

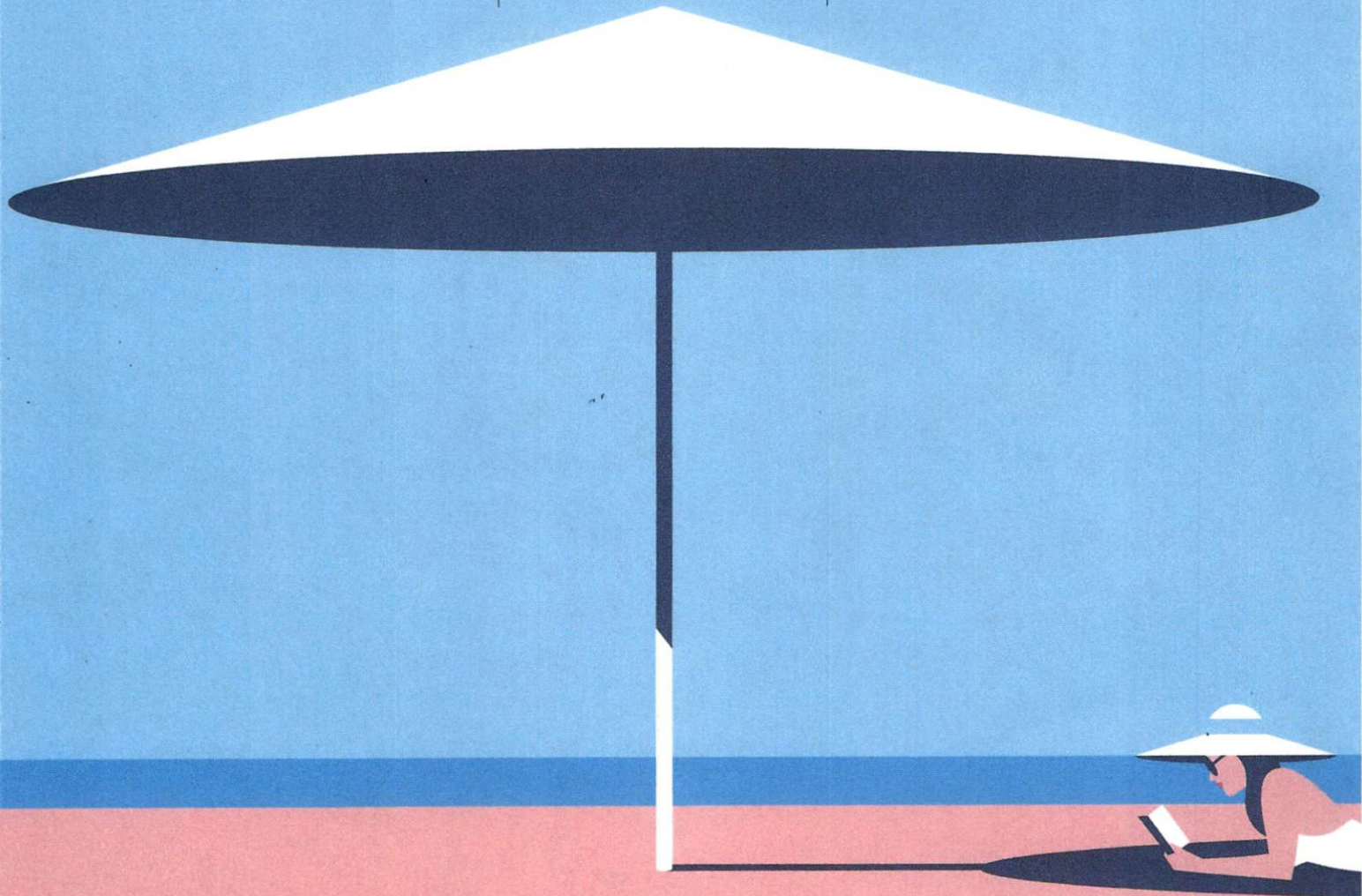
The Skin Cancer Foundation Journal

We care about you and your family.

**You Asked,
We Answered!**
Advice everyone
can use

What You Eat
How food may
help you prevent
skin cancer

**Your Sun
Protection Guide**
All the steps to
save your skin





more than

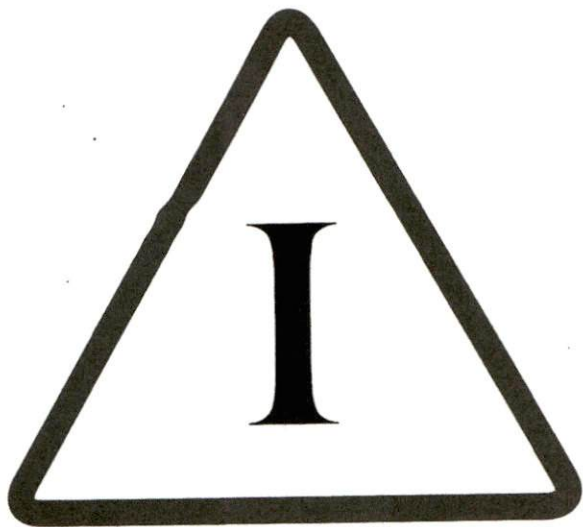
If you (or someone you know) has been diagnosed with two or more nonmelanoma
You are also, unfortunately, at much higher risk

by Julie Bain • Illustrations by Shout



skin cancers, you are part of a special group.
of developing further skin cancers. Here's why — and what you can do about it.

one?



IN FEBRUARY 2017, Australian actor Hugh Jackman posted a photo of his bandaged nose on Instagram, saying “Another basal cell carcinoma.” This was the fifth time he’d required surgery on his nose for this most common form of skin cancer. Imagine how that must feel when your face is shown on giant screens worldwide. Jackman told *People* magazine that he gets his skin checked every three months now because, “My doctor says I’ll likely have more.”

If you’re one of the millions of people who have been diagnosed for the first time with either a basal cell carcinoma or a squamous cell carcinoma (also called BCC and SCC, the major nonmelanoma types of skin cancer), you have better than even odds of getting another. About 60 percent of people who have had one skin cancer will be diagnosed with a second one within 10 years, says a 2015 study in *JAMA Dermatology*.

Your odds increase dramatically if you’ve been diagnosed with a second BCC or SCC (or third, or any other number beyond first). Then you have a 61.5 percent chance of being a repeat customer within just *two* years. So if you’ve been diagnosed twice, welcome to the high-risk club. Hugh Jackman is in it, and Diane Keaton, and millions of regular folks like me (my tally: 10 BCCs and 1 SCC).



Risky Business

“**IT’S IMPORTANT** for patients to be aware of those statistics, because knowing they’re at higher risk can empower them to take action,” says New York City dermatologist Elizabeth K. Hale, MD, a senior vice president of The Skin Cancer Foundation. “While

Five on the Nose

Hugh Jackman has been open about his skin cancers and uses social media to preach the sunscreen gospel to millions.



having previous skin cancers may be the greatest risk factor, knowing your other risk factors is also extremely important.” These include how often you’ve been sunburned, for example, and whether you’ve ever used tanning beds.

Many other factors can put you in this high-risk group, too, like your skin type, genetics and a family history of skin cancer, says Los Angeles dermatologist Ronald L. Moy, MD, also a senior vice president of the Foundation. “Where did you grow up? How much Irish or English do you have in you? How much sun exposure have you gotten, and how much early exposure as a child?”

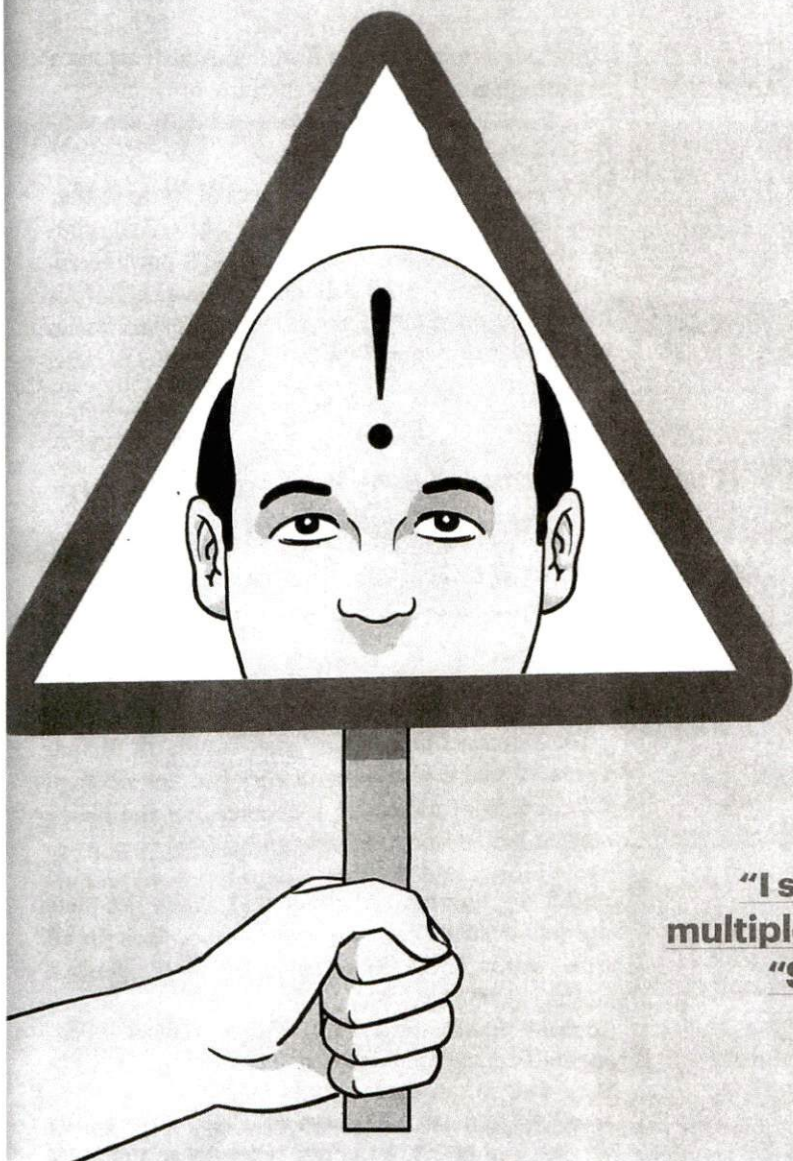
Some patients may think it’s no big deal to be diagnosed with a nonmelanoma skin cancer. For those whose BCC or SCC was detected early and treated right away, it usually isn’t a big deal. If they’re also among the 40 percent of people who won’t develop another skin cancer in the next decade, that’s great news. But for those of us who’ve had more than one, it’s important to understand that these skin cancers *can* be a big deal. While basal cell carcinomas almost never spread (metastasize), some can be aggressive, grow quite large and even become disfiguring. And squamous cell carcinomas can sometimes metastasize, spreading to lymph nodes or beyond if not treated early.

Making matters worse, if you’ve had one type of skin cancer, statistics show you are also at risk for the other types, including melanoma, which can be life-threatening. The main reason for this risky situation? When your skin is exposed to ultraviolet (UV) rays from the sun or from tanning beds, it causes DNA damage in your skin cells. If repair processes in those cells don’t fix all this genetic damage, it can produce mutations that lead to skin cancer. If you’ve had multiple skin cancers, it may signal that you’ve had extensive sun damage, that your immune system is compromised, that your skin just doesn’t repair its DNA very well — or all the above.

“I see patients every day who have had multiple skin cancers,” Dr. Moy says. Some patients even get hundreds of them, such as a fair-skinned commer-

Advice for Men

“I know I’m generalizing,” says Dr. Hale, “but female patients tend to be more motivated and comply with a skin care routine recommended by their dermatologist. ‘What antioxidant? What sunscreen? What moisturizer?’ they ask. Then they do it. To get men to even wear sunscreen is a feat.” Now that products containing DNA repair enzymes are available, though, she says she’s had more success at getting men motivated, too. “I keep it simple and say, ‘Every single morning after you shave, put on sunscreen. Then, in the evening, before you go to bed, put a topical DNA repair enzyme cream on your face or scalp or both.’” She notes that many of her male patients have said it makes their skin look and feel better. “And, most importantly, it decreases their risk of future skin cancers.”



"I see patients every day who have had multiple skin cancers," says Ronald L. Moy, MD. "Some even get hundreds of them."

cial airline pilot from New Zealand he sees regularly. "When you're on a plane, whether as a passenger, a crew member or a pilot, you're bombarded with ultraviolet radiation. Some penetrates the windows, and even the fuselage doesn't protect you completely." Much DNA repair takes place at night, especially when you're sleeping. So for those who travel a lot, lose sleep and get jet lag, that nighttime repair may be disrupted, putting them further at risk.



Make a Commitment

IF YOU'VE had more than one skin cancer, it's important to understand and accept that you're at high risk. Then it's time to make a lifelong commitment to prevention and early detection. "That is what makes skin cancer unique," says Dr. Hale. "Patients can really take ownership. You can't change your genetic predisposition, but there are plenty of things you can do."

↑ Watch Your Head!

Men are less aware of the warning signs of skin cancer than women and less likely to use sunscreen. Let's help change that!



Detect Early

FINDING a dermatologist you feel comfortable with who specializes in skin cancer (and accepts your insurance) is a good first step. Create a regular schedule for skin checks, and talk to the doctor about what to look for on your own skin and when to raise a red flag between regular checkups. For example, pre-cancerous spots called actinic keratoses (AKs) can sometimes develop into SCCs, but you can avoid this by finding and treating them early. "It's a matter of keeping up with these precancers and figuring out what we can do to decrease their chance of getting aggressive and progressing," says Dr. Hale.

Similarly, if you're diagnosed with a BCC or SCC and need treatment such as surgery to remove it, it's always better to do it when it's small. "Sometimes a patient might say, 'If it's not going to kill me, why are you cutting into my face?'" Dr. Hale says. She explains that even though BCCs grow slowly, they may bleed, get scabby and unsightly, and invade deep into

local tissue. Left untreated completely, they can eat through muscle, even bone, and that can make surgery more difficult and more disfiguring. SCCs can attach themselves to local lymph nodes and spread. "It's much better to treat an SCC before it becomes a big problem," says Dr. Hale.



Protect Consistently

FIRST AND FOREMOST, Dr. Hale tells her patients to wear a broad-spectrum, high-SPF sunscreen every day, rain or shine, all year round. To help motivate people, she often cites three important studies that came out of Australia. For 20 years, the researchers followed adults who went from just recreational sunscreen use to everyday sunscreen use. They found that regular sunscreen use reduced squamous cell carcinoma by 40 percent and helped prevent actinic keratoses, too. Later they determined that it cut melanoma incidence in half. And in 2013, they showed that regular sunscreen use also reduced signs of skin aging and wrinkles by 24 percent.

Sunscreen alone can't protect you fully, though. See our "Daily Sun Protection Guide" on page 70 for

detailed advice on sunscreen, sun-protective clothing, hats, sunglasses and more.



Fight the Damage

CONTINUING to use sunscreen and other sun protection daily is crucial and will help you prevent skin cancers down the road. "Meanwhile," says Dr. Moy, "there are things you can do now to repair some of the skin damage you already have."

• **Nicotinamide:** Dr. Moy strongly recommends nicotinamide (also called niacinamide), a form of vitamin B3 that enhances DNA repair in damaged skin cells, for many of his patients. A study in *The New England Journal of Medicine* showed that a year of treatment with 500 mg of oral nicotinamide twice a day reduced new nonmelanoma skin cancers by 23 percent. The supplements, sold over the counter, also cut precancers by 15 percent. "This was a very good study and proves that taking a supplement can greatly influence the chance of getting a future skin cancer," says Dr. Moy. "It's so convincing, and there were no side effects in the study."

Dr. Hale agrees. She typically recommends that patients who have had two or more nonmelanoma skin cancers take nicotinamide supplements. "It's exciting that there is new research showing something else we can do to diminish the chance of skin cancer," she says. "It can also reverse some precancerous lesions — and it's affordable." Be sure the label says "nicotinamide" or "niacinamide" and not "niacin," a different form of the vitamin, which can

cause side effects such as flushing. And remember that supplements are not a substitute for sunscreen, hats, long sleeves and other forms of daily sun protection. They work together!

• **DNA repair enzymes:** Another area of research that Drs. Hale and Moy are excited about is topical products containing DNA repair enzymes. "I now recommend these not only for patients who have a history of nonmelanoma skin cancers, but also for patients who just have multiple actinic keratoses," says Dr. Hale.

"It's exciting that there is new research showing something else we can do to diminish the chance of skin cancer," says Elizabeth K. Hale, MD.

Dr. Moy says he's seeing good results in his patients: "I had a woman with very bad actinic cheilitis, a type of precancer that forms on the lips. I started her on nicotinamide and a DNA repair enzyme cream, and they stopped the growth and reduced the number of precancers." These products are sold over the counter, but be sure to look for all three words, "DNA repair enzymes," on the label or in the ingredients list.

• **Topical medication:** Prescription topical treatments, such as imiquimod and 5-fluorouracil, work very well for treating actinic keratoses and some small, superficial BCCs, says Dr. Hale. Patient compliance can be poor, though, when these therapies are used for the extended periods of time needed for treatment, because they come with uncomfortable side effects like redness, swelling and crusting. But for prevention in higher-risk patients, sometimes she prescribes a low dose of imiquimod, for example, to be applied to at-risk areas of skin one night a week "just to keep the immune system up and regulated to try to attack whatever may come." Although this use is still off-label (not strictly FDA-approved for the purpose) and the protocol is still being worked out, Dr. Hale says it is something doctors may consider for some patients.

• **Laser resurfacing:** Another technique that can help reduce skin damage is laser resurfacing. Often done as an antiaging treatment, it can reduce wrinkles and scars, but it also removes precancerous or genetically mutated cells. A small study in 2006 showed that it resulted in a lower incidence of nonmelanoma skin cancers, and a longer time before developing new skin cancers, compared with the control group. Dr. Moy says doing a laser peel that removes damaged skin cells from the bas-

Who Knows about Mohs?

Treatment options for nonmelanoma skin cancers range from topical medications to laser therapy to various surgical techniques. [Learn more at SkinCancer.org/treatments.] If you've had multiple nonmelanoma skin cancers, though, it's likely you've heard of, and maybe experienced, Mohs surgery.

The procedure, which requires special skills and training, is done in stages. The surgeon removes a thin layer of tissue, and the patient waits while the physician examines thin slices of that tissue under a microscope in an on-site lab. If this examination shows cancer cells at any edge or surface, the physician marks them on a special map of the surgical site. The surgeon then removes another thin layer of tissue from the exact location where the cancer cells remain. The doctor repeats these steps until there is no longer any evidence of cancer. The wound may be left open or closed with stitches.

Mohs surgery offers the highest cure rate with the smallest possible scar, and is often recommended if the cancer is a recurrence or is around the eyes, nose, lips and ears. Both Dr. Hale and Dr. Moy are trained in Mohs surgery. While the procedure can take time if several layers must be removed, most patients agree the good results are worth it. And Dr. Moy says, "About 50 percent of my patients walk away with just one stage of Mohs surgery required. In many cases, it doesn't even need stitches." Early detection is the key.

WHAT'S YOUR NUMBER?

↓
We hear from people every day on our Skin Cancer Foundation Facebook page. Here are a few recent comments from those who have had multiple nonmelanoma skin cancers.

I have had an even dozen Mohs procedures, and I'm thankful to have a wonderful surgeon. My facial scarring has been very minimal. — Nancy G.

12

15

I've had 13 Mohs surgeries and two excisions, all on my face and scalp. Between living at high altitude and being the child of a redhead, I didn't stand much of a chance against getting skin cancer. — Jay G.

11

I'm off to yet another surgery this morning for a basal cell carcinoma — #11.
— Mona M.

I had five BCCs and one SCC, most of them on my face. The only noticeable scar is on my forehead, but I cover it with makeup and hair. — Ani P.

6

I always wore sunscreen but never a hat. Now I'm having my second Mohs surgery on my scalp. — Jay T.

2

I'm an oncology nurse and should know better, but when I saw a suspicious bump I just ignored it. When I saw a second one, I knew I had to get them checked out. They were both skin cancer. I've now had two Mohs surgeries. I thought I would lose part of my nose, but I didn't. I'm happy with the results. I plan on getting regular checkups going forward! — Matt N.

All three of my kids fight me about using sunscreen even though they've seen me go through two squamous cell skin cancers as well as many basal cell carcinomas. — Kristin S.

4

I have had four Mohs surgeries for skin cancers. So very thankful that we have this technology. I had 34 stitches in my cheek to repair the sites, but now it is hardly noticeable. My surgeon is great. — Brenda W.

81

I've had 81 skin cancers. I love my doctor in New York. She did many of my Mohs surgeries and is amazing. — Lisa P.

My score is at seven skin cancers, both basal and squamous cell carcinomas. I've had Mohs surgery on my upper cheek and my temple. — Eric S.

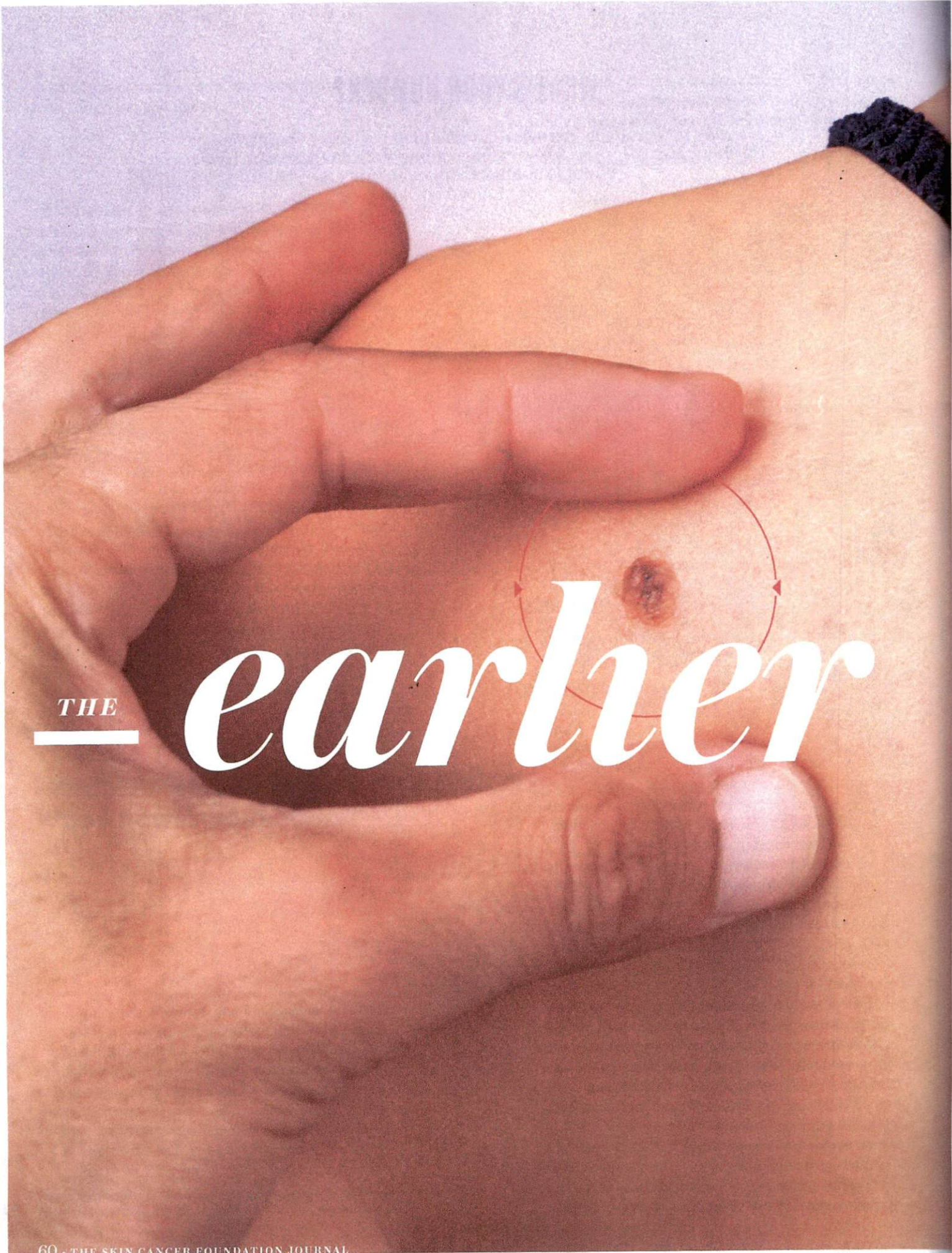
7

al layer of skin, where basal cell carcinomas form, allows healthy new skin cells to replace them and heal in about three days. "That should dramatically decrease skin cancers. I saw a patient recently who had lots of skin cancer on her arms and legs but not a single one on her face. Why? I had done laser resurfacing on her face."

• **Photodynamic therapy:** While this is an approved light-based treatment for AKs (it has some rejuvenating effects, too), Dr. Hale says she also uses it for reducing sun damage in high-risk patients. "I have

different protocols I use for different people, depending on their history and skin type, and it's very effective." The doctor applies a light-sensitive chemical to the areas at risk, then uses a blue light to activate the areas, which causes precancerous skin cells to slough off and be replaced by healthy new cells. Because of continued sun sensitivity, patients must avoid sunlight for a few days afterward. ■

Julie Bain is health and science editor at *The Skin Cancer Foundation*.



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The key to avoiding skin cancers
is **PREVENTION**.
But the way to keep them from becoming
destructive and dangerous is
EARLY DETECTION.
Here's our experts' plan to make sure
you nip any skin cancers in the bud.

BY MARK TEICH

100



If we all practiced
PERFECT sun protection
 and stayed out of
 tanning beds, most of us
 would never get
 skin cancer.

NONE OF US is perfect, though. No matter how carefully we shield our skin outdoors, some of the sun's harmful ultraviolet (UV) rays will sooner or later get through to our skin. Each time, this adds to our lifetime DNA damage, producing mutations that may one day lead to skin cancer.

In fact, some people would get skin cancer if they never tanned indoors, and never went outside. They are just genetically prone to the disease, and may have one or more close family members who have already had it. And some rarer forms of melanoma have nothing to do with sun exposure.

That's why sun protection and tanning avoidance aren't enough. By learning how to look for suspicious changes on your skin, and seeing your doctor for regular skin exams, you have the best chance of stopping precancerous lesions before they become cancers, and small, easily removable cancers

before they become large, hard-to-cure ones. It could keep you from losing part of an ear or nose to basal cell carcinoma (BCC). It could even keep a squamous cell carcinoma (SCC) or melanoma from threatening your life.

This year alone, more than 5.4 million cases of BCC and SCC will be treated in more than 3.3 million people, making skin cancer the most common type of cancer in the U.S. Another 87,000 cases of melanoma, the most dangerous skin cancer of all, will also be diagnosed. One out of every five of us is going to get skin cancer.

"Early detection is absolutely critical," says Ariel Ostad, MD, assistant clinical professor of dermatology at New York University School of Medicine. "Lesions need to be found and treated early to be readily cured. For example, by the time a melanoma is obviously visible on the skin, the chances of survival are much lower."



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**Help
 Yourself**

Handy at-home devices like The Skin Cancer Foundation's Early Detection Tool can help you track down skin cancer early. Learn more at Store.SkinCancer.org.

This advice doesn't just apply if you have fair skin and light eyes. If you have a darker skin tone, you have more protective melanin in your skin, which can lower your risk for skin cancer. However, it doesn't eliminate your risk. *Everyone* should regularly examine their skin and go in for professional exams. Not doing so could lead to later detection and a worse prognosis. "Everyone has skin, so everyone is at risk," says Jeffrey Brackeen, MD, the founder of the Skin Cancer Institute in Lubbock, Texas, and an associate professor in the Departments of Dermatology and Pathology at Texas Tech's Health Sciences Center.

▼
**Get to Know
 Your Own Skin**

YOU'VE HEARD the expression, "If you want to do something right, do it yourself?" Here's a variation: "If you want to find any skin cancers, find them yourself."

"This year for the first time, the estimates of expected deaths from melanoma in the U.S. are going down," says Allan C. Halpern, MD, chief of the Dermatology Service at Memorial Sloan Kettering Cancer Center in New York City, and a vice president of The Skin Cancer Foundation. "A key reason for this is increased public education in prevention and self-examination."

Makes sense, doesn't it? After all, you can look at your own skin anytime you want, at no cost. Research shows that patients, especially women, find the majority of skin cancers themselves. A 2016 study in the *Journal of the American Academy of Dermatology* showed that 53 percent of melanomas were self-detected. More women than men found their melanomas, and the women also had a better prognosis. "Patients are the key to early detection," says Dr. Brackeen. Like The Skin Cancer Foundation, Dr. Brackeen advises people to examine their skin thoroughly once a month.

Using a trusted partner can help. A 2016 study in *JAMA Dermatology* found that the benefits of having someone else look closely at your hard-to-see areas far outweighs any potential embarrassment. Dr. Ostad says he recommends the buddy system. “Most of us can self-check our face, ears, neck, our whole front. But working with a partner is ideal for those areas you can’t see well.”

The study trained partners on what to look for, and their confidence and skills improved. Dr. Ostad suggests that you stand or sit in front of a full-length mirror naked and look at every inch you can see, from scalp to toe, including your genital area, as some skin cancers can develop even in places that don’t get much, if any, sun exposure. You can use a blow-dryer to see your scalp better, and a hand mirror with the full-length mirror to see your back. Better yet, work with a friend or partner to check the back of your scalp, your back, backs of your legs, buttocks and bottoms of your feet. “The majority of melanomas occur on the legs in women and on the back in men. And in people with darker skin tones, most occur on the soles, palms and nails, so look carefully at those,” Dr. Ostad says.

What to Look For

THE FIRST THING you want to keep your eye peeled for in a self-exam is any lesion that seems to have changed. Look for signs of abnormality such as crusting, scaliness, shininess or scarlike areas. “It may be curly, have trickles of blood or tiny capillaries in it, or it might be flat and reddish or have no color, or pigment, at all,” says Dr. Ostad. “It could even be painful or itchy.” Anything that seems abnormal should be checked out by a dermatologist.

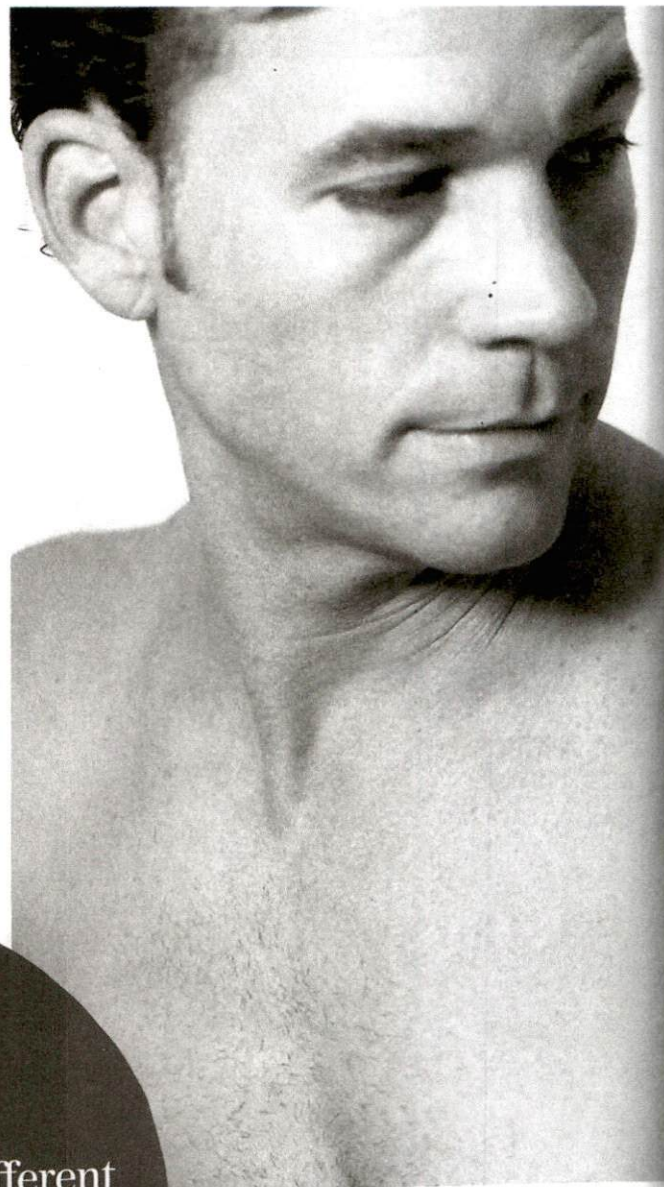
The more you practice self-examination, the more you will be able to spot such anomalies, and the more you will be able to rely on trained instinct: If something just doesn’t seem right to you, see a dermatologist.

Dermatologists have actually passed on some fundamental strategies that can be used in self-examination to recognize potential melanomas. The best-known is the ABCDEs of melanoma acronym: Asymmetry, Border irregularity, Color variations, Diameter over 6 mm (about ¼ inch, or the size of a pencil eraser) and Evolution (the lesion is changing in size, shape, color or some other significant way). A lesion with any of these traits should be seen by a dermatologist to rule out or confirm

“Any mole that **STANDS OUT** as different from all other moles around it should be seen by a dermatologist.”

melanoma. You can learn more about the ABCDEs in our “Skin Cancer 101” guide on page 20.

Since not all melanomas conform to the ABCDEs, dermatologists have come up with other recognition tricks you can use in self-examination. A key one is the “Ugly Duckling” technique. Basically, an “ugly duckling” is any mole that stands out in



some way as different from all other moles around it. It could be bigger, darker, rougher in texture than surrounding moles, or it could be the only mole in evidence. If it stands out as an “outlier,” it should be seen by a dermatologist.

Be aware when you do self-examination that not all skin cancers grow out of preexisting precancers, atypical moles or other lesions. Don’t get so wrapped up in tracking your existing moles that you neglect to look just as carefully at the rest of your skin. “In general, you don’t get new moles as an adult. After age 25 or 30 it’s rare to get them,” says Dr. Brackeen. “So you should view anything new with some suspicion. A professional needs

have a total-body exam every time you come in," Dr. Ostad asserts. If you don't have your entire body checked, these lesions get missed. Dr. Ostad notes that people who are at high risk of developing skin cancer may want to come in more often than once a year for a skin exam. This includes those with many moles, some atypical moles (large, abnormal-looking moles that resemble melanomas), extensive sun damage or a personal or family history of skin cancer.

If you are in this high-risk group, he points out, you should know that you are also at increased risk of developing ocular (eye) skin cancers. Typically, people at high risk for skin cancer have light blue, light grey or light green eyes, which have less sun-protective pigment (melanin) than darker eyes. "It is important for them to wear UV-protective sunglasses, the same way we wear hats and clothes for sun protection, and they should go in annually for a thorough eye exam with an ophthalmologist as well as a skin exam. Catching ocular melanomas early is the key," he says.

The Dermatologist's Skin Exam Toolkit

WHEN YOU GO in for a professional skin exam today, most dermatologists use certain important strategies along with total-body checks to home in more precisely on suspicious lesions and monitor them over time.

Dermatoscopy (often called

Dermoscopy), Drs. Halpern, Ostad and Brackeen all use dermatoscopy in skin exams whenever a lesion seems suspicious. Essentially a skin microscope using a special light, it is a noninvasive imaging technique that allows dermatologists to detect a lesion's structural features and pigment patterns beneath the skin. They can glean information invisible



more, they have the tools to verify

their concerns.

"Routine total-body skin exams

by the trained eye of a dermatol-

ogist save lives," says Dr. Ostad.

Thanks to increased self-examina-

tions and professional examina-

tions, he says, important strides

are being made in decreasing

melanoma deaths.

To make sure all lesions are

caught early, many dermatologists

(and The Skin Cancer Founda-

tion) recommend annual exams.

The problem with coming in for

a skin exam only if you find a

worrisome lesion is that it may al-

ready be dangerous by then. Also,

when patients come in to point

out a specific lesion, the physician

may find a bigger problem else-

where. "That's why you should

Homing In
↓
Most dermatologists today use a kind of handheld skin microscope called a dermatoscope to zero in on a diagnosis before doing a biopsy.

to take a look. If you catch skin cancers early, you can make them nothing but a bad memory." Visit SkinCancer.org/exam to find step-by-step techniques for skin self-examination, extensive information on what to look for and body maps to record the lesions you find so you can track them over time.

You Should Have Your Skin Examined! (by a Professional)

WHILE PATIENTS find most of their skin cancers themselves, studies show that dermatologists tend to find skin cancers at an earlier stage: Their eyes are simply better honed to spot the earliest warning signs. Further-

to the naked eye and potentially approach a diagnosis before doing an invasive biopsy. "I use dermatoscopy to look at every suspicious lesion at every visit," says Dr. Brackeen. "It often allows you to determine if a lesion is a skin cancer or not without doing a biopsy. If a lesion is a little atypical, say, I can use it to see that it's a harmless seborrheic keratosis as opposed to a melanoma. It also allows me to identify cancers when they are much smaller, as little as a few millimeters."

For trickier diagnoses, dermatologists today also can employ computerized offshoots of dermatoscopy, as well as sophisticated systems such as high-resolution ultrasound and confocal scanning laser microscopy. Some comput-

er-assisted diagnostic devices actually have fully automated analysis systems to differentiate between benign lesions, melanomas and other malignancies.

Digital photography. Not all dermatologists use this, but those who do swear by it. The physician photographs all the patient's notable lesions using a digital camera, then stores these photos in the computer to serve as a baseline for future reference. On subsequent visits, the physician can look at and again photograph each of the patient's lesions, comparing them against the original photos to see if anything important has changed.

Dr. Brackeen currently uses digital photography in his practice specifically for people who ask and those who are at high

risk for skin cancer, such as those with atypical moles, which can sometimes evolve into melanomas. And Dr. Halpern reports that his group at Memorial Sloan Kettering is now routinely using advanced three-dimensional total-body photography to track patients' lesions over time.

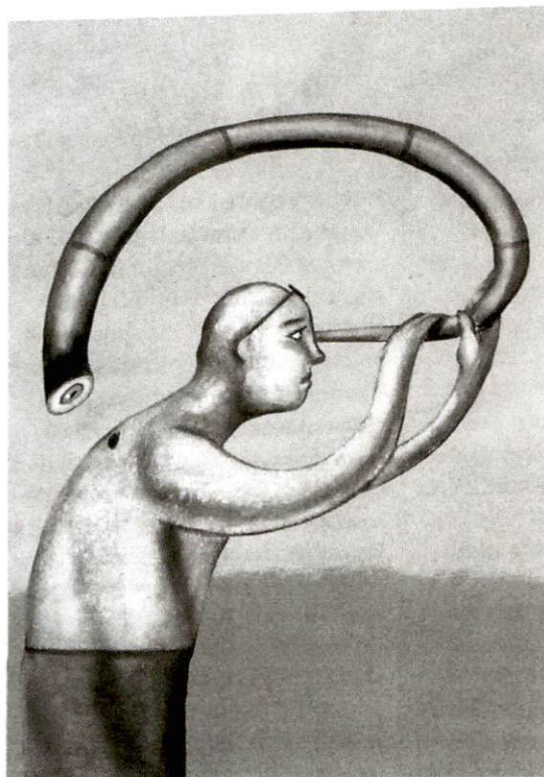
General Practitioners: A Valuable Resource

FRONTLINE PHYSICIANS like general and family practitioners can also be incredibly important in early detection of potential skin cancers. A lot more people see them than see dermatologists.

CONTINUED ON PAGE 68

Self-Exam Aids

Drs. Halpern, Brackeen and Ostad all point out that versions of key tools dermatologists use in early detection are now also available to you for self-examination. Here, some of the most important ones:



Internet Resources:

The combination of lesion image collection, self-examination tutorials and support groups on the Internet is having a major impact on early detection, says Dr. Halpern. "The fact that melanoma is being diagnosed at thinner and thinner stages, and that most of them are not being found in screenings, means only one thing: public education. It shows that patients have already learned a heck of a lot about early detection," he asserts. "The Skin Cancer Foundation can take a lot of credit for that."

Cell Phone Photographs and Calendars:

"I recommend that some patients photograph their own skin using their cell phones, especially for hard-to-see places like the back," says Dr. Brackeen. A selfie stick can be helpful. "They should use the photos as a reference to compare from month to month with later photos. They can even give themselves a reminder on the phone's calendar or notes app to recheck the moles they shoot. I recommend setting the calendar for the first of every month."

Mobile "Diagnostic" Apps:

Taking it one step further, many melanoma "diagnostic" apps are available on mobile phones today. "There are hundreds of these available, and some can be an excellent adjunct to your self-exam," says Dr. Halpern. You take photos of your lesions, download them into the apps and follow them over time. They automatically compare the lesion against subsequent photos you take and against photo banks of melanomas and other lesions, alerting you to any changes that might be suggestive of skin cancer.

"You should not use these apps to self-diagnose, however," says Dr. Halpern. "They are non-vetted and unapproved as diagnostic tools. In theory they could be helpful in diagnosis, but we know they can mislead." What they can do, however, is give you monthly calendar reminders to check and photograph your lesions again, give you a record of all those pictures so you can tell if they're changing, and give you an idea of when you need to make an appointment with your dermatologist.

Many see dermatologists only if referred by primary physicians.

"There is not enough dermatologist manpower to provide enough primary screeners," Dr. Halpern explains, so other doctors can help fill the gap. He mentions a study by Laura Ferris, MD, associate professor of dermatology at the University of Pittsburgh Medical Center, which showed that general practitioners trained to do annual skin examinations found thinner, earlier melanomas than untrained physicians who did not do skin screening. Dr.



↑
GPs Can Help

—
General practitioners offer another valuable set of eyes.

Halpern believes that increased screening by primary care physicians, physician assistants and nurse practitioners could further reduce melanoma mortality.

"One place we are failing, though, where melanoma mortality is going up, is men over age 55. To have a big impact on mortality, we need to pay attention to that group," says Dr. Halpern. "One opportunity to raise awareness among older men is through their general practitioners."

Male or female, we all need to make checking our skin regularly

a habit. The Skin Cancer Foundation recommends that everyone have an annual total-body skin exam by a dermatologist. If you can't get to a dermatologist that often, make sure your primary practitioner is trained in skin examination, and ask for a skin exam at your next visit.

The Foundation's heartfelt goal is to reduce skin cancer incidence and mortality, and that all starts with you. ■

Mark Teich is executive editor at *The Skin Cancer Foundation*.

It's "Just" a Skin Exam

If you look at it one way, getting a skin exam from a dermatologist is no big deal. It's one of the easiest and quickest physical exams you'll ever take: For the most part, you just show some skin, the doctor eyeballs you painlessly and you hit the pavement 10 or 15 minutes later. On the other hand, the exam is a very big deal, because those 10 or 15 minutes can save your life.

Before You Arrive

To get the best value from your skin exam, it makes sense to do a few things beforehand.

Do a thorough self-exam, so that you can call the doctor's attention to anything that concerns you. Write it down, including where it is on your body, so you don't forget.

Make a note of any personal or family history of skin cancer. Either of these increases your chance of future skin cancers and will make the doctor all the more vigilant.

Remove any polish from your fingernails and toenails, so the doctor has a clear view of the nails themselves and the skin beneath the nails, where skin cancers can grow.

Remove all makeup and lipstick. Most skin cancers arise on the face, and some particularly risky precancers and cancers grow on the lips, so you want the most unobstructed view possible.

At the Doctor's Office

At the start of the visit, give the doctor your personal and family skin cancer history and mention any spots you're worried about. The dermatologist may check these specific lesions first, explaining to you why they do or don't look suspicious.

If the exam is going to be complete, the dermatologist will ask you to undress completely. That includes socks, jewelry, underwear. You can always decline, but remember, the point of a total-body exam is that skin cancers can grow anywhere on



your body, even in areas rarely exposed to the sun. Many doctors provide a hospital gown, which can be lowered and raised easily to isolate one area to examine at a time, so that you're not sitting around in the altogether. If not, you can always ask for one, or keep your underwear on until the doctor looks at that particular area. You can also ask for a medical attendant to be in the room or to leave the room, depending on what makes you feel most comfortable.

The physician will visually examine every inch of your body systematically head to toe, looking at everything, including your scalp, ears, eyes and mouth, between your fingers and toes and between your legs, the lymph node areas in your armpits and behind your knees, and the soles of your feet — on the lookout for any spot that may be a skin cancer. Feel free to ask at any time what the doctor is looking for and what the areas of concern are, so that you can more effective-

ly examine yourself in the future. Use the visit to educate yourself.

If nothing on your skin proves worrisome, the coast is clear to simply set up your next regular exam. But if any lesions arouse concern, the dermatologist will use certain preliminary methods to narrow in on a diagnosis. He or she may simply feel the lesion, checking its texture, dimensions and solidity, or use an imaging tool like a dermatoscope to differentiate the lesion from other, similar lesions. The doctor might also compare it against photos taken at a previous visit to see if the lesion has changed significantly.

If signs point to skin cancer, the dermatologist will do a biopsy. The doctor will give you a local anesthesia to numb the area, then remove a piece of tissue and send it to a lab for analysis. Ultimately, a pathologist will determine if the lesion is a skin cancer, and if so, what kind it is. It can take a week or longer to learn your results. If it is skin cancer, your doctor will schedule a date to remove the entire tumor, discussing with you what kind of treatment will be best.

Follow-up


The Skin Cancer Foundation recommends an annual skin exam, but if you've had a skin cancer, or have a lesion that could turn into one, more frequent visits are your best guarantee that any skin cancer you find will be early and curable.

Your Daily Sun Protection Guide

The sun sustains life and feels good, but it can be your skin's worst enemy. While every sunburn can increase your risk of skin cancer, it's not just those big days at the beach or ballgame that cause trouble. Each time you run out to get the mail, walk the dog or commute to work without sun protection also adds to the damage that can lead to skin cancer (as well as leathery skin, dark spots and wrinkles).

No single method of **SUN DEFENSE** can protect you perfectly, though. That's why we created this roundup of advice for you. The best path to **BEAUTIFUL, HEALTHY SKIN** is to adopt as many of these steps as possible into your lifestyle, and make them daily habits everywhere you go, all year long.

HOW THE SUN'S RAYS HARM YOU



- ▶ The sun produces two types of ultraviolet (UV) rays that can hurt your skin. The ones called **UVB** cause sunburn, while those known as **UVA** lead to tanning as well as skin aging and wrinkles.
- ▶ When either type of UV light is hitting your unprotected skin, **damage to the DNA in your skin cells starts within minutes.** Your immune system will repair some of this damage, but not all of it.
- ▶ Over time, the remaining DNA damage can cause **mutations that lead to skin cancer.**



1 Cover It Up

Clothing can provide a great barrier against the sun's UV rays. Its protection is consistent over time and doesn't wear off like sunscreen does. Many new fabrics offer high-tech protection and breathability, too. The more skin you cover (high neck, long sleeves, pants), the better, and a hat with a wide brim all the way around (three inches or more) is best because it helps shade your eyes, face and neck. Also wear UV-blocking sunglasses to protect your eyes and the skin around them.

What Does UPF Mean?

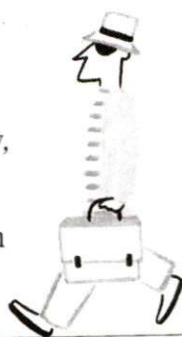
Look for UPF, which stands for ultraviolet protection factor, on labels for clothing, hats and fabrics. The number indicates what fraction of the sun's UV rays can penetrate the fabric. A shirt labeled UPF 50, for example, allows just 1/50th of the UV radiation to reach your skin.

The pitfall: Any clothing leaves some skin exposed, so you need sunscreen, too. Don't forget to apply it to your hands, especially after washing them.

2 Play in the Shade

When you have to be outside, think of shade as your refuge, especially between 10 AM and 4 PM, the peak hours of sun intensity. Walk on the shady side of the street, sit under an awning or sun-protective umbrella, duck onto the covered porch at a pool party or even under a tree.

The pitfall: Shade isn't a perfect shield. Some UV rays can still reach your skin. They can pass through leaves and branches, hit your skin from the side and reflect off water, sand, glass and concrete.



3 Know Your Sunscreen

Sunscreens come in many formulations and delivery methods, and it can take trial and error to find the one you like best. Whether it's a sport spray, an easy-to-use stick or a rich moisturizer with antiaging ingredients, the best sunscreen is the one you will use every day.

Broad Spectrum. The words "broad-spectrum protection" on a label indicate that the sunscreen contains ingredients that protect against UVA rays as well as UVB.

SPF stands for sun protection factor. The number tells you how long the sun's UVB rays would take to redden your skin when using a particular sunscreen compared with the amount of time without sunscreen. So if you use an SPF 15 product exactly as directed (applied generously and evenly, and reapplied after two hours or after sweating or swimming), it would take you 15 times longer to burn than if you weren't wearing sunscreen.

Sensitive Skin. Products containing zinc oxide and titanium dioxide, sometimes referred to as mineral or physical formulas, may be less likely to cause skin irritation in people who have sensitive skin.

Water Resistance. While sunscreens can't claim to be waterproof, they can be labeled water-resistant for either 40 or 80 minutes. Yes, you can burn even when you're in the water, so reapplying is key!

The pitfall: Most people don't apply sunscreen exactly as directed. They may not use enough or apply it liberally enough, may miss spots and may forget to reapply. Slather it on!

The Skin Cancer Foundation advises everyone to use a broad-spectrum sunscreen with an SPF of 15 or higher every day. For extended outdoor activity, use a water-resistant, broad-spectrum sunscreen with an SPF of 30 or higher. Reapply every two hours or after swimming or sweating.



5 LOOK OUT FOR WINDOWS

- ▶ While glass blocks UVB rays pretty well, it **allows UVA rays to pass through.** This is true of your windows at home as well as on the road.
- ▶ Car windshields are treated to shield drivers from most UVA, **but side, back and sunroof windows usually aren't.** When you're in your car, protect yourself and your family with hats, clothing, sunglasses, sunscreen, whatever it takes. Another option is to have UV-protective window film applied to windows, in your car or at home.
- ▶ The windows on **airplanes, trains and buses** also allow UVA rays to pass through. That's why airline pilots, crew members and even frequent travelers may get more skin cancers than other people.

The pitfall: You need to plan ahead before traveling and make sure you have sunscreen on and protective clothing with you.

6 Say No to Tanning Beds

It's simple: Don't use a tanning bed — ever. Indoor tanning (even one time) raises the risk of all kinds of skin cancer, including melanoma. In fact, using a tanning bed before age 35 increases your risk of melanoma by 75 percent.

The pitfall: While a number of states have implemented laws prohibiting minors under a certain age (varying from 18 to 14) from using tanning beds, or requiring parental consent, other states have not restricted access. Peer pressure to be tan can affect your better judgment at any age. Say no!

4 Shield the Wee Ones

Infants: It's best in the first six months to keep infants out of the sun rather than use sunscreen on their sensitive skin. Clothing should cover baby's vulnerable arms and legs, and don't forget to use hats, sunglasses and stroller sun shades.

Toddlers: In addition to providing a protective hat and clothing, you can apply sunscreen to children starting at six months.

The pitfall: Unexpected exposure can happen, for example, with a babysitter. Be prepared; talk to caregivers in advance about sun protection.



7 Seek the Seal

The bottom line is that you need several types of sun protection to safeguard your skin. It takes a village! Many products that meet stringent criteria for safe and effective UV protection have earned The Skin Cancer Foundation Seal of Recommendation. Look for sunscreens, moisturizers, cosmetics, clothing, hats, sunglasses, awnings, umbrellas, window film and more that carry the Seal.