

Building a Culture of Sun Safety for Nevada's Students

Helping Schools Implement Senate Bill 159
Sun Safety Policy & Understand Its Importance

Fall, 2021

Why?

Skin Cancer

- Most common form of cancer in the US; Nevada's rates are higher than national average
- Over 3.5 million cases diagnosed nationally each year
- A totally preventable form of cancer



Nevada SB 159 requires all schools to have a policy about safe exposure to the sun, and it allows students to possess and self-administer sunscreen.

Skin Cancer Facts

Majority of sun exposure occurs before age 20

- ✿ Childhood & adolescent sunburns increase skin cancer risk
- ✿ 1 or more blistering sunburns in childhood doubles skin cancer risk
- ✿ 5 or more blistering sunburns between ages 15-20 increases melanoma risk by 80 %



Source: American Association for Cancer Research

Why Nevada Cancer Coalition?

Statewide 501(c)(3) unites and leads community partners to improve the health of Nevadans through:

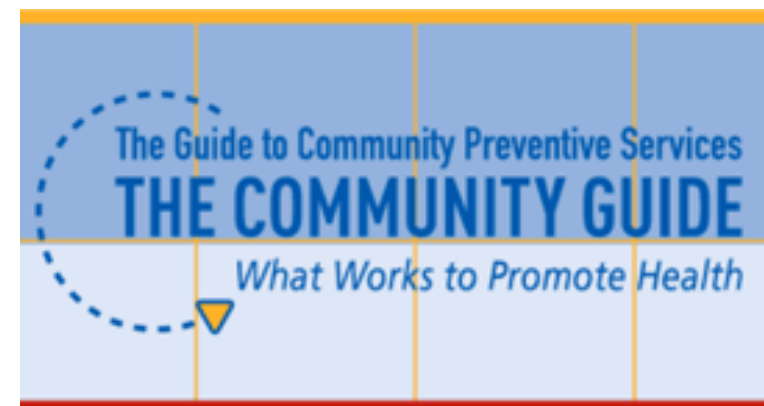
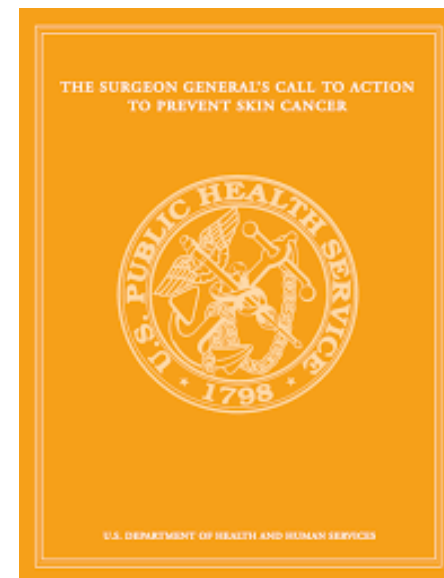
- Cancer prevention, early detection, survivorship
- Education
- Advocacy





Response to U.S. Surgeon General's 2014 Call To Action To Prevent Skin Cancer

- Sun safety, skin cancer prevention program for:
 - ✓ Schools
 - ✓ Workplaces
 - ✓ Outdoor recreational areas



What causes skin cancer?

- ✿ Ultraviolet or UV rays
 - ✓ Come from the sun
 - ✓ Come from tanning beds
 - ✓ Bounce off of bright and reflective surfaces
 - ✓ Concrete
 - ✓ Metal
 - ✓ Water
 - ✓ Sand
 - ✓ Snow
 - ✓ Even comes through clouds!!
 - ✓ Also goes through glass!!



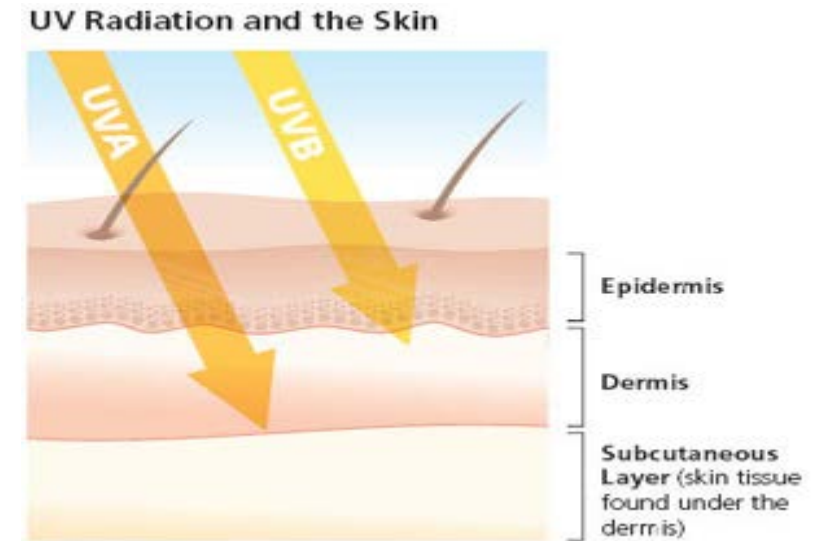
Two types of UV Radiation

★ UV-A Radiation

- ✓ Goes deep into the skin
- ✓ Causes early skin aging
- ✓ Causes wrinkles, brown spots
- ✓ Contributes to skin cancer

★ UV-B Radiation

- ✓ Damages the surface skin layers
- ✓ Causes sunburns
- ✓ Causes skin cancer



<http://www.skincancer.org/prevention/uva-and-uvb>

Risk Factors

Genetics

- ★ Caucasians > 95% of melanoma cases
 - ✓ Blonde, red-haired, light eyes, many moles, freckles
 - ✓ ≥ 3 blistering sunburns before age 20
- ★ Dark skin tones less affected, but more likely to be diagnosed late, when it's harder to treat
 - ✓ Melanoma often occurs under fingernails, palms of hands, soles of feet
- ★ A large number of moles on one's body
- ★ About 1 in 10 melanoma patients have an affected family member

Risk Factors

Environmental

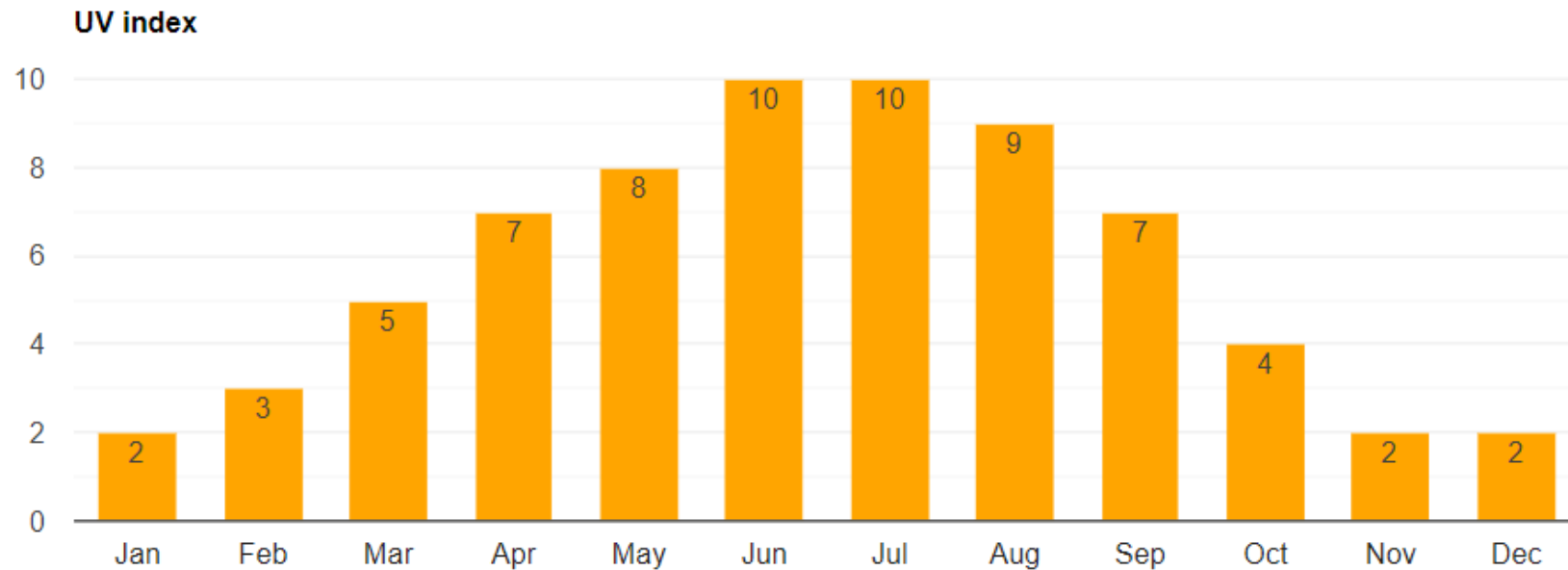
- ★ Elevation
 - ✓ Winnemucca - 4,295'
 - ✓ Reno - 4,401'
 - ✓ Lake Tahoe - 6,225'
 - ✓ Las Vegas - 2,000'



UV Exposure - highest between 10 a.m. - 4 p.m.

- ★ Blistering sunburns before age 20
- ★ Winnemucca - +/- 223 sunny days
- ★ UV Index often 10+ during summer
- ★ UV Index April - Sept- 6-7 - High or Very High range

Environmental Risk Factors



The average UV index in January: **2**

The average UV index in February: **3**

The average UV index in March: **5**

The average UV index in April: **7**

The average UV index in May: **8**

The average UV index in June: **10**

The average UV index in July: **10**

The average UV index in August: **9**

The average UV index in September: **7**

The average UV index in October: **4**

The average UV index in November: **2**

The average UV index in December: **2**

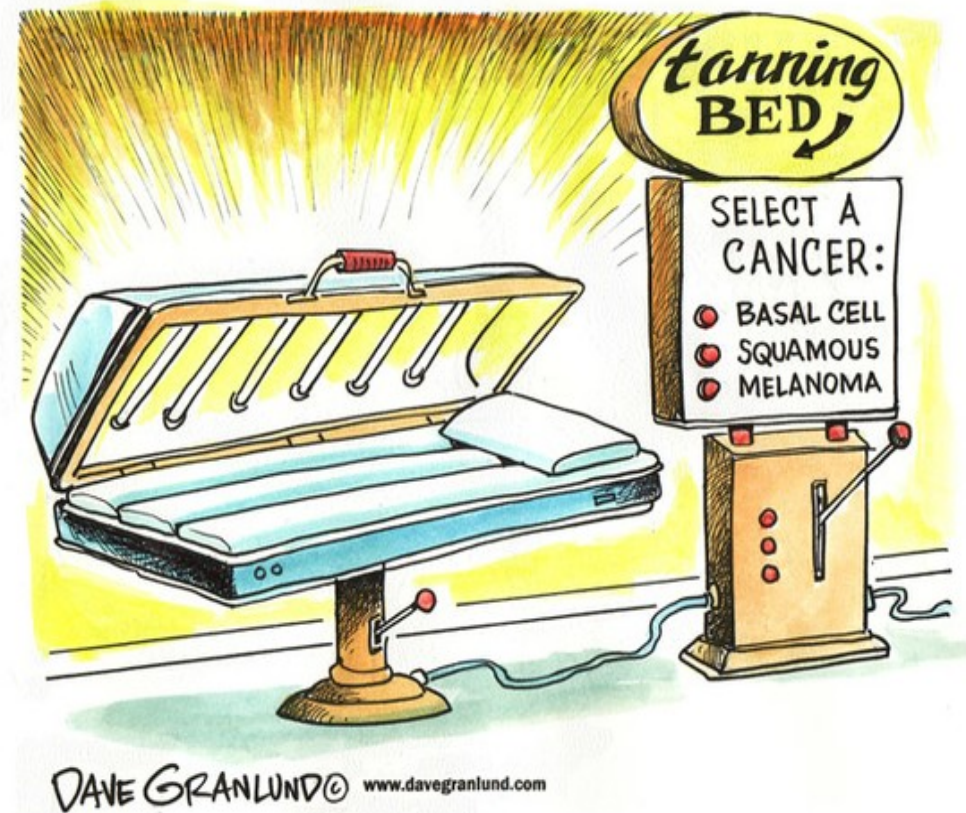
Months with the highest UV index are **June** and **July** (UV index 10). Months with the lowest UV index are **January, November** and **December** (UV index 2).

Source: *Weather Atlas*

Risk Factors

UV Exposure from tanning beds

- ★ Increases melanoma risk by 59%
- ★ Risk increases with each use
- ★ Nevada law prohibits use by anyone under 18 years of age



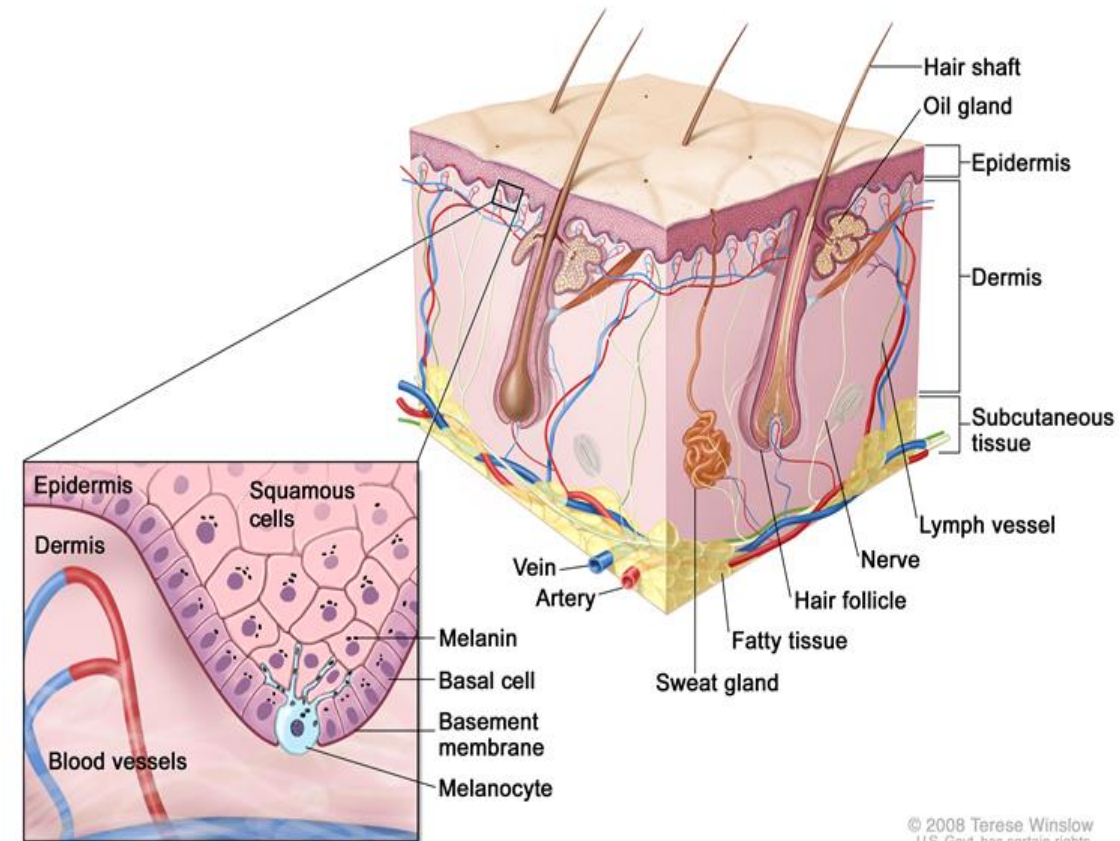
UV Rays from the Sun Versus Tanning Beds

- ☀ The Sun
 - ✓ UV-A = Signs of Aging
 - ✓ UV-B = Sunburn
- ☀ Tanning Beds—The Faster Tan—WHY?
 - ✓ High-pressure sunlamps
 - ✓ UV-A rays are 12 times stronger!!!!
 - ✓ 20 minutes in a tanning bed = 3 hours ur in the sun
 - ✓ 2.5 times more likely to get squamous cell carcinoma
 - ✓ 1.5 times more likely to get basal cell carcinoma
 - ✓ Tanning beds when you're young—75% more likely to get melanoma!



Anatomy of the Skin

- ★ Epidermis is composed of:
 - ✓ Squamous cells
 - ✓ Basal cells
 - ✓ Melanocytes
- ★ Dermis contains blood vessels
- ★ Hypodermis/subcutaneous layer
 - ✓ Fatty tissue



Three main types of skin cancer:

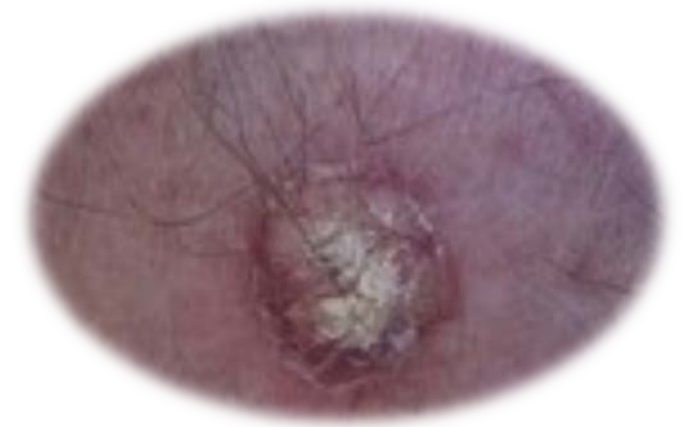
★ 1. Basal Cell Carcinoma

- ✓ Most common but least dangerous skin cancer
- ✓ Slow-growing
- ✓ Face is the most common place it is found



★ 2. Squamous Cell Carcinoma

- ✓ Can be found anywhere on the body
- ✓ Can spread to other parts of the body



Most Serious Type Of Skin Cancer

3. Melanoma

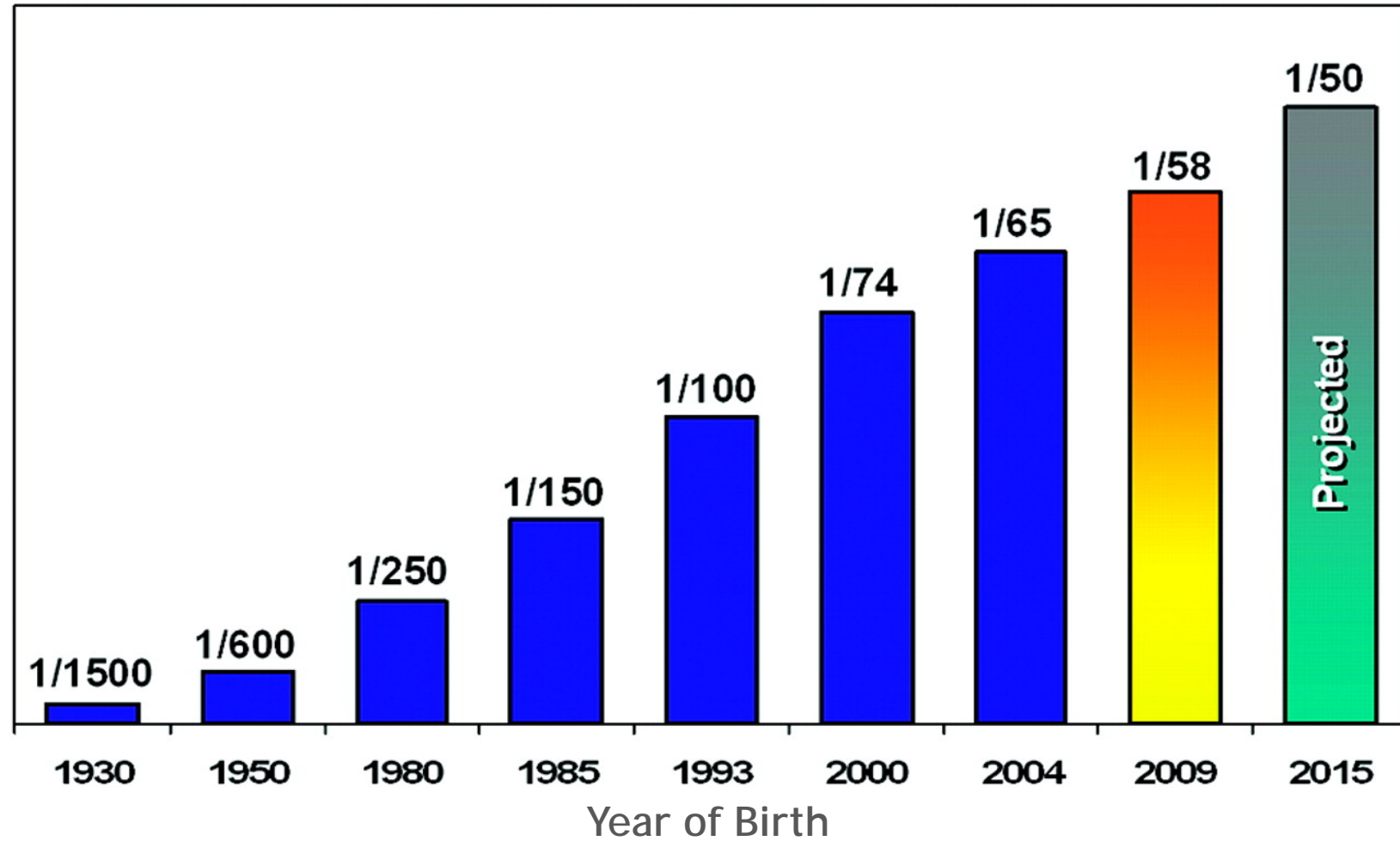
- ✿ Occurs on any skin surface
- ✿ Found under fingernails, toenails, palms of hands, soles of feet
- ✿ Can grow quickly, becoming life-threatening in as little as 6 weeks
- ✿ Most deadly skin cancer



Melanoma on the eyebrow of a Hispanic man. Photo credit: R. Steven Padilla, MD



Lifetime Risk of Melanoma










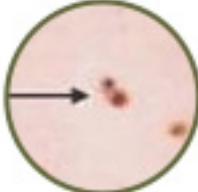


From Rigel, D. S. et al. CA Cancer J Clin 2010.

What Does Melanoma Look Like?

- Often resembles moles; some melanomas develop from moles
- Most appear black or brown, but can be skin-colored, pink, red, purple, blue or white
- Many moles increases risk
- Learn the ABCDE's (and F, too)



NORMAL		CANCEROUS
	<p>“A” is for Asymmetry</p> <ul style="list-style-type: none"> • If you draw a line through the middle of the mole, the halves of a melanoma won't match in size. 	
	<p>“B” is for Border</p> <ul style="list-style-type: none"> • The edges of an early melanoma tend to be uneven, crusty or notched. 	
	<p>“C” is for Color</p> <ul style="list-style-type: none"> • Healthy moles are uniform in color. A variety of colors, especially white and/or blue, is bad. 	
	<p>“D” is for Diameter</p> <ul style="list-style-type: none"> • Melanomas are usually larger in diameter than a pencil eraser, although they can be smaller. 	
	<p>“E” is for Evolving</p> <ul style="list-style-type: none"> • When a mole changes in size, shape or color, or begins to bleed or scab, this points to danger. 	

Nodular Melanoma



E = Elevated

F = Firm

G = Growing

Eye Damage Too!

UV and other radiation from the sun can harm your eyes.

- ✓ Ocular melanoma
- ✓ Cataracts
- ✓ Macular degeneration
- ✓ Photokeratitis – a painful sunburn of the eye
- ✓ Temporary vision loss





How to prevent skin cancer?

Policy, Education, Support

SB 159 Requirements, as of July 1, 2019

Boards/governing bodies of each school board, charter school or private school must **adopt a policy concerning safe exposure to the sun**

✿ Policy must provide that

- ✓ Pupils engaging in school-sponsored outdoor activities may wear protective clothing, such as a hat and sunglasses
- ✓ Sunscreen *is not* to be considered an OTC medication
- ✓ Pupils may possess and self-administer sunscreen

SB 159 Requirements, as of July 1, 2019

- **Sun Safe Policy must provide that:**

- ✓ School uniform policies, to the extent practicable, must be consistent with protective clothing policy
- ✓ Policy may include teaching pupils practices for safe sun exposure to reduce risk of skin cancer

<https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6218/Overview>



Support for SB 159

Multiple organizations spoke in support, including:

- Nevada Association of School Superintendents
- Nevada Association of School Administrators
- Nevada Association of School Boards
- Nevada State Medical Association
- Nevada Dermatology & Dermatologic Surgery Association
- Nevada Cancer Coalition
- American Cancer Society-Cancer Action Network
- And many more!

Prevent Skin Cancer With The 5 S's of Sun Safety

SLIP on sun-protective clothing

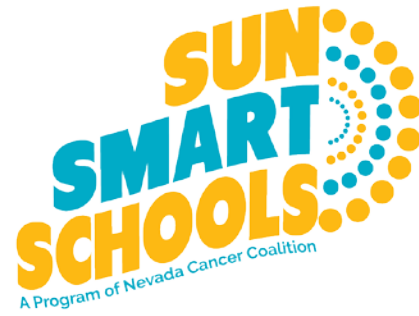
SLOP on sunscreen

SLAP on a hat

SEEK shade when outdoors, especially 10 a.m. - 4 p.m.

SLIDE on sun-protective glasses





Sun Smart Schools offers resources, support to Nevada schools

- **Sun safety curriculum & education**
 - ✓ 5 S's of sun safety – Slip, Slop, Slap, Seek, Slide
- Access to sunscreen & shade
- School & school district policies to support sun safe behavior
- Pillar 2 component for Green Ribbon Schools
 - ✓ <https://www2.ed.gov/programs/green-ribbon-schools/state-contacts.html>



Is Sunscreen Safe To Use?

- Yes, dermatologists recommend it
- Scientific studies support wearing sunscreen regularly
- FDA continues to tell Americans to apply sunscreen as rule-making process moves forward

<https://www.aad.org/public/spot-skin-cancer/learn-about-skin-cancer/prevent/is-sunscreen-safe>

Is Sunscreen Safe To Use?

- ✿ FDA is asking for safety data to find out:
 - ✓ Extent skin absorbs sunscreen ingredients
 - ✓ Whether absorbing sunscreen has an effect on skin or the body
 - ✓ FDA has *not* asked public to stop using sunscreens containing these chemicals: ensulizole, octisalate, homosalate, octocrylene, octinoxate, oxybenzone, avobenzone
 - ✓ FDA was scheduled to issue rule monograph in November, 2019
- ✓ Ingredients GRASE
 - ✓ Titanium dioxide
 - ✓ Zinc oxide

<https://www.aad.org/public/spot-skin-cancer/learn-about-skin-cancer/prevent/is-sunscreen-safe>

What About Sunscreen Provided To Schools By NCC?

☀️ Active ingredients:

- ✓ Octyl Methoxy Cinnamate – 7.00 %
- ✓ Titanium Dioxide – 1.00 %
- ✓ Zinc Oxide – 1.00 %
- ✓ Octyl Salicylate 1.00 %

**SAY YES TO SUN PROTECTION
SAY NO TO SKIN CANCER**

SKIN CANCER IS THE MOST COMMON CANCER IN THE U.S.
ONE in FIVE Americans will develop skin cancer in their lifetime, and one person dies from melanoma, the deadliest form of skin cancer, every hour.

THERE ARE TWO TYPES OF SUNSCREENS:

Since exposure to the sun's harmful UV rays is the most preventable risk factor for skin cancer, protect your skin by:

- SEEKING SHADE
- WEARING PROTECTIVE CLOTHING
- GENEROUSLY APPLYING SUNSCREEN

PHYSICAL SUNSCREEN
This sunscreen **WORKS LIKE A SHIELD** - it sits on the surface of your skin, deflecting the sun's rays.
Look for the active ingredients **ZINC OXIDE** and/or **TITANIUM DIOXIDE**.
Opt for this sunscreen if you have **SENSITIVE SKIN**.

CHEMICAL SUNSCREEN
This sunscreen **WORKS AS A SPONGE**, absorbing the sun's rays.
Look for one or more of the following active ingredients: **OXYBENZONE, AVOBENZONE, OCTISALATE, OCTOCRYLENE, HOMOSALATE** and **OCTINOXATE**.
This formulation tends to be **EASIER TO RUB INTO** the skin without leaving a white residue.

If you have concerns about certain sunscreen ingredients, use the information above to choose an alternative that works for you. As long as it's **BROAD-SPECTRUM, WATER-RESISTANT** and has an **SPF 30 OR HIGHER**, it can effectively protect you from the sun. Make sure you reapply it every **TWO HOURS**, or after swimming or sweating.

SPOT SKIN CANCER
DERMATOLOGIST

If you have questions about how to protect your skin or choose a sunscreen, talk to a board-certified dermatologist or learn more at SpotSkinCancer.org.

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Recommended Curriculum

- ☀️ NCC studied successful school sun safety programs across the U.S.
- ☀️ Researched evidence-based curriculum
- ☀️ Talked with teachers
- ☀️ Has developed presentations for elementary, middle, high school students
- ☀️ Sun Smart Schools has been recognized multiple times by CDC for its effectiveness



Preschool, K – 1 Curriculum

- ★ Developed by M.D. Anderson Cancer Center, disseminated by CATCH Global Foundation
- ★ Educates children, parents, teachers

<https://sunbeatables.org/>



Grades 2-5 Curriculum

- ✦ From Scholastic and University of Texas MD Anderson Cancer Center
- ✦ Educates children, parents, teachers

<http://www.scholastic.com/sunsafety/>

Sponsored Educational Materials


Be Sunbeatable™

ELA and STEM Lessons for Grades 2-5

Teaching children about sun safety can have a long-term and positive impact on their health. This sun safety program from Scholastic and The University of Texas MD Anderson Cancer Center will help encourage students and families to be sun safe every day and everywhere.

[Get the full Teacher's Guide](#)

THE UNIVERSITY OF TEXAS
MDAnderson
Cancer Center
Making Cancer History®



Kindergarten – 8th Grade Curriculum

☀️ NEEF/SunWise™

- ✓ Environmental and health education program developed by EPA in 2003; regularly updated; NGSS compliant
- ✓ Cross-curricular, standards-based. Complete lesson materials for easy “plug and play”

[National Environmental Education Foundation’s SunWise program](#)



A Partnership Program of the U.S. Environmental Protection Agency

NEEF
A Program of Nevada Cancer Control

SunAWARE for Life – Grades K - 12

☀️ Children's Melanoma Prevention Foundation

- ✓ Trained foundation educators provide a fun, informative and interactive program
- ✓ Five easy action steps
- ✓ Videos, curriculum, rap songs, and more

[SunAWARE for Life Curriculum](#)

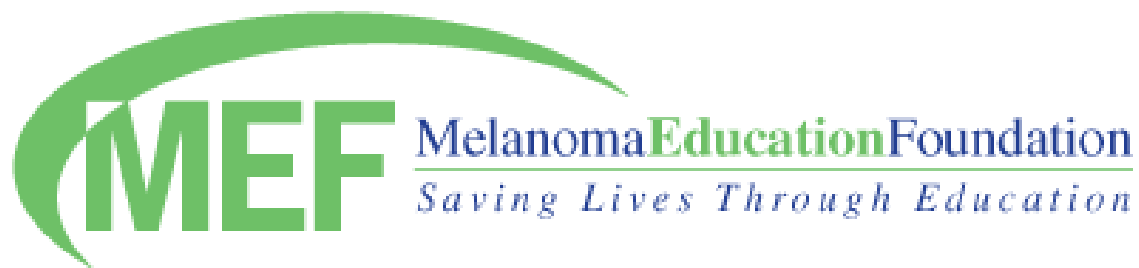


Middle School and High School Curriculum

★ Melanoma Education Foundation

- ✓ Lesson plans and teaching videos for middle & high school
- ✓ CEU on-demand webinars for school nurses

[Preview Melanoma Education Foundation Student Videos](#)



Middle School and High School Curriculum

- ◆ **Sun Smart U – Skin Cancer Foundation**
 - ✓ Meets CDC’s National Health Education Standards
 - ✓ 1- or 2-part interactive lesson/survivor stories

[The Skin Cancer Foundation’s Sun Smart U](#)



Sun Smart Schools Program Results

2015 – 16 School Year – Pilot Year, 7 participating schools

- Students, Parents surveyed
 - ✓ Sun practices increase among all group
 - ✓ Older students still think they look better with a tan

2016 – 17 School Year – 20 participating schools

- Students, Parents, Educators surveyed
 - ✓ Sun safe practices, including regular sunscreen use, increased among all groups
 - ✓ Older students, adults still think they look better with a tan
 - ✓ Automatic sunscreen dispensers provided to 12 Douglas County Schools



Sun Smart Schools Program Results

2017- 2018 School Year – 48 participating schools

- 64 automatic sunscreen dispensers provided to schools since program began
- Administrators, teachers, nurses, health aides, high school students surveyed
 - ✓ 85% of high school students said they would do more to protect their skin from sun
 - ✓ 27% increase in students' knowledge about harms of tanning beds
 - ✓ 63% of school staff report modeling sun safe behavior at school
 - ✓ Sun safe practices increase among all groups



2018 – 19 School Year – 76 participating schools

- National recognition for program effectiveness
 - ✓ Program recognizes as Success Story by CDC
 - ✓ Featured program in CDC's 2018 Skin Cancer Prevention Progress Report



How Does It All Work?

☀️ School Advocates

- ✓ Superintendents, Principals, Administrators
- ✓ Teachers, Parents, Students
- ✓ Chief Nurse, School Nurses

☀️ Lots of support from NCC

- ✓ Resources of all kinds
- ✓ Sunscreen dispensers, sunscreen, (as resources allow. At-risk schools given priority)



the Truth about Tanning
Your natural skin color is great the way it is!

Myth: "I have to get a tan to look good."
Truth: You should know your skin will pay a price!
Fine Lines and Wrinkles, Sagging Skin, Cataracts, Brown Spots

Myth: "Only old people get cancer."
Truth: Young women are getting skin cancer more often. The risk is real!
Indoor tanning before you're 35 increases your risk of melanoma by 75%.
Melanoma—the deadliest kind—is the third most common cancer in people from 15 to 39. You can get melanoma in your eyes.

Myth: "Having a good 'base tan' will protect my skin from the sun."
Truth: A tan is a sign of damaged skin.
You can get more than a tan from a tanning bed.
If the tanning bed isn't clean, you could pick up a serious skin infection with symptoms like:
☐ Genital warts
☐ Skin rashes
☐ Skin warts
☐ Flaking, discolored patches on your skin

Myth: "Tanning beds are a good way to get vitamin D."
Truth: Tanning beds are risky, and most people get enough vitamin D from food and sunlight during daily activities.

National Center for Chronic Disease Prevention and Health Promotion
Division of Cancer Prevention and Control

Take Advantage Of Sun Smart Resources

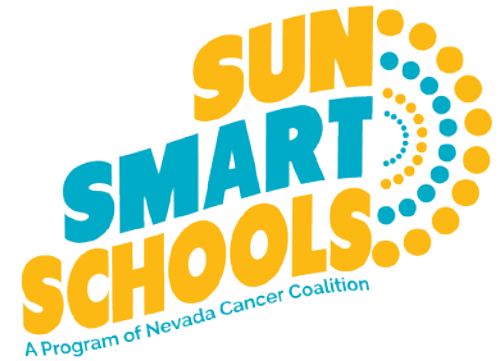
- ★ **Assemblies and guest speakers**
 - ✓ School-wide sun safety assemblies to teach 5 S's of sun safety; Sun Smart Swag
 - ✓ Melanoma survivor presentations
 - ✓ Meteorologists and other experts
- ▶ **Sunscreen dispensers, sunscreen**
- ▶ **Help getting shade tree donations**
- ▶ **Newsletter with Tips & Tools for Sun Smart Schools**
- ▶ **Printed resources and more!**



How to get started?

Contact NCC via www.SunSmartNevada.org for access to:

- * Curriculum – **FREE**
- * Technical Assistance – **FREE**
- * Guest Speakers – **FREE**
- * Sunscreen Dispensers – **FREE**
- * Sunscreen – **First year provided by NCC**, as resources allow
 - ✓ School budgets, PTOs/PTAs, Partners in Education, individual donors can help cover ongoing sunscreen costs



Complementary Curriculum Links

[National Environmental Education Foundation's SunWise program](#), developed by the EPA, (K - 8) - Spring 2018 updated curriculum will meet 2017 NGSS standards

[The Skin Cancer Foundation's Sun Smart U](#) (6 - 12)

[Melanoma Education Foundation Lessons](#) (6 - 12)

[The Sunbeatables™](#) (Preschool)

[Be Sunbeatable Grades 2-5](#)

2019 Program Report:
[Sun Smart Schools Annual Report](#)



Questions?

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