Sunscreen is just one part of a sun-healthy lifestyle.

It's important to spend time outdoors, but by incorporating some common-sense protective measures, we can play outside while still minimizing our exposure to UV rays.  

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<tbody>
<tr>
<td>1</td>
<td><strong>USE SUNSCREEN</strong> that's effective and safe. Start with our &quot;best&quot; list. Make sure the SPF is 30 or higher. Buy new sunscreen every year and avoid powders and sprays.</td>
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<td>2</td>
<td><strong>GET YOUR VITAMIN D.</strong> Many Americans have low levels of Vitamin D. Sunlight triggers the skin to make this vitamin. The American Medical Association recommends that everyone get 10 minutes of direct sun (without sunscreen) several times per week.</td>
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<td>3</td>
<td><strong>KEEP KIDS SAFE</strong> since they're more sensitive to sun damage. Use sunscreen, play in the shade, and keep infants out of direct sun as much as possible. Check our special sun safety tips for kids below.</td>
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<td>4</td>
<td><strong>AVOID EXCESSIVE MIDDAY SUN WHEN INTENSITY PEAKS.</strong> Summer sun is more intense between 10 and 4, also at high altitudes and in the tropics.</td>
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<td>5</td>
<td><strong>SEEK SHADE OR BRING YOUR OWN.</strong> Cover up with a shirt, hat, and UV-protective sunglasses. Remember that invisible rays can reflect up toward you from the ground, so you may still need sunscreen if you wear a hat.</td>
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<td>6</td>
<td><strong>SLOP ON SUNSCREEN AND REAPPLY OFTEN.</strong> Put it on before you go out in the sun. Sunscreen washes off in water and can break down in the sun — reapply often. Wear daily on skin not covered by clothing.</td>
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<td>7</td>
<td><strong>AVOID PRODUCTS WITH BUG REPELLENT.</strong> You don't typically need them at the same time of day, and the mixture of ingredients leads to greater amounts of the pesticide soaking through the skin.</td>
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<td>8</td>
<td><strong>CHECK THE UV INDEX</strong> when planning outdoor activities.</td>
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<tr>
<td>9</td>
<td><strong>SKIP SUNLAMPS AND TANNING BEDS</strong> Artificial tanning beds dramatically increase the risk of melanoma, the most deadly form of skin cancer. Tanning bed use before age 30 is especially risky.</td>
</tr>
<tr>
<td>10</td>
<td><strong>CHECK YOUR SKIN</strong> for spots and changes, and remember that natural tone (not just tan) is beautiful. You know your skin best, so examine it for changes, lesions, and spots regularly. Be extra careful if you have freckles, moles, take certain medications (such as some antibiotics), or have a family history of skin cancer. Early detection is best, so consult your doctor for more information.</td>
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Sunscreen Information available from ewg.org
EWG’s 2009 Sunscreen Investigation

About Active Ingredients

The UV-protective properties of sunscreens are determined by their active ingredients. Only 17 chemicals have been approved by FDA as active ingredients in sunscreen. The efficacy of any sunscreen depends on the amount of each active ingredient, and the stability of the chemical mixture on its own and under UV radiation. In addition, some sunscreen makers skirt the rules by including chemicals approved in other countries but not in the U.S., and not labeling them "active ingredients."

We reviewed the scientific literature and government assessments for common sunscreen chemicals' efficacy and toxicity. Zinc oxide and titanium dioxide are known as "mineral sunscreens" or "physical blockers" since they reflect and scatter UV rays. The other actives are called "chemical blockers" because they absorb and disperse UV rays.

Studies show that unlike other common sunscreen chemicals, little to no zinc and titanium absorb through the skin, and they provide stable UVA protection relative to the other ingredients. For these reasons many zinc and titanium-based sunscreens appear at the top of our recommended product lists. However, zinc and titanium in spray or powder sunscreens are not recommended, since inhalation of zinc and titanium particles is a concern.

Chemical sunscreens vary widely in terms of the type of UV rays they block, their stability and toxicity concerns. One active, oxybenzone, is widely used but rates poorly on our index due to high absorption through skin, high rates of allergic reactions, and growing concerns about hormone disruption. You can learn more about individual active ingredients below. Compare their UV-blocking spectra to see which chemicals are better at UVA and UVB protection.

When choosing a sunscreen, however, it's best to check the overall rating for specific products. Our product ratings take into account overall UV protection (UVA and UVB) as well as the rate at which sunscreen ingredients break down in the sun; both of these factors depend on the particular combinations and amounts of active ingredients in each product. We also summarize the known and suspected hazards of all listed ingredients found in each products under our health hazard score.
Active Ingredient

**OCTINOXATE (OCTYL METHOXYCYNNAMATE) [stability details]**

The most widely used sunscreen ingredient, known for its low potential to sensitize skin or act as a phototallergen. Estrogenic effects are noted in laboratory animals as well as disruption of thyroid hormone and brain signaling.

**OXYBENZONE (BENZOPHENONE-3) [stability details]**

Associated with photoallergic reactions. This chemical absorbs through the skin in significant amounts. It contaminates the bodies of 97% of Americans according to Centers for Disease Control research.

**OCTISALATE [stability details]**

Octisalate is a weak UVB absorber with a generally good safety profile among sunscreen ingredients. It is a penetration enhancer, which may increase the amount of other ingredients passing through skin.

**AVOBENZONE (PARSOL 1789 | BUTYL METHOXYDIBENZOYLMETHANE) [stability details]**

Sunlight causes this unstable ingredient to break down into unknown chemicals, especially in the presence of another active, Octinoxate. Primarily a UVA-absorbing agent.

**OCTOCRYLENE [stability details]**

Octocrylene may be used in combination with other UV absorbers to achieve higher SPF formulas. It produces oxygen radicals when exposed to UV light.

**HOMOSALATE [stability details]**

A UVB protector. Research indicates it is a weak hormone disruptor, forms toxic metabolites, and can enhance the penetration of a toxic herbicide.
ZINC OXIDE (Z-COTE, 60nm) [stability details]
27 products | UVB | UVA | 0 minor | 0 major | 3 - 7

Sunscreens with micronized zinc oxide may contain nanoparticles. Micronized zinc offers improved sun protection compared to conventional (larger) particles. Micronized zinc particles do not penetrate healthy skin but may be more toxic to living cells and the environment. Inhalation of powders and sprays is a concern.

TITANIUM DIOXIDE (NON-NANO) [stability details]
29 products | UVB | UVA | 0 minor | 0 major | 1 - 4

Titanium dioxide has a long history of use in sunscreen and other products. It appears safe for use on skin, due to low penetration but inhalation is a concern. Some titanium sunscreens containing nano-size particles may have greater toxicity to body tissues and environment.

ENSULIZOLE (PHENYLBENZIMIDAZOLE SULFONIC ACID) [stability details]
72 products | 0 minor | 1 major | 3

Known to produce free radicals when exposed to sunlight, leading to damage of DNA, this UVB protector may have the potential to cause cancer.

NANO ZINC OXIDE (20-60nm) [stability details]
261 products | UVB | UVA | 0 minor | 0 major | 3 - 9

Nano zinc oxide offers greater sun protection than larger zinc particles. Comparatively little is known regarding potential health effects of nanoparticles. They do not penetrate healthy skin, and thus appear to pose a low health risk in lotions. Inhalation of powders and sprays is a concern.

NANO TITANIUM DIOXIDE [stability details]
309 products | UVB | UVA | 0 minor | 0 major | 2 - 10

Nano TiO2 offers greater sun protection than larger titanium particles. Comparatively little is known regarding potential health effects of nanoparticles. They do not penetrate healthy skin, and thus appear to pose a low health risk in lotions. Inhalation of powders and sprays is a concern.

ZINC OXIDE (NON-NANO) [stability details]
31 products | UVB | UVA | 0 minor | 0 major | 2 - 5

Zinc has a long history of use in sunscreen and other skin care products; little absorption and no adverse health effects are reported. Some sunscreens with zinc contain nanoparticles which do not penetrate skin but may pose toxicity concerns if inhaled or in the
environment.

**PADIMATE O (OCTYL DIMETHYL PABA | PABA ESTER) [stability details]**  
14 products  
4 minor  
6 major

A derivative of the once-popular PABA sunscreen ingredient, research shows this chemical releases free radicals, damages DNA, has estrogenic activity, and causes allergic reactions in some people.

**MENTHYL ANTHRANILATE [stability details]**  
14 products  
0 minor  
1 major

A moderately effective UVA protector not permitted for use in Europe or Japan. 1 study found that it produces damaging reactive oxygen species when exposed to sunlight.

**MEXORYL SX [stability details]**  
9 products  
1 minor  
2 major

FDA approved use of this UVA-absorbing agent in 2006. 2 hours of sunlight can degrade as much as 40% of this active ingredient. Low skin penetration.

**METHYLENE BIS-BENZOTRIAZOLYL TETRAMETHYLBUTYLPHENOL [stability details]**  
4 products  
0 minor  
1 major

Not an approved active ingredient in the U.S., Tinosorb M may still be found in some cosmetic products. Few studies exist on this chemical. It is photostable and does not absorb through the skin.

**SULISOBENZONE (BENZOPHENONE-4) [stability details]**  
3 products  
0 minor  
3 - 4 major

Can cause skin and eye irritation. Does not penetrate the skin to a large degree, but enhances the ability of other chemicals to penetrate.

**CINOXATE [stability details]**  
1 products  
0 minor  
3 major

Though approved as a sunscreen active ingredient in the U.S., this UVB absorber is no longer in common use.