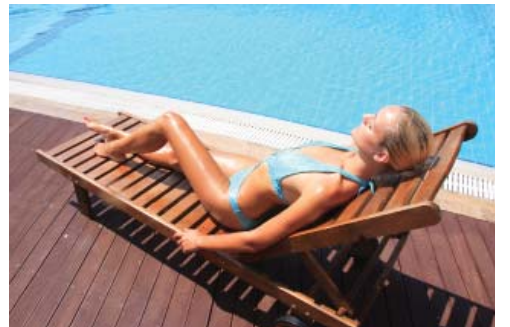


Summer Sun Protection Kit



Provided as a public service by the National Foundation for Cancer Research



Research for a Cure

4600 East West Highway, Suite 525
Bethesda, MD 20814
1-800-321-CURE (2873) • www.NFCR.org

INTRODUCTION

More than 1 million people are diagnosed with skin cancer every year in the United States. But many of these cases could have been prevented!

Research has shown that much of the skin damage that leads to skin cancer is caused by over-exposure to Ultraviolet (UV) rays from the sun or from tanning beds. This damage is easily preventable.

Keep reading to learn our recommended ways to protect yourself and your family from sun damage.

Who is at risk for getting skin cancer?

Everyone! But especially ...

- Anyone who has fair skin, red or blond hair, and blue, green, or gray eyes
- Anyone with a history of substantial sun exposure
- Those with occupations that require long hours outdoors
- Anyone who spends extensive leisure time in the sun
- Anyone who has already had skin cancer
- Though naturally dark-skinned people are less likely than fair-skinned people to get skin cancer, it is still essential for them to practice sun protection



Your Risk

Overall, the lifetime risk of getting melanoma (the most deadly form of skin cancer) is:

1 in 50 for Caucasians.

1 in 200 for Hispanics.

1 in 1,000 for African-Americans.

Interesting facts:

The majority of skin cancers in African-Americans are squamous cell carcinomas, usually arising on the sites of preexisting inflammatory skin conditions or burn injuries.

Squamous cell carcinomas are at least twice as frequent in men as in women. They rarely appear before age 50 and are most often seen in individuals in their 70s.

SKIN CANCER RISK FACTORS

Sun Exposure

- Both UVA and UVB rays can induce skin cancer.
- Parents beware: blistering sunburns in early childhood increase the risk of developing skin cancer later in life.
- Cumulative exposure also is a factor – people who live in sunny climates are more likely to get skin cancer.
- Tanning beds increase your exposure to UV rays and your risk of skin cancer. There are many healthier alternatives to tanning beds, including sunless tanning sprays and lotions.
- An FDA panel has recommended new restrictions on the use of tanning beds. Stay tuned for final decisions by the FDA.

Moles

- Regardless of type, the more moles you have, the greater your risk for melanoma.
- Normal moles — the small brown blemishes, growths, or “beauty marks” that appear in the first few decades of life in almost everyone
- Atypical moles, also known as dysplastic nevi.

Skin Type

- People with fairer skin are at increased risk.

Family History – Genetic Component in MELANOMA

- 1 in 10 patients diagnosed with melanoma also has a family member with a history of melanoma.
- Each person with a first-degree relative diagnosed with melanoma has a 50 percent greater chance of developing the disease than people who do not have a family history.
- If the cancer occurred in a grandmother, grandfather, aunt, uncle, niece or nephew, there is still an increase in risk, although it is not as great.

TYPES OF SKIN CANCER

Basal Cell – most common form of skin cancer (most common cancer)

- Affects 1 million Americans each year
- Rarely fatal, but can be highly disfiguring from surgical removal of large tumor

Squamous Cell – second most common skin cancer

- 250,000 new cases each year
- Resulting in approximately 2,500 deaths.

Melanoma – Accounts for less than 5% of skin cancer cases – but it causes most skin cancer deaths.

- The number of new cases of melanoma in the United States HAS NOT changed much in the last 8 years.
- The disease is highly curable if detected in its earliest stages and treated properly
- Skin cancer cells can spread to distant sites in the body or METASTASIZE.

HOW DOES SKIN CANCER START?

- Skin cancer, like other cancers, does not develop overnight
- It starts with a single cell or a small group of cells, and grows over long periods of time after the DNA of the cells gets damaged
- The damaged cells continue to multiply in an unregulated manner
- We call this unregulated abnormal growth “cancer”

SKIN CANCER PREVENTION

Here's what you can do to stop skin cancer before it even starts! These are every-day tips you can use to help keep you and your family skin cancer free:

- Use sunscreen with an SPF (sun protection factor) of at least 15. Use it even on hazy days, since the harmful UV rays can still get through.
- Because the PABA (para-amino-benzoic acid) in most sunscreens blocks UV-B rays, but not UV-A, be sure to choose a brand that contains benzophenones or zinc oxide to also block UV-A rays.
- Be sure to put your sunscreen on about half-hour before you go outside.
- If your fun-in-the-sun involves water (swimming, boating, water skiing, etc.), remember to reapply sunscreen after getting wet. Also reapply if you are exercising enough to perspire.
- Wear a hat with a brim wide enough to shade your ears, back of neck and face. This is especially important for children.
- Wear long sleeved shirts and light-weight pants. Wear sunglasses that block UV radiation (which can cause cataracts in the eyes).
- If you take any over-the-counter or prescription drugs, ask your doctor or pharmacist if they increase sun sensitivity.
- Stay away from tanning booths and lamps. Since they also use UV rays, including UV-A, they are no safer than natural sunlight.
- Keep your diet rich with dark green vegetables; these are high in phytonutrients like sulforaphane which help the skin.
- Try to keep you and your family them out of the sun between 10:00 a.m. and 2:00 p.m., when the sun's ultraviolet rays are the strongest.
- Wear a very high SPF sunscreen on all scars. If scars get direct sunlight during the first year after forming, they can remain pink for years instead of fading to a less noticeable translucent color.
- If you do get a sunburn, apply aloe to alleviate the pain. The aloe plant has a natural skin protecting ingredient.
- Keeping your skin moisturized after exposure to sun is very important. Use a rich moisturizer (like a cocoa butter formula) with vitamin E, or if possible, use an actual aloe plant; apply the tissue from the inside of the leaf directly to the skin. The oils in this plant help repair skin after a sunburn.
- Always wear lip balm with a minimum SPF of 15; try to get UVA and UVB protection.
- The oils and fats in avocado and olive oil can be used twofold; keeping these "good fats" in your diet keeps your skin and hair healthy and shiny respectively; in addition, they can be applied directly to your damaged skin or hair.
- It may sound strange, but putting sunblock directly into your hair and rubbing it into your scalp can help protect against burning.
- Taking a bath with certain ingredients like a few cups of whole milk or water-soluble lotion after exposure to sun can help alleviate damage.
- Stay hydrated; consume significantly more water than usual when you are spending time in the sun; this will keep your body and skin hydrated and looking young.
- Wear sunglasses to not only protect your eyes from the sun but also to reduce wrinkles or "crow's feet" from squinting.

PALE IS BEAUTIFUL, TOO!

What's fashionable often influences our choices - how we look, what we do, even what we think. In Victorian times, the fashion was for ladies to have pale, milky-white skin, indicating that they were financially well-to-do and did not have to toil in the sun. More recently, a bronzed, suntanned look has been considered fashionable, and even "healthy."

Yet just the opposite is true. A tan is a sign of skin damage! It is proven scientific fact that overexposure to the sun damages skin, causing cumulative, permanent, irreversible harm, including (but not limited to) skin cancer. Researchers have found that the damage is caused by two types of ultraviolet (UV) radiation: UV-A and UV-B, not just UV-B as previously believed. How much UV exposure depends on how strong the sunlight is, how long you are exposed to it and whether or not your skin is protected.

As scientists uncover increasing evidence of the dangers of UV radiation, the reasons to seek shade also increase. Besides skin cancer, which can be deadly, harmful effects of the sun include:

Premature "Aging" - Even ordinary sun exposure causes injury to the skin, previously thought to be due to age, but now recognized simply as damage. This damage is cumulative over the years, resulting in wrinkling and sagging as well as rough, leathery skin.

Eye Damage - UV radiation has been shown to cause cataracts in the eyes.

Reduced Immunity to Infections - By damaging blood vessels beneath your skin, UV-A and UV-B rays can actually decrease your body's ability to fight off infections.

EARLY DETECTION

If you haven't prevented skin cancer, you can at least catch it early before it metastasizes (spreads to other parts of the body)

The best way to do this is through regular skin self-exams.

How to do a Skin Self-Exam

- Be sure to check every part of your skin, not just the places that are easy to see!
- Stand in front of a large mirror.
- Use a hand mirror to check the backs of your legs, the soles of your feet and the undersides of your arms.

What to look for

For Non-Melanoma (Basal and squamous cell carcinoma)	For Melanoma Remember "ABCD"
Smooth, pearly or translucent lumps that may bleed or crust over Smooth, pearly or translucent lumps that may bleed or crust over	Asymmetry-one half of a mole looks different than the other half
Flat red spots that are scaly, crusty or smooth	Border irregularity-the edges of a mole are ragged, blurred or notched
Firm reddish lumps	Color-does the shade vary from one part of the mole to the other?
Persistent, scaly, reddish or brownish patches on parts of the skin that have been exposed to the sun	Diameter-the mole is larger than a pencil eraser

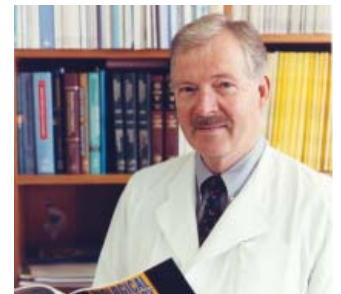
SKIN CANCER RESEARCH

NFCR scientists are working around the clock to find a cure for cancer. Every day, we are learning more and getting closer! Here's what just some of our researchers are doing to help fight skin cancer.

NFCR Fellow Helmut Sies, M.D.

Heinrich Heine Universitat, Germany

Searching for “A Second Layer of Sunscreen” is the focus of NFCR Fellow Helmut Sies, M.D., from Heinrich Heine Universitat, Germany. Back in the 1980s, Dr. Helmut Sies discovered the powerful anti-oxidation activity of lycopene, the famous red pigment in tomatoes and other fruits and vegetables. His recent research with human volunteers showed that lycopene and other carotenoids (natural pigments) effectively ameliorated UV-induced skin damage (erythema) in humans, which can help reduce the risk of skin cancer. Dr. Sies' discovery increases the possibilities of using dietary intervention for skin cancer protection, and helps the development of functional foods that may enable humans to create a second layer of powerful sunscreen from inside out.



NFCR Center for Metastasis Research

University of Alabama (Birmingham) directed by Danny Welch, Ph.D.

Stopping the Lethal Spread of Melanoma and other types of cancer is the steady march of the NFCR Center of Metastasis Research,

University of Alabama (Birmingham) directed by Danny Welch, Ph.D. Melanoma can take a patient's life within 4-6 months once it has

spread. Very little is known how cancer cells spread to distant sites in the body and many researchers have shied away from the complex biology of metastatic cancer.

Dr. Welch and his collaborators are opening the research doors toward an understanding of the metastatic process and finding ways to stop its killing. They have discovered six “metastasis suppressor genes” including BRMS1 and KISS1 genes that stop the spread of melanoma. The impact of this research is enormously significant, as it is leading to the development of novel anti-cancer therapies that prevent metastasis from happening or keep it dormant, putting the cancer under control and giving patients new hope for a cure and extended life.



HOW YOU CAN HELP

These research projects, and many others, hold great promise for yielding more effective therapies for patients with skin cancer. With more funding, however, they could ramp up their efforts and accelerate progress to save more lives!

Although most skin cancers are curable, they still cause lasting damage and disruption to a patient's life. Melanoma is estimated to claim 8,700 American people's lives in 2010 alone, accounting for more than 70% of all skin cancer deaths.

Studies show that only 15% of patients with metastatic melanoma could survive for 5 years or longer. Better treatment strategies are in high demand for this lethal skin cancer.

When you donate to the National Foundation for Cancer Research, your dollars help our scientists accomplish many important research goals aimed at developing better cancer treatment and prevention strategies. Visit www.NFCR.org today to learn more, and join the millions of individuals across the globe who are helping us to save lives through cutting-edge cancer research.



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