

Skin Grafts

What is a skin graft?

A skin graft is a surgical operation in which a piece of healthy skin is transferred to a new site on the body.

They can be split thickness or full thickness and your surgeon will decide on which option, depending upon the defect that needs to be covered.

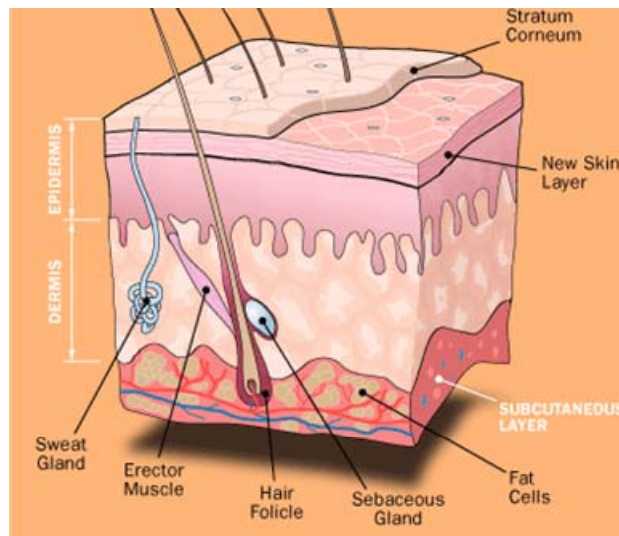


Figure 1: Layers of the skin

What does the operation involve?

A split thickness skin graft (STSG) involves shaving off the epidermis and a variable layer of dermis (see above diagram). This layer of skin is then secured over the open wound where it 'takes' a new blood supply from the underlying tissues. The site of the shave (donor site) heals up on its own, like a 'graze', using regenerating skin cells from hair follicles or glands.

A full thickness skin graft (FTSG) involves taking all of the epidermis and dermis from the donor site. This means that the donor site must be closed directly (stitched) as it will not heal on its own. This necessitates taking the FTSG from an area of high skin laxity, such as the neck, in front/behind the ear or the upper inner arm. You will then be left with a straight line scar at the donor site. As with a STSG, the FTSG is then stitched in place over the wound.

Grafts are sometimes held in place with an overlying sponge or 'tie-over' dressing which minimises shearing forces that could otherwise prevent the graft getting a new blood supply from underlying tissues.

There are pros and cons for a split thickness skin graft vs a full thickness skin graft and the surgeon will decide on the best option for you and discuss the reasons for that decision.

What are the benefits of an operation?

When there is an open wound that won't close directly the options range from leaving it to heal (which may take months or longer) or covering the wound. The simplest way to cover an open wound is with a skin graft.

What are the risks?

Any time there is an open wound there is a risk of infection or bleeding. It is very rare for any bleeding to be significant enough to warrant a transfusion unless a very large proportion of the skin needs grafting. There is also a very small chance of nerve injury, although normally the nerves lie too deep to be disturbed during cleaning of the recipient site (wound) or harvesting of the skin graft.

There will be a scar where the graft is taken from and where the graft is stitched into place. Sometimes these scars can be hypertrophic or keloid in nature (more prominent than normal). In between 5 and 20 per cent of cases the skin graft will fail to survive (partially or completely). This may in some cases require a repeat skin graft procedure. The most common causes for failure are infection, haematoma (collection of blood between graft and underlying tissue) and shearing forces.

If the procedure is carried out under a general anaesthetic there is a very small risk of blood clots or chest infections. The risk of these increases if you have predisposing risk factors such as long term immobility, previous clots or breathing difficulties.

Risks from the operation itself and of the graft failing to survive are significantly higher in smokers.

What happens after the operation?

This depends on the size of the skin graft and the area involved. Clearly a skin graft on the foot of a patient with poor mobility will warrant admission into hospital until the graft has 'taken' (approximately 5 days). However, if the patient were fully mobile they could be discharged with crutches and brought back to check on the graft after 5 days. A small graft on the face would be a day case procedure, but a skin graft covering 10% of the body, for example, would certainly require closer monitoring.

What activities will I be able to do afterwards?

In order for the graft to survive it must grow new blood vessels from the underlying tissue. If the patient moves about too much then the shearing forces could damage these vessels and cause the graft to fail. Clearly this is more of a problem over joints and in areas of the body which are in constant use, such as the hands and feet.

How much pain can I expect?

You will often be surprised at how little the wound hurts after the procedure. This is because normally the nerves to the skin in this region would have been damaged by whatever necessitated the graft in the first place. Instead, the donor site is normally far more uncomfortable for the patient, as, particularly with split thickness skin grafts, nerve endings lie free under the layer of skin that has been removed for the graft. In essence, the donor site will feel like a 'carpet burn'.

How do I care for my wound?

The nursing staff will advise you on how to look after your wounds.

When will I be able to drive / return to work?

Your doctor will answer these questions depending on your own particular circumstances.

When should I seek help?

If you notice any excessive bleeding or signs of infection, such as redness of the wound or discharge, then please see your GP or attend A&E.

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