

# The Sinister Side of the Sun

A high-risk group for skin cancer, boaters should pay special attention to protecting their skin from the damaging effects of the sun

BY DIANE SELKIRK

I've always considered a sunny day on the water to be about as close as it gets to paradise. Nothing beats sailing along with the sun sparkling off the water, under a sky so blue it looks like I could swim in it. But the more I've learned about how the sun can damage my skin, my eyes and even my immune system, the more I've had to re-evaluate my definition of paradise.

Five years ago, a good friend, and fellow boater, died after being diagnosed with melanoma. Before his death, I

**Prolonged exposure to sun, particularly for those with fair skin, can lead to skin cancer.**

promised him I'd get my skin checked once a year. But six months after a routine check-up, I noticed that the small round mole above my shin had begun to look like Pac-Man. It also itched slightly. But it looked so cute and benign—so much a part of my leg—that I felt silly mentioning it to my family doctor. She told me it pays to be diligent and sent me to the skin clinic. The dermatologist inspected my leg and said it was probably nothing, but as he removed the mole, he told me you can never be too careful.

To be candid, I am fair. I have reddish hair, loads of freckles and four moles. As a child I wanted to tan like my sisters did. Instead, I burned and occasionally blistered. When I was a teenager, I started teaching at sailing camp, and because I was out in the sun every day, I became more careful about using sunscreen. But it wasn't until I reached adulthood, and spent four years sailing in the tropics, that I became fanatical about limiting my sun exposure. Unfortunately, however, my devotion to sun protection came too late—my cute mole turned out to be melanoma.



**The Numbers** According to the Canadian Cancer Society, one in seven Canadians will develop skin cancer in their lifetime, and in B.C., skin cancer incidence has doubled over the past 15 years. This year, more than 80,000 Canadians will be diagnosed with basal or squamous cell carcinomas, at least 4,600 more will be diagnosed with melanoma and approximately 900 people will die from melanoma.

“Melanoma is one of the most rapidly increasing types of cancer—though research hasn’t yet discovered the reason why.”

**Boaters at Risk** As boaters, we are part of a group that’s at increased risk for skin cancer. Our activities keep us in the sun for hours, often on warm, sunny summer days. Those tans and sunburns we bring home, as marks of distinction from a great weekend aboard, are signs that we’ve damaged our skin. Doctors first noted in the late 1800s that sailors exposed to the sun developed prematurely aged skin, which they called “sailor’s skin,” and by the early 1900s an excess risk of skin cancer was observed among seafaring types.

While outdoor activities are part of a healthy lifestyle, over exposure to the sun’s damaging ultraviolet (UV) rays can lead to skin cancer. But it doesn’t have to be this way. Of all the cancers we have to contend

with, skin cancer is considered one of the most preventable. Yet according to Tara Taggart, a health promotion coordinator with the Canadian Cancer Society, only 56 percent of us practice safe sun behaviour.

Taggart says that the good news for boaters is that as a population we tend to be very aware of skin cancer. She discovered that the Royal Victoria Yacht Club sailors she recently worked with on the Swiftsure race were, as a group, pretty sun savvy. I fear this awareness may have come at a cost though; nearly every boater I know can name someone who has been diagnosed with skin cancer.

**From Sun Tan to Skin Cancer**

Scientists say that cumulative exposure to the sun’s UV rays damages the DNA in our skin—it is radiation after all. Our bodies are pretty good at repairing the damage, but if we keep exposing our unprotected selves to the sun, those damaged cells will multiply and eventually develop into cancer.

Recently, we’ve discovered the problem with the sun goes even deeper. It appears that over-exposure to UV-radiation also makes your immune system weaker. It does so by altering



The surgery wounds (and drainage tube) from the removal of malignant melanoma. The patient advises others to wear sunscreen and ask a dermatologist about suspicious moles immediately.

the distribution and function of disease-fighting white blood cells. This decrease in immune function can indirectly cause cancer by inhibiting our body’s ability to repair itself.

The good news is that if you catch it early, skin cancer is one of the more innocuous cancers to have. For the most part, it is contained

**Test your sun IQ**

**1 I don’t need sunscreen if I’m swimming, the water can protect me. True or False?**

False: 60–80 percent of the sun’s rays can reach at least one foot below the surface of the water, which is where you’ll be.

**2 I have a darker complexion, but I’m still at risk for skin cancer. True or False?**

True: Skin cancer develops in people of all shades, from the fairest to the darkest.

**3 The half-bottle of sunscreen I just found in the back of a locker will work fine for another season. True or False?**

False: Throw that old sunscreen away if it’s reached its expiry date. Over time, sunscreen chemicals degrade and lose effectiveness.

**4 All sunlight has the same UV concentration. True or False?**

False: The intensity of the sun’s rays depends upon the time of year, the time of day, and the altitude and latitude of your location.

**5 The best way to protect my skin when I’m in the sun is to cover up. True or False?**

True: Tightly woven clothes screen out harmful UV rays. Sunscreen is often applied too thinly and too infrequently and often fools people into thinking they can be in the sun longer than they should be.

**6 It’s sunny and fairly cool out, but I still need sun protection. True or False?**

True: Neither heat nor brightness are indicative of UV intensity.

**7 Skin cancer only shows up where the body was exposed to the sun. True or False?**

False: Skin cancer often shows up on the face, arms, neck and other places that get plenty of sun, but the disease can strike anywhere, such as the bottoms of the feet and under finger nails—one of the mysteries of cancer.



**8 Boaters are at an increased risk of skin cancer. True or False?**

True: Any activity that increases your exposure to the sun increases your risk. And water can

to the spot where it's found, and once the cancer is removed, you're essentially cured; however, your risk for future cancers is increased.

**Types of Skin Cancer** When skin cancer develops, 80 percent of the time it's **basal cell carcinoma**. Basal cell most often turns up in men over 50, on sun-exposed areas like the face, neck, arms and legs. While the appearance of basal cell can vary, the Canadian Dermatology Association says we should be on the look out for:

- A firm, light-coloured bump, often with a pearly border.
- A growth that bleeds, heals and then reappears.
- A small, red scaling patch often found on the trunk or limbs.

While these basal cell tumours rarely metastasize (develop into a cancer that can spread to other parts of the body), it is still cancer and will continue to grow. To prevent damage to surrounding skin, it is still better to diagnose and treat the illness early.

The next most common form of cancer is **squamous cell carcinoma**. This cancer tends to develop in fair-skinned, middle-aged people who have had years of sun exposure. The thickened, red, scaly bumps or wart-like growths can grow rapidly over a period of just a few weeks—so watch for change. Squamous cell tumours are often found on the back of the hand or neck or on the rim of the ear. Squamous cell can eventually metastasize, so early treatment is ▶

reflect back 20–90 percent of the UV rays that hit it, intensifying exposure.

**9 Skin cancer is easily curable in its early stages. True or false?**

True: Experts say the cure rate for skin cancer would be much higher if people learned the signs of skin cancer and sought medical care more quickly.

**10 I can skip the sunscreen if a day is overcast. True or False?**

False: Up to 90 percent of UV rays can penetrate clouds, meaning you can still get sunburned on a lightly overcast day.

Source: BC Health Guide, [www.bchealthguide.org](http://www.bchealthguide.org). —DS

important to keep it from spreading.

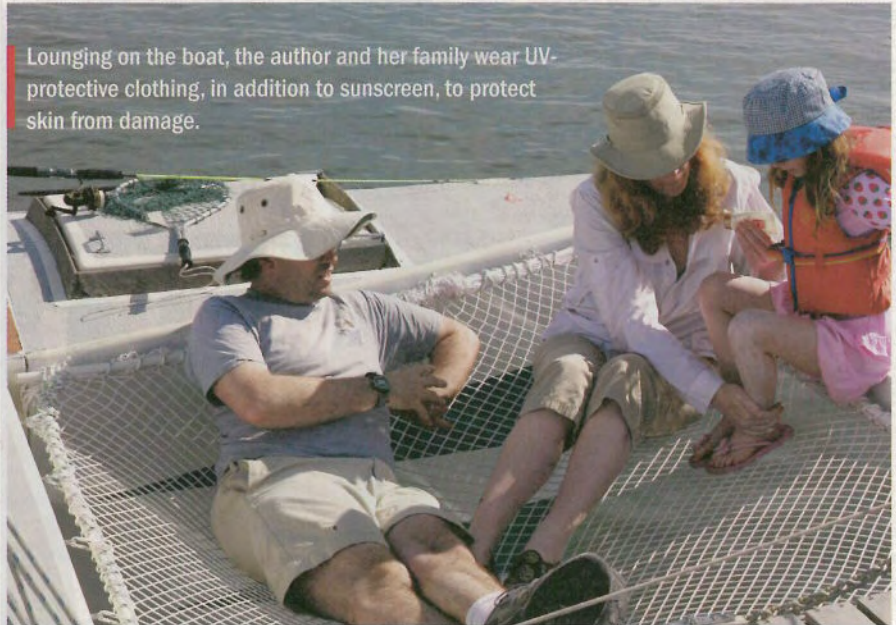
**Melanoma** occurs when cancer develops in the melanocytes (the cells that give the skin its colour, typically a mole). This is the most dangerous form of skin cancer because it can spread into the lymph nodes and then into organs. Melanoma is one of the most rapidly increasing types of cancer—though research hasn't yet discovered the reason why. Fortunately, melanoma also has one of the highest cure rates of all metastasizing cancers—if it's found early. The "ABCDEs" of melanoma can help with early detection:

- **Asymmetry:** a mole with one side different from the other side.
- **Border:** the edge is irregular, ragged and imprecise.
- **Colour:** it may have colour variation, showing brown, black, red, grey or white areas.
- **Diameter:** watch for a mole that gets bigger.
- **Evolution:** note any changes in the shape, symptoms (such as itching or tenderness), surface (especially bleeding) or colour.

**The Joys of Shade** While most skin cancers can be removed surgically, getting annual skin checks and reducing sun exposure, at any age, are the easiest ways to save your skin.

There's a myth that once you have a base tan, or if you don't burn, you don't need to bother with sun protection—it's not true. A base tan, at best, only provides the equivalent protection of an SPF 4 sunscreen. And while much of the damage that can lead to cancer often happens during childhood (a time when many of us spent long carefree, sunscreen-free hours playing outside), you can still do plenty of harm as an adult—especially if you get a blistering burn, which is believed to double your risk for melanoma, in part by disrupting the white blood cells.

The key, of course, is to stay out of the sun. But while night boating can be quite lovely, most of us aren't prepared to give up daylight. So Taggart says we should avoid overexposure. There are some great ways to do this, but one of the best is to get a bimini or sun-awning for the boat. Many boaters wrongly assume that, unlike our sun-drenched brethren down south, we don't really need such accessories up here. But we do.



Lounging on the boat, the author and her family wear UV-protective clothing, in addition to sunscreen, to protect skin from damage.

Stratospheric ozone, which shields us from the full intensity of the sun's UV rays, has thinned over Canada since 1980 and is expected to continue thinning. An increase in the levels of UV reaching us compounds the effects of spending time in the sun. According

to some estimates, a 10 percent loss of ozone may lead to a 26 percent increase in skin cancers among fair-skinned people.

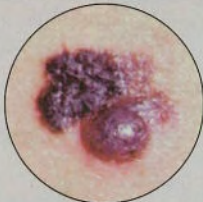
If you can't get into the shade, Taggart says the next best thing is to create your own. A wide-brimmed hat, big movie-star sunglasses and skin-covering clothing are the best way to go. Loose-weave clothing may let in sun, so look for the new lightweight fabrics with added UV protection if a tightly woven shirt strikes you as too toasty. Then slop on some sunscreen. Most of us mess this up. Look for a sunscreen that's at least SPF 15, and use a lot of it; about a shot glass worth if you're doing your entire body. It should be applied at least 20 minutes before heading into the sun and reapplied frequently, especially after swimming or exercising. Also try to keep out of the sun during the peak burning hours of 11:00–15:00 in summer.

**I** was fortunate; my melanoma was found early, and after a few surgeries, I was declared cancer-free. In my case, I was "cured" of the specific melanoma I had, but my risk rate is such that it's about 100 percent likely that I'll have more cancer to contend with in the years to come. So depending on which doctor I talk to, I'm what they call "cured" or "currently cancer-free."

All this has led me to change my behaviour on the water. Not so much with myself—I've been

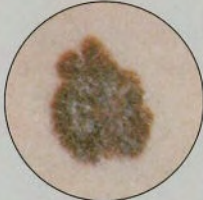
### The ABCDs of Malignant Melanoma

Check your moles and pigmented spots for any of the following signs of malignant melanoma. See your dermatologist if you note any of these changes:



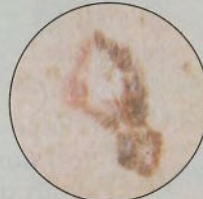
#### Asymmetry

Asymmetry means the shape is not the same on both sides.



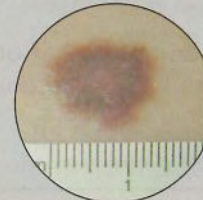
#### Border

The border or visible edge of a malignant melanoma is irregular, ragged and indistinct.



#### Colour

The colour of a malignant melanoma may range from brown to black and have areas of red, grey or white.



#### Diameter

Diameter increase or growth in width is common in melanoma—often more than 6mm in diameter.

pretty sun safe for years—but with others. These days, I always carry extra sunscreen, hats and sunglasses, and I hand them out freely—reminding others to enjoy a great but safe time on the water. And I always suggest they follow-up with an annual visit to the dermatologist. ☺

## Choosing the Right sunscreen

You may have noticed that the sunscreens showing up on store shelves these days have different information on their labels than in the past. This is in response to changes in the U.S. labelling laws that no longer allow sunscreen manufacturers to label their products as “waterproof” or “providing all-day protection” and require they include the warning, “It is important to decrease UV exposure by limiting time in the sun.” The problem was sunscreen manufacturers were making claims that were unproven, and sunscreen users were assuming that if they slapped on a bit of sunscreen in the morning they were good until dusk.

The SPF on the label stands for the “sun protection factor” and is followed by a number that refers to the product’s ability to stop your skin from burning. The higher the number of the SPF, the longer you can be in the sun before burning. The SPF you should be using depends on your skin type; for example, if you burn after 10 minutes in the sun, an SPF 15 that is applied according to directions could theoretically provide up to 150 minutes of protection. Keep in mind, however, that the actual protection is less because sunscreen can get rubbed or washed off.

The problem is the SPF number only refers to protection against the less harmful UVB rays. Most sunscreens don’t defend nearly as well against the UVA rays that are more likely to cause skin cancer. Experts say the best protection against UVA is a sunscreen that includes zinc oxide, titanium dioxide or avobenzone; these are the sunscreens that typically leave a white film on your skin. Look for new U.S. products that will soon be labelled with the level of UVA protection they provide.

Remember though, sunscreen is designed to protect you from unavoidable sun exposure as a final defence from the sun. Hats, shades and shirts should be you first step. —DS