

The Sunscreen Survival Guide

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The use of sunscreen can reduce the risk of non-melanoma and melanoma skin cancers.¹

Types of Sunscreens

The ingredient label on sunscreen lists the ‘active’ ingredients, which determines whether a sunscreen is physical, chemical, or a mix of both.

Physical: Physical sunscreens use minerals, such as titanium dioxide and zinc oxide, that reflect UV radiation. Physical sunscreen has been shown to not be absorbed systematically, since the size of the molecules are too large to cross the skin barrier.¹ Some of these sunscreens may leave a white “cast” on the skin which can be unappealing to users. Sunscreen companies have worked on new formulations to reduce the white cast.¹

Chemical: Chemical sunscreens use compounds, such as oxybenzone, avobenzone, octocrylene and ecamsule, that absorb UV radiation. There is evidence that these chemicals are absorbed systemically when large volumes of sunscreen are used. Overall, the FDA continues to recommend chemical sunscreen since its benefits outweigh its risks.¹

Lotions versus sprays: Dermatologists generally prefer lotion-based sunscreens, since these are easier to apply uniformly and generously. Spray-based sunscreens, while still better than no sunscreen, are less preferred due to their risk of flammability, less control over application, and unknown risks of inhalation.¹

Overall, the best sunscreen is the sunscreen you will use every day.

Sun Protection Factor (SPF)

SPF is a measurement of how well a sunscreen protects from UVB radiation. SPF15 sunscreen blocks 94% of UVB, SPF30 blocks about 97%, and SPF50 blocks around 98%.²⁻³

Dermatologists generally recommend using at least 30-50 SPF.¹⁻³

Cost

One study published in JAMA Dermatology found that the annual cost of sunscreen can vary from \$40 to over \$1,400 depending on the brand of sunscreen purchased and the amount of clothing individuals wore.⁴

Staying in the shade or wearing long sleeve shirts, broad hats, or pants can reduce the amount of sunscreen needed to fully protect the skin and therefore reduce the expense of sunscreen.

Sunscreens are regulated by the FDA and must present accurate information about the SPF.⁵ Lower priced sunscreen is just as effective as expensive cosmetic brands.

Sunscreen Application

Many individuals underapply sunscreen, which reduces its effectiveness. Studies show people generally apply 20-50% of the recommended amount, reducing an SPF 50 to an SPF 25 or lower.¹

For full body coverage, apply at least a shot-glass amount of sunscreen.⁴ Another way to think of this is applying one spoon full to the face, 1 spoon to each arm, 2 spoons to the torso (includes back and front), and 1 spoon to each leg.¹

Follow the directions on the sunscreen package to know when to reapply. Sunscreen should always be reapplied after swimming or sweating. While it is recommended to reapply every 2-3 hours in general, some evidence has shown sunscreen may last up to 8 hours if it has not been rubbed off by water or friction.¹

Takeaways

- Chemical sunscreens absorb UV rays while physical sunscreens reflect them.
- The best sunscreen is the sunscreen you will regularly wear.
- The yearly cost of sunscreen can be reduced by wearing protective clothing such as hats and long sleeves.
- On average, apply at least shot-glass amount of sunscreen to cover the whole body.

References

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