CONDITION

# Cuts and puncture wounds

Cuts and puncture wounds are injuries that break the skin and may damage deeper tissue.

**WHAT IT IS**
Breaks in the skin caused by sharp or pointed objects

**BODY SYSTEM**
Skin and soft tissues

**MAIN SYMPTOMS**
Pain, bleeding, open skin, swelling

**WHAT CAUSES IT**
Injury from sharp, rough, or pointed objects

**HOW IT IS DIAGNOSED**
Wound examination; imaging for suspected objects or deep damage

**MAIN TREATMENT**
Cleaning, bleeding control, protection, and closure when needed

**CAN IT BE CURED?**
Yes - most heal with appropriate wound care

**IS IT AN EMERGENCY?**
Sometimes - uncontrolled bleeding or severe deep injury

**LONG-TERM OUTLOOK**
Most heal fully; some leave scars or deeper damage

## Overview

A cut is a split or opening in the skin, often caused by a sharp edge. A puncture wound is a small but deeper hole made by a pointed object, such as a nail, needle, tooth, or thorn. Grazes and scrapes damage the skin's surface rather than making a deep opening.

Many minor wounds can be managed at home. Others need medical care because bleeding may be difficult to stop, the wound may need closing, or deeper structures may be injured. These structures include tendons, which connect muscles to bones; nerves; blood vessels; joints; and bones.

Puncture wounds can be easy to underestimate. The opening may be small and close quickly, while dirt, bacteria, or part of the object remains deeper inside. Bites are also treated carefully because teeth can push bacteria into tissue.

The location, depth, cause, contamination, and time since the injury all affect treatment. Your vaccination history and conditions that affect healing also matter.

## Symptoms

A cut usually causes visible bleeding, pain, and separated skin edges. A scrape may feel raw or sting. A puncture wound may show only a small hole, with pain or tenderness beneath it.

Other possible features include:

Some redness and tenderness can be part of early healing. Redness that keeps spreading, increasing pain, warmth, swelling, pus, or fever may indicate infection.

A deep wound can injure tissue even when bleeding is limited. For example, a puncture near a joint may enter the joint, and a wound on the hand may damage a tendon or nerve.

- Swelling, bruising, or redness near the wound
- Dirt, glass, wood, metal, or another object in the wound
- Reduced feeling, tingling, weakness, or difficulty moving
- Clear fluid leaking from a wound near a joint

## Causes and risk factors

Cuts may be caused by knives, broken glass, tools, machinery, sharp metal, falls, or contact with rough surfaces. Puncture wounds commonly come from nails, needles, splinters, thorns, fishhooks, animal claws, or bites.

The chance of infection or delayed healing is higher when a wound:

Diabetes, reduced circulation, a weakened immune system, and some medicines can make infection more likely or slow healing. Smoking also interferes with the blood supply needed for tissue repair.

A nail through a shoe deserves medical assessment because material from the shoe and ground may be carried deep into the foot. Injuries involving high-pressure paint, grease, air, or water equipment are emergencies even when the skin opening looks minor.

- Is deep, crushed, dirty, or contaminated with soil, saliva, or waste
- Contains a foreign object, meaning material left inside the tissue
- Is on the hand, foot, face, near a joint, or over a bone

- Comes from an animal or human bite
- Is not cleaned promptly
- Has poor blood flow around it

## Diagnosis

Most cuts and puncture wounds are diagnosed by examining the injury. A healthcare professional may ask what caused it, when it happened, whether the object broke, and whether the wound was exposed to soil, water, saliva, or chemicals.

The examination checks the wound's depth and location, blood flow, feeling, and movement. A local anaesthetic may be used to numb the area so it can be cleaned and inspected more closely.

An X-ray may be needed if glass, metal, bone damage, or a joint injury is suspected. Wood and some other materials do not always appear on an X-ray, so ultrasound or another type of scan may sometimes be used.

Routine swabs are not usually needed for a fresh, uncomplicated wound. If infection develops, testing fluid or pus may help identify the bacteria involved.

Your tetanus vaccination history will also be reviewed. If an animal caused the wound, the species, location, behaviour, availability for observation, and local rabies risk may need to be assessed.

## Treatment and management

For a minor wound, wash your hands and apply firm, direct pressure with clean gauze or cloth. Keep the pressure steady rather than repeatedly lifting the covering to check. If blood soaks through, place more material on top.

Once bleeding is controlled, rinse the wound with clean running tap water. Gently clean the surrounding skin with soap and remove loose surface dirt that comes away easily. Do not dig into the wound or pull out a deeply embedded object. Avoid putting hydrogen peroxide, rubbing alcohol, or bleach into the wound because these can damage healing tissue.

Pat the area dry and cover it with a sterile or clean non-stick dressing. Change the dressing if it becomes wet or dirty. Follow label directions for any non-prescription pain medicine, and ask a pharmacist if you are unsure whether it is suitable for you.

Medical treatment may include more thorough cleaning and removal of damaged tissue or

foreign material. A cut may be closed with stitches, staples, adhesive strips, or medical skin glue. The choice depends on its location, depth, shape, contamination, and age. Some contaminated wounds and punctures are left open so fluid can drain and infection is less likely to be trapped inside.

Antibiotics like amoxicillin or doxycycline are not needed for every cut. They may be considered for infected wounds or injuries with a higher infection risk, such as some bites, deep punctures, and wounds involving joints or other important structures.

Tetanus prevention depends on the type of wound and your vaccination history. Treatment may involve a tetanus-containing vaccine. For certain dirty or major wounds in people without adequate vaccination, tetanus immune globulin may also be needed. This provides ready-made antibodies for short-term protection.

Possible rabies exposure requires prompt assessment. If recommended, rabies post-exposure treatment can include wound care, vaccination, and rabies immune globulin. Do not wait for symptoms if a potentially rabid animal has bitten or scratched you.

## Complications

Infection is the most common concern. It may remain in the skin or spread into deeper tissue. Rarely, infection reaches a joint or bone, causing septic arthritis or osteomyelitis.

Other complications include:

Tetanus is a serious nervous system infection caused by bacteria found in the environment. Vaccination makes it uncommon in countries with strong immunisation programmes, but contaminated wounds still require an appropriate vaccination review.

Rabies is another serious but preventable infection associated with certain mammal bites and scratches. The risk depends strongly on the animal and where the exposure occurred.

- Ongoing bleeding or a collection of blood under the skin
- A retained fragment of glass, wood, metal, tooth, or other material
- Injury to a tendon, nerve, blood vessel, joint, or bone
- Reduced movement, altered feeling, or persistent pain
- A raised, widened, or noticeable scar

## Prevention

Not every accidental cut or puncture can be prevented. Risk can be reduced by handling knives and tools carefully, wearing footwear outdoors, and using suitable gloves, eye protection, or other safety equipment for work and hobbies.

Dispose of needles and sharp objects in an approved container. Do not place your hand into rubbish, sinks, machinery, or other spaces where hidden sharp objects may be present.

Keep recommended tetanus vaccinations up to date. Vaccination does not prevent the wound itself, but it lowers the risk of tetanus after an injury.

Use barriers and appropriate training around animals. Avoid handling unfamiliar wild animals or bats, especially with bare hands.

## Living with it and what to expect

Minor surface wounds often improve over several days. Deeper cuts and punctures may remain sore for longer and can take weeks to heal. Healing time is affected by the wound's depth, blood supply, contamination, location, and whether deeper tissue was injured.

Itching and mild tenderness can occur as new skin forms. A scar may look red, dark, raised, or firm at first and then change gradually over months. Some scars remain visible. Protecting a healed scar from strong sunlight can reduce long-lasting colour changes.

If stitches or staples were used, you will need a plan for review or removal. Timing differs by body area and the type of closure, so follow the instructions given when the wound was treated.

After a deeper hand, foot, tendon, nerve, or joint injury, recovery may include exercises, splinting, or rehabilitation. Persistent numbness, weakness, restricted movement, or pain is not something to ignore at routine follow-up.

## When to get medical help

Call emergency services or go to an emergency department now if:

Do not remove a large embedded object. It may be limiting bleeding. Apply pressure around it, keep it as still as possible, and seek emergency help.

Arrange prompt, same-day medical advice for a deep puncture, nail-through-shoe injury, bite, contaminated wound, or cut that may need closing. Also seek prompt care if your tetanus vaccination history is incomplete or uncertain, or if the injury could involve rabies.

Contact a healthcare professional promptly if redness spreads, pain or swelling increases, pus

appears, the wound develops a bad smell, red streaks extend from it, or you develop a fever or feel unwell.

Routine follow-up is appropriate for dressing checks, stitch or staple removal, scar concerns, or mild symptoms that are improving as expected.

- Bleeding is heavy, spurting, or does not stop with firm direct pressure
- The wound is very deep, gaping, or exposes fat, muscle, tendon, or bone
- A large or deeply embedded object remains in place
- Part of the body has been partly or completely cut off
- The injury involves the eye, neck, chest, abdomen, or a major blood vessel
- The area becomes pale, blue, cold, numb, weak, or difficult to move
- The wound came from high-pressure equipment or moving machinery

## Common questions

How do I know if a cut needs stitches?

A cut may need closure if it is deep, gaping, continues bleeding, crosses a joint, or is on the face, hand, eyelid, or another important area. It should be assessed promptly because the safe approach to closure changes with time and contamination.

Why can a small puncture wound be serious?

A pointed object can push bacteria or debris deep below the skin. The surface may close before the deeper tissue heals, making infection or a retained object less obvious.

Should I put hydrogen peroxide or alcohol on a wound?

Usually not. These products can irritate and damage healing cells. Rinsing with clean running water and protecting the wound with a clean dressing is generally more suitable.

Do I need a tetanus shot after every cut?

Not necessarily. The decision is based on the wound type and when you last received a tetanus-containing vaccine. Dirty, deep, puncture, crush, burn, and bite wounds receive particular attention.

Can I get a cut or puncture wound wet?

Brief, gentle washing is often acceptable, but soaking can soften the skin and loosen some closures or dressings. Follow the instructions provided for stitches, staples, glue, or adhesive strips, and replace a wet dressing.

What if an animal or person bit me?

Wash the wound promptly and seek medical advice, especially for bites to the hand, face, foot, genitals, or near a joint. The assessment may cover infection, tetanus, rabies, and possible damage beneath the skin.

## Sources

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- Centers for Disease Control and Prevention. Rabies Post-exposure Prophylaxis Guidance
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