

Patient information

Jaw or chin corrective surgery (orthognathic surgery)

Key messages

- Please bring with you any medications you use (including patches, creams and herbal remedies) in the original packaging if possible, and any information that you have been given relevant to your care in hospital, such as x rays or test results.
- Take your medications as normal on the day of the procedure **unless** you have been specifically told not to take a drug or drugs before or on the day by a member of your medical team. **Do not** take any medications used to treat diabetes.
- Smokers are strongly advised to stop smoking before this procedure as it can significantly affect the healing of tissues.
- You must be off the oral contraceptive pill for 6 weeks and Aspirin for 14 days before your surgery. It is important that you discuss this with your surgeon at the time of booking a date for the procedures

Important things you need to know

Patient choice is an important part of your care. You have the right to change your mind at any time.

You are due to undergo corrective jaw surgery on based on the advice given to you by your orthodontist and surgeon and because it has not been possible to correct the alignment of your teeth with orthodontics alone. This is usually carried out alongside orthodontic treatment to align the teeth.

You may also have chosen or been recommended an ancillary procedure such as extraction of teeth, genioplasty (chin surgery) insertion of implants, rhinoplasty (nose job), etc because it is necessary as part of the procedure or because it is expected to further improve your appearance and facial harmony However, your surgeon might recommend that it is carried out at a later stage.

Before your procedure

You will be admitted to hospital the day before or the morning of your operation. This procedure may involve the use of general anaesthesia and you must therefore be fasting for 6 hours before surgery.

Smokers are strongly advised to stop smoking before this procedure.

You must be off the oral contraceptive pill 6 weeks before your surgery

During the procedure

The operation is almost entirely carried out from the inside of your mouth to minimise visible scars on the skin of your face.

For lower and/or upper jaw surgery, an incision (cut) is made through the gum behind the back teeth to gain access

to the lower jaw, or in the gum above the upper teeth for the upper jaw. The jaw is then carefully cut with a small saw to allow it to be broken in a controlled way. Occasionally, for lower jaw surgery, it is necessary to make a small incision on the skin of the face to allow the screws that hold the jaw bone in place to be inserted.

This incision is only a few millimetres long and usually only requires a single stitch.

For genioplasty, an incision is made through the gum on the inside of the lower lip to gain access to the chin bone and chin. The chin bone is then cut with a saw to allow it to be broken in a controlled manner.

For both operations, the jaw and chin are then moved into the new position and held in place with small metal plates and screws. The gum inside the mouth is stitched back into place with dissolvable stitches that can take around two weeks to disappear.

The metal that is used for the plates and screws is titanium, (although occasionally a dissolvable plate is used) which does not set off metal detectors in airports etc. These are not usually removed unless they cause problems in the future

After the procedure

Most patients consider this procedure to be relatively painless. You are likely, however, to have some discomfort and swelling both on the inside and outside of your mouth after surgery and for this reason we will offer you regular painkillers. The discomfort is usually worst for the first few days after the operation, and it can take a couple of weeks to completely disappear. To ensure the mouth/jaw heals without becoming infected we will give you some intravenous antibiotics whilst you are in hospital. When you leave hospital we shall give you some painkillers, nasal drops, mouth wash and a course of antibiotics.

Immediately after the operation, your face will be swollen and feel tight, your jaws will be stiff and you will find that you cannot open your mouth very wide. You will probably have elastics between your teeth to guide your bite. If you have had upper jaw surgery, your nose will usually feel blocked and you might have to breathe through your mouth. Your throat might also be uncomfortable, and swallowing can be difficult to begin with. Many people feel quite 'sorry for themselves' for the first few days after the operation.

Swelling and bruising is variable but is generally worst on the second or third day after the operation. The swelling can be reduced by using a cold compress and by sleeping propped upright with a few pillows for a few days. Most of the swelling will go within a fortnight, but there can be some more subtle swelling that will take several months to disappear, although only you and those who know you best are likely to notice this.

Eating and drinking. For the first day or two you will only want to drink liquids but very quickly you should be able to manage a soft diet/pureed diet for six weeks. After this you can begin to build up to a normal diet (see diet advice)

Getting about after the procedure. It is important that you begin to mobilize as soon as possible after the procedure, and we will help you with this. This helps improve your recovery and reduces the risk of certain complications. If you have any mobility problems, we can arrange nursing or physiotherapy help.

Discharge. This can be different from person to person but most patients who have had this type of surgery will require a one or two night stay in hospital. The position of your jaw and/or chin may be checked using X- rays before you can go home.

Resuming normal activities including work. This varies from person to person and on what kind of job or study you

do. For lower or upper jaw surgery, I recommend that most people have about three weeks off work and avoid strenuous exercise during this time. For people having chin surgery only, I recommend having around a week off work. It is important to remember that after either operation you will not be able to drive or operate machinery for 48 hours after your general anaesthetic.

I also advise no contact sports for three months.

Special measures after the procedure. You will be advised on oral hygiene measures including the use of a small, soft toothbrush and mouthwash after every meal.

Check-ups and results. A review appointment will be arranged on discharge from the hospital to see both your surgeon and orthodontist. Patients are usually kept under review for up to two years.

Intended benefits & Risks

Jaw surgery is performed to correct the bite of your teeth that cannot be corrected by orthodontics alone. Genioplasty is performed to correct the position of your chin.

Risks associated with Orthognathic Surgery

There are general risks associated with any type of surgery and anaesthesia as well as risks and potential complications particular to corrective jaw surgery

Significant, unavoidable or frequently occurring risks of this procedure There are potential complications with any operation. Although these are rare, it is important that you are aware of them and have the opportunity to discuss them with your surgeon.

Bleeding: You can expect some oozing (light bleeding) from the cuts inside your mouth on the night of the operation. Any significant bleeding is very unusual. If it happens, you can

apply pressure over the area for at least 10 minutes with a rolled up handkerchief or swab to stop it.

If you have had upper jaw surgery, you will notice a slight bleeding from your nose, which can take a week or so to settle. Again, this is normal and nothing to be concerned about.

Numbness: If you have had lower jaw and/or chin surgery, your bottom lip will be numb and tingly after the operation. This is similar to the sensation you might feel after having an injection at the dentist. About one in 10 people will have some tingling or numbness that can last several weeks. Up to 15% of patients may have permanent loss of some sensation in this area but this is rarely a problem.

Infection: The small plates and screws that hold your jaw bone(s) in its new position are usually left in place permanently. Occasionally these can become infected and will need to be removed. This is not normally a problem until several months after surgery. It is very rare that people have long-lasting problems.

Adjustment of the bite: To adjust your bite in the weeks following lower or upper jaw surgery, it is often necessary to put elastic bands on your orthodontic braces to guide your bite into its new position. Rarely, we find that your new bite is not quite right, and a second small operation might be required to reposition the fixing plates and screws.

Speech: Occasionally you will notice a small change in the quality of your speech.

Unfavourable Fractures: When the break (fracture) in the bone doesn't occur as intended it may be necessary to close the teeth and jaws tightly after surgery for up to 4 weeks. While this will delay the recovery it rarely has permanent problems associated with it such as reduced mouth opening.

Damage to the roots of teeth: This rarely occurs and may result in the loss of the tooth or the root(s) of the tooth may need to be filled (root canal therapy)

Severe swelling of the face can occasionally occur. This can be very frightening for the patient and the family. This 'odema' often settles very quickly. If there are any concerns about breathing, because of the swelling, it may be necessary to transfer you to the Intensive Care Unit (ICU) for overnight monitoring

What are the risks of the surgery and anaesthesia?

In modern anaesthesia, serious problems are uncommon. Risks cannot be removed completely, but modern equipment, training and drugs have made it a much safer procedure in recent years.

The risks are higher if you have any other illness, personal factors (such as smoking or being overweight) or surgery which is complicated, long or performed in an emergency.

Deaths caused by anaesthesia are very rare. There are probably about five deaths for every million anaesthetics in the UK.

Very common (1 in 10 people) and common side effects (1 in 100 people)

Feeling sick and vomiting after surgery

Sore throat

Blocked nose or nose bleed (particularly in facial surgery where the breathing tube may be passed through your nose, rather than your mouth)

Dizziness, blurred vision

Headache

Bladder problems

Damage to lips or tongue (usually minor)

Itching

Aches, pains and backache

Pain during injection of drugs

Bruising and soreness

Confusion or memory loss

Uncommon side effects and complications (1 in 1000 people)

Chest infection

Muscle pains

Slow breathing (depressed respiration)

Damage to teeth

An existing medical condition getting worse

Awareness (becoming conscious during your operation)

Rare (1 in 10,000 people) and very rare (1 in 100,000 people) complications

Damage to the eyes

Heart attack or stroke

Serious allergy to drugs

Nerve damage

Death

Equipment failure