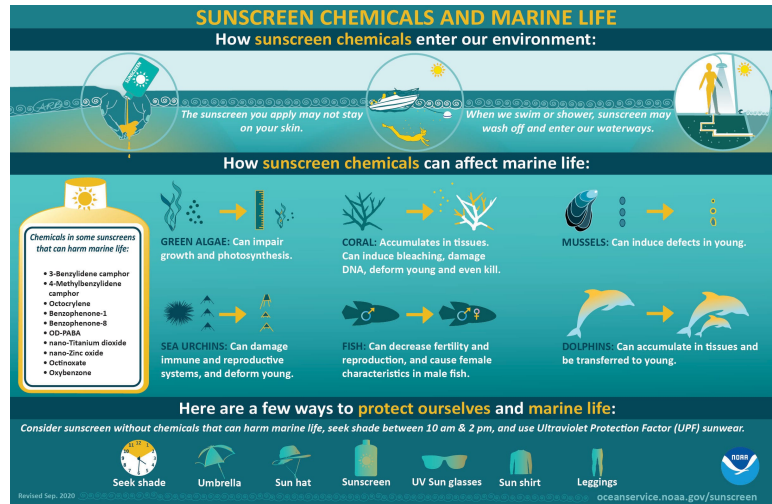


Skincare Chemicals and Coral Reefs

Common chemicals used in thousands of products to protect against harmful effects of ultraviolet light threaten corals and other marine life.



Infographic: Sunscreen Chemicals and Marine Life. Transcript | Download

Healthy coral reefs are one of the most valuable ecosystems on Earth. They provide billions of dollars in economic and environmental services, such as food, coastal protection, and tourism. However, coral ecosystems around the world face serious threats from a number of sources, including climate change, unsustainable fishing, land-based pollution, coastal development, disease, and invasive species.

Scientists have also discovered that some of the chemicals found in sunscreen and other personal health products threaten the health of coral reefs. How these, and other compounds, affect reef ecosystems remains an active area of research. Researchers are reviewing the environmental impacts of sunscreen ingredients as part of a [National Academy of Sciences study](#) expected to be completed in 2021. NOAA will review this study when it is available and update the information presented in this article as warranted.

Infographic Transcript: Sunscreen Chemicals and Marine Life

- **How sunscreen chemicals enter our environment:** The sunscreen you apply may not stay on your skin. When we swim or shower, sunscreen may wash off and enter our waterways.
- **How sunscreen chemicals can affect marine life:**
 - **Green Algae:** Can impair growth and photosynthesis.
 - **Coral:** Accumulates in tissues. Can induce bleaching, damage DNA, deform young, and even kill.
 - **Mussels:** Can induce defects in young.
 - **Sea Urchins:** Can damage immune and reproductive systems, and deform young.
 - **Fish:** Can decrease fertility and reproduction, and cause female characteristics in male fish.
 - **Dolphins:** Can accumulate in tissue and be transferred to young.
- **Chemicals in some sunscreens that can harm marine life include:** Oxybenzone, Benzophenone-1, Benzophenone-8, OD-PABA, 4-Methylbenzylidene camphor, 3-Benzylidene camphor, nano-Titanium dioxide, nano-Zinc oxide, Octinoxate, Octocrylene
- **Here are a few ways to protect ourselves and marine life:** Consider sunscreen without chemicals that can harm marine life, seek shade between 10 am & 2 pm, and use Ultraviolet Protection Factor (UPF) sunwear.

More Information

[Bibliography & Studies led by NOAA Researchers, Partners](#)

[National Centers for Coastal Ocean Science](#)

[NOAA Office for Coastal Management: Study on Coral-Harming Chemical Spurs Corrective Action](#)

[Coral Disease & Health Consortium](#)

[Coral Reef Conservation Program](#)

[Office for Coastal Management](#)

[Can a coral reef recover from bleaching and other stressful events?](#)

[How does pollution threaten coral reefs?](#)

[How does climate change affect coral reefs?](#)

[How does overfishing threaten coral reefs?](#)



Last updated:

02/26/21

Author: NOAA

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