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Time (and Care)
Heals All Wounds

*I'm just very self-conscious about these scars.
They remind me of the terrible acne I had as a
teenager.*

—Ellen, 35, social worker

If you live a full, active life it is impossible not to acquire a few scars. Some of us see them as badges of honor. Some of us are simply embarrassed by them. How we feel about our scars often has a lot to do with how we got them. For example, a cluster of acne scars, even just one or two ice-pick scars, on an otherwise smooth cheek won't be met with the same acceptance that a scar acquired in a childhood accident might be. My older brother once pushed me off the top bunk bed, sending me to the floor with a new gash over my eyebrow. The scar is now faded and barely noticeable, but when I see it in the mirror, memories of childhood flash briefly in my mind.

A scar is the technical term for tissue the body makes to right a wrong. In the process an amazing number of events happen as though preprogrammed. A cut from a broken wineglass (don't retrieve them from the fireplace!), a scrape from the pavement, an incision from

“WILL I HAVE A SCAR?”

This is the most common question I hear when I talk about cosmetic procedures and reconstructive surgery. It is a smart question, but it took me a while to really understand what my patients meant by asking it. To a doctor, a scar, as this chapter explains, is a normal process for healing skin. To most people, however, the word connotes an unsightly, even deforming and distracting mark on the face or body. I now answer by saying that while scars are part of normal healing, using the techniques we have available, we will strive to hide it, making it as unnoticeable as possible. In the end, it's not how long the “scar” is but whether or not it is noticeable.

plastic surgery, all set in motion a cascade of finely tuned events in your skin.

When you get any kind of wound, however small, your body increases the production of collagen to mend the site. Collagen is the same material your dermis is made of but when the body churns it out to fix a wound, it is thicker and denser, to make sure it holds. As a result, at least early in the process, the scar may look and even feel thicker than the normal skin around it. Scars that result from a surgical incision are usually narrow and pale, unless you have a tendency to make excess scar tissue. Scars from accidents that are jagged may heal with a shape that reflects the original injury. How a scar looks in the end depends on what caused it, how it was treated, how your own body deals with it, and the patience you can bring to bear on the process. In general, like emotional trauma, time heals all wounds. But you can help.

▪ HOW A WOUND HEALS

Once you've been injured, whether by a scalpel, in an accident, or as a result of acne, the natural healing process begins. This process has three stages, which we'll get to in a moment: inflammation, proliferation, and maturation. Dermatologists also generally divide wound healing into two broad categories: primary intention and second intention.

Wounds that heal by primary intention are those that have been neatly sutured together in an effort to help the body form bridges of scar tissue that will remodel the skin. Sometimes surgical wounds that heal on their

own, including some surgical wounds as well as deep scrapes and other accident marks, are in the second intention category; this natural healing is quite a remarkable process.

AFTER SURGERY

The inflammatory phase of healing begins about twelve hours after surgery and lasts for approximately five days. Don't worry if there is a little crusted blood around the incision. Adequate blood flow to the wound site is what ensures that the wound is healing. Blood is the magic potion that carries special cells, chemicals that first staunch the flow of blood by constricting vessels in the area, and platelets to plug up any leaks. In addition, brigades of specialized white blood corpuscles march to the area to fight off the germs that intact skin normally keeps out. If germs do gain a foothold in the wound, infection results. Infection is rare on the face or scalp where the blood flow is robust. In other areas, such as those farthest from the heart, like the legs and feet where blood flow can be more sluggish, the risk of infection is greater.

Proliferation begins about a day after surgery while the inflammation

JUST THIS ONCE, DON'T LISTEN TO GRANDMA

Wounds heal best when kept moist. It has been proven that moist wounds of the skin will heal up to 50 percent faster than wounds that dry out and develop a scab. Follow these simple rules, but don't try convincing Grandma to do it—old beliefs die hard. For scrapes, cuts, and surgical wounds, try the following:

1. Clean the wound daily with tap water. Don't use hydrogen peroxide. (The bubbles make it look as if something good is happening, but in fact, in the test tube, hydrogen peroxide can injure or kill cells.)
2. Apply a thin layer of antibiotic ointment such as Polysporin or Bactroban. Don't overdo it, since prolonged use of the former can result in an allergic rash.
3. After the first week, plain petroleum jelly (Vaseline) or Aquaphor works well to keep the wound moist.
4. Cover the wound with a Band-Aid or other nonstick dressing. Don't use gauze—the fibers can get in the wound.
5. Once the wound has healed and you can see new skin growing over it, you can discontinue the ointment.

phase is still in progress and continues for about a week. It is during this phase that fibroblasts divide rapidly in preparation for spewing out the bundles of new collagen. At this stage a variety of cells combine with collagen to build scaffolding upon which the more permanent scar tissue will be built.

Maturation refers to the slow process of remodeling the final scar. Although sufficient scar tissue forms within a few weeks, so that any sutures can be removed safely, the body continues to work hard laying cables of collagen and reconfiguring the scar. After two months the scar may still have a reddish, raised appearance, which can persist for a full year. The body's own natural refinement of scars continues, on average, for a full year, so in the world of cosmetic surgery and reconstructive surgery, we make no final judgments about the need to fix an imperfect result until the body has gotten its last licks in. In time, even the most thickened red or purple scars will become pale and flat.

AFTER AN ACCIDENT

Second intention healing is one of the skin's most miraculous defenses against an environment filled with sharp edges, hot barbecues, piercing thorns, and unkind tools. It is the body's way of saying: "Because I know you are sometimes a klutz, I will help." After a burn or a cut occurs, the body immediately begins its own remarkable campaign of rebuilding.

During this process, the wound begins to fill with fresh healing material called granulation tissue. Soon afterward the wound actually starts to contract, thanks to the work of specialized cells that make new collagen. As the collagen bundles remodel themselves over time and contract, the final scar can be much smaller than the original wound. Shortly after the wound has filled up with granulation tissue, the epidermis begins to grow over it. This allows the final healed wound to resemble the surrounding skin as much as possible. It is at this stage that you can help the body help itself. To speed successful healing and minimize any scarring at the end, keep the wound moist (See box on p. 191).

A young person's wounds will heal more quickly, but the risk of forming a raised (hypertrophic) scar is greater. Older people can take consolation in knowing that while their wounds may heal more slowly, there is less of a chance that the scar will be raised.

