

# ***Ban the Burn*** handbook

Teacher Guide  
to Skin Cancer  
Prevention

An Educational  
Tool for  
High School  
Teachers

The Ulman Cancer  
Fund for Young Adults  
& The Coalition for Skin  
Cancer Prevention  
in Maryland Says:

*Play it safe  
in the Sun...*

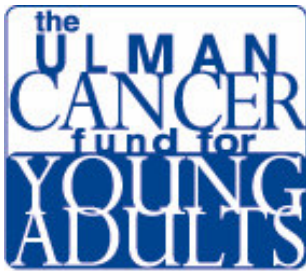
**Use Protection!**



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To: School Health Educator

From: Brock Yetso  
Executive Director, The Ulman Cancer Fund for Young Adults

Re: Ban the Burn Campaign, A Guide To Skin Cancer Prevention

Dear Health Educator:

Along with the luxuries of nice weather, long days, and sun shine, comes a personal responsibility to protect yourself. During warmer months, more and more people will go outside without the proper sunscreen protection. Whether it's swimming in the pool, lying on the beach, or playing soccer, we **MUST** wear sunscreen.

The Ulman Cancer Fund for Young Adults asks you to join us today. We are making a community effort to educate students about the importance of protecting themselves from harmful summer rays. Through your initiative, our educational resources, and your students attention we can make the outdoors safer for everyone.

Attached are a teacher and student handbook, skin cancer resources and a video that can assist you in achieving this goal. Please incorporate any of these resources into your lesson plans as you see fit. The Ulman Cancer Fund for Young Adults thanks you for helping us reach out to others. What you teach can directly impact the safety of your students.

Respectfully,

Brock Yetso  
Executive Director  
The Ulman Cancer Fund for Young Adults

## **Want a Guest Speaker?**

The Ulman Cancer Fund for Young Adults would like to come speak to your class. Talking about cancer can be a difficult topic, and we would like to make the learning experience as enjoyable as possible. We will explain what we, The Ulman Cancer Fund for Young Adults, do in the cancer community and how we can help support and educate young adults and their families.

If interested, please contact The Ulman Cancer Fund for Young Adults and ask about a speaker for the Ban the Burn Campaign. Call (888)393-fund, email us at [info@ulmanfund.org](mailto:info@ulmanfund.org), or fax back this form (410)964-0402.

### **Speaker Request**

Name: \_\_\_\_\_

School: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Date and time needed: \_\_\_\_\_

# ***Ban the Burn***

## **The Ulman Cancer Fund for Young Adults & The Coalition for Skin Cancer Prevention in Maryland's Skin Cancer Awareness Campaign**

**Teachers:** The Ulman Cancer Fund for Young Adults in conjunction with The Coalition for Skin Cancer Prevention in Maryland, has put together resources that will help educate you and your students about skin cancer and the importance of practicing proper sun protection. In accordance with National Melanoma/Skin Cancer Detection and Awareness Month(May) and the summer months that follow, we ask that you utilize these resources to help fight this national battle at a community level.

### **Goals:**

1. Students will increase their knowledge of the dangers existing from both minimal and excessive exposure to the sun and proper methods of protection.
2. Students will practice sun protective behaviors.

### **Objectives:**

1. Students will be able to identify the negative effects of unprotective excessive exposure to the sun.
2. Students will be able to identify the risk factors for skin cancer.
3. Students will be able to identify behavior changes that will reduce their risk for skin cancer.

### **Materials:**

#### **Ban the Burn Teacher Kit:**

*Ban the Burn* Handbook, Teacher Guide to Skin Cancer Prevention  
Lesson Plan  
Teacher's Guide to Skin Cancer Prevention  
Answer keys to SunGuard Your Skin Survey (pre-test) and Word Search  
Ban the Burn Vocabulary and Exercise  
Skin Cancer Transparencies/Handouts  
SunGuard Your Skin Survey (pre-test)  
Video-*Be Smart Protect Yourself* **8-10 mins.**  
Developed by Ulman Cancer Fund founder and two time melanoma survivor Doug Ulman.  
Video introduction and letter from Doug Ulman  
SunGuard Man Online Cards  
Ulman Cancer Fund for Young Adults bookmarks  
You've Just Been Burned Card  
Ban the Burn Poster by The Ulman Cancer Fund

#### **Ban the Burn Student Kit:**

*Ban the Burn* Handbook, Student Guide to Skin Cancer Prevention  
SunGuard Man Online Cards  
SunGuard Your Skin Survey  
SunGuard Your Skin Word Search  
Ban the Burn Exercise  
Ban the Burn T-shirt Contest Form

### **Procedure:**

1. Administer **SunGuard Your Skin Survey**; collect all papers and place in separate folder.
2. Initiate **Discussion** with the following questions:

Have you ever had a painful sunburn?

Do you think it is healthy to have a tan?

How does society condition us to have these beliefs?(Television, advertisements, fashion industry, tanning salons, etc.)

How difficult is it to change behavior in the face of society's influences? Can you do it?

Do you know anyone who has had skin cancer?

**Tell Students:** *You don't have to be very old to get skin cancer!*

3. Show **Video(8-10 mins.)**, “*Be Smart Protect Yourself*,” in which Doug Ulman, a former Howard County High School graduate talks about his experiences as a young skin cancer survivor.

**\*\*\*READ video introduction to students before showing video\*\*\***

4. **Discuss** class reaction to the video.

5. Show **Overhead Transparency/Handout #1**

Have students refer to **Ban the Burn Handbook, Students Guide to Skin Cancer Prevention**

**Discuss** function and structure of skin

6. **Ask:** What is in sunlight that causes skin to burn?

**Ultraviolet Radiation** (UVA and UVB) causes

Tanning - a sign of damaged skin

Wrinkling

Sunburn

Cataracts

Premature Aging

Skin Cancer

Ultraviolet Radiation is more intense:

During summer months

Closer to the equator

At high altitudes

Between 10 am and 4 pm

7. **Say:** Sun damaged (tan or sunburned) skin over years can lead to **skin cancer**

Show **Overhead Transparency/Handout #2**

Discuss types of skin cancer and ABCD's of Melanoma

Examine photos of Melanoma

8. Introduce “risk factors” as something that puts you at greater risk for developing skin cancer.

Show **Overhead Transparency/Handout #3**

**Stress:** Everyone is at some risk for developing skin cancer even if you don't possess any risk factors. *Refer back to Video* - Doug felt he had few risk factors and he was diagnosed twice with Melanoma before the age of 20.

9. Show **Overhead Transparency/Handout #4**

Discuss measures to prevent skin cancer.

10. Go over answers to SunGuard Your Skin Survey, which students filled out at the start of the class. Have students discuss whether their answers would differ now.

11. Assign Word Search and Ban the Burn Exercise.

# TEACHER'S GUIDE TO SKIN CANCER PREVENTION

## WHY PROTECT AGAINST EXCESSIVE EXPOSURE TO SUNLIGHT?

Sunshine is both friend and foe. The sun provides light, warmth, and is essential for growth and development of all living things. Unfortunately, excessive sun exposure can cause blistering sunburns, premature aging (wrinkles and blotches), cataracts, a weakened immune system, and skin cancer. (A cataract is a loss of transparency in the lens of the eye that clouds vision.) Sunlight is believed to cause 80-90% of all skin cancer.

## PREVENTING SKIN CANCER

Overexposure to solar ultraviolet (UV) rays is the most important behavioral risk factor for the development of skin cancer. However, most Americans do not adequately protect themselves or their children from the sun's dangerous rays. According to the results of a survey completed in the summer of 1998 by the Coalition for Skin Cancer Prevention in Maryland, 52% of parents limit the amount of time their children spend in the sun, 45% have them wear protective clothing, 39% have their children use sunscreen, and only 24% have their children wear hats. Therefore, educating children and adults about the measures that can be taken to reduce or avoid UV exposure is important.

## TYPES OF SKIN CANCER

There are actually over 200 types of skin cancer. The three major forms are basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and the deadliest form- malignant melanoma.

Skin cancer can develop anywhere on the body but most often appears on surfaces receiving the greatest amount of sunshine. BCC and SCC often take the form of a pale, wax-like, pearly bump or a red, scaly, sharply outlined patch. The patches may crust, discharge pus, and sometimes bleed. If not treated early, SCC may spread to other parts of the body. Less than 1% of people with SCC or BCC will die from skin cancer. For many people, these two skin cancers can cause some disfigurement based on the amount of damaged skin the physician must remove. Luckily, the negative effects of surgery can be greatly minimized when the diseases are treated in their early stages.

**Malignant Melanoma** is the most serious form of skin cancer. It often arises from or near a mole. There are four basic warning signs that should prompt individuals to visit their physician (especially a Dermatologist). Examine moles or growths for:

**ASYMMETRY:** a line drawn through the mole produces two halves that do not match.

**BORDER:** the border of the mole has an irregular shape or notched (jagged) edges.

**COLOR:** the color is not uniform but has a mixture of "bleeding" of colors such as black, brown, red, blue.

**DIAMETER:** The diameter is larger than a standard pencil eraser.

## YEARLY NUMBER OF SKIN CANCER CASES

In the United States, about 1,000,000 people are expected to get BCC or SCC this year. An additional 51,400 will develop melanoma. An estimated 9,800 individuals will die from melanoma. Maryland expects 800 new cases of melanoma this year.

To understand the significant increase in skin cancer rates, consider these facts. In the 1930's, the lifetime risk of getting invasive melanoma was 1 in 1500. By contrast, the predicted lifetime chance for those living in the year 2000 was approximately 1 in 75, or 20 times the 1930's risk.

## **WHY SUNLIGHT IS HAZARDOUS**

Since sun exposure is understood to be the major cause of skin cancer, it is extremely important to protect children and youth from too much sunshine. This caution is reinforced by the fact that up to 80% of an individual's lifetime contact with sunshine occurs before adulthood (at least for children who, as adults, acquire indoor occupations). A teacher's or parent's efforts to help children adopt sun-safe behaviors are much preferred to treating skin cancer later in life. The sun's role in skin cancer results from its emission of invisible UV light, which includes UVA and UVB. These two sectors of UV light enter the skin cells causing both visible and invisible injuries.

Sunburn is an example of visible injury. Childhood sunburns likely increase the risk that children will get melanoma in adulthood. Two blistering sunburns during childhood double the risk of melanoma later in life. Less well known is that tanning is actually an outward sign of internal damage as the body desperately tries to protect itself. Unfortunately, a tan offers inadequate protection against future solar assault.

Ozone, a naturally occurring "sunscreens" in the stratosphere above us, partially filters out harmful UVB. Unfortunately, the ozone layer is thinning from the release of chlorofluorocarbons (CFCs) into the air, along with other factors. CFCs are used in refrigerants, insulating foams, and solvents, etc. To slow down ozone layer destruction, many countries have signed treaties such as The Montreal Protocol on Substances that Deplete the Ozone Layer, which phase out the use of CFCs and other like substances.

## **HIGH RISK CONDITIONS FOR UV EXPOSURE**

UV rays linked to skin cancer development are more intense (destructive) under certain time frames or conditions (usually related to the sun's angle to the earth and/or the depth of atmosphere through which the sun's rays must pass):

1. 10:00 a.m. – 4:00 p.m.
2. Mid-spring through mid-fall
3. Geographical latitudes nearer the equator (like Australia).
4. Higher altitudes (mountainous regions)
5. Absent cloud cover

Individuals must also understand that tanning salons, sun lamps, and sunbeds emit UV radiation that is often more damaging than natural sunlight. Remember there is no safe tan!

## **PERSONAL HIGH RISK FACTORS FOR SKIN CANCER**

Skin cancer can afflict any person regardless of skin color. Individuals most likely to get skin cancer will tend to have some of these characteristics.

- Fair skin
- Blue, green, or hazel eyes
- Light-colored hair

- Freckles
- Tendency to burn rather than tan
- History of severe sunburns
- Have many moles (especially over 100)
- Personal or family history of skin cancer

Some medications also increase a person's sensitivity to light (therefore the risk of skin cancer). Read the medicine label or ask your pharmacist or doctor about your situation.

## **HOW TO PROTECT PEOPLE FROM GETTING SKIN CANCER**

Here are the basic strategies to shield children (and adults) from excessive sun exposure:

1. Wear tightly woven, loose fitting clothing that covers as much of the body as possible.
2. Wear a wide-brimmed hat (four-inch brims) that produces a shadow which covers the eyes, ears, nose, face, and back of neck.
3. Use sunglasses that include a warranty stating that they provide at least 95% UVA and UVB (broad-spectrum) protection.
4. Reduce sun exposure from 10:00 a.m. – 4:00 p.m., when UV rays are the strongest. (This is especially important from mid-spring through mid-fall).
5. Find shade (trees, physical structures), to shield you, especially from 10:00 a.m. to 4:00 p.m.
6. Liberally apply sunscreen to exposed skin 30 minutes before venturing outdoors. The sunscreen container should have a sun protection factor (SPF) rating of 15 or above and should state that it has broad-spectrum (UVA and UVB) protection. PABA free sunscreens are recommended for persons with sensitive skin. Depending on outdoor conditions, sunscreen should be re-applied at least every two hours.

## **WARNING!**

Don't depend on sunscreens alone to protect children and adults from skin cancer. Instead, rely as much as possible on a combination of all the guidelines just listed.

Please note that the SPF number tells how many times longer (under ideal conditions) a person can stay out in the sun without beginning to turn red in comparison with the amount of time totally unprotected skin would start to burn. Research indicates these numbers are sometimes overstated. Whether or not an individual practices the previously stated skin cancer prevention methods, it is wise to perform a skin self-examination (using a hand mirror) at least once every one to three months and to seek a medical examination annually. The possible first signs of developing skin cancer can often be self-observed according to the characteristics described earlier regarding moles and growths (See your doctor if you suspect any problems).

Finally, the good news is that most skin cancer can be successfully treated if detected in its earlier phases. About 90% of skin cancers are treated with surgery. Other solutions include radiation therapy, electrodesiccation (tissue destruction by heat), cryosurgery (tissue destruction by freezing), and laser therapy, etc.

Of course, the best "treatment", as always, is **PREVENTION**. Your instruction can help children to grow up cancer free. Good luck!

# Answer Key

## SunGuard Your Skin Survey

Age \_\_\_\_\_

Circle one: Male

Female

**Part A** – Check the space before the best answer.

1. A person with a tan looks attractive.

\_\_\_ strongly agree \_\_\_ agree \_\_\_ no opinion \_\_\_ disagree \_\_\_ strongly disagree

2. A person with a tan looks healthy.

\_\_\_ strongly agree \_\_\_ agree \_\_\_ no opinion \_\_\_ disagree \_\_\_ strongly disagree

3. People who protect themselves from the sun are cool.

\_\_\_ strongly agree \_\_\_ agree \_\_\_ no opinion \_\_\_ disagree \_\_\_ strongly disagree

4. How many painful sunburns did you have last summer?

\_\_\_ none \_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ more than three \_\_\_ I don't remember

5. When you were out in the sun last summer, how often did you use sunscreen?

\_\_\_ always \_\_\_ sometimes \_\_\_ I don't remember \_\_\_ rarely \_\_\_ never

6. When you were out in the sun last summer and wore a hat for protection, what kind of hat did you wear?

\_\_\_ wide-brimmed hat \_\_\_ baseball cap \_\_\_ visor \_\_\_ other \_\_\_ I never wore a hat

**Part B** – Fill in the blank with the letter next to the best answer.

b 7. The sun's rays are the strongest, and should be avoided between the hours of

- a. 9:00 a.m. and 12:00 p.m.
- b. 10:00 a.m. and 4:00 p.m.
- c. 2:00 p.m. and 5:00 p.m.
- d. 3:00 p.m. and 6:00 p.m.

a 8. What is the minimum SPF (sun protection factor) a sunscreen should have to protect you adequately from the damaging effects of the sun?

- a. 15
- b. 8
- c. 30
- d. 5

c 9. Which of the following is not a type of skin cancer?

- a. Squamous cell carcinoma
- b. Malignant melanoma
- c. Sickle cell carcinoma
- d. Basal cell carcinoma

- a 10. All of the following are risk factors for skin cancer except
- Having dark hair
  - Having light colored skin
  - Being severely sunburned as a child
  - Having family members who have had skin cancer
- d 11. The substance in the skin that makes people tan is called
- Melatonin
  - Myanmar
  - Mandarin
  - Melanin
- c 12. Which of the following is not one of the ABCD's of Melanoma?
- Border
  - Diameter
  - Atypical
  - Asymmetrical
  - Color
- d 13. Which of the following is the best method of protecting yourself from the harmful effects of the sun?
- Wear light colored clothing
  - Wear a baseball cap
  - Use sunscreen with SPF 8
  - Seek shade

**Part C** – True or False: Place a T or F in the blank to make the statement correct.

- F 14. The sun's rays are less intense at high altitudes.
- T 15. People with a large number of moles on their bodies are at greater risk for developing malignant melanoma.
- F 16. Sunscreen should be put on ½ hour before going outside and reapplied every four hours.
- T 17. People with naturally dark skin can develop skin cancer.
- T 18. A tan is a sign that the skin is damaged.
- F 19. Tanning salons and sun lamps are safe ways to get a tan.
- T 20. A wide-brimmed hat gives more sun protection than a baseball cap.
- F 21. Ultraviolet A (UVA) rays cause the skin to become sunburned.
- T 22. Wearing a hat and long sleeved shirts are good methods of protection from sunburn.
- T 23. You can get burned from reflection of the sun's rays off sand, water, and snow.
- T 24. Protecting yourself from sunburns as an adolescent will help prevent skin cancer later in life.
- F 25. The outside layer of skin is called the dermis.
- T 26. People can die from malignant melanoma.

# SUNGAURD YOUR SKIN

## WORD SEARCH

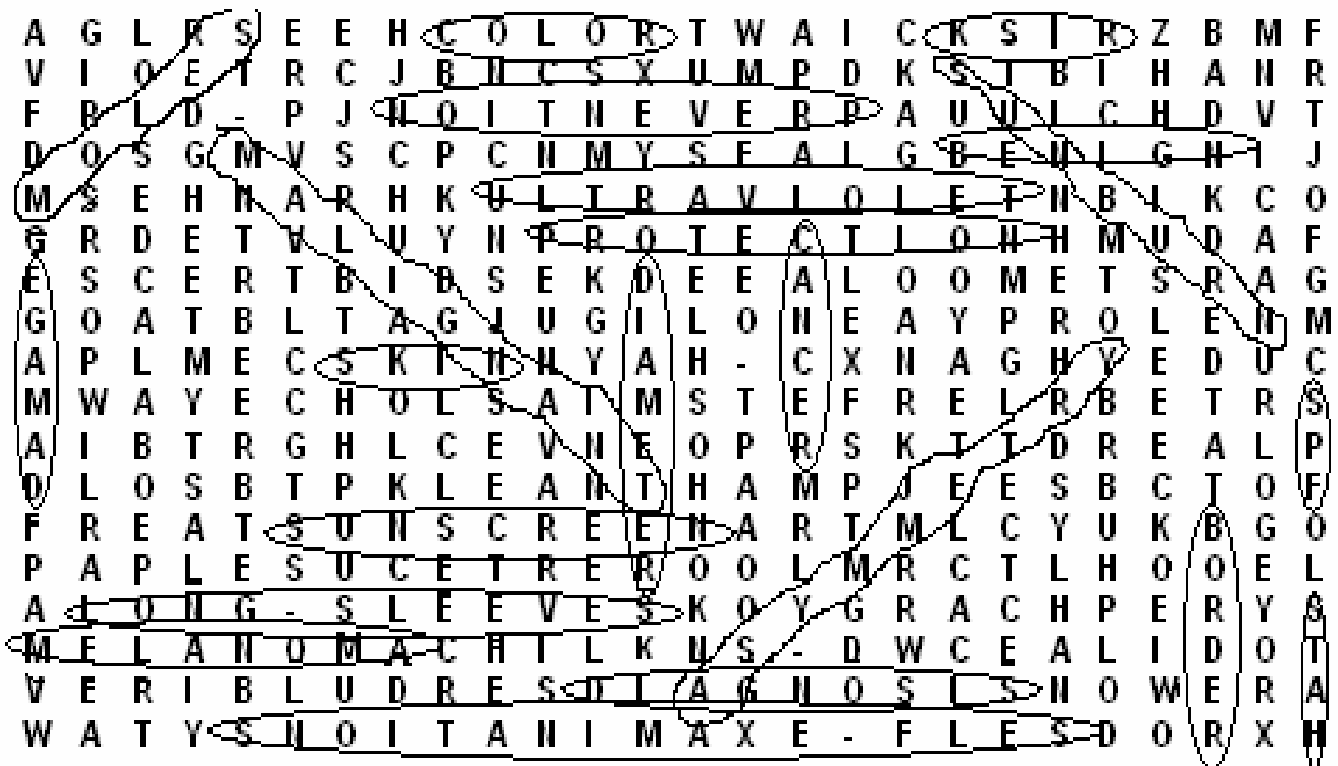
Find the following skin cancer related terms in the word search below.

self-examination  
moles  
color  
prevention  
sunburn  
benign  
malignant

ultraviolet  
damage  
melanoma  
skin  
diameter  
sunscreen  
diagnosis  
asymmetry

border  
cancer  
SPF  
protection  
hats  
long sleeves  
risk

The words can be found horizontally, vertically, diagonally, forward or backward.



## ***Ban the Burn Vocabulary***

**Basal Cells:** Small, round cells found in the lower part, or base, of the epidermis, the outer layer of the skin.

**Cancer:** A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissues and can spread through the bloodstream and lymphatic system to other parts of the body.

**Dermatologist:** A doctor who specializes in the diagnosis and treatment of skin problems.

**Dermis:** The lower or inner layer of the two main layers of tissue that make up the skin.

**Epidermis:** The upper or outer layer of the two main layers of tissue that make up the skin.

**Hair follicles:** Shafts or openings on the surface of the skin through which hair grows.

**Malignant:** Cancerous; a growth with tendency to invade and destroy nearby tissue and spread to other parts of the body.

**Medical Oncologist:** A doctor who specializes in diagnosing and treating cancer using several types of treatment.

**Melanin:** The substance that gives the skin its color.

**Melanocytes:** Cells in the skin that produce and contain the pigment called melanin.

**Melanoma:** A form of skin cancer that arises in melanocytes, the cells that produce pigment. Melanoma usually begins in a mole.

**Metastasis:** The spread of cancer from one part of the body to another.

**Risk factor:** Anything that increases the chance of developing a disease.

**Squamous cells:** Flat cells that look like fish scales under a microscope. These cells cover internal and external surfaces of the body.

**Sun Protection Factor:** SPF. A scale for rating the level of sunburn protection in sunscreen products. The higher the SPF, the more sunburn protection it provides.

**Sunscreen:** A substance that helps to protect the skin from the sun's harmful rays. Sunscreens reflect, absorb, and/or scatter both UVA and UVB radiation. Using lotions, creams, or gels that contain sunscreens can help protect the skin from premature skin aging and damage that may lead to skin cancer.

**Ultraviolet radiation:** Invisible rays that are part of the energy that comes from the sun. UV radiation can damage the skin and cause melanoma and other types of skin cancer. UV radiation that reaches the earth's surface is made up of two types of rays, called UVA and UVB rays.

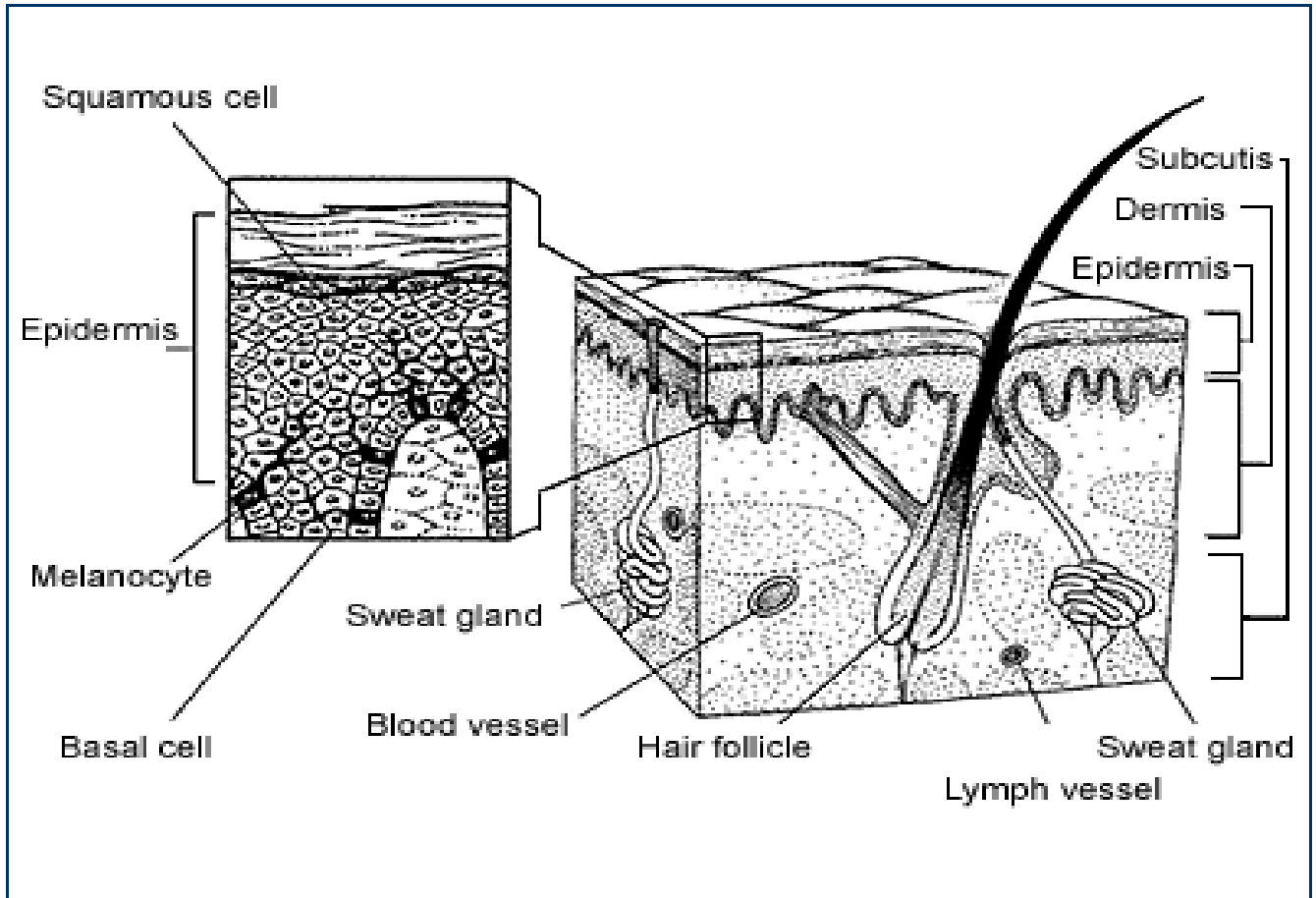
**UVA rays:** These rays pass deeper into the skin and may add to skin damage that can lead to skin cancer and cause premature skin aging.

**UVB rays:** These rays are more likely to cause a visible sunburn. They also may add to skin damage that can lead to skin cancer and cause premature skin aging.

## *Ban the Burn*

- **Transparencies/Handouts**
- **Video introduction**
- **Comment sheet**

# Learn about your skin so you can protect it.



# Your Skin and Cancer

The three most common types of skin cancer are:

- Basal Cell Carcinoma (cancer)
- Squamous Cell Carcinoma
- Malignant Melanoma

The “A,B,C,D’s” of Malignant Melanoma are:

- **A**symmetry - one half unlike the other half (fig. 1)
- **B**order - irregular or poorly defined border (fig. 2)
- **C**olor - varied from one area to another (fig. 3)
- **D**iameter - larger than 6mm (diameter of a pencil eraser) (fig. 4)

Fig. 1

**A**

Fig. 2

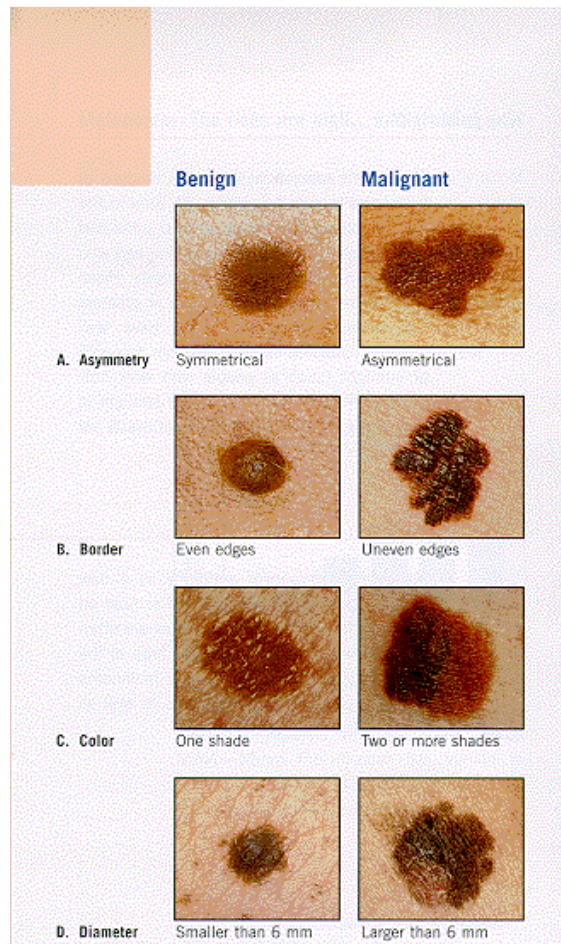
**B**

Fig. 3

**C**

Fig. 4

**D**



Skin cancer can be easily treated if it's detected early.  
Self mole checks are important.

# Who is at risk for developing skin cancer?

A risk factor is something that puts you at greater risk for developing a disease. This does not mean that someone who doesn't have a risk factor will not get the disease.

The risk factors for skin cancer are:

- Fair Skin
- Blue, green or hazel eyes
- Light colored hair
- Freckles
- Tendency to burn rather than tan
- History of severe sunburns
- Have many moles (especially over 100)
- Personal or family history of skin cancer

# Play it Safe in the Sun ...Use Protection

## Smart Steps to Prevent Skin Cancer

- Avoid direct exposure to the sun between the hours of 10 am and 4 pm, when the sun's rays are strongest.
- Wear protective, tightly woven clothing (dark colors protect better than light), such as long sleeved shirts and long pants.
- Wear a hat with a 4-inch brim all around. Baseball caps do not protect ears and neck.
- Wear sunglasses to protect eyes from damaging UV rays.
- Seek shade of trees, buildings, umbrellas, etc. if outside during peak sunlight hours.
- Refer to the daily UV Index when planning outdoor activities.
- Avoid reflective surfaces, such as sand, water, snow or concrete, which can reflect up to 85% of the sun's damaging rays.
- Avoid use of tanning salons and sun lamps.
- Use a broad spectrum sunscreen with a Sun Protection Factor (SPF) of 15 or higher, which protects against UVA and UVB rays. Apply ½ hour before sun exposure.
- Reapply sunscreen every two hours, especially if you're swimming or sweating.

# Video Introduction

## Who is Doug Ulman?

Doug is a native of Columbia, MD. Attending Phelps Luck and Northfield elementary schools, Dunloggin Middle School, and then graduating from Centennial High School in 1995, Doug has remained a role model in his community. Furthering his education at Brown University, Doug was confronted with a dilemma that would be more difficult than any college class. In March 1997, during a routine physical with his family doctor, Doug had a suspicious-looking mole removed. Two weeks later, while back at Brown University, Doug was delivered the shocking news that he had been diagnosed with malignant melanoma, a deadly form of skin cancer.

At the age of 19, this was just the beginning of what would be a life-changing event for Doug. Please listen and learn. Knowing Doug's story could help save your life someday.

## **A note from Doug...**

Dear Friend

I am so excited that you are taking the time to learn more about skin cancer. Growing up in Columbia, Maryland, playing soccer on the fields on Cedar Lane, running around Centennial Park, and on the hills behind Centennial High School I often times forgot to wear sunscreen.

As a young adult I thought I was invincible. There was no need to wear sunscreen. Nothing bad could happen to me. Things were going so well.

I was wrong.

At the age of nineteen I was diagnosed with Malignant Melanoma, the most deadly form of skin cancer. Three months later, at the age of twenty, doctors looked at me once again and said, "Doug, you have cancer!" They had found a second Melanoma.

Please know that I am excited that you are learning about skin cancer and I hope that you will learn from my experience and know that you can prevent yourself from having cancer. I sincerely hope that you will protect yourself so that you never have to hear the words, "you have cancer," and I wish you the best for health and happiness in the future.

Best wishes,

Doug Ulman

## **Please fill out and return!**

*The Ulman Cancer Fund for Young Adults* and the *Coalition for Skin Cancer Prevention in Maryland* want to know what YOU think about our ***Ban the Burn* handbook**. In order for us to better serve you and help our students learn more about cancer, we ask for your comments on the following:

Please fax back to **(410) 964-0402** or mail to: **The Ulman Cancer Fund  
PMB #505, Suite A  
4725 Dorsey Hall Dr.  
Ellicott City, MD 21042**

I. Lesson Plan

II. Overhead Transparencies/Handouts

III. Teacher's Guide to Skin Cancer Prevention

IV. Video

V. Guest speaker

VI. Student Handbook

VII. SunGuard Word Search, Ban the Burn exercise, SunGuard Survey

# Smart Steps

## *to Prevent Skin Cancer*

- Avoid the sun between 10 am and 4 pm
- Cover up with protective clothing
- Wear a wide-brimmed hat
- Use UVA protective sunglasses
- Seek shade
- Avoid reflective surfaces
- Don't use tanning salons or sun lamps
- Use sunscreen with SPF 15 or higher



[www.ulmanfund.org](http://www.ulmanfund.org)



[www.sungaurdman.org](http://www.sungaurdman.org)



# ***Ban the Burn*** handbook

## **SAMPLE FOR TEACHERS**

**Student Guide  
to Skin Cancer  
Prevention**

**An Educational  
Tool for  
High School  
Students**

**The Ulman Cancer  
Fund for Young Adults  
& The Coalition for Skin  
Cancer Prevention  
in Maryland Says:**

*Play it safe  
in the Sun...*

**Use Protection!**



[www.ulmanfund.org](http://www.ulmanfund.org)



[www.sungaurdman.org](http://www.sungaurdman.org)

# Ban the Burn

## Student Guide to Skin Cancer Prevention

### Sun Facts: What *YOU* should know about the Sun

There are many types of rays that come from the sun: heat rays, visible light, and invisible **ultraviolet light (UV) light**. The ultraviolet rays of the sun are the most frequent cause of skin cancer. The sun's energy is more intense closer to the equator, on mountain tops, in summer, and in the middle of the day.

The UV radiation that reaches the earth's surface consists of two types of rays, called UVA and UVB rays. Scientists believe both types of rays can add to skin damage and ultimately cause burning and skin cancer. For this reason, Doctors recommend that people wear sunscreens that protect us from both types of rays.

**UVA rays:** Constantly present in the environment. These rays do not leave a visible burn, but rather affect the skin's deepest layers, the dermis, causing premature aging and wrinkling. With a longer wavelength, these rays penetrate deeper into the skin and damage collagen and elastin, causing a loss of elasticity in the skin. Excessive UVA exposure can be responsible for dry, leathery, wrinkly skin, and may also contribute to melanoma.

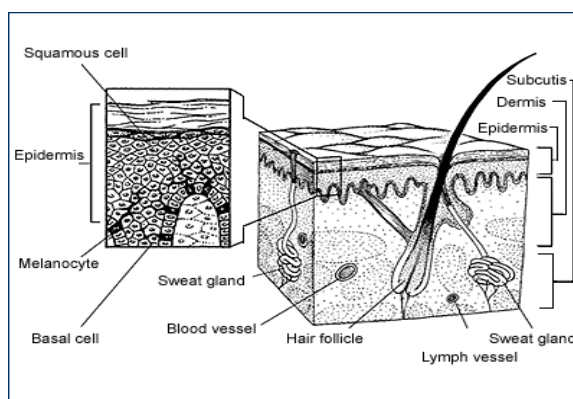
**UVB rays:** Primarily affect the topmost layers of the skin, the **epidermis**. These rays leave visible sunburns. Deliberate sun tanning and burning will increase the incidence of skin cancer.



### Your Skin and the Sun

Your **skin** is the largest organ in your body. It helps your body do a number of things; protect the body from injury and infection, regulate body temperature, transmit sensory information to the brain, and regulate body temperature and fluid balance. The skin has two layers-the epidermis and dermis.

The **epidermis** is the thin outer layer of the skin. It is composed of several layers of cells. The upper layer is called the **squamous cells**. They are flat and scaly and help protect the lower layers of skin. The lower layer contains the round basal cells. These cells replenish the squamous cells as they are sloughed off. Within the basal cell layer is **melanocytes**, which contain the pigment **melanin**. Melanocytes are responsible for giving the skin its color.



The **dermis** is a thick layer of skin under the epidermis. This layer gives the skin its strength and elasticity, and helps insulate the body from cold and heat. The dermis also has blood vessels, fat, hair roots and nerve endings, which respond to touch, pressure, heat and cold.

When the body is cold, the skin closes up the **hair follicles**, shafts or openings in which the hair grows, and pores (or tiny holes). This causes the hairs to stand up straight and creates

what we call goose bumps. When the body is hot, our *sweat glands* react. The skin lets water (or sweat) out of the pores. The sweat evaporates and cools the body.

Skin color depends on the activity level of *melanin-producing cells (melanocytes)* in the epidermis. Everyone has the same number of melanin-producing cells, but people who have more active melanin-producing cells or pigment have darker skins. People who have more active melanin-producing cells in some parts of their skin develop freckles when exposed to sunlight.

The amount of melanin determines how much sun the skin can tolerate without being damaged. The skin makes more melanin when the sun shines on it. In essence, if exposed to excess sunlight, melanin makes the skin darker (“tan”) to protect the lower skin layers from ultraviolet radiation.

**TANS ARE NOT A SIGN OF HEALTH.** Rather, melanin production is the skin’s defense mechanism, which still permits one kind of ultraviolet light (UVB) to damage the skin. People with light skin need to be more careful about sun exposure.

Sunburn looks red because the blood vessels, within the Subcutis tissue in the skin, dilate or expand to help heal the cells that have been injured by the sun. *Blood vessels* remove any waste from the cells, while replenishing them with nutrients and oxygen. The *Subcutis tissue* provides a layer of insulation for the skin. Both blood vessels and *lymph vessels* flow through this area to help provide protection from injury and transport defense mechanisms throughout the body.

## Your Skin and Cancer

*Cancer* is the term for diseases in which abnormal cells grow and divide without control. Cancer cells can invade nearby tissue and spread to all parts of the body through the bloodstream and lymphatic system (*metastasize*). Cancers are usually diagnosed and treated by *Medical Oncologists*, doctors who specialize in the cancer field. When any suspicious cells or body parts are removed or checked for cancer, the Oncologist classifies them as either *benign* or *malignant*. Malignant means that the cells are in fact cancerous with a tendency to spread throughout the body. Benign defines a cell that is not cancerous

Most skin cancers are caused by sun exposure. The majority of people do not get skin cancer when they are young but each time they are out in the sun without protection they increase their chance of getting skin cancer later in life. Getting sunburned adds to the risk of getting melanoma, the most dangerous type of skin cancer. Repeated sunburns will greatly increase the chances of getting skin cancer later on in life. *Dermatologists*, specialized skin doctors, can help diagnose and treat all skin diseases, especially skin cancer. Your actions today will directly impact your health in the future.

The three most common types of skin cancer are:

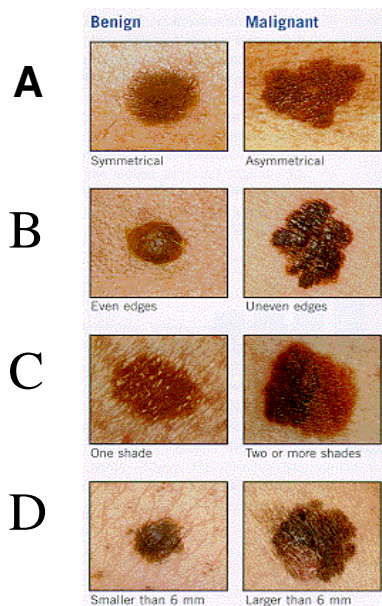
1. *Basal cell carcinoma (cancer)* - The most common type of skin cancer, affecting 800,000 people each year in the US. It is a slow growing cancer that seldom spreads (metastasize) to other parts of the body.

- *Appearance:* Usually appears as a small bump or nodule, a open sore that fails to heal, or a reddish patch of skin.
- *Treatment:* This cancer can be treated with surgery or radiation.
- *Survival:* When detected early, the cure rate is approximately 95%.

2. **Squamous cell carcinoma** - The second most common cause of skin cancer in Caucasians and accounts for 200,000 cases annually in the US. Usually found on the ear, face, lips, and back of hands.

- *Appearance:* It can differ in appearance from a scaly red patch of skin with irregular borders to wart-like bump that cracks and periodically bleeds.
- *Treatment:* Surgery
- *Survival:* Unlike basal cell cancer, squamous cell cancer can spread (metastasize) to other parts of the body. When detected early, the cure rate is 95%.

3. **Malignant Melanoma** - Melanoma is a very serious cancer, affecting about 40,000 people in the US. It accounts for over two thirds of all skin cancer deaths, averaging about 7,000 each year.



- *Appearance:* It can usually begin as a light brown blemish or a flat black blemish with irregular borders. It will sometimes begin to itch, develop a crust and bleed. Although melanomas may feel different, they often do not cause pain. In detecting melanoma, we should use the “**A,B,C,D**” changes in the surface of a mole which are:

**A**symmetry - one half unlike the other half

**B**order irregular - poorly defined border

**C**olor - varied from one area to another

**D**iameter - larger than 6mm (diameter of a pencil eraser)

*(Itching moles should be checked also)*

- *Treatment:* First you must surgically remove the cancerous area on the skin. Most Doctors then check lymph nodes closest to the melanoma. If the cancer has spread to the lymph nodes, those cancerous lymph nodes will be surgically removed. Chemotherapy is administered if the melanoma has spread to the lymph nodes and other areas of the body.
- *Survival:* When detected and treated early, the melanoma survival rate is nearly 100%. But, if left untreated, melanoma can rapidly spread throughout the body and cause death.

***Skin cancer can be easily treated if it's detected early. Self mole checks are important.***

## Who is at Risk?

\*A risk factor is something that puts you at greater jeopardy for developing a disease. This does not mean that someone who doesn't have a risk factor is immune.

The risk factors\* for skin cancer are:

- Fair Skin
- Blue, green or hazel eyes
- Light colored hair
- Freckles
- Tendency to burn rather than tan
- History of severe sunburns
- Have many moles (especially over 100)
- Personal or family history of skin cancer

## **Smart Steps to Prevent Skin Cancer**

- Examine your skin regularly and completely. Become familiar with your own skin – get someone to help check your back.
- Reduce sun exposure from 10:00 am to 4:00 pm, when UV rays are strongest. This is especially important from mid-spring through mid-fall.
- Wear tightly woven, loose fitting clothing that covers as much of the body as possible. Dark colors protect better than light.
- Wear a wide brimmed hat (four inches) that produces a shadow that covers the eyes, ears, nose, face, and back of the neck.
- Find shade (trees, physical structures) to shield you, especially from 10:00 am to 4:00 pm.
- Use sunglasses that include a warranty stating that they provide at least 95 percent UVA and UVB (broad spectrum) protection.
- Liberally apply sunscreen to exposed skin one half hour before venturing outdoors. The sunscreen container should have a *sun protection factor (SPF)* rating of 15 or above and should state that it has broad-spectrum (UVA or UVB) protection. PABA free sunscreens are recommended for persons with sensitive skin. Depending on outdoor conditions, sunscreen should be re-applied at least every two hours.

**\*\*\*SPF is the scale for rating the level of sunburn protection in sunscreen products\*\*\***

# SunGuard Your Skin Survey

Age \_\_\_\_\_

Circle one: Male Female

**Part A** – Check the space before the best answer.

1. A person with a tan looks attractive.

\_\_\_ strongly agree \_\_\_ agree \_\_\_ no opinion \_\_\_ disagree \_\_\_ strongly disagree

2. A person with a tan looks healthy.

\_\_\_ strongly agree \_\_\_ agree \_\_\_ no opinion \_\_\_ disagree \_\_\_ strongly disagree

3. People who protects themselves from the sun are cool.

\_\_\_ strongly agree \_\_\_ agree \_\_\_ no opinion \_\_\_ disagree \_\_\_ strongly disagree

4. How many painful sunburns did you have last summer?

\_\_\_ none \_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ more than three \_\_\_ I don't remember

5. When you were out in the sun last summer, how often did you use sunscreen?

\_\_\_ always \_\_\_ sometimes \_\_\_ I don't remember \_\_\_ rarely \_\_\_ never

6. When you were out in the sun last summer and wore a hat for protection, what kind of hat did you wear?

\_\_\_ wide-brimmed hat \_\_\_ baseball cap \_\_\_ visor \_\_\_ other \_\_\_ I never wore a hat

**Part B** – Fill in the blank with the letter next to the best answer.

\_\_\_ 7. The sun's rays are the strongest, and should be avoided between the hours of

- e. 9:00 a.m. and 12:00 p.m.
- f. 10:00 a.m. and 4:00 p.m.
- g. 2:00 p.m. and 5:00 p.m.
- h. 3:00 p.m. and 6:00 p.m.

\_\_\_ 8. What is the minimum SPF (sun protection factor) a sunscreen should have to protect you adequately from the damaging effects of the sun?

- e. 15
- f. 8
- g. 30
- h. 5

\_\_\_ 9. Which of the following is not a type of skin cancer?

- e. Squamous cell carcinoma
- f. Malignant melanoma
- g. Sickle cell carcinoma
- h. Basal cell carcinoma

\_\_\_ 10. All of the following are risk factors for skin cancer except

- e. Having dark hair
- f. Having light colored skin
- g. Being severely sunburned as a child
- h. Having family members who have had skin cancer

- \_\_\_ 11. The substance in the skin that makes people tan is called
- e. Melatonin
  - f. Myanmar
  - g. Mandarin
  - h. Melanin
- \_\_\_ 12. Which of the following is not one of the ABCD's of Melanoma?
- f. Border
  - g. Diameter
  - h. Atypical
  - i. Asymmetrical
  - j. Color
- \_\_\_ 13. Which of the following is the best method of protecting yourself from the harmful effects of the sun?
- e. Wear light colored clothing
  - f. Wear a baseball cap
  - g. Use sunscreen with SPF 8
  - h. Seek shade

**Part C** – True or False: Place a T or F in the blank to make the statement correct.

- \_\_\_ 14. The sun's rays are less intense at high altitudes.
- \_\_\_ 15. People with a large number of moles on their bodies are at greater risk for developing malignant melanoma.
- \_\_\_ 16. Sunscreen should be put on ½ hour before going outside and reapplied every four hours.
- \_\_\_ 17. People with naturally dark skin can develop skin cancer.
- \_\_\_ 18. A tan is a sign that the skin is damaged.
- \_\_\_ 19. Tanning salons and sun lamps are safe ways to get a tan.
- \_\_\_ 20. A wide-brimmed hat gives more sun protection than a baseball cap.
- \_\_\_ 21. Ultraviolet A (UVA) rays cause the skin to become sunburned.
- \_\_\_ 22. Wearing a hat and long sleeved shirts are good methods of protection from sunburn.
- \_\_\_ 23. You can get burned from reflection of the sun's rays off sand, water, and snow.
- \_\_\_ 24. Protecting yourself from sunburns as an adolescent will help prevent skin cancer later in life.
- \_\_\_ 25. The outside layer of skin is called the dermis.
- \_\_\_ 26. People can die from malignant melanoma.

# SUNGAURD YOUR SKIN

## WORD SEARCH

Find the following skin cancer related terms in the word search below.

self-examination  
moles  
color  
prevention  
sunburn  
benign  
malignant

ultraviolet  
damage  
melanoma  
skin  
diameter  
sunscreen  
diagnosis  
asymmetry

border  
cancer  
SPF  
protection  
hats  
long sleeves  
risk

The words can be found horizontally, vertically, diagonally, forward or backward.

A G L R S E E H C O L O R T W A I C K S I R Z B M F  
V I O E T R C J B N C S X U M P D K S T B I H A N R  
F R L D - P J H O I T H E V E R P A U U L C H D V T  
D O S G M V S C P C N M Y S E A L G B E N I G N I J  
M S E H N A R H K U L T R A V I O L E T N B I K C O  
G R D E T V L U Y N P R O T E C T I O N H M U D A F  
E S C E R T B I D S E K D E E A L O O M E T S R A G  
G O A T B L T A G J U G I L O N E A Y P R O L E N M  
A P L M E C S K I N N Y A H - C X N A G H Y E D U C  
M W A Y E C H O L S A I M S T E F R E L R B E T R S  
A I B T R G H L C E V N E O P R S K T T D R E A L P  
D L O S B T P K L E A N T H A M P J E E S B C T O F  
F R E A T S U N S C R E E N A R T M L C Y U K B G O  
P A P L E S U C E T R E R O O L M R C T L H O O E L  
A L O N G - S L E E V E S K O Y G R A C H P E R Y S  
M E L A N O M A C H I L K N S - D W C E A L I D O T  
V E R I B L U D R E S D I A G N O S I S N O W E R A  
W A T Y S N O I T A N I M A X E - F L E S D O R X H

*Ban the Burn Exercise*

# **Vocabulary**

**Basal Cells:**

**Cancer:**

**Dermatologist:**

**Dermis:**

**Epidermis:**

**Hair follicles:**

**Malignant:**

**Medical Oncologist:**

**Melanin:**

**Melanocytes:**

**Melanoma:**

**Metastasis:**

**Risk factor:**

**Squamous cells:**

**Sun Protection Factor:**

**Sunscreen:**

**Ultraviolet radiation:**

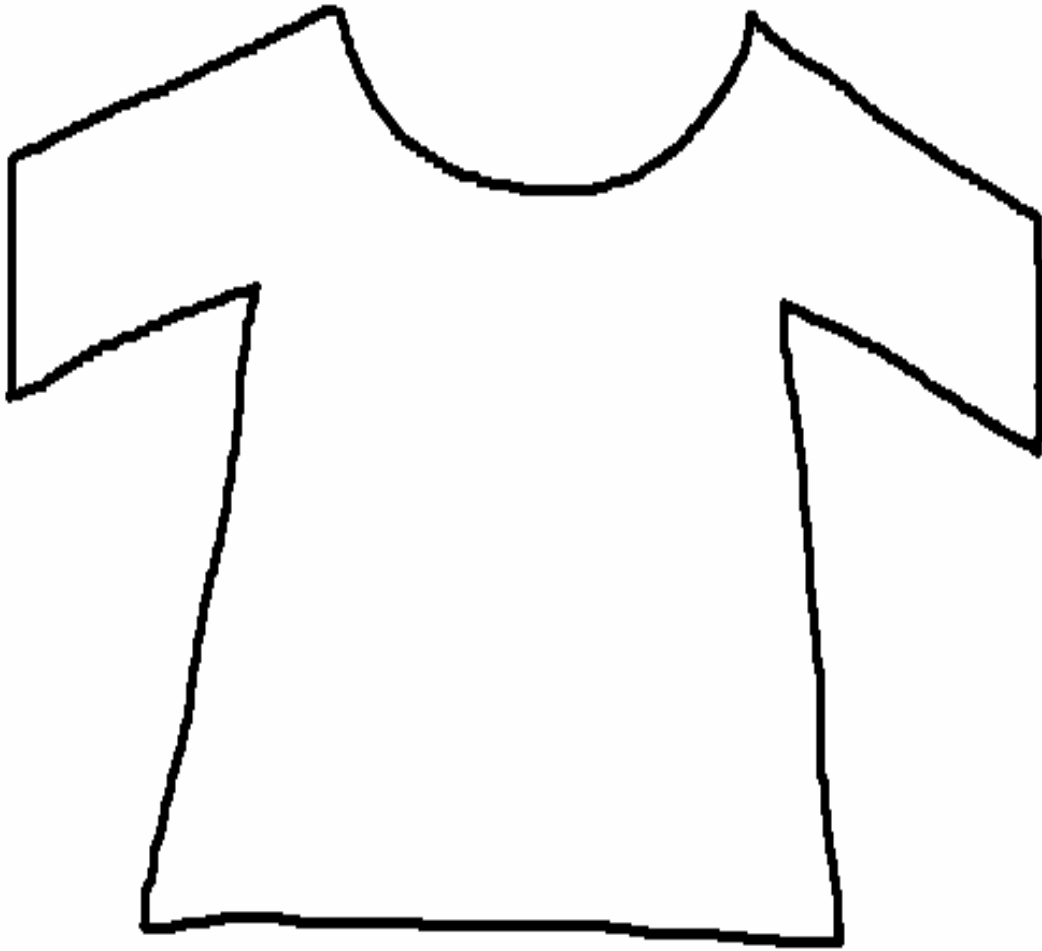
**UVA rays:**

**UVB rays:**

## **Questions**

1. List the types of UV radiation and their negative effects on the body.
2. List three risk factors for skin cancer.
3. List three steps you can take do to reduce your risk of getting skin cancer.
4. What are the “A,B,C,D’s” of Malignant Melanoma?

# ***Ban the Burn*** T-shirt Contest



Name: \_\_\_\_\_ Class: \_\_\_\_\_ School: \_\_\_\_\_