



Bath Oral Surgery Clinic

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Frequently asked questions

Bone Augmentation and Grafting Procedures

What is bone augmentation and grafting?

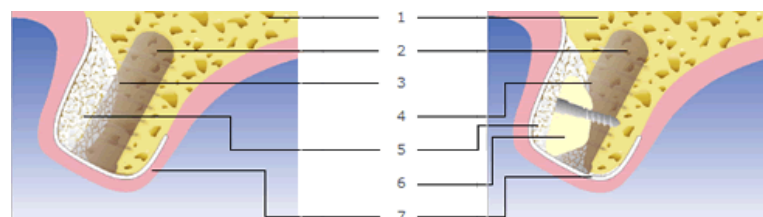
Bone augmentation and grafting are related procedures, used to correct deficiencies of bone volume in areas of either jaw where the placement of implants is planned for the replacement of missing teeth.

Why would I need this procedure?

Generally, once teeth have been removed, the bone that was supporting them is slowly lost over time and the end result is a reduction in both bone quantity and density. This situation needs to be corrected if the intention is to replace the missing teeth with implant-supported restorations as sufficient bone has to be present to surround the entire length of the implant. Bone augmentation procedures are used where only relatively small amounts of bone need to be replaced and developed. Grafting procedures are used where larger volumes of bone have been lost over time and need to be replaced.

How is the bone augmentation/grafting procedure carried out?

As with all implant-related treatment, the surgeon and nursing staff follow a strict sterile protocol in the surgery. The gum tissue is temporarily lifted up to expose the bony defect at the site for the procedure. In cases where this defect is relatively small, sufficient augmentation material is placed and a special membrane secured over the area to cover the material. The gum tissue is then replaced into position to cover the whole site. Where the bony defect is larger, a grafting procedure is required which involves the placement of a block graft, secured using fixation screws. Augmentation material is then placed around this block graft before the special membrane is secured over the area and the gum tissue replaced into position to cover the whole site.



Diagrammatic representation of bone augmentation prior to implant placement.

Diagrammatic representation of bone grafting to implant placement.

1. Jaw bone
2. Proposed position of implant
3. Border of bony defect for augmentation
4. Border of bony defect for grafting
5. Augmentation material
6. Block graft material (secured with fixation screw)
7. Membrane placed over augmentation/graft area

Bone augmentation/grafting can be carried out under local anaesthesia alone or with additional intravenous sedation if required. This is inherently a more pleasant way of having potentially stressful surgical treatment carried out and is especially good if you are apprehensive as the sedative's action actually removes anxiety, so making the treatment much more comfortable.

These options can be discussed with you during a consultation appointment.

What materials are used for the bone augmentation/ grafting?

The bone augmentation material ("Bio-Oss") and special membrane ("Bio-Gide") are produced by Geistlich Biomaterials (www.geistlich.co.uk). The augmentation material is a bone substitute of bovine origin; the membrane is a collagen of porcine origin. Both have been thoroughly treated to remove all proteins and sterilised to ensure safety. The bone substitute initially acts as a scaffold but over time, it largely dissolves away to be replaced by your own bone.

"Bio-Oss" and "Bio-Gide" have been comprehensively researched and validated for use in bone augmentation and grafting procedures; detailed patient information booklets regarding these materials are available.

The block graft material is supplied by the Rocky Mountain Tissue Bank (www.rmtb.org) and is sourced from donated human tissue. This tissue bank is accredited with and conforms to the standards established by the American Association of Tissue Banks and the Food and Drug Association for the retrieval, processing, storage and distribution of its tissue products as well as being ISO certified for distribution in the European community.

Can implants be placed at the same time?

It is sometimes possible to place an implant at the same time as an augmentation procedure if there is sufficient quantity of jawbone already present at the operation site to stabilize the implant. Following the procedure, the part of the implant covered by the augmentation material becomes surrounded by new bone over time.

If a graft is required, this is usually carried out as a separate procedure; the graft will need to be left to mature for around 10 months before implants are placed. The type of augmentation/grafting procedure required and the likely timescale of treatment will be discussed during a consultation appointment.

How long will the operation take?

This depends on the degree of augmentation/grafting required and whether the operation is being carried out with local anaesthesia alone or with additional intravenous sedation.

An appointment for surgery under local anaesthesia usually lasts 90 minutes. When intravenous sedation is used, an appointment usually lasts 120 minutes. The longer time allows for the recovery period needed before you can be discharged home.

Will there be any stitches?

Stitches are used in the operation to help complete the surgery. A fine size of thread is used to achieve a good cosmetic result.

These stitches are dissolvable and so should disappear after about two weeks.

Will I be in pain afterwards?

You should not feel any pain immediately after the operation, as the area of surgery will be numb from the local anaesthetics that have been used.

As the numbness wears off, the area might become uncomfortable and then you should take painkillers. We will supply you with these, with information about doses.

Could there be any complications or after-effects?

After the procedure, there is likely to be some swelling and bruising in the area of the surgery and possibly some discomfort. The bruising is usually most obvious after two to three days and will vary in amount between patients. It normally resolves itself in 10 to 14 days.

As the operation site will now be of a larger volume, the area is likely to feel quite enlarged even after the bruising has subsided and the overlying gum tissue may feel different to that of the adjacent areas.

These changes in sensation generally tend to become less noticeable over time and gradually resolve as the augmented/grafted area integrates with the surrounding bone.

When can I return to work?

This depends on your occupation and how you are after your treatment. It may be possible to return to work the next day.

Some people need to take some time off work, especially if the operation has been carried out under intravenous sedation. We will give you appropriate advice for your particular circumstances.

After your operation

After your surgery, we will give you an information sheet with instructions to help bring about a quick recovery.

We will discuss this with you before you are discharged home, to ensure that the information is clear and understood.

The main points are as follows.

On the day of the operation

- **Get plenty of rest** in the first few hours after your operation.
- **Do not rinse your mouth** or drink hot fluids.
- **Relieve discomfort** by taking the supplied painkillers as directed and use ice packs to reduce discomfort at the operation site.

From the following day

- **Keep your mouth as clean as possible** by gently brushing your teeth as usual.
- **Use salt water mouth rinses** (one teaspoon of salt in a cup of warm water) every four hours for seven days. This will help to keep the operation site clean and clear of debris.
- **Avoid smoking.** The local action of nicotine in the mouth has been shown to have a detrimental effect on healing after surgery and greatly increases the likelihood of wound infection developing.
- **Continue to take the painkillers** and any other supplied medications as directed and use ice packs for the next two to three days.
- **If bleeding is troublesome**, you can usually control it by placing dampened gauze over the wound and applying pressure for 15 to 20 minutes (slight oozing can be expected for a short time following surgery).

If you have any other complications or require advice after treatment, please call **07790 203198** and leave a message including a contact telephone number. We will return your call as soon as we can.