BEAUTY

Yes, Sunscreen Expires

Here is how to judge the forgotten bottle, understand what its date means and replace guesswork with reliable sun protection.

The bottle from last summer

You find it where summer things go to disappear: beneath a beach towel, inside a tote bag or at the back of a cupboard. The bottle is half full. The sun is out. Throwing it away feels wasteful, but trusting it feels like a gamble.

The short answer is yes, sunscreen expires. If the bottle carries an expiration date and that date has passed, it should not be the sunscreen you rely on. If there is no date, public-health guidance gives sunscreen a shelf life of no more than three years. Exposure to high temperatures can make that shelf life shorter.

That last detail matters because sunscreen rarely lives a sheltered life. The guidance does not provide a home test that can prove an old or heat-exposed bottle is still protective. Its appearance cannot give you a new, evidence-backed expiration date. When its history is uncertain, certainty about the contents is uncertain too.

This is not simply a question of whether an old cream remains pleasant to apply. Sunscreen has a job: filtering ultraviolet (UV) rays before they damage skin cells. An expired bottle asks you to trust protection that the available guidance no longer tells you to trust. That is the wrong place to economise.

The date is not the whole story

An expiration date is the easiest case. It gives you a clear boundary supplied on the product itself. A bottle without one requires a different calculation: its shelf life is no more than three years, and heat may shorten that period. If you cannot establish when it entered your bathroom, bag or car, you cannot establish that it remains within that window.

The phrase "no more than" is important. Three years is not a promise that every undated bottle remains dependable until its third anniversary under every condition. The same guidance that supplies the limit also warns that high temperatures shorten shelf life. Time and storage history belong in the same decision.

The sources supplied here do not say that refrigeration restores sunscreen, that shaking

reverses age or that a quick inspection can certify protection. Nor do they offer a grace period beyond the printed date. Those popular shortcuts would turn an unknown into an answer without evidence.

The honest rule is less ingenious and more useful: follow the date when there is one. With an undated bottle, use the three-year limit only if you actually know its age, and remember that substantial heat exposure may have shortened it. If neither age nor storage can be established, replacement removes the guesswork.

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What you are protecting against

Ultraviolet rays are invisible radiation. They can pass through skin and damage skin cells. Sunburn is a sign of that damage, but a tan is not the healthy alternative it is sometimes made out to be: tanning appears after cells have already been damaged, and some have been killed.

Two kinds of ultraviolet rays reach the earth's surface and affect skin. Ultraviolet A (UVA) rays travel more deeply into skin, while ultraviolet B (UVB) rays can cause sunburn. Exposure is associated with premature skin ageing, skin spots, eye problems and skin cancers, including melanoma.

The risk does not belong only to bright, hot holidays. UV rays can reach you in every season, including on cloudy and cool days. They can also reflect from water, cement, sand and snow. Temperature is therefore a poor stand-in for whether protection matters.

Most skin cancers are caused by too much UV exposure. That puts the old bottle in perspective. The issue is not that passing an expiration date makes sunscreen suddenly dangerous to touch; the supplied evidence does not say that. The problem is relying on uncertain protection against radiation known to damage skin cells.

A bottle is only one layer

Fresh sunscreen still has to be the right kind. Guidance recommends broad-spectrum protection, meaning it filters both UVA and UVB rays, with a sun protection factor (SPF) of 15 or higher. Higher SPF numbers indicate more protection. People with very light skin are advised to use SPF 30 or higher.

Sunscreen also wears off. It needs to be put on again after swimming, sweating or towelling off, and when you remain outdoors for an extended period. A valid date does not make one

application permanent. Expiration is one check within sun protection, not the entire system.

Clothing, shade, hats and sunglasses do work the bottle cannot do alone. Tightly woven long sleeves and trousers or skirts offer protection; so does a wide-brimmed hat made from tightly woven fabric. Wraparound sunglasses that block UVA and UVB rays protect the eyes and surrounding skin, including from rays entering at the sides.

Shade helps, but sunscreen and protective clothing are still advised there. Avoiding the strongest sun adds another layer. The exact strongest period differs slightly across the supplied guidance, but both sources place it around the middle of the day. The shared point is clear: sunscreen works best as part of a set of choices, not as permission to ignore exposure.

Do a five-minute sunscreen check

Before your next outdoor day, take out the sunscreen bottle you intend to use. Find the expiration date. If it has passed, replace the bottle. If there is no date, ask whether you can confidently place it within three years and whether it has been exposed to high temperatures. If you cannot answer those questions, do not make the bottle carry more certainty than it has.

For the replacement, the objects you need are ordinary: a broad-spectrum sunscreen with SPF 15 or higher, a tightly woven hat, protective clothing and UVA- and UVB-blocking sunglasses. These are complementary layers. You do not need to treat sunscreen as the only defence or turn the highest number on the shelf into the whole decision.

Keep checking your skin, too. New or changing spots or moles-including changes in size, shape, colour or feel-move this beyond a cupboard-clear-out. Those changes should be assessed by a health care professional. An expired bottle is a practical problem; a changing skin mark is a medical one.

The step for this week is simple and physical: pick up your sunscreen bottle and read its date before you need it. Set aside anything expired, too old, heat-exposed or of unknown history. Put a dependable bottle beside your hat and sunglasses. Future you, standing in the doorway with the sun already out, should not have to make a safety decision from memory.

Where this comes from

- Sun Exposure

  MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/sunexposure.html
- Tanning



MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/tanning.html

- Complementary Health Approaches for Travelers - Sun Exposure

  National Center for Complementary and Integrative Health · https://www.nccih.nih.gov/health/complementary-health-approaches-for-travelers

- Sun Safety Facts - Skin Cancer

  Centers for Disease Control and Prevention · https://www.cdc.gov/skin-cancer/sun-safety/