Sun Safety & Skin Cancer Prevention

An Educational Program for University Students

Adopted from the Sun Safe Colorado- Preventing Skin Cancer at Work Training PPT Slides

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Introduction

- The following four modules will help you understand
    1) your personal risk for skin cancer
    2) how sun damages the skin
    3) how to reduce sun exposure
    4) how to spot skin cancer early

MODULE 1:

Know Your Personal Risk

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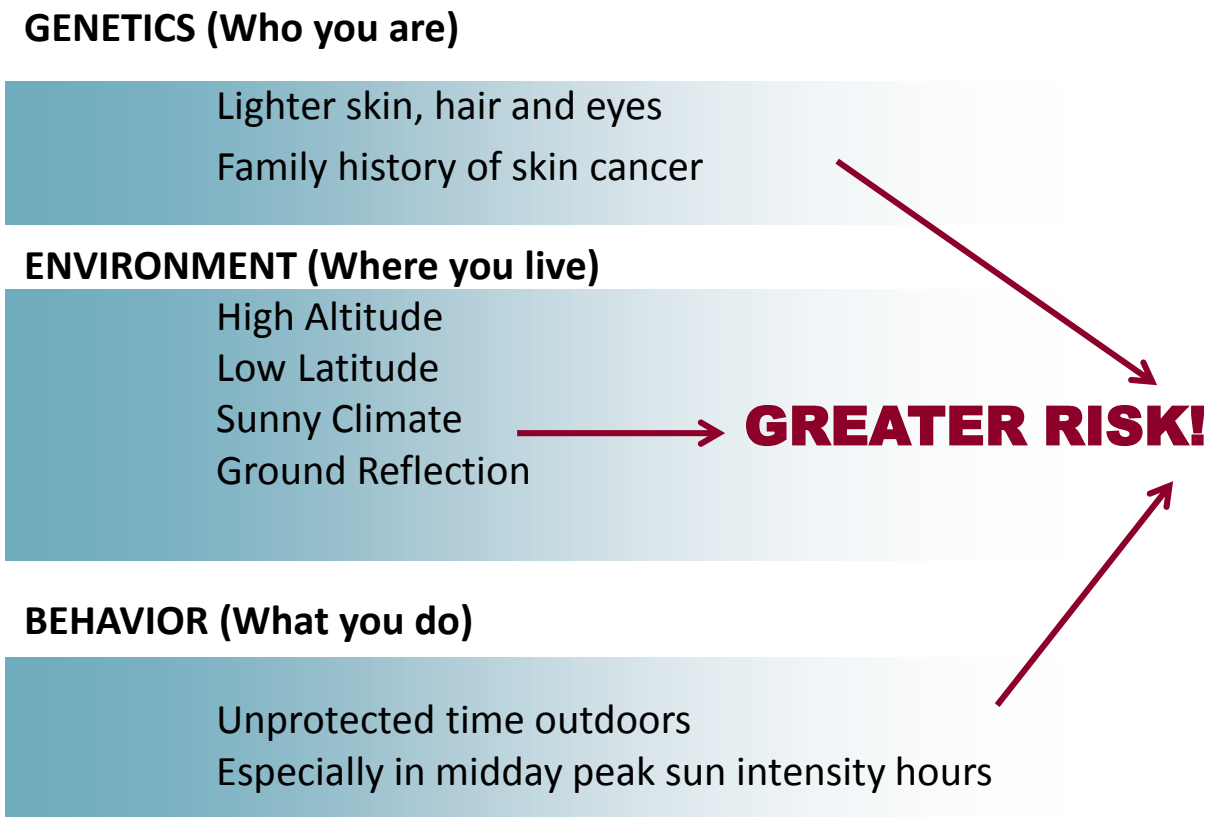
Personal Risk Factors



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What's your skin type?

I	Always burns, never tans, sensitive to sun exposure
II	Burns easily, tans minimally
III	Burns moderately, tans gradually to light brown
IV	Burns minimally, always tans well to moderately brown
V	Rarely burns, tans profusely to dark
VI	Never burns, deeply pigmented, least sensitive

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Genetic High Risk Factors

- Blond or red hair
- Blue, green or gray eyes
- Fair skin
- Skin that freckles and burns easily
- Many moles; large moles
- Family members with melanoma

Environmental High Risk Factors

- Altitude
  - In places with higher elevation the atmosphere becomes thinner and you are exposed to more UV rays.
- Latitude
  - Due to the angle of the sun, the closer you are to the equator, the more intense the sun's UV rays.
- Climate
  - Locations that have a lot of clear sunny days throughout the year are exposed to more intense UV rays than places with varying seasons.

Behavioral High Risk Factors

- Do you stay out all day in the sun without protection?
- Do you sunbathe to get a tan?
- Do you sunburn?
- Do you go to a tanning salon?

MODULE 2:

How Sun Damages The Skin

At least 90% of skin cancer is caused by ultraviolet radiation.

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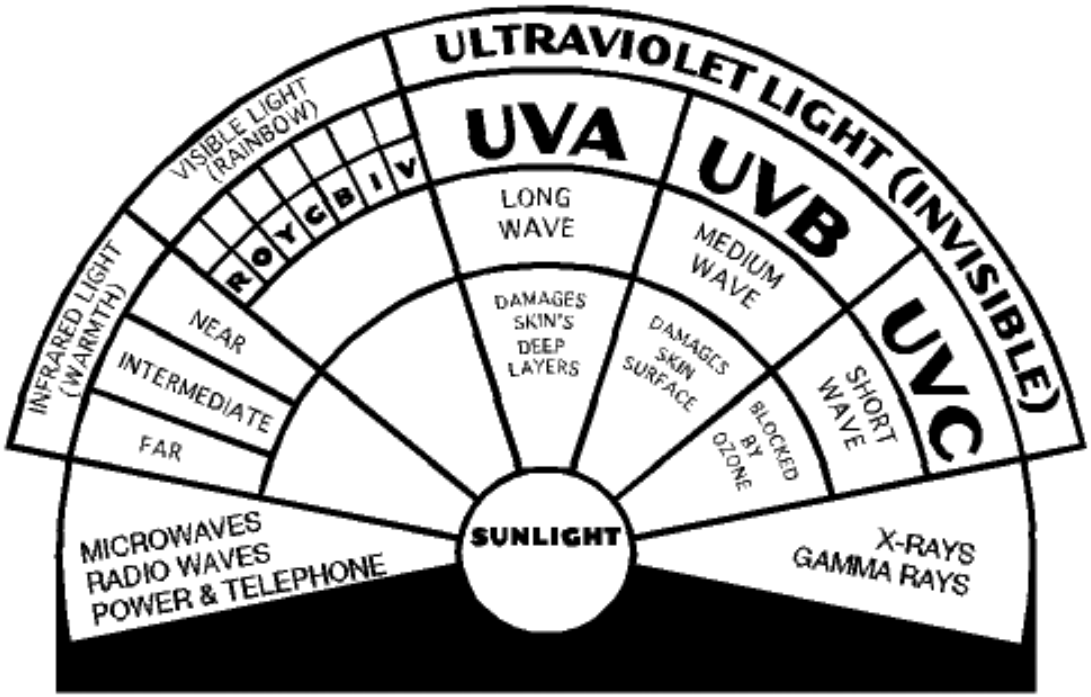
Electromagnetic Spectrum



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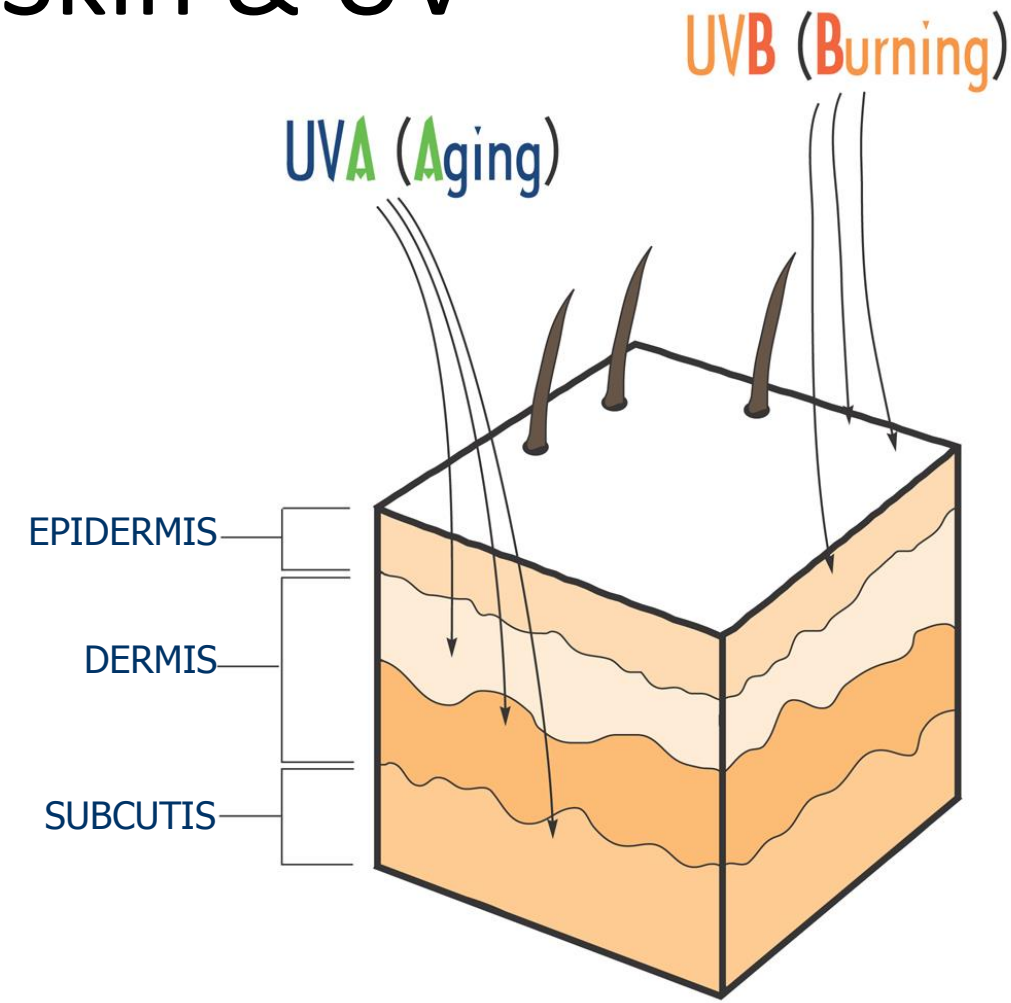
Skin & UV



UV Radiation is 95% UVA & 5% UVB.

UVA causes tanning, aging & skin cancer.

UVB causes burning & skin cancer.

Tanning beds emit 2-3 times more UVA than the sun.

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Suntans & Sunburns

- A suntan tells you that your skin is trying to protect itself from damaging UV rays.
- Suntans give a very small amount of protection from sunburn, but the skin gets damage while getting the tan, including aging from UVA rays and lifetime sun exposure.
- Sunburns cause wrinkles, premature skin aging and skin cancer.
- Avoid severe sunburns from intense, intermittent exposure to UV rays.
- Avoid continual exposure to UV rays over your lifetime.

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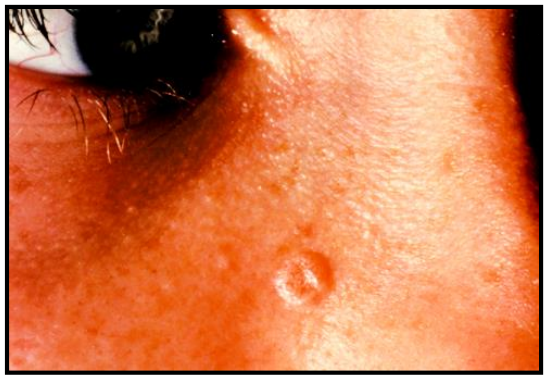
Skin Cancer Formation

- UVA and UVB rays hit the epidermis, reaching cellular DNA
- DNA in skin cells is damaged
- To prevent more damage, skin produces melanin (tanning)
- The immune system tries to repair damaged cells, but sometimes mistakes (mutations) are made
- Mutations can result in skin cancer within 5 years

Skin Cancer

Basal Cell



Squamous Cell

Melanoma

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MODULE 3:

Reduce Your Sun Exposure

Regular UV protection can reduce skin cancer risk by 80%.

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Limit Your Time In The Sun

- Schedule outdoor activities to avoid intense midday hours (10 am to 4 pm).
- Seek shade or go inside when you can.
- Shade can reduce UV by 75%.
- Eat lunch inside or in the shade.
- Use portable shade cover.
- Car window glass blocks UVB but not all UVA.
- Clouds block only 20-40% of UV.

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Check the UV Index daily

- Sun protection is needed when the UV Index is 3 (moderate) or higher.
- Use sun protection at high altitude in the winter months.
- UV increases about 4-5% with every 1000 feet gained in elevation.
- https://www.epa.gov/enviro/uv-index-search

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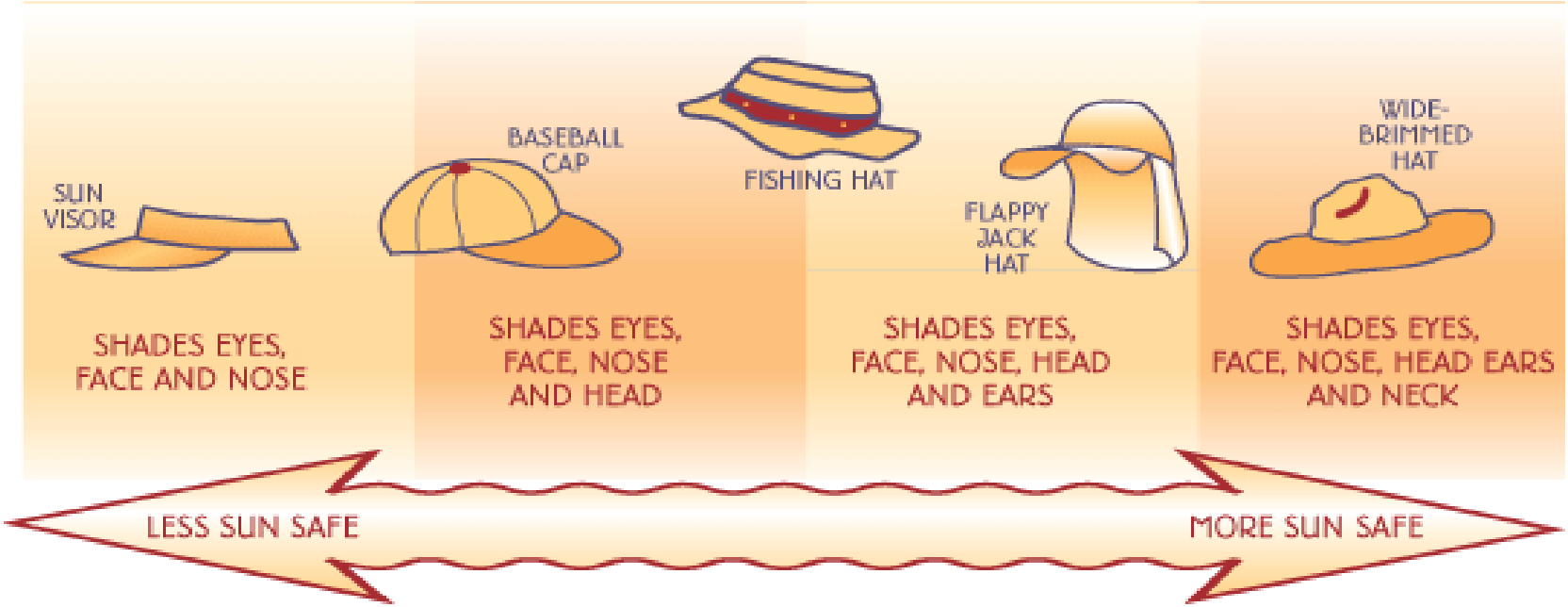
Sun Safe Clothing

- Clothing can block 100% of UV.
- Wear clothing that covers a large amount of your skin.
- Long-sleeve shirts and long pants are best.
- Choose clothing that is made from fabric with a tight weave that allows little or no light to pass through.
- Wear gloves to protect your hands.
- Choose wide-brimmed hats.

What is UPF?

- UPF = Ultraviolet Protection Factor
- Like SPF for fabric
- Fabrics are not tested on humans like sunscreen
- The higher the UPF the more UV that's blocked
- Sun protective = UPF 15 to 50+
- White t-shirt = about UPF 5

The Sun Safety of Hats



Choose wide-brimmed hats.
But, any hat is better than NO hat!

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Sunglasses

- The eye absorbs >99% of UV.
- UV rays can:
  - harm your eyes
  - cause cataracts, macular degeneration & blindness
- Select and wear large sunglasses that block 99-100% of UV rays.
- Look for lenses that meet ANSI Z80.3
- Darker lenses are not necessarily better.
- Expensive lenses are not necessarily better.

Sunscreen

- Choose SPF 15 or more.
- Use “broad-spectrum” sunscreen UVA and UVB.
- Apply 15-30 minutes prior to sun exposure.
- Apply all over exposed skin, including your ears, neck and hands.
- Slop it on! – on average, you should use an amount the size of a large grape to cover your face, ears and neck.
- Reapply every two hours or more often after swimming or sweating.
- Choose water-resistant sunscreen.
- Make using sunscreen a habit.

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What is SPF?

- SPF = Sun Protection Factor
- SPF is a number that tells you how long a sunscreen will protect your skin from sunburn.
- SPF also tells you the amount of protection.
  - SPF 15 blocks 93% of UVB
  - SPF 30 blocks 97% of UVB
  - SPF 50 blocks 98% of UVB
- SPF is not a measure of UVA protection.
- However, most sunscreens do block UVB and UVA.

Calculating SPF

Your Time To Burn Without Protection
x SPF of your sunscreen

= ____ MINUTES UNTIL SKIN BURNS

Example:
12 minutes x SPF 30 = 360 minutes (6 hours) until sunburn

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Vitamin D

- Vitamin D sufficiency is important for overall good health. Most people can satisfy the body's requirement for vitamin D from casual exposure to sunlight.
  - 10-15 minutes of sun exposure twice a week to the face, arms, hands, or back without sunscreen is usually sufficient to provide adequate Vitamin D.
- Obese, darker skinned and older people can be at risk for Vitamin D deficiency, but consumption of fortified mike or orange juice will provide the necessary amount of Vitamin D.

MODULE 4:

Early Detection

At least 95% of skin cancer can be cured if detected early.

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Check Your Skin

- **Look for changes in spots, moles or**
- **sores that do not heal.**
- **Use the ABCDE* rule for moles:**
  - **A** is for **Asymmetry**: One half of the mole or birthmark does not match the other.
  - **B** is for **Border**: The edges are ragged, irregular, or poorly defined.
  - **C** is for **Color**: The color varies from one area to another; may have differing shades of brown or black, sometimes white, red or blue.
  - **D** is for **Diameter**: The area is larger than 6 mm (as a general rule, the size of a pencil eraser) and is growing larger.
  - **E** is for **Evolving**: If there are any changes in the size, color, shape or texture of a mole, the development of a new mole, or any other unusual changes in the skin, see your dermatologist immediately.

*Source: American Academy of Dermatology, Skin Cancer Foundation

How to perform a monthly skin check:

- Examine your body front and back in the mirror, then right and left sides arms raised.
- Bend elbows and look carefully at forearms and upper underarms and palms.
- Look at the backs of the legs and feet; spaces between toes, and sole.
- Examine back of neck and scalp with a hand mirror. Part hair for a closer look.
- Finally, check back and buttocks with a hand mirror.
- Consult a physician immediately if you have any doubt about a mole or changing spot on your skin.

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Summary

- EVERYONE needs to be sun safe.
- Avoid sunburning and suntanning.
- Wear sunscreen & lip balm with SPF 15 or higher
- Wear sun safe clothing, hats and eyewear.
- Limit your time in the sun
- Practice early detection.

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