

Deep Circumflex Iliac Artery Flap (DCIA)

A DCIA free flap is one way of filling a bony hole in either the upper or lower jaw. It is one of the common ways of replacing bone that has been removed for cancer treatment.

What does the surgery involve?

Your surgeon will take a piece of bone from your pelvis. The pelvis is the large block of bone that lies immediately above the hip joint. Pelvic bone (the flap) is removed along with two blood vessels, one of which supplies blood to the flap (the artery) and one of which drains blood from it (the vein). The artery supplying blood to the bone is called the deep circumflex iliac artery and hence the flap is usually known as the “DCIA” flap. Once the necessary piece of bone from the pelvis is removed it is transferred to the head and neck and secured in position with small plates and screws. The blood vessels supplying and draining the flap are then joined to blood vessels in your neck under a microscope. These blood vessels then keep the flap alive while it heals into its new place.

What happens to the hole in the pelvis?

The hole in the pelvic bone that is left after the flap is raised is left to heal on its own. It takes several months for the pelvis to heal completely but at the end of this time it will be as strong as it was before the surgery.

What can I expect after the operation?

The area of your pelvis where the bone has been removed is likely to be sore. Regular painkillers will be arranged for you. A small tube is also placed through the skin into the underlying wound to drain any blood that may collect. This “drain” is usually removed after a few days.

Will I have a scar?

All cuts made through the skin leave a scar but the majority fade with time. The scar on your tummy is usually around 9” long (23cm).

What are the possible problems?

There are potential complications with any operation. Fortunately, with this type of surgery complications are rare and may not happen to you. However, it is important that you are aware of them and have the opportunity to discuss them with your surgeon.

Bleeding – since a “drain” is inserted into your pelvic wound bleeding is unusual.

Infection – you will be given antibiotics through a vein whilst you are asleep and for the first few days after surgery. As a result, infection is not normally a problem.

Numbness – occasionally a patch of skin over your thigh will feel numb and tingly after the operation. This numbness may take several months to disappear and in a minority of patients may last forever.

Hernia – in addition to removing bone from your pelvis your surgeon may also remove a neighboring muscle. This is necessary if some of the soft tissue lining inside your mouth has also to be replaced. If part of a tummy muscle is removed the area is usually strengthened with a synthetic plastic sheet when the wound is closed. Despite this the tummy muscles may be weakened. This can produce a bulge in the area. Rarely hernias may occur months or even years after surgery.

Flap failure – in 2 - 5% of cases one of the blood vessels supplying or draining the flap can develop a blood clot within it. This means that the flap doesn't get any fresh blood or, if the drainage vein clots, then the flap becomes very congested with old blood. If this occurs it usually happens within the first two days and means that you will have to return to the operating theatre to have the clot removed. Removing the clot is not always successful and on these occasions the flap "fails" and an alternative method of reconstruction sought.

Will my walking be affected?

You will be on bed rest for three or four days after surgery. Soon after you will start sitting out in a chair. With the help of physiotherapists, you will start to walk at the end of the first week. You should be climbing stairs by about the third week after surgery.

Although you may need some help with walking when you leave hospital (e.g., a stick) most people end up walking normally after a few months.