

Healing

EMBRACE YOUR SCARS

If you have a scar, congratulations! Think of it as a badge of courage and healing.

Our expert dermatologists tell how to nurture a new scar to get the best outcome — and, if needed, how to fix an old scar to make it look better.

by Julie Bain



A **LMOST** no one gets through life without a few scars. You can probably trace some milestones with a tour of your own skin: the chicken pox you couldn't stop scratching when you were 7, the time you fell off your bike, that acne that tormented you in high school or when you had a C-section along with your bundle of joy.

If you've been diagnosed with skin cancer and are

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**If This Tree
Could Talk!**
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Every scar
tells a story.
What's yours?

going in for treatment, good for you. That's much better than if it stayed undiagnosed and continued to grow. If it's treated when it's small, you may not even have a scar. If you need surgery to remove it, you probably will end up with some kind of scar to add to your collection. You may or may not be worried about that. Either way, we want to reassure you that a scar demonstrates the healing power of your

own skin. We asked two of our Skin Cancer Foundation member physicians to share their expertise on everything you need to know to be scar-savvy, from wound care to scar repair.

What is a scar, exactly?

A **SCAR** is your skin's natural way of knitting itself back together after it's been hurt. Healing is a multipart process, and the science behind it is complex. Dermatologic surgeon Mary-Margaret Kober, MD, who practices in Santa Rosa, California, helps explain it in simple terms. Wherever there's been an injury, she says, the first thing that happens is that blood cells called platelets gather together and form a clot to stop the bleeding and seal the wound. Your immune system kicks in and creates inflammation, which helps fight infection and start the healing. Later, cells called fibroblasts make collagen, growth factors and other substances to help mend and rebuild the skin. A few days later, the tissue starts to contract and make a scar. It can take up to a year for a scar to fully heal and reveal its final result. Even when healed, scar tissue is never completely like normal skin. "It's not quite as strong or as elastic, the color and texture may be different and it doesn't produce hair, oil or sweat," Dr. Kober says.

Do skin cancers always need surgery?

NOT ALWAYS. The two most common types of skin cancer are basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), the major nonmelanoma skin cancers. Treatment options are based on the size and location of the cancer, and may include topical medications, scraping and burning, freezing, radiation, light-based treatments like lasers and photodynamic therapy, and excision or Mohs surgery.

Excision means the physician surgically removes the cancerous tissue with a scalpel, then sends it to a lab for later analysis. In Mohs surgery, which is recommended for some BCCs and SCCs and requires special training, the physician analyzes all edges of a thin layer of removed tissue in an on-site lab while the patient waits. If any cancer cells remain, the surgeon removes another layer of tissue from that precise spot while sparing as much healthy tissue as possible. The doctor repeats this process until no cancer cells remain. This technique has a high cure rate and achieves the smallest possible scar, says Dr. Kober, who has extensive training and experience in Mohs surgery.

Melanomas, which are far less common than BCCs and SCCs, can be more dangerous. Surgery is the most common treatment. Some surgeons are using

Mohs surgery on certain cases of melanoma, but this requires additional training. Patients with more advanced melanomas may require additional treatments, such as radiation or medications, including immunotherapies and targeted therapies.

How much do patients worry about scars?

WHEN DOCTORS tell patients they need skin cancer surgery, they hear a wide range of reactions, says Dr. Kober. "I have some patients who say, 'I don't care about the scar, Doc. I don't have a modeling career. Just get the cancer out.' That's one extreme." There are also patients on the other side of the spectrum, she says, who are very concerned about the scar and its cosmetic appearance.

Hooman Khorasani, MD, chief of the Division of Dermatologic & Cosmetic Surgery at Mount Sinai Medical Center in New York City, sees the full gamut of reactions in his practice as well. That includes celebrity patients who know an unsightly scar could hurt their career. Dr. Khorasani, who spends about 60 percent of his time doing Mohs surgery, says he's careful to reassure patients as well as manage their expectations. Most cases are BCCs and SCCs. When detected early, they're almost always curable. "I explain to

Surgeons do their best to **HIDE SCARS** in the normal folds of the skin, or in **SMILE LINES**.

patients that these are very common skin cancers and that they're not alone," he says. "We're definitely going to take care of it and get rid of the cancer. That's the most important thing." He knows the importance of a good cosmetic outcome, too. In fact, he's done extensive research on minimal scar wound repair.

What should patients expect from a surgery scar?

IT'S IMPORTANT to know that a scar may end up quite a bit longer than you might have guessed, says Dr. Khorasani. While your skin cancer may have looked like a small red spot when diagnosed, that can be just the tip of the iceberg, he explains. There may be extensions, or "roots," of the cancer that are not visible from the surface. "On average, the wound

that will be created during surgery on a BCC or SCC will be at least twice as big as the lesion you can see before surgery,” says Dr. Khorasani. And because of the surgical techniques needed to make a scar lie flat and even, the scar will always be longer than the diameter of the wound.

Dr. Kober says that most of the time, Mohs surgeons are able to clear the roots of the tumor by removing just one or two layers of tissue. “But every once in a while, both the patient and I are surprised at how far those roots travel. That’s the benefit of Mohs surgery; we can look at 100 percent of the margin and make sure that the skin cancer is out and won’t come back.” She always reassures patients that she will do everything she can to keep the scar as small as possible. “Surgeons also do their best to hide the scar in the normal folds of the skin, or in smile lines,” she says. “The vast majority of the time it heals well and you barely notice it. But if the patient is not completely happy with a scar, there are techniques to improve its appearance.”

Because melanoma is more likely to spread than nonmelanoma skin cancers, surgical guidelines require the doctor to remove a larger safety margin of healthy tissue. Dr. Khorasani says that on average, the wounds from melanoma surgery, and thus the scars, are about twice as large as those from other skin cancers.

What should people know about surgical techniques?

WITH ANY SURGICAL PROCEDURE, it’s important to look for a doctor who is well-trained, up on the latest techniques and has performed the procedure many times.

When he is teaching medical students about surgical technique and how to handle the tissue, Dr. Khorasani says, “I tell residents they must treat the epidermis, the top layer of the skin, as if it is the most delicate flower. I tell them that to give the scar an even finish, they have to make sure every edge they’re suturing together is as even as a door on a spaceship.”

Dr. Kober explains how a circular wound becomes a straight-line scar. “If you try to bring that circle together, the two ends pucker up and become raised,” she says. To correct for that, the surgeon has to remove those little puckers on either end. So before the wound is closed, the surgeon shapes the wound so it looks more like a football than a baseball. “It does lengthen the scar, but it means that the scar lies flat and will look its best.”

Larger skin cancers may need reconstruction using what is called a flap from neighboring skin or sometimes a skin graft from another area of the body.



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**Scar
Evolution**

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Top two:
Before excising
a basal cell
carcinoma from
a woman’s leg,
Dr. Khorasani
marked the
lesion to help
guide his
surgery. Third
from top: The
wound
immediately
after closure.
Bottom: The scar
one year
after surgery.

Are some people just naturally good healers?

HAVING A GOOD blood supply to the area of the surgery is the number one issue in healing, says Dr. Khorasani. In general, when you’re younger, you have a greater blood supply, so younger people tend to heal well. However, he says he has seen many elderly patients who naturally heal well, too. “I think that just means they have good regenerative machinery. I always ask them what their secret is, especially those over 90 who are super sharp mentally. Some people are just genetically blessed and heal really well — like Wolverine!”

What habits can we learn from good healers?

A HEALTHY DIET is very important, says Dr. Khorasani. “And stress hormones can inhibit the wound-healing process, so finding ways to reduce stress also helps healing.”

Smoking slows down the healing process, and it makes the scars worse, Dr. Kober says. “So please don’t smoke.”

Certain supplements, such as garlic, ginkgo, vitamin C, fish oil and vitamin E, or medications that thin the blood, such as aspirin, Coumadin or Plavix, can make you more predisposed to bleeding complications that can affect scar healing, says Dr. Kober. It’s important to tell your doctor in advance if you’re taking any of those and get advice on whether you should stop them before or after surgery.

After surgery, what can patients do for a better scar outcome?

Follow your doctor’s instructions for post-op care. Dr. Kober says that after a surgery, she applies ointment to keep the wound moist and a pressure dressing that stays on for 48 hours. “This helps to immobilize the wound and facilitate the healing process. The pressure also helps to prevent any oozing that might occur after surgery.”

Limit activity so you don’t stretch the wound site. For about two weeks after surgery, Dr. Khorasani says, the wound has only a fraction of its original strength, so any movement can stretch the scar and affect the way it will heal. This can be tricky if your wound is on the back of your hand, for example, or on your lower leg. But if you really want a good outcome, Dr. Khorasani advises, take it easy.

Keep the wound moist with ointment. “Dry wounds heal slower and tend to scar more,” says Dr. Kober.

After 48 hours, she recommends that patients remove the dressing, wash the wound gently with plain soap and water and then keep it covered with ointment and a bandage each day until they return to see

PROTECT your scar from the sun for at least the first **SIX MONTHS** to a year after surgery.

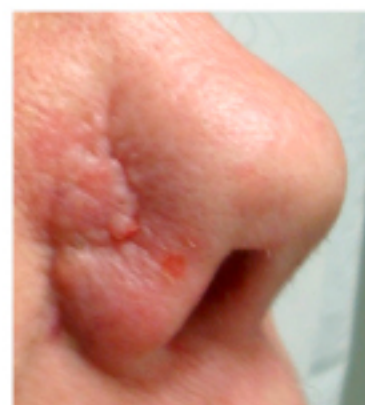
the doctor, usually in about a week. “We prefer they use a neutral ointment and not an antibiotic ointment because many people develop contact allergies to those,” she explains.

Protect your scar from the sun. New scars tend to darken and discolor when exposed to UV light. While you should be protecting your skin from the sun anyway to help prevent future skin cancers, both doctors say that for better scars it is crucial to use sunscreen religiously and keep the area covered if possible. “I advise it for at least the first six months to a year after surgery,” says Dr. Kober.

Consider trying a silicone patch or gel. Silicone has been shown to reduce the thickness of some scars, says Dr. Khorasani. After the stitches have been removed, patients can apply an over-the-counter silicone sheet as directed. There’s also a silicone gel with sunscreen in it that dries to form a kind of waterproof shield. Both doctors often recommend silicone for patients who want a minimal scar. “Try the silicone sheets for two months or longer,” says Dr. Kober. “Several silicone gel products go on clear, allowing it to be hidden under makeup. Patients often use these products for three to six months.”

What are the signs of trouble in a healing scar?

Bleeding: Dr. Kober tells patients that if they notice a bit of blood oozing after surgery, “hold firm pressure for 20 minutes on the area — without peeking. If you peek, you release the pressure and have to start the clock over again,” she says. “Most of the time that will solve the problem.” However, for patients who are on blood thinners and don’t clot as well, that may not stop the oozing. “If that’s the case,” Dr. Kober says, “I tell patients to give us a call. We can talk it through, get a sense of how much bleeding there is and, if needed, follow up in the office.”



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Scar Repair
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Top:
Dr. Khorasani used a flap of skin from the cheek to cover a wound from Mohs surgery on the nose.

Bottom:
The scar after dermabrasion and laser resurfacing.

Infection: Typically, infections are very red, hot and tender, says Dr. Kober. “If it’s a prominent infection, you might see a little yellowy-greenish substance. But sometimes it’s more subtle.” There’s always a little redness associated with the healing process. “But if redness is growing around the wound, or if you have what I describe as pain out of proportion to what you would expect for the normal healing process, call your doctor,” says Dr. Kober. “Most of the time it’s nothing, but it’s always good to put your mind at ease.”

If someone doesn’t like a scar, what can be done to improve it?

MOST SURGEONS suggest waiting six months or longer to let a scar fully heal before having treatment to reduce or repair a scar you don’t like. Scars that are older can also benefit from some treatments.

Redness: “Redness means blood vessels formed to heal the wound, and they’re still engorged with blood,” says Dr. Khorasani. “We have certain lasers we can treat those vessels with to reduce the redness of a scar.”

Irregularity: “If a scar is irregular, the only thing that really takes care of that is dermabrasion, which is kind of like sandpapering your skin to even it out,” says Dr. Khorasani. “Don’t worry; it doesn’t hurt.”

Atrophic scars: Some scars are atrophic, which means they are sunken or pitted. “For those, we can use a resurfacing laser, like a CO2 laser, which creates a wound that will heal more like new normal skin. We might also inject fillers to help deep atrophic scars,” says Dr. Khorasani. Dr. Kober adds, “Particularly on the nose where sebaceous (oil) glands are more prominent, laser resurfacing is a great option. The laser smooths the scar and blends it into the surrounding skin, making it less visible.”

Hypertrophic scars: Certain people may be prone to hypertrophic scars, which are thick and raised, or keloids, where the scar tissue extends outside of the original injury and grows and becomes hard. “We inject steroids to flatten these scars,” says Dr. Kober. “It often takes more than one treatment.”

Combination: Dr. Khorasani says he tries to look at the whole area surrounding a scar before determining the best treatment. “We routinely do a combination treatment,” he says. “For example, if we’re going to be lasering a scar on one cheek, why not consider treating the acne scarring on the other cheek, and make it all even?” ■

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