

# Alveolar Bone Grafting for Adult Cleft Lip and Palate Patients

## What is an alveolar bone graft?

The Alveolus is part of the bone that holds our teeth, some patients with a cleft lip and palate have a gap in the alveolus. There can also be a gap in the roof of their mouth, which connects with their nose, called a fistula. The operation involves bone being taken from the hip and placed in the gap. It is done under general anaesthetic and may help to close a fistula too.

If you have a fistula you may notice food and fluid can leaking into your nose from your mouth. The alveolar bone graft aims to seal the fistula to stop this from happening. If there is a small amount of air escape through the fistula closing it can reduce the air leakage thereby improving speech.

## Why could it benefit me?

Teeth need erupt through the jaw bone and into the mouth, needing bone around them for support. If a patient with a cleft has a gap in the bone, the teeth may not erupt or they can come through in the wrong position. To allow us to straighten the teeth with braces we need to have bone in the gap. If there are missing teeth we want to replace we may also need bone in the gap.

## When can my treatment happen?

Patients often have this surgery at the age of 8-10 years old. It can be needed later in life as a “top-up” if more bone is needed in the area to help replace any missing teeth. If the surgery was not done when you were younger it can be still be required when you are older depending on how your teeth grow.

## What are the stages of treatment?

Records will be taken of your teeth and face in the form of photographs, X-rays and molds of your teeth. Then you will have a meeting with the whole team to discuss your treatment options.

Fixed braces might need to be placed by the Orthodontist to straighten your teeth prior to bone grafting.

If you have a bilateral cleft lip and palate the surgery may be done in two stages, 3-6 months apart. Once you are ready for surgery you will be sent for a pre-assessment appointment, which may include blood samples and a review with an anaesthetist. This is to ensure you are ready for the general anaesthetic.

## **What does Alveolar Bone Grafting Surgery involve?**

The operation is in two parts. Firstly, bone is taken usually from your hip to put into the cleft. The surgeon will make a small cut in the skin and muscle over the hip bone. The surgeon will then remove a small piece of bone from the hip and the cut in the muscle and the skin is then sewn closed with dissolvable stitches.

During the operation local anaesthetic is injected to the region, and a dressing is put on top of the skin. After a few weeks, the bone that was removed will have regrown. There may sometimes be a small dent where the bone was taken.

The second part of the operation is to repair the cleft of the alveolus. The surgeon will uncover the cleft by making a cut in the gum. They will then put the bone from the hip into the cleft. The fistula will be sewn closed and the surgeon will finish by sewing the gum over the bone graft to close it, ensuring that the region is water-tight. The sewing is done using dissolvable stitches.

## **What are the risks of having the surgery?**

Any surgery carries a small risk of infection or bleeding. Every anaesthetic also carries a risk, but this is very small. Your anaesthetist is an experienced doctor who is trained to deal with any complications. The surgeon and anaesthetist will discuss potential risks with you before the operation.

You may have a headache, a sore throat or feel dizzy afterwards. These side effects are usually short-lived and not severe.

There is a chance that the graft might fail, or only partially 'take' in which case it would need to be repeated. This is often due to poor tooth brushing before and after the operation. To reduce the chance of the bone graft failing, we might suggest you see a hygienist before and/or after the operation.

Bone grafts are sometimes damaged through trauma or by being knocked so we advise you to be very careful for the first couple of weeks after the operation.

Occasionally, the fistula can reopen. If this happens the fistula would need to be repaired in a second operation.

When harvesting bone from the hip, there is a small risk of damaging a nerve which supplies sensation to the side of the thigh. This is a very low risk, and if it does occur it is usually temporary in nature.

## **What will happen after my surgery?**

You will feel a little sleepy and groggy after surgery, however most patients are able to go home the same day. A course of antibiotics will be started in hospital to reduce the risk of an infection and these may need to be taken at home as well as prescribed. To reduce any infection in the mouth or at the hip it is important to brush your teeth and keep your hip wound clean. The hip wound will be dressed in a waterproof dressing until your review appointment with our team.

When you wake up your hip and mouth will be numb as we inject local anaesthetic as part of the procedure. You will be able to walk on your hip but you may require some simple pain killers. Avoid having a bath or swimming until your review appointment which will be 10-14 days after your surgery.

## **How can I care for my mouth after surgery?**

- Do not rinse, swab your mouth or brush your teeth on the first night after the surgery
- The day after your surgery, rinse your mouth gently for at least 1 minute with 0.2% Chlorhexidine Gluconate e.g Corsodyl mouthwash, use 4 times daily for no more than 2 weeks
- Do not pull on lips or cheeks to view the surgical site. This can open the surgical site and retard healing.
- Avoid smoking, alcohol, or drinking through a straw as these may disrupt the healing, promote bleeding and or pain.

## **What happens if I have bleeding?**

- It is not unusual to have slight oozing for 24 hours and occasional bleeding for 10 days after an oral surgery procedure.
- Remember, a drop or two of blood mixed with saliva may seem like more blood than there really is.

### **To minimize bleeding:**

- Avoid spitting or rinsing your mouth on the day of the surgery

## **Will the surgical site be swollen?**

You may experience swelling after the surgery.

- Swelling peaks in appearance in 2-3 days and take up to 10 days to return to normal.
- Applying ice-packs for the first 24 hours, with 20 minutes on and off intervals.

- Elevating your head may decrease the swelling. Sleep with a couple of extra pillows to keep your head elevated during the first night.

### **What about my denture or my brace?**

It is best NOT to wear your denture for up to a week after surgery and it may need to be modified, unless otherwise advised

### **What will happen to my stitches?**

- Stitches are placed to close the surgical site. If they need to be removed this will be done at your post-operative review appointment, otherwise do not disturb the surgical area.

### **Smoking and bone grafting**

We know the irritants from smoking affect the normal healing of the gum and bone tissues of the mouth. Therefore, please try and stop prior to surgery.

### **What appointments do I need after surgery?**

We will give you a review appointment after the surgery for the cleft clinic. Your first appointment is to check that everything is healing well. Around 6 months after the graft we will take a post-operative x-ray to review the graft.

If you need any braces or restorative dental treatment after your graft this will be arranged.

### **Further information can be found on:**

<https://www.clapa.com/treatment/school-years-5-12/alveolar-bone-graft-abg-surgery/>

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[www.bartshealth.nhs.uk/pals](http://www.bartshealth.nhs.uk/pals)

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