

PATIENT INFORMATION SHEET

Bone Grafting; Guided Bone Regeneration and Sinus Lift

This documentation has been designed to improve your understanding of these procedures. If you have any other questions that this leaflet does not address, then please ask your dentist or surgeon.

The Problem

The most likely reason that a bone graft has been suggested is that dental implant placement is planned. Implants require adequate bone to be anchored securely. You may have reduced bone due to early tooth loss, infection, trauma or having large sinuses. (sinuses are the air-filled spaces located in the cheek bones, above the teeth and either sides of the nose.)

Surgical options : Guided bone regeneration

Artificial bone derived from animal or mineral sources can be used to encourage new bone to grow. These materials have been specially prepared to make them safe for use in humans. The materials provide a scaffold for new bone to grow into and will be ready to receive dental implants several months later. The process can take anything from 3 to 12 months to occur. One advantage of this method is that it is not necessary to take bone from another site in the mouth, making surgery more comfortable and quicker.

Autogenous bone graft (own bone)

Bone is usually harvested from inside another part of your mouth. Common donor sites are the lower wisdom tooth region and the chin where small blocks of bone can be collected. Scrapings of bone close to the implant site can also be used along with artificial bone to improve bone regeneration. If large quantities of bone are needed, bone grafts from other areas of your body such as hip or skull can be carried out in a hospital setting. There will be discomfort from the donor site as well as the surgical site, however many people feel that this is worth the additional discomfort as your own bone is normally considered the 'gold standard'.

Sinus lift procedures

The procedure increases the height of bone between the gum and sinus to allow sufficient bone for an implant to be placed. This can be carried out using artificial bone (guided bone regeneration) or your own bone (autogenous bone graft).

What type of anaesthetic is used?

Depending on the quantity of bone needed, your general health, and anxiety level; bone grafting can be carried out under either local anaesthetic, with or without sedation, or a general anaesthetic. Your surgeon will help you decide which is best for you. The area of surgery will be completely numb during treatment. You can expect to feel pulling and pressure sensations and the vibrations of the drill, but no pain.

What does the surgery involve?

A cut in the gum will be necessary to uncover the proposed implant site. If your own bone is being used, then the gum will

also be cut over the donor site. If artificial bone is used (with or without fragments of your own bone) this will often be held in place with a dissolvable membrane material. Block bone grafting requires drilling and usually needs a small titanium screw to hold the bone in the correct place whilst healing occurs. This can be removed at the time of implant placement but may remain in place permanently. Dissolvable stitches in the gum are often needed to bring the gum back together. However, your surgeon may choose to remove them before they dissolve.

If a sinus lift is planned, then a cut in the upper gum at the back of your mouth will be made. A small amount of drilling is carried out. The sinus lining is lifted up. Bone and/or artificial bone is placed into the defect between the sinus lining and the implant site before closing the gum with stitches.

What can I expect after surgery?

It is normal to expect some discomfort and swelling both on the inside and outside of your mouth after bone grafting surgery. This usually settles down after three days but may be sore for up to two weeks. You may find that your jaw is stiff and you have to eat a soft diet for a week or so. It may be necessary to take a few days off work. Painkillers and sometimes antibiotics can be prescribed. Although there can be a little bleeding at the time of the bone graft this usually stops very quickly and is unlikely to be a problem. Should the area bleed again when you get home this can usually be stopped with gentle pressure to the area with a clean cotton handkerchief or surgical swabs. You should avoid rinsing your mouth out on the day of surgery. Carefully cleaning of your mouth and rinsing with warm salt water or Chlorhexidine mouthwash is normally advised after 24 hours to encourage healing.

If a sinus lift is carried out you will be advised not to blow your nose, sneeze with pinched nostrils, fly, play woodwind or brass musical instruments, blow up balloons or air mattresses, until healing has taken place.

How long do I need to wait after the bone graft before the implant/s can be placed?

In a few cases the implant can be placed at the same time as the bone grafting or guided bone regeneration. In most cases however a period of 3-6 months healing is necessary before the implant(s) can be placed.

What are the risks?

In some cases, the bone graft fails to take or dissolves away. This can sometimes be the result of infection. In other cases, there is no clear reason why this can happen.

If a sinus lift procedure is carried out, there is a small chance that you could develop symptoms of sinusitis after surgery.

In some surgical sites there are nerves that give feeling. Your surgeon will discuss whether any nerves may be bruised as a result of your surgery, which might result in altered sensation of your mouth, lips or tongue.

In very rare cases when using artificial bone, incompatibility and allergic reactions have occurred. Although the materials used are rigorously tested for safety there may be some unknown effects on the body that later become clear. If artificial bone is planned, please discuss with your surgeon what type is to be used, as you may have a preference on religious or ethical grounds.