

Skin Cancer Prevention and Education Initiatives

Facts

FROM THE DIVISION OF CANCER PREVENTION AND CONTROL

2008 / 2009

The Centers for Disease Control and Prevention (CDC) provides leadership for nationwide efforts to reduce illness and death caused by skin cancer, which is likely the most common form of cancer in the United States. The message of CDC's Skin Cancer Primary Prevention and Education Initiative is clear: When in the sun, seek shade, cover up, get a hat, wear sunglasses, and use sunscreen.

The Burden of Skin Cancer

Skin cancer is likely the most common form of cancer in the United States. The two most common types of skin cancer—basal cell and squamous cell carcinomas—are highly curable. However, melanoma, the third most common skin cancer, is more dangerous, especially among young people. Approximately 65%–90% of melanomas are caused by exposure to ultraviolet (UV) light or sunlight.¹

The following statistics refer to new cases of, and deaths from, melanomas of the skin. Non-epithelial skin cancers, which are not reflected below, represent 8% of skin cancers that are tracked by central cancer registries. These statistics also do not include data for basal cell and squamous cell carcinomas, which are not tracked by central cancer registries.

In 2005,*²

- 53,792 people in the United States were diagnosed with melanomas of the skin, 30,544 of them men and 23,248 of them women.
- 50,589 whites, 1,122 Hispanics, 261 blacks, 159 Asian/Pacific Islanders, and 95 American Indian/Alaska Natives in the United States were diagnosed with melanomas of the skin.

That same year,²

- 8,345 people in the United States died of melanomas of the skin, 5,283 of them men and 3,062 of them women.
- 8,146 whites, 168 Hispanics, 124 blacks, 55 Asian/Pacific Islanders, and 20 American Indians/Alaska Natives in the United States died of melanomas of the skin.

Epidemiologic data suggest that most skin cancers can be prevented if children, adolescents, and adults are protected from UV radiation.¹

** Incidence counts cover approximately 96% of the U.S. population. Death counts cover 100% of the U.S. population. Use caution in comparing incidence and death counts.*

Risk Reduction

The best way to prevent skin cancer is to protect oneself from the sun.^{1,4} When used consistently, sun-protective practices can reduce a person's risk of developing skin cancer.

Risk Factors

People with certain risk factors are more likely than others to develop skin cancer. Risk factors vary for different types of skin cancer, but some general risk factors are having:^{1,3,4}

- A lighter natural skin color.
- Family history of skin cancer.
- A personal history of skin cancer.
- Exposure to the sun through work and play.
- A history of sunburns early in life.
- Skin that burns, freckles, reddens easily, or becomes painful in the sun.
- Blue or green eyes.
- Blond or red hair.
- Certain types and a large number of moles.

CDC recommends easy options for sun protection:¹

- Seek shade, especially during midday hours (10:00 a.m.–4:00 p.m.), when UV rays are strongest and do the most damage.
- Cover up with clothing to protect exposed skin.

- Wear a hat with a wide brim to shade the face, head, ears, and neck.
- Wear sunglasses that wrap around and block as close to 100% of both UVA and UVB rays as possible.
- Rub on sunscreen with sun protective factor (SPF) 15 or higher, and both UVA and UVB protection.

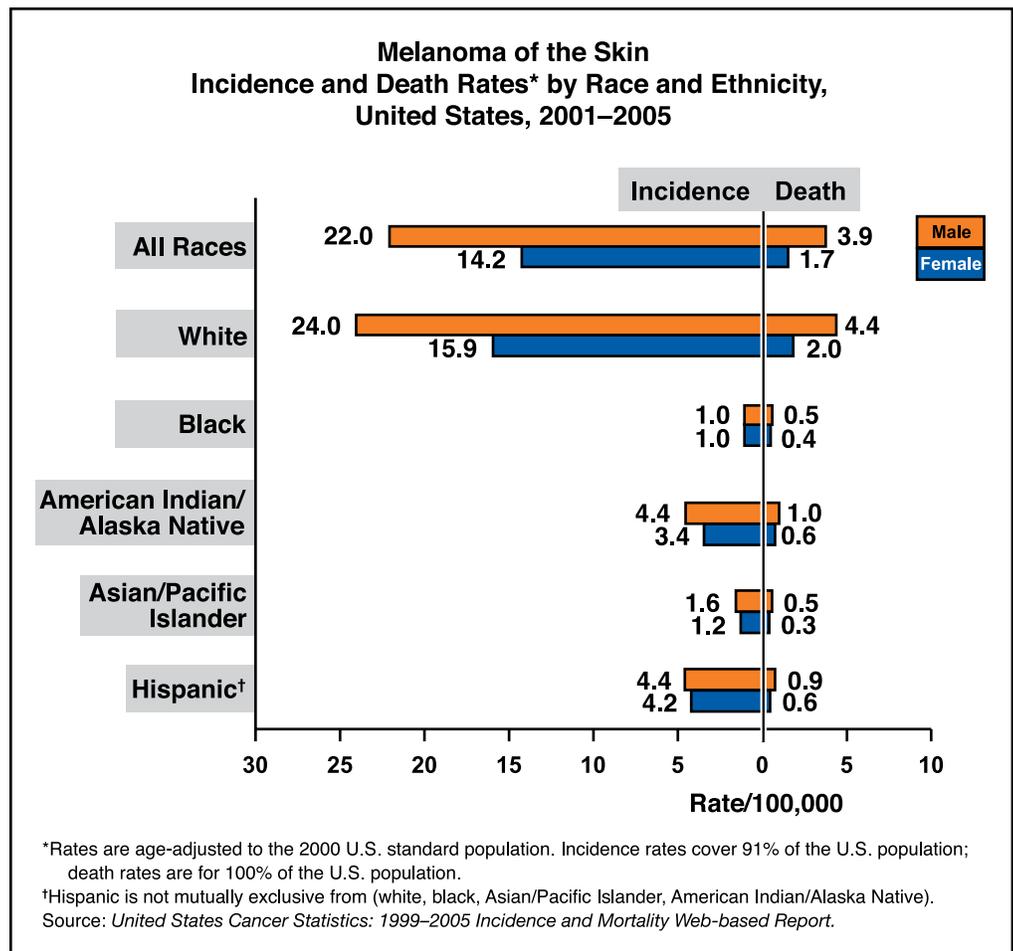
Tanning beds and sunlamps emit ultraviolet rays that are as dangerous as those from the sun and, therefore, should be avoided. As of April 2008, at least 28 states had passed legislation governing the use of tanning facilities by minors.⁵

National surveys supported by CDC indicate that U.S. youth and adults are being exposed to ultraviolet radiation and can do more to protect themselves.

- More than one-third of the U.S. population reported a sunburn in the previous year, with rates higher among men and the non-Hispanic white population.⁶
- Only 56% of adults practiced at least one of the three sun-protective behaviors (use sunscreen, wear sun-protective clothing, or seek shade).⁷
 - 30% reported usually applying sunscreen.
 - 7% applied sunscreen with an SPF of 15 or higher.
 - 18% reported usually wearing some type of fully sun-protective clothing.
 - 33% usually sought shade.
- Only 9% of high school students reported that they routinely used a sunscreen with an SPF of 15 or higher.⁸
- About 9% of teens aged 14–17 years used indoor tanning devices. Girls aged 14–17 years were seven times more likely than boys in the same age group to use these devices.⁹

Early Detection

The U.S. Preventive Services Task Force (USPSTF) has concluded there is not enough evidence to recommend for or against routine screening (total body examination by a clinician) to detect skin cancers early. However, the



USPSTF recommends that clinicians: 1) be aware that fair-skinned men and women aged 65 years or older, and people with atypical moles or more than 50 moles, are at greater risk for developing melanoma; and 2) remain alert for skin abnormalities when conducting physical examinations for other purposes.¹⁰

Accomplishments

In December 2005, CDC and a group of skin cancer experts met to discuss common measures of sun protection and tanning behaviors, with an aim of developing a consensus-based set of core items to measure indoor and sunless tanning use. After reaching a consensus, the core measures were cognitively tested and revised. The recommendations were published in the February 2008 edition of the *Archives of Dermatology*.^{11,12}

Additionally, CDC has worked with other federal agencies and the independent Task Force on Community Preventive Services to review studies of community-based interventions targeting skin cancer prevention. Recommended interventions are published in the *Guide to Community Preventive Services*, and available at www.thecommunityguide.org. This publication describes proven strategies that communities can use to plan and implement skin cancer prevention programs.^{13,14,15,16,17}

Finally, CDC has published articles disseminated for the public, health professionals, occupational health workers, and researchers:

- Glanz K, Buller DB, Saraiya M. Reducing ultraviolet radiation exposure among outdoor workers: State of the evidence and recommendations. *Environmental Health* 2007;6:22.
- Saraiya M, Balluz L, Wen XJ, Joseph DA. Sunburn prevalence among adults—United States, 1999, 2003, and 2004. *MMWR* 2007;6(21):524–528.
- Glanz K, Halpern A, Saraiya M. Behavioral and community interventions to prevent skin cancer. *Archives of Dermatology* 2006;2(3):356–360.
- Glanz K, Yaroch AL, Dancel M, Saraiya M, Crane LA, Buller DB, Manne S, O’Riordan DL, Heckman CJ, Hay J, Robinson JK. Measures of sun exposure and sun protection practices for behavioral and epidemiologic research. *Archives of Dermatology* 2008;144(2):217–222.
- QuickStats: Percentage of teens aged 14–17 years who used indoor tanning devices during the preceding 12 months, by sex and age—United States, 2005. *MMWR* 2006;55(40):1101.

These and other public health efforts that address skin cancer support CDC’s overarching goal of healthy people in every stage of life. They also address the U.S. Department of Health and Human Services’ Healthy People 2010 goals of increasing the proportion of people who use at least one sun-protective measure that may reduce the risk of skin cancer, and reducing the rate of melanoma cancer deaths to 2.5 deaths per 100,000 people.

Ongoing Work

CDC’s skin cancer prevention and education efforts include

- Funding cancer programs in nine states to implement skin cancer activities outlined in the states’ Comprehensive Cancer Control (CCC) plans, through the National Comprehensive Cancer Control Program. With a total award of \$475,000, these states are increasing awareness and educating children and adolescents, as well as establishing school policies based on the recommendations of *Guidelines for School Programs to Prevent Skin Cancer (Guidelines)*. Accomplishments include the development of:
 - Sun safety questions incorporated into the state Behavioral Risk Factor Surveillance System (BRFSS) (www.cdc.gov/brfss/).
 - Elementary school education kits to integrate skin cancer education into current classroom lessons.
 - Partnerships with the Parent-Teacher Association (PTA), Environmental Protection Agency (EPA),

Young Men’s Christian Association (YMCA), American Cancer Society (ACS), state school nurses’ associations, pharmaceutical companies, state CCC coalitions, and dermatological societies.

- Media campaigns.
- Mini-grants to schools for shade shelters.
- A foundation for a sun safety program across several counties in one state to develop curriculum and policies for schools, pools, camps, and beaches.
- Analyzing data collected from a pilot program with three states. The states’ education agencies collaborated with the states’ departments of health to conduct demonstration projects implementing the *Guidelines*. Lessons learned for possible replication in other states will be reported to CDC.
- Supporting epidemiologic, behavioral science, and surveillance research efforts designed to expand knowledge about skin cancer prevention and control.
- Promoting and disseminating *Shade Planning for America’s Schools*, a manual to help schools create and maintain a physical environment that supports sun safety by ensuring that school grounds have adequate shade (www.cdc.gov/cancer/skin/).

Future Directions

CDC’s skin cancer prevention education initiative plans to:

- Enhance prevention research to identify effective strategies for reducing skin cancer risk.
- Increase support of skin cancer activities described in states’ CCC plans. Specifically, CDC’s National Comprehensive Cancer Control Program will fund selected states with approved skin cancer activities.
- Promote, disseminate, and support the implementation of the *Guidelines for School Programs to Prevent Skin Cancer*.
- Continue surveillance on monitoring sun protective behaviors among the U.S. population.
- Consider the feasibility of a monograph on the descriptive epidemiology of melanomas in the United States.

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Contact Information

Centers for Disease Control and Prevention

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

Mail Stop K-64
4770 Buford Highway, NE
Atlanta, GA 30341-3717

1 (800) CDC-INFO ■ Fax (770) 488-4760
CDCINFO@cdc.gov ■ www.cdc.gov/cancer