SUN SAFETY AND SKIN CANCER

Learn at Lunch
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FACT OR FICTION

Using an indoor tanning bed doesn’t expose you to the same kinds of harmful rays as the sun.

FICTION
FACT OR FICTION

You don’t need sunscreen on a cloudy day.

FICTION
FACT OR FICTION

75% of skin aging is caused by the sun.

FICTION
FACT OR FICTION

Dark skinned men and women are not at risk for skin cancer.

FICTION
FACT OR FICTION

Only ultraviolet-B rays cause skin damage.

FICTION
FACT OR FICTION

Everyday, ten people die from melanoma.

FICTION
FACT OR FICTION

If you have a suspicious mole, your doctor can always cut it off before it turns cancerous

FICTION
SKIN CANCER

- Skin is the largest organ in the body
- 3 layers of cells
- Most common type of cancer in the US
- Uncontrolled growth of abnormal skin cells
- Cancers are named for the type of cells
  - Melanomas start in melanocytes
  - Basal cell and squamous cell carcinomas
BASAL CELL CARCINOMA

- Develop on sun-exposed areas
- Slow growing
- Rarely spread to other parts of the body
- Shiny or pearly, papule or nodule
- After treatment, can come back in the same place on the skin
SQUAMOUS CELL CARCINOMA

- More aggressive than basal cell cancers
- Usually appear on sun-exposed areas
- Can develop in scars, skin sores, or lesions
- Less common than basal cell carcinoma
MELANOMA

- Starts in melanocytes
- Usually brown or black, but can be a variety of colors or have no color
- Can grow anywhere, but are more likely to start in certain locations
- Less common than basal and squamous cell cancers, but much more dangerous
- If caught early enough, it is usually curable
- Caused over 9,000 deaths in 2017
CAUSES OF SKIN CANCER

- Most common cause is ultraviolet (UV) radiation exposure
  - Changes the DNA in our cells
  - Triggers overgrowth of abnormal cells
- Some genetic changes that increase risk of melanoma can be passed from generation to generation
ULTRAVIOLET RAYS

- Cause of most skin cancers
- UVA rays
  - Easily reach the Earth’s surface
  - Reach deep into the skin
  - Long term damage (aging and wrinkles)
- UVB rays
  - Ozone layer helps to filter these rays
  - Reach the top layer of skin
  - Main rays that cause sunburn
- UV rays can come from the sun or indoor tanning
**SKIN TYPES**

- Six different skin phototypes (how they react to the sun)
- Skin types I and II have highest risk
  - Fair skin that always or usually burns
  - Light hair
  - Freckles
- Skin types V and VI have lowest risk
  - Rarely or never burn
  - More likely to develop acral lentiginous melanoma
    - Very aggressive
    - Appear on parts not exposed to the sun
    - Usually not found until it has already spread
MELANOMA RISK FACTORS

- More moles, higher likelihood of developing melanoma
- Family history (10% of those with melanoma have family members with melanoma)
- Personal history
- Currently take immune system suppressant medications (organ transplant patients)
- Gender
  - Women BEFORE 50
  - Men AFTER 50
- Age
  - One of the most common cancers found in people younger than 30
BASAL CELL AND SQUAMOUS CELL RISK FACTORS

- Age
- Gender
  - Men more likely than women
- Past treatment with radiation
- Previous skin cancer
- Smoking
  - Suppresses immune system
  - Increases squamous cell carcinoma risk by 52%
- Immune system suppression
SKIN CANCER PREVENTION

- No way to completely prevent skin cancer
- 2 main ways everyone can help to prevent
  - Sun safety
  - Early identification
SUN SAFETY

- Protect skin with clothing
  - Doesn’t protect from all UV rays

- Wear a hat
  - Wide-brimmed is best

- Wear sunglasses
  - Wrap-around sunglasses
  - Block both UVA and UVB rays

- Stay in the shade
  - Especially during the 10am to 4pm hours
  - If your shadow is shorter than you are, the rays are the strongest

- Avoid other sources of UV light (tanning beds, sun lamps)
**SUNSCREEN**

- Apply at least 15 minutes before going outdoors
- Reapply every 2 hours (every 40 minutes if swimming or sweating)
- Use **at least** 1 ounce of sunscreen on exposed areas
- Sunscreen in make-up is not usually enough
- Wear sunscreen everyday for best protection (even on a cloudy day!)

The American Academy of Dermatology recommends consumers choose a sunscreen which states on the label:

- **SPF 30 OR HIGHER**
- **BROAD SPECTRUM**
  - Means a sunscreen protects the skin from ultraviolet A (UVA) and ultraviolet B (UVB) rays, both of which can cause cancer.
- **WATER RESISTANT**
  - For up to 40 or 80 minutes. Sunscreen can no longer claim to be waterproof or sweatproof.
SUN PROTECTION FACTOR (SPF)

- Measure of the sunscreen’s ability to prevent UVB rays from damaging the skin
- Your skin turns red within 10 minutes of being outside with NO protection
- If you apply SPF 30, it will protect your skin 30 times that amount of time
- So, it would take 300 minutes instead of 10 minutes
MEDICATIONS THAT INCREASE SUN SENSITIVITY

- Some medications make your skin more sensitive to sunlight than usual
- These effects can continue after stopping the medication
- Most common
  - Acne treatments (Retin-A cream, Accutane, OTC items with benzyl peroxide)
  - Antibiotics (Bactrim, doxycycline, levofloxacin)
  - Vitamins and herbal supplements (St. John’s Wart)
- Ask your pharmacist!
VITAMIN D

- Vitamin D is necessary for building bone (these values are to maintain bone health)
  - 600 IU daily for ages 1-70
  - 800 IU daily for those 70+
- Sun exposure helps to promote vitamin D production in the skin (UVB rays)
- You can get vitamin D through diet and supplements rather than the sun
  - Fatty fish (tuna and salmon)
  - Cheese
  - Egg yolks
  - Foods fortified with vitamin-D (milk, orange juice)
EARLY DETECTION

- About half of melanomas are self-detected
- If found early, it is easier to treat (small and hasn’t spread)
- Get skin checked by a health care professional
  - Should be a part of your regular routine, especially for those with higher risk
- Know your own skin
  - Check on a regular basis
  - Learn the patterns of your moles, blemishes, and freckles
  - Self-exam is best in a well-lit room with a full-length mirror
  - Examine all areas including palms, soles, scalp, ears, nails, and back
WHAT TO LOOK FOR

- Skin cancers can appear in a variety of forms

- Warning signs:
  - A new growth (after age 16)
  - A spot, bump, or mole that has slowly gotten larger over time
  - A spot or mole that is changing in shape or color
  - A sore that doesn’t heal within 3 months
NORMAL MOLES

- Evenly colored (brown, black, or tan)
- Flat or raised
- Oval or round
- Generally smaller than the width of a pencil eraser
- Most people have moles and almost all of them are harmless
- Recognizing the changes in moles is important and can suggest melanoma
- Look for the ABCDEs when evaluating changing moles
Asymmetric

Does it have an irregular shape?

Is one half different from the other?
Border

Is the border irregular or jagged?
Color

Is the color uneven?
Are there multiple colors present?
Diameter

Is it larger than 6mm?
Is it larger than the size of a pencil eraser?
Evolution

Has there been a change in size, shape, symptoms, surface or color?
Always ask your healthcare provider about any moles you identify as suspicious!
MORE INFORMATION

- www.skincancer.org
- www.cancer.org
REFERENCES

https://www.skincancer.org/prevention/are-you-at-risk/skin-types-and-at-risk-groups#panel1-5

https://www.skincancer.org/skin-cancer-information/ask-the-experts/