



## Classification and Types of Grafting in Surgery

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### Overview

When skin damage-from burns, injuries, or surgery is too big to treat with stitches, grafts can help. Your doctor removes the injured skin and replaces it with a healthy patch, usually from somewhere else on your body, like your arm or leg. It heals with your surrounding skin over a period of days or weeks. Healthy skin, bone, or other tissue is taken from one portion of the body and transplanted into another to replace diseased or injured tissue. Despite its time and labour requirements, grafting is a common method of vegetative propagation of woody plants for any or all of the following reasons: to impart disease resistance or hardiness, which is contributed by the rootstock; to reduce the time it takes for the scion to produce its first flowers or fruits.

Grafting refers to a surgical procedure to move tissue from one site to another on the body, or from another creature, without bringing its own blood supply with it. Instead, when it is implanted, a new blood supply grows in. A flap is a similar treatment that involves transferring tissue while keeping the blood supply intact. A graft can be an artificially created device in specific cases. A tube to transmit blood flow across a defect or from an artery to a vein for hemodialysis is an example of this.

### Classification

Autografts and isografts aren't commonly thought of as alien, thus they don't cause rejection. The receiver may perceive allografts and xenografts as foreign and reject them.

**Autograft:** A graft taken from one portion of an individual's body and transferred to another part of the same individual's body, such as a skin graft.

**Isograft:** A graft extracted from one person and implanted in another person with the same genetic makeup, such as

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grafts between identical twins.

**Allograft:** A graft taken from one person and transplanted into a genetically unrelated member of the same species.

**Xenograft:** Graft taken from one individual and applied to another member of the same species, such as an animal to a human.

### Grafting techniques

Skin grafting is the most common type of grafting, although many other tissues can be grafted as well: skin, bone, nerves, tendons, neurons, blood vessels, fat, and cornea are some of the most routinely transplanted tissues today. The following are examples of specific types: Skin grafting is used to replace skin that has been lost due to a wound, burn, infection, or surgery. In the instance of damaged skin, it is removed and replaced with fresh skin. Skin grafting can shorten the length of treatment and reduce the amount of time spent in the hospital, while also improving function and aesthetics. Skin grafts are divided into two categories:

1. Skin grafts with a split thickness [epidermis + portion of the dermis]
2. Skin grafts of full thickness [epidermis + complete thickness of the dermis]

Bone grafting is employed in a variety of situations, including dental implants. The bone can either be autologous (taken from the iliac crest of the pelvis) or banked (allograft). Vascular grafting is the surgical use of transplanted or synthetic blood vessels. Ligament grafting is used to repair ligaments, such as the anterior cruciate ligament or the ulnar collateral ligament. The procedure of extracting adipose tissue through liposuction, processing/centrifugation, and injection into soft tissue to improve covering, volume, and contour, usually in the breast, buttocks, and face, is known as fat grafting.