



# SunSafe in the Middle School Years

---

## RECREATION STAFF AND LIFEGUARD MANUAL

Copyright © the Trustees of Dartmouth College. All rights reserved. Unless otherwise noted, all content is the property of Dartmouth College. Redistribution or commercial use without the expressed, written permission of Dartmouth College is prohibited. For information on usage rights, contact the Dartmouth Cancer Center's Office of Community Outreach and Engagement, [DCC.Community.Outreach@dartmouth.edu](mailto:DCC.Community.Outreach@dartmouth.edu)

Image on this page is from Microsoft 365 stock photo library.

## Project Background

*SunSafe in the Middle School Years* is designed to improve sun protection behaviors of middle school students (10- to 13-year-olds). Originally developed in 2000, *SunSafe in the Middle School Years* was developed and tested using funding provided by the National Cancer Institute, and the project was directed by Ardis Olson, M.D. At the time, the project worked with schools, coaches, town recreation programs, parents, and health care providers in 10 communities throughout Vermont and New Hampshire.

This multi-component intervention demonstrates that community members can serve as role models and educators to change youth sun protection actions and thus reduce skin cancer risks. Findings from the original study include<sup>i</sup>:

- Youth in the intervention communities were more likely to use sunscreen and to apply it more thoroughly than those in the control communities.
- Youth in the intervention communities reported receiving sun protection advice from more adults than those in the control communities.
- Youth in the intervention communities protected more of their body from the sun than those in the control communities.

## Why Middle School Students?

Middle school is an important time to work with youth. During this age, youth are making more independent health behavior choices but are still willing to listen to adults' advice and they are still influenced by the role modeling of parents, teachers, coaches, recreation staff, and lifeguards.

- 80% of lifetime sun exposure occurs before age 18.<sup>ii</sup> Less than one out of three youth protect themselves from sun damage effectively.<sup>iii</sup>
- One or more blistering sunburns in childhood or adolescence doubles the risk of developing melanoma later in life.<sup>iv</sup>
- Data from the *SunSafe in the Middle School Years*' baseline study (unpublished) shows that in 2000, 84% of middle school youth understood protecting themselves from sun damage can prevent skin cancer. However, less than one third (29%) used sunscreen and only 7% wore a hat.

- Data from the 2019 VT Youth Risk Behavior Survey indicates little progress has been made regarding youth’s sun safe behaviors since 2000. In 2019, 66% of VT middle school students reported having at least one sunburn in the past 12 months. The percent of students who had sunburns increased with each grade level.<sup>v</sup>

## Why Recreation Staff and Lifeguards?

- Recreation staff and lifeguards can serve as role models for youth ages 10-13.
- Practicing sun safe behaviors (covering up, seeking shade, and wearing sunscreen) can prevent injury from sunburn and permanent skin damage.
- Skin damage can occur in as little as 15 minutes of sun exposure.
  - The intensity of UV radiation is the highest in summer.
  - UV rays reflect off water and hard surfaces. This increases their intensity.
- Recreation staff and Lifeguards are often outside for long periods and are exposed to UV rays for hours at a time.
- Skin damage is cumulative – it’s never too late to adopt sun safe behaviors.

## How Recreation Staff and Lifeguards Can Protect Young People’s Skin

As a lifeguard or recreation program staff, you work hard to prevent injury to children with whom you watch over. Ensuring they practice sun safe behaviors is another aspect of protecting them from injury.

Adults have a dual role of instructing children how to protect themselves from the sun AND being role models (in other words, protecting yourself from the sun too). Young adults are especially important role models because young teens relate to them more than older adults.

So, how can recreation staff and lifeguards protect young people’s skin from the sun?

- Practice SunSafe behaviors and promote the idea that being healthy means taking care of your skin just as much as being active, working out, not smoking, and eating healthy.
- Adopt a SunSafe policy for recreation centers, pools, and/or beaches.

## What are SunSafe Behaviors?

Skin protection is an important defense against skin cancer. The body's usual defense against the sun's damaging ultraviolet rays is a pigment in the skin called melanin. Some individuals have more melanin. The melanin in light brown or tanned skin provides only as much defense as a sunscreen with a Sun Protection Factor (SPF) of 4. The melanin in dark black skin provides only as much defense as a sunscreen with an SPF of 8. This means that even people with the darkest skin can get sunburns.

So, to protect your skin from the sun's harmful rays, always cover up, seek shade, and wear a UVA/UVB sunscreen with an SPF of 15 or greater on skin exposed to the sun.

### Cover Up

Wear clothing that covers your skin. Such as:

- Long sleeve shirts.
- Long pants.
- Hats. Wide-brimmed hats are best. They protect the neck, ears, eyes, forehead, nose, and scalp.
- Sunglasses that block 99 - 100% of UVA and UVB rays.

### Use Good Sunscreen and Apply Often

Use a broad-spectrum sunscreen with an SPF of at least 15.

- Apply sunscreen liberally, 20-30 minutes before going outside.
- Reapply sunscreen every 2 hours. All sunscreen - even waterproof sunscreen - should be reapplied every 2 hours. If you swim, sweat, or towel dry your skin, sunscreen should be reapplied more frequently.
- Don't forget to apply sunscreen to lips, ears, feet, hands, bald spots, and the back of your neck.

### Seek Shade

Reduce UV radiation by taking shelter under a tree, umbrella, or another shady spot, especially when the radiation from the sun is most intense. The intensity of the sun's rays vary by:

- Time of day. The sun's rays are the most intense between 10 am and 4pm.
- Time of the year.
- Elevation (UV intensity increases with altitude).
- Reflection off surfaces (such as water or snow)
- Cloud cover.

## Adopt a SunSafe Policy

You and your team can adopt a SunSafe policy for recreation centers, pools, and beaches!

Here are some ideas to include in the policy:

- Encourage everyone to come to the pool, beach, or recreation center with sunscreen already applied. Also, encourage them to bring sunscreen with them as sunscreen should be reapplied every 2 hours or more!
  - Reminders: A broad-spectrum UVA/UVB sunscreen with an SPF of at least 15 is recommended.
- Encourage everyone to wear sunglasses when sitting near water or during outdoor activities.
- Encourage everyone to wear a hat when they are outdoors. The hat should protect the face, neck, and ears.

If you are working with children or youth, here are some additional suggestions:

- At the beginning of the day, ask the youth if they have put on sunscreen already. If they have not put it on already, ask them to put it on before they start swimming or other activities.
- During the day, make sure they **reapply sunscreen at least every 2 hours**.
- When possible, ask them to play in an area protected from the sun, especially from 11 am to 3 pm (the times of most intense UV radiation).





## The UV Index

The ozone shields the earth from harmful UV radiation. Thinning of the ozone layer, as well as seasonal and weather changes, cause different amounts of UV radiation to reach the earth at any given time. Clear skies allow 100% of incoming radiation (what gets through the ozone) to reach the Earth's surface. The UV Index provides a daily forecast of the expected risk of overexposure to the sun. A computer model is used to calculate the UV index based on the ozone conditions, elevation and cloud cover.

The UV gives the expected UV radiation reaching Earth's surface on a scale of 1 to 10+. The higher the number, the greater the exposure to UV radiation and the greater the need to protect your skin. **Check the UV Index each day to plan for adequate protection against the sun's radiation.**

The UV forecast can be found online at <http://weather.com>

Index Number	Exposure Level	Minutes to Skin Damage
0-2	Minimal	>60
3-4	Low	30-40
5-6	Moderate	20-30
7-9	High	10-20

In NH and VT, the UV Index on a clear day in early spring is often as high as the UV Index on a summer day. Sun damage to unprotected skin can begin within 15 minutes on sunny days in late April or early September.

---

<sup>i</sup> Ardis L. Olson, Cecelia Gaffney, Pamela Starr, Jennifer J. Gibson, Bernard F. Cole, Allen J. Dietrich; SunSafe in the Middle School Years: A Community-wide Intervention to Change Early-Adolescent Sun Protection. *Pediatrics* January 2007; 119 (1): e247–e256. 10.1542/peds.2006-1579.

<https://doi.org/10.1542/peds.2006-1579>

<sup>ii</sup> Cleveland Clinic (2022). Ultraviolet Radiation and Skin Cancer.

<https://my.clevelandclinic.org/health/diseases/10985-ultraviolet-radiation>

<sup>iii</sup> Centers for Disease Prevention and Control (2022, April). Guidelines for School Programs to Prevent Skin Cancer. [https://www.cdc.gov/cancer/skin/what\\_cdc\\_is\\_doing/guidelines.htm](https://www.cdc.gov/cancer/skin/what_cdc_is_doing/guidelines.htm)

<sup>iv</sup> Skin Cancer Foundation. (2021). Sunburn & Your Skin. [www.skincancer.org/risk-factors/sunburn/](http://www.skincancer.org/risk-factors/sunburn/)

<sup>v</sup> Vermont Department of Health. (2020). 2019 Vermont Youth Risk Behavior Survey Report, 173.

[www.healthvermont.gov/sites/default/files/documents/pdf/CHS\\_YRBS\\_statewide\\_report.pdf](http://www.healthvermont.gov/sites/default/files/documents/pdf/CHS_YRBS_statewide_report.pdf)

October 2023