CONDITION

Scars

A scar is fibrous tissue that forms as the skin repairs an injury.

WHAT IT IS
Fibrous tissue replacing skin after injury

BODY SYSTEM
Skin

MAIN SYMPTOMS
Visible mark, colour change, itching, tightness

WHAT CAUSES IT
Healing after injury, surgery, burns, or inflammation

HOW IT IS DIAGNOSED
Skin examination; biopsy when the diagnosis is uncertain

MAIN TREATMENT
Scar care, silicone, injections, laser, or surgery

CAN IT BE CURED?
No - most remain, though many fade

IS IT AN EMERGENCY?
No - new wound problems may need urgent care

LONG-TERM OUTLOOK
Most flatten and fade; some remain raised or tight

Overview

A scar is an area of fibrous tissue that replaces normal skin after an injury. Fibrous tissue is rich in collagen, a strong protein that helps close and support a wound. Scar tissue does not have exactly the same structure as uninjured skin.

Scars can follow cuts, surgery, burns, acne, chickenpox, injections, piercings, tattoos, or other skin inflammation. Even a well-treated wound may leave a scar. This is part of normal healing and does not necessarily mean that anything went wrong.

A new scar may look red, pink, purple, brown, or darker than the surrounding skin. It can feel firm, raised, itchy, tender, numb, or tight. Over months, many scars become flatter, softer, and less noticeable.

The main types include:

Scars matter when they cause pain, itching, limited movement, or distress about appearance. Treatment can often improve these problems, but it cannot usually restore the skin exactly to how it looked before the injury.

- Flat scars , which often fade as they mature
- Hypertrophic scars , which are raised but stay within the original wound
- Keloids , which grow beyond the edges of the original wound
- Atrophic scars , which are sunken or pitted, often after acne or chickenpox
- Contracture scars , which tighten and may restrict movement, often after burns

Symptoms

How a scar looks and feels changes with its type, location, age, and the injury that caused it. New scars are often more noticeable than mature scars.

Common features include:

A hypertrophic scar is usually thick and raised but remains inside the boundaries of the original wound. It may gradually flatten.

A keloid can continue growing beyond the original injury. It may be smooth, shiny, firm, itchy, or painful. Keloids are common on the chest, shoulders, earlobes, jawline, and upper back, although they can occur elsewhere.

Atrophic scars sit below the surrounding skin. Acne scars may look like broad depressions, rolling uneven areas, or narrow, deep pits.

Contracture scars shorten or tighten the skin. If they cross a joint, they may limit movement. Scars around the mouth, eyelids, neck, hands, or chest can also affect everyday activities.

- A visible line, patch, pit, or raised area
- Red, pink, purple, brown, pale, or darker colouring
- Firmness, thickness, or uneven texture
- Itching, tenderness, pain, tingling, or numbness
- Tightness or reduced movement near a joint
- Greater sensitivity to touch, clothing, heat, or cold

Causes and risk factors

Scarring begins when an injury reaches the deeper layer of skin, called the dermis. The body closes the wound by producing collagen. During the following months, this collagen is reorganised and the scar becomes more mature.

The final appearance is influenced by the wound's depth and location, how it was closed, tension on the skin, infection, and individual healing patterns.

Raised scars are more likely after burns, deep wounds, delayed healing, or injuries in areas under tension. The chest, shoulders, upper back, neck, and earlobes are common sites.

Keloid tendency can run in families. Keloids are more common in people with darker skin tones, but anyone can develop one. A person who has had a keloid has a higher chance of developing another after surgery, piercing, tattooing, or other skin injury.

Acne scars are more likely after deep, inflamed acne, especially when treatment is delayed or spots are picked or squeezed. Not everyone with severe acne develops scars, and milder acne can sometimes leave them too.

Age, hormones, inherited traits, and certain medicines or health conditions may affect healing. These factors do not make the scar your fault.

Diagnosis

Most scars are diagnosed by examining the skin and asking how the mark developed. Its location, shape, texture, growth pattern, and relationship to the original injury usually identify the type.

Photographs or measurements may be used to follow a raised scar over time. If movement is affected, an assessment may look at how the scar crosses a joint and how much it limits daily activities.

Tests are not usually needed. A small skin sample, called a biopsy, may be taken if the diagnosis is unclear or the area has unexpected features. The sample is examined under a microscope. This can help rule out another skin condition.

A mark that appears without a known injury, changes rapidly, repeatedly bleeds, or does not heal should not automatically be assumed to be a scar.

Treatment and management

Many scars do not need medical treatment. A new scar often changes naturally for 12 to 18 months or longer. Treatment is considered when a scar is painful, itchy, raised, tight, limits

movement, or causes significant concern about appearance.

Once a wound has fully closed, moisturising and gentle massage may help dryness, sensitivity, or tightness. Massage is not suitable for an open wound and should not be painful.

Silicone gel or silicone sheets may help some raised scars become flatter and softer. They must be used consistently, and skin irritation can occur. Evidence for over-the-counter scar creams and oils is limited. Vitamin E can irritate the skin in some people.

Sunlight can make a scar's colour difference more noticeable. Covering the area and using broad-spectrum sunscreen on healed skin can reduce further darkening and protect sensitive scar tissue.

Medical treatments are selected according to the scar type:

Removing a scar surgically creates a new wound and therefore another scar. Keloids can return after removal, sometimes larger than before. Surgery is often combined with other treatment when recurrence is a concern.

No procedure can guarantee that a scar will disappear. Treatment usually aims to improve comfort, movement, texture, colour, or visibility.

- Steroid injections may soften and flatten hypertrophic scars or keloids
- Cryotherapy , which freezes tissue, may help selected small keloids
- Laser or light treatment may reduce redness, thickness, or uneven texture
- Skin needling, laser resurfacing, or other procedures may improve some acne scars
- Surgery may release a tight scar, revise its position, or remove selected scars
- Pressure garments or splints may be used by specialist burn services
- Skin camouflage products can reduce visible colour differences

Complications

Most scars cause no serious physical problems. Possible complications include persistent itching, pain, altered sensation, and sensitivity.

A scar crossing a joint may tighten and reduce movement. Contractures can affect walking, hand use, dressing, eating, or other daily activities. Early assessment is useful when movement starts to become restricted.

Keloids may continue to enlarge and can become uncomfortable. They are not cancer, but an unexplained or changing growth may need assessment to confirm what it is.

Scars can also affect confidence, relationships, work, or social activities. Distress is not determined by the scar's size. Psychological support, peer support, and skin camouflage services may help when a scar is affecting daily life.

Prevention

Not every scar can be prevented. Scarring is a normal response to deeper skin injury, and inherited keloid tendency cannot be removed.

Prompt care of cuts, burns, acne, and other skin inflammation may reduce avoidable damage. Follow wound-care instructions after an operation, keep the area clean as advised, and avoid picking scabs or squeezing acne spots.

Once a wound is closed, protecting it from sunlight may reduce long-lasting colour change. Do not apply silicone, cosmetics, or scar products to an open or infected wound unless specifically advised.

If you have previously developed a keloid, discuss this before planned surgery or cosmetic skin injury. Piercings and tattoos may trigger another keloid. This does not mean one will definitely form, but the risk deserves consideration.

Living with it and what to expect

Scar maturation is slow. During the first weeks and months, a scar may become firmer, redder, darker, or more raised before it starts to settle. Many then soften and fade over the following year or longer.

Mature scars usually remain visible to some degree. They may be paler or darker than nearby skin and may not grow hair or sweat normally. Numbness or altered sensation can improve, but it sometimes persists.

Hypertrophic scars may flatten over time. Keloids are less likely to settle without treatment and can grow for months or years. Atrophic acne scars usually remain unless treated. Contractures may continue to affect movement and can need rehabilitation or surgery.

Treatment often takes time and may involve several sessions. Improvement is usually gradual rather than immediate. A realistic goal may be less itching, better movement, a flatter surface, or a colour that blends more closely with surrounding skin.

If the appearance of a scar is affecting your mood or causing you to avoid activities, this is a valid reason to seek support. You do not have to wait until the distress becomes severe.

When to get medical help

Arrange routine medical advice if a scar is painful, persistently itchy, growing, restricting movement, or causing distress. Assessment is also appropriate if you are unsure whether a mark is a scar.

Seek prompt medical advice for a wound or scar area with:

These features do not always mean a serious problem, but they should be checked.

Get emergency help for a severe or extensive burn, a chemical or electrical burn, difficulty breathing after a burn, or a major injury with uncontrolled bleeding. These are emergencies because of the new injury, not because a mature scar is present.

- Increasing redness, warmth, swelling, or pain
- Pus, an unpleasant smell, or the wound reopening
- Fever or feeling unwell
- Rapid growth, repeated bleeding, ulceration, or a major colour change
- New loss of movement near a joint

Common questions

Do scars ever go away completely?

Most scars do not disappear completely. Many become flatter, softer, and less noticeable over 12 to 18 months or longer. The final result is influenced by the injury, body area, skin type, and type of scar.

Why is my scar still red or dark?

New scars contain active blood vessels and pigment changes, so redness or darker colouring can last for months. Sun exposure may make the contrast stronger. A rapidly changing, bleeding, or non-healing area should be assessed.

Can I remove a keloid at home?

No. Cutting, burning, or tying off a keloid can cause injury, infection, and further scarring. Medical treatments can reduce its size or symptoms, but recurrence is possible.

Does massaging a scar break down scar tissue?

Gentle massage of a fully healed wound may help comfort, flexibility, or sensitivity. It cannot erase a scar, and forceful massage can irritate the skin. Do not massage an open, infected, or easily damaged wound.

What is the best treatment for acne scars?

There is no single best treatment because acne scars have different shapes and depths. Options may include skin needling, laser treatment, resurfacing, injections, fillers, or minor surgery. Active acne is often managed first to reduce further scarring.

Can a scar turn into cancer?

Ordinary scars do not usually become cancer. Rarely, long-standing scars or burn wounds can develop concerning changes. A scar that develops a persistent sore, repeated bleeding, rapid growth, or a new lump should be examined.

Sources

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