Department of Oral and Maxillofacial Surgery

Maxillary (upper jaw) osteotomy

This leaflet has been designed to improve your understanding of your forthcoming treatment and contains answers to many of the common questions. If you have any other questions that the leaflet does not answer or would like further explanation please ask your surgeon or orthodontist.

The problem

It has not been possible to correct your teeth and how they bite together with orthodontics alone. This is because the bones of your face and jaws are out of balance with one another. Surgery will change the relationship of your upper jaw to the lower jaw and will correct these problems. The surgery will take place under a general anaesthetic, which means that you are going to be put to sleep completely.

What does the operation involve?

The operation is all carried out from the inside of your mouth so that there are no visible scars on the skin of your face.

- A cut is made through the gum above your upper teeth to gain access to the jawbone.
- The upper jaw is then cut with a small saw to allow it to be broken in a controlled manner.
- It is then moved into its new position and held in place with small metal plates and screws.
- The gum is stitched back into place with dissolvable stitches that can take a fortnight or even longer to fall out.

What can I expect after the operation?

- **Postoperative pain** – Perhaps surprisingly it is not a particularly painful operation but it is still likely to be sore and we encourage you to have supplies of paracetamol and ibuprofen at home. Please inform your doctor if you are unable to take ibuprofen painkillers.
- **Swelling** - it is normal to expect swelling over the cheekbones, upper and lower lip and chin region. This is usually worst approximately 48 hours after surgery and will often persist for three to four weeks. The swelling can be reduced by using cold compresses and sleeping propped upright for a few days. Initially your nose is often blocked and you may have to breathe through your mouth.
Following certain maxillary procedures, it is not unusual for some swelling to persist for several months.

- **Reduced mouth opening** - Immediately after the operation your face will be swollen and will feel tight. Your jaws will be stiff and you will find that you cannot open your mouth widely.

- **Sore throat** - Your throat may also be uncomfortable and swallowing can be difficult to begin with. In all you should expect to feel a bit miserable and sorry for yourself for the first few days.

- **Infection** - It is also necessary to make sure that the area heals without any infection, so you will be given antibiotics through a vein in your arm whilst you are in hospital. You will sometimes be sent home with a course of antibiotics.

- **Difficulty eating and speaking** – this is usually due to swelling and is worst in the first week. It is still very important to keep the mouth as clean as possible with tooth brushing and mouth-rinsing after meals.

- **Bleeding** – bleeding is usually minimal, but can feel like a lot in the mouth when it mixes with saliva. Most bleeding often settles within the first 48 hours after surgery.

- **Bruising** – this can occur over the skin of the face and neck and will usually take one to two weeks to resolve itself. Usually no treatment is needed for this.

- **Stitches** – stitches inside the mouth are often resorbable and take two to three weeks to completely dissolve. These can sometimes cause discomfort but often get softer with time.

- **Use of elastic bands** to control occlusion – after jaw surgery, elastic bands are used to guide the jaw into its new biting position (occlusion). This is also to help maintain the new bite and prevent any shift following surgery.

**Can I eat normally after surgery?**

Not to begin with. For the first day or two you will only want liquids but very quickly you should be able to manage a soft diet and then gradually build up to normal food over a few weeks.

**How do I clean my teeth after surgery?**

After surgery you will be quite sore, swollen and not be able to open your mouth as wide as normal. But it is really important to maintain good, if not perfect oral hygiene.

- Use a small soft tooth brush to clean your teeth at least two to three times a day.
- Use warm salty mouth rinses; rinse for five minutes, five times a day for five days after the surgery.
• You may also use Corsodyl (chlorhexadine) mouth rinse, but be aware it can cause staining to the teeth, especially if you’re cleaning is not good (this can be polished off later if necessary).
• Above all, it is essential you keep your mouth and teeth as clean as possible after your jaw surgery.

How long will I be in hospital?
This varies from person to person but most patients spend one or sometimes two nights in hospital after their operation. The position of your jaw will be checked with X-rays before you are allowed home.

Do I need to take any time off work?
Again this varies from person to person and also depends on what kind of job you do. We recommend that most people have about three weeks off work.
It is important to remember that you will not be able to drive or operate machinery for 48 hours after your general anaesthetic.

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.

General risks of surgery

Local to surgical site:
• Postoperative pain
• Swelling - usually worst approximately 48 hours after surgery and often persist for three to four weeks
• Bleeding - requiring transfusion or return to theatre
• Bruising
• Infection - requiring antibiotic therapy and/or return to theatre. Greatest risk in smokers, diabetics and immunocompromised patients.
• Wound breakdown
• Scarring
• Fistula formation (leakage from a hole at surgical site, e.g. screw placement)

Systemic complication:
• Deep Venous Thrombosis (blood clot in legs)
• Pulmonary Embolism (blood clot in lungs)
• Myocardial Infarction (heart attack)
• Cerebrovascular Accident (stroke)
• Pneumonia (chest infection)
• Pressure sores
Specific risks of maxillary (upper jaw) orthognathic procedures

Frequently occurring (most patients experience this to some extent)
- Numbness affecting the cheeks, upper lip, gums and palate (this may be permanent in a small number of patients to varying degrees)
- Difficulty opening mouth wide
- Nose bleeding requiring nasal packs (bandages)
- Changes in the shape of the nose (broadening nasal base, nasal tipping upwards)

Rarely occurring (less than one in 20 patients having surgery)
- Relapse of maxillary position (particularly if maxilla moved down)
- Infection of maxillary plates requiring re-operation to remove the plates & screws
- Friction burns/bruising from surgical drill
- Soft tissue injury from prolonged traction
- Deviated nasal septum affecting breathing
- Acute or chronic sinusitis
- Oro-antral fistula (communication between sinus and mouth)

Very rare complications (significantly less than one patient in 100)
- Re-operation to correct maxillary position
- Catastrophic bleeding requiring blood transfusion and/or further intervention
- Rigid intermaxillary fixation (jaws wired together)
- Severe swelling causing dangerous airway obstruction
- Tooth damage/loss
- Non-union or necrosis of bone

Can I smoke?
Given the strong association between many of the complications listed above and smoking, are strongly encouraged NOT to smoke at any stage during their treatment and may be refused their operation.

Will I need further appointments?
A review appointment will be arranged before you leave hospital to see both the surgeon and orthodontist.

Adapted from:
British Association of Oral and Maxillofacial Surgeons.
http://www.baoms.org.uk/
We are a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

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