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Solar Flare – What you don't know can kill you!

Whitepaper by Wendy Steele, Keys Founder

Your skin is the first thing that people notice about you—at every age! We often take it for granted. The fact is we rely on our skin health to protect us every day of our lives, as the body's first defense from the damaging effects of the environment.

What you choose to do to your skin has everything to do with the skin results that you will get. Everyday, people use soaps, scrubs, gels, toners, lotions, creams, skin lighteners, brighteners, faders—and the list goes on! Most of these products contain chemicals that can sensitize, irritate and even weaken the skin.



The absolute worst culprit for lifetime damage and irritation of the skin is the relentless everyday effects of solar radiation. How much time you've spent on the beach blanket or at the pool in your lifetime does make a difference in how your skin looks today. In the case of melanoma skin cancer, if not detected early it can kill you.

It still astounds me when I hear someone say; "I'm just working on getting a base tan" as if it is good for you! How did an entire generation flock toward the beach with the belief that the sun was good for you and act as if tanning was healthy, attractive and desirable?

Circa 1960's- 70's Tanning culture rides the wave

Picture a sun-drenched California beach with young muscle builders, beach babes and surfer dudes. Back then, the "Ho Daddy's" were actually the want to be surfers that hung out on the beach, in hopes of cruising with the beach babes. The genuine surfers didn't care about all of the beach hubbub; after all they really just wanted to catch the perfect wave and hang ten.

No kidding—the tanning culture did not start in the U.S. until the 1960's. For the countless hours they spent outdoors in the sun, young people created the foundation for some extensive cumulative skin damage—radiation is real, it burns skin tissue. Skin that is tanned is the body's response mechanism to the repeated injury to their skin. Pictures of Hollywood stars on Malibu and Santa Monica beaches and poolside in Palm Springs and Las Vegas jump started the culture of tanning in this country. And unfortunately many of them today still continue to fuel the fire!

Interesting flashback...if you watch an old period movie on the Turner Classic Movie channel you are likely to see cowboys wearing long sleeved shirts, long pants and hats and gloves; while western frontier women appear with long skirts, long sleeved shirts, gloves, big brimmed hats and parasols. As if!

Not so long ago it really was all about taking cover from the sun and the elements. Well, I believe it is once again high time to take prudent cover and understand how to protect yourself and your loved ones every day of the year from damaging solar radiation.

Circa 2005 – The stakes are high
We are paying a huge price for continually damaging our skin

You are never too old or too young to suffer from the damaging effects of solar radiation. Scientific studies recently found that having several sunburns over the course of a lifetime can double or even triple melanoma risk, no matter when the sunburns occur. The fact is there are no safe ultraviolet (UV) rays or safe suntans.

More than half of all new cancers in the USA are skin cancers. The sun is responsible for more than 90 percent of all skin cancers. Precaution and early diagnosis could prevent 100,000 new cancer cases and 60,000 melanoma deaths in the U.S. each year!

The Mayo Clinic revealed in August 2005 that their studies have indicated that the incidence of two types of skin cancer has tripled in women under 40. Skin cancers are increasing rapidly in people over age 50 as well. Melanoma skin cancer is rising at an alarming rate.

Melanoma is dangerous because it can be a horrifyingly swift and silent killer if not detected at its earliest stages. There are many stories of heartbreak of losing loved ones so early in their lives to this type of cancer and leaving a legacy of the importance of being vigilant and paying attention to the skin's early warning signals. Early diagnosis is in fact the best chance for excellent cure rates.

My defining moment....having had a melanoma changed everything

I will always remember the day when my husband, Bob, first noticed a strange-looking spot on my leg. It was a glorious summer day in San Diego where we lived aboard our boat, and I had just kicked back and propped up my feet when Bob pointed to a small waxy spot on the outside of my left leg near my ankle. It caught me off guard because even when I shaved my legs I had not noticed this funky spot! First it was in a tough place to see it—I actually needed a mirror to get a good look at it. Second, it was a pearly translucent white looking area, like a very thin piece of hot wax had been dripped on my left ankle just above the ankle bone. At first glance it was not alarming and only about the size of the tip of my little finger (little then did I know how much size matters). We both agreed to keep a watchful eye on it. About 6 weeks later Bob was alarmed when he saw that this “waxy” spot on my left ankle turned bright red.

I made several calls to friends in the medical community who urged me to get an emergency appointment to a dermatologist. At first I thought they were over-reacting, and then I recalled the tone and urgency in their voices. It had unnerved me and that spurred me into action. How lucky I was to be referred into Dr. Hugh Greenway, a renowned dermatology specialist at Scripps Clinic in San Diego. Dr. Greenway is an internationally recognized expert in skin cancer surgery and considered by peer review to be one the best doctors in America. Within two weeks of discovering the red lesion, I had a skin biopsy and upon receiving the dermatology report confirming melanoma, I was advised to report for surgery within five days. It all happened so incredibly fast which served to underscore the seriousness of this type of cancer.

After having successful Mohs Microsurgery at Scripps Clinic, Dr. Greenway was adamant that the most important thing I could do was to be vigilant about limiting the amount of time my skin was ever exposed to direct sunlight, especially between the daytime hours of 10-4pm. He stressed how UV radiation was now my arch enemy and how important it was to wear sun protection every single day---rain or shine. He instructed me to always wear a hat and protective clothing when outside or when

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exposed to the sun for long periods of time, and to cover up while driving or even sitting for long periods of time next to a bright sunny window.

**Beating rising skin cancer odds
depends on educating people of all ages against conventional thinking**

Perhaps the greatest education I received is that the use of sunscreen does not mean that you can stay in the sun as long as you like! Yes, really! I learned that anytime you spend time outdoors you are risking solar radiation damage. Radiation is cumulative. The hours of 10am-4pm remains the most dangerous period to spend any extended time in the sun. Extended outdoor exposure during these hours should be avoided. Sunscreens in fact absorb or scatter UV radiation and can still allow harmful UV rays to penetrate and damage the skin.

There is controversy and concern about sunscreens. Sunscreens containing benzophenones and cinnamates act to absorb UV rays before they enter the skin. The concern is that sunscreens contain chemical particles small enough to enter the bloodstream. There are many experts who will tell you that a much better choice for topical protection is a sunblock compounded with zinc oxide, without sensitizing chemicals. Zinc oxide reflects the UV rays and is particularly effective for the most sensitive skin. We use zinc oxide in our Solar Rx 30+ sunblock, to provide more complete protection and coverage without any chemicals to irritate the skin. As a melanoma survivor I choose to avoid titanium dioxides as much as possible on my skin.

I also learned that sunscreen alone will not prevent aging of the skin—special attention needs to be paid to the delicate face, neck and hands. These areas of the body should be shaded and covered as much as possible. No effective comprehensive skin protection plan can be without hats, protective clothing, sunglasses and sunblock. Protection from solar radiation in fact requires a plan and some realistic and rational thinking! Your skin health and perhaps your life depends on just how you decide to go about doing this.

Radiation is radiation... Radiation is cumulative

If you are reading this and saying to yourself, well I have survived this long without a problem—then I hope you will consider the following for loved ones around you, and especially for your children or grandchildren:

Sunburn in childhood is a key determining risk factor for the most dangerous type of skin cancer – melanoma. The experts warn that just one blistering sunburn in childhood is estimated to double the risk of getting melanoma later in life.

I grew up with wonderful childhood sailing experiences on the Chesapeake Bay. Unfortunately I experienced a blistering sunburn close to the age of nine. Thirty years later, when Dr. Greenway at Scripps Clinic took my chronological childhood history of sun exposure, he concluded that the radiation damage that contributed to my melanoma most likely occurred between the ages of nine to fifteen years of age!

The Mayo Clinic's Leslie Christenson, M.D. stated in her August 2005 study results; *"Because non-melanoma skin cancers generally occur in persons after 50, very little attention has been paid to their incidence in younger adults and children. We have discovered that these cancers are becoming increasingly prevalent in younger people, and if steps are not taken at a young age to prevent these cancers, we may see an exponential increase in the overall occurrence of non-melanoma skin cancers."*

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The threat is real. Overexposure to radiation, ultraviolet light from the sun or indoor tanning is the greatest risk for skin cancer. Excessive sun exposure for the first 18 years of life increases the risk of melanoma.

The clear message here is that we can take specific actions now to eliminate sunburn in children and young adults. Those actions, taken now, can indeed help to prevent the epidemic of skin cancer incidence and death from skin cancer should decrease!

Early detection and diagnosis is critical to increase melanoma survival
Know the early warning signs of skin cancer

The three main forms of skin cancer are Basal Cell Carcinoma, Squamous Cell Carcinoma and Melanoma. Comprehensive skin awareness begins with knowing your body and skin! You know your skin better than anyone else. Check your body thoroughly at least every three months. Look for any changes. Learn and use the ABCD's as you examine your skin. It is especially important to help your loved ones, your spouse, partner and especially children and young adults to recognize changes in their skin. Early detection is critical to reducing deaths due to melanoma!

The early warning signs are commonly referred to as (the ABCD's):

- A- Asymmetry : one half of a mole does not match the other half. Common moles are round and symmetrical.
- B- Border irregularity: skin cancer may have uneven or irregular borders; the edges are ragged, notched or blurred.
- C- Color: mole is not uniform in color; watch for varied colors that can range in shades from brown, tan or black and also red, white and blue
- D- Diameter: if a spot is larger than a pencil eraser (6mm or ¼ inch diameter it could be trouble; melanomas are usually larger than 6mm.

To be sure use the following guide along with the ABCD's—*Any changes in size, color, shape or texture of a mole, new mole, itching or bleeding, a change in skin including a growth that increases in size, a spot that continues to scab, itch or bleed---see a clinical practitioner/dermatologist immediately!*

We have created a cancer awareness card for your reference see below.

Solar Rx
Keys philosophy on Sun Protection to avoid melanoma and skin cancers:

We believe in a comprehensive awareness program to avoid life-long solar radiation damage that begins with the simple statement:

The best way to prevent skin cancer and photoaging is to keep the harmful UV rays from contacting and penetrating the skin.

Photoaging, caused by the UV radiation, directly contributes to the wrinkles, skin blotchiness, redness and collagen and tissue breakdown that show up in people as skin damage. Due to excessive exposure to the sun and tanning devices, many young adults are seeing the effects of this damage at an earlier age---in their twenties!

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We believe it is prudent advice for all ages--stay out of the sun and limit time spent in the sun. Avoid unnecessary sun exposure between 10:00am and 4:00 pm, when the solar UV rays are the strongest. Use sun avoidance protective measures rain or shine, all year-round.

We understand that complete sun avoidance is not realistic so we offer the following four steps to make people aware of how they can protect their skin and the skin of loved ones from the adverse affects of solar radiation:

Prepare for the time that you know you will be exposed to the sun. The best way is to think of it as creating and using your own portable shading devices:

Slip on a SPF 30+ long sleeved shirt and long pants or long skirt

Slop on a SPF 30+ broad spectrum Sunblock with Zinc Oxide

Slap on a wide-brimmed SPF 30+ Hat with a 4-5 inch brim

Shades for shielding the eyes-always wear UV filtering sunglasses

For more information on skin cancer awareness, please see the following resources on our website:



- Keys Slip, Slop, Slap, Shades and ABCDs of Melanoma Wallet Card is available for download as a pdf file at
 - <http://www.keys-soap.com/cancercard.pdf>
- Mayo Clinic, Research Findings Reported to JAMA August 10, 2005; <http://www.mayoclinic.org/news2005-rst/2989.html>
- The Skin Cancer Foundation website <http://www.skincancer.org>
- American Academy of Dermatology website <http://www.aad.org>

Wendy Steele, Keys Soap Founder is a Melanoma Survivor. She is an Inner Circle member of the Skin Cancer Foundation.

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