreens refers to their stability upon exposure to sunlight.
- Water-resistant sunscreens maintain their SPF protection level after 40 to 80 minutes of water immersion, as determined by laboratory testing.
- Sunscreens should ideally be non-comedogenic (which means they won't block pores), non-irritating, hypoallergenic and minimally or non-perfumed.

The U.S. Food and Drug Administration recently adopted more stringent regulations about labelling sunscreens

and establishing standards for testing the effectiveness of sunscreen products. Health Canada is also in the process of revising its sunscreen monograph.

The Canadian Dermatology Association (CDA) Sun Protection Program scientifically evaluates sunscreens through independent laboratory testing, and Canadians are encouraged to look for the CDA logo when purchasing sunscreens.

The CDA recommends that a broad-spectrum (providing UVA and UVB protection) and high SPF (30+) sunscreen be generously and evenly applied to the skin approximately 15 to 20 minutes before sun exposure. It should then be reapplied every two hours, or more frequently if you are swimming or sweating. In general, you will need about two to three tablespoons of sunscreen to adequately cover the body's skin surface, and a teaspoon of sunscreen is needed for the face.

Dermatologists encourage the use of sunscreen for children older than six months, while using other sun protective measures for younger infants.

Keep in mind that sunscreen is only one of the many ways to ensure overall sun safety. Other strategies include staying out of the sun during peak hours from 11 a.m. to 3 p.m., seeking shade and wearing sun-protective clothing and sunglasses. Including sunscreen as part of your everyday routine will not only save you from painful sunburns, it will, most importantly, reduce your risk of developing skin cancer. ■

Dr. Anatoli Freiman is Chair of the Canadian Dermatology Association Sun Protection Program and Medical Director of the Toronto Dermatology Centre (torontodermatologycentre.com).



Checklist: My sunscreen should...

1. Have an SPF of 30 or higher.
2. Offer broad-spectrum (UVA/UVB) protection.
3. Be hypoallergenic and non-comedogenic so it won't clog my pores.

When in doubt:
look for the CDA Sun
Protection Program logo.

