PROCEDURE

Skin graft

A skin graft moves healthy skin onto a wound that cannot close on its own.

PURPOSE
Cover and help heal an area of missing skin

PROCEDURE TYPE
Therapeutic surgery transferring healthy skin to another body area

WHERE IT IS DONE
Operating theatre or outpatient procedure room

ANAESTHESIA
Local or general, based on graft size and location

HOW LONG IT TAKES
30 minutes to several hours, based on wound complexity

PREPARATION
Medication review; fasting if sedation or general anaesthesia planned

RECOVERY
Same day or overnight; no driving after sedation or general anaesthesia

MAIN RISKS
Graft failure, infection, bleeding, scarring

RESULTS
Attachment checked within days; healing continues for weeks

Overview

A skin graft is an operation that places healthy skin over an area where skin is missing or badly damaged. The transplanted skin usually comes from another part of your body, called the donor site. The area receiving the skin is called the graft site.

A split-thickness graft contains the top layer of skin and part of the layer beneath it. It can cover a relatively large wound. The donor site usually heals like a graze.

A full-thickness graft contains all layers of the skin. It is often used for smaller wounds where appearance or durability is important, such as on the face or hand. Its donor site is usually closed with stitches.

The graft needs close contact with a healthy wound surface and a good blood supply. New blood vessels then grow into the graft, allowing it to survive.

Why the procedure is performed

A skin graft may be used when a wound is too large or deep to close with stitches alone. Reasons include:

The aim is to cover exposed tissue, support healing, reduce fluid loss, and improve function. A graft may also reduce the time a wound remains open.

- Burns or traumatic skin loss
- A wound left after removing skin cancer or another growth
- A long-lasting ulcer after infection and blood-flow problems are addressed
- A surgical wound that cannot be closed directly
- Reconstruction after an injury or previous operation

Who should and should not have it

A skin graft may be suitable if your wound has a healthy base, enough blood flow, and little or no dead tissue. Your surgical team will also consider the wound's size and location, your general health, and whether a suitable donor site is available.

The procedure may be delayed or avoided if:

Smoking and nicotine can reduce blood flow and make graft failure more likely. Poorly controlled blood sugar and some medicines can also interfere with healing. These factors do not always rule out surgery, but they may need attention first.

- The wound has uncontrolled infection, bleeding, or dead tissue
- Blood flow to the graft site is too poor to support healing
- Pressure, swelling, or movement cannot be controlled
- Your health makes anaesthesia or surgery unsafe at that time
- Another method would provide stronger or more reliable coverage

How to prepare

Your treating facility's own instructions take priority because preparation differs according to the graft, anaesthesia, and your health.

Tell the team about all medicines, vitamins, supplements, allergies, and previous problems with

anaesthesia. Blood thinners like warfarin or apixaban can increase bleeding, but stopping them may also be harmful. Do not stop any prescribed medicine unless the treating team gives you a specific plan.

You may be asked to avoid food and drink before sedation or general anaesthesia. Follow the stated times exactly. Fasting may not be needed for a small graft under local anaesthesia.

Ask whether you should wash with a particular soap and whether hair near the site will be clipped at the facility. Do not shave the area unless instructed.

If you smoke or use nicotine, tell the team. They can explain how avoiding nicotine around surgery may support healing.

Arrange transport home if you will receive sedation or general anaesthesia. You may also need help with meals, dressings, children, or household tasks while movement is restricted.

What happens during the procedure

The team confirms the graft and donor sites and gives the planned anaesthetic. With local anaesthesia, you remain awake but the area is numbed. With general anaesthesia, you are unconscious.

The surgeon cleans the wound and removes tissue that could prevent healing. This is called debridement. A thin layer of skin is then removed from the donor site with a surgical blade or a device called a dermatome.

A split-thickness graft may be meshed by making small openings in it. This allows it to stretch and lets fluid drain. A full-thickness graft is usually placed without meshing.

The graft is shaped to fit the wound and secured with stitches, staples, surgical glue, or a combination. A firm padded dressing, sometimes called a bolster, may hold it still. Some grafts are covered with a negative-pressure dressing that uses gentle suction.

The donor site is dressed. A full-thickness donor wound is usually stitched closed.

Recovery and what to expect afterward

Pain: Both sites can feel sore. The donor site may sting or burn more than the graft site, especially after a split-thickness graft. Use pain relief as directed. Discomfort should gradually improve rather than become more severe.

Eating: You can usually restart fluids and food after anaesthesia once the team says it is safe. Nausea can occur after general anaesthesia, so beginning with light food may be more

comfortable.

Activity: Protect the graft from rubbing, pressure, stretching, and impact. Depending on its location, you may need to elevate a limb, limit walking, or use a splint. Keep dressings dry and do not lift them to inspect the graft unless instructed. The donor-site dressing may remain in place while new skin forms underneath.

Driving: Do not drive home after sedation or general anaesthesia. Do not resume driving until you are no longer taking medicines that impair alertness and can safely control the vehicle without damaging the graft.

Work: Return time is based on the graft's location, your work, and healing. Desk work may be possible sooner than work involving lifting, prolonged standing, dirt, water, or friction. Ask for a work plan before leaving.

Risks and possible complications

A graft may partly or completely fail to attach. Causes can include infection, poor blood flow, movement, pressure, or blood or fluid collecting underneath it. Another procedure or continued wound care may then be needed.

Other possible complications include:

The donor site can also develop infection, changes in colour, or a noticeable scar.

- Bleeding or a collection of blood beneath the graft
- Infection at the graft or donor site
- Delayed healing or reopening of the wound
- Pain, itching, altered sensation, or numbness
- Raised, widened, or tight scarring
- Differences in colour, texture, hair growth, or contour
- Tightening of the graft that limits movement, called contracture

Results and follow up

The first important result is whether the graft has attached, sometimes called "taking." This is usually assessed when the surgical team removes or changes the main dressing within the first several days. Do not remove it yourself unless instructed.

A graft can look red, purple, pale, crusted, or uneven early in healing. Its appearance often

changes over the following weeks and months. Colour and texture may not fully match the surrounding skin.

Follow-up visits are used to check both sites, remove stitches or staples when needed, and adjust dressings. Later care may include moisturising, scar massage, sun protection, compression clothing, or physical therapy. Use these only when your team recommends them for your graft.

Alternatives

The realistic alternatives depend on the wound:

For some wounds, these methods are combined rather than treated as separate choices.

- Dressings and healing naturally: Avoids another wound at a donor site, but healing may take longer and can leave a less predictable scar.
- Direct closure with stitches: Provides faster closure without a graft, but only works when the wound edges can meet without harmful tension.
- A local skin flap: Moves nearby skin while keeping its blood supply. It can be thicker and more durable than a graft but involves a more complex operation and additional scars.
- A free flap: Transfers skin and deeper tissue with microsurgery. It can cover wounds with exposed bone or poor local tissue, but requires longer surgery and recovery.
- Skin substitutes or donated skin: Can provide temporary or staged coverage and avoid immediate harvesting. Some do not provide permanent skin and may still require a later graft.
- Continued wound treatment before surgery: May improve infection control or blood flow, but leaves the wound open for longer.

When to call your healthcare team

Attend planned appointments even if healing seems satisfactory. Contact the team during routine hours for dressing questions, mild itching, expected colour changes, or help with activity and work restrictions.

Seek urgent advice the same day if you develop:

Call emergency services for heavy bleeding that does not stop with firm pressure, fainting, severe breathing difficulty, or chest pain.

- Increasing pain, warmth, swelling, or spreading redness
- Fever, pus, a strong odour, or fluid leaking through the dressing
- New separation of the wound edges
- A dressing soaked with blood
- Loss of feeling, marked swelling, or colour change beyond the graft
- A graft or donor dressing that comes off unexpectedly

Common questions

Will I be asleep?

For a small graft, local anaesthesia may keep you awake while numbing the area. Larger or more complex grafts are often performed under general anaesthesia. Your anaesthesia plan should be explained before you consent.

Can I drive home?

Not after sedation or general anaesthesia. Arrange for a responsible adult to take you home. Even after local anaesthesia, driving may be unsafe if the graft restricts movement or you are taking pain medicine that affects alertness.

How painful is a skin graft?

You should not feel sharp pain during the procedure. Afterward, soreness, stinging, or burning is common. The donor site can be more uncomfortable than the graft. Tell the team if pain is worsening or not controlled by the recommended treatment.

When will I know if the graft has taken?

The team can usually make an early assessment within several days, often at the first dressing change. Complete healing and the final appearance take much longer.

Will the grafted skin look normal?

It may not exactly match the surrounding skin in colour, thickness, texture, or hair growth. Early redness and uneven colour often settle, but some differences and scarring can remain.

When can the dressings come off?

This is decided separately for the graft and donor sites. Removing a dressing too early can disturb healing, so leave it in place until your team tells you how and when to change it.

Sources

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