



University Hospitals Bristol **NHS**

NHS Foundation Trust

Patient Information Service
Cleft information

Orthognathic (jaw) surgery



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The type of surgery that you are being considered for is known as orthognathic surgery. This means literally 'surgery to create straight jaws'.

The main aims of this type of surgery are:

- to improve the relationship between your upper and lower jaws
- to improve the way you eat and speak by aligning your teeth and correcting the way your upper and lower teeth meet
- To improve your facial and dental appearance.

Before surgery

Each patient's treatment has to be planned individually. To decide which method of treatment is best for you, a number of investigations are carried out.

These include:

- a full clinical examination of your face, jaws and mouth
- special X rays of your face and jaws
- dental impressions to make casts of your teeth
- photographs of your face and mouth
- a speech test.

We also need to know what concerns you have and also whether you are receiving (or have received) any medical treatment. Using this information, a team including orthodontists, surgeons, speech and language therapists and psychologists will recommend the best form of treatment. You may need several appointments before a final decision is made and explained to you.

Prior to surgery, you will usually require orthodontic treatment with fixed appliances (braces). These will place your teeth in a suitable position to allow the jaws to be corrected. These appliances are usually left in place until after the surgery to maintain the correction and to ensure the bite and appearance are the best they can be.

In total, these appliances are in position for about 24 months, but this can be longer in some difficult cases.

About four to six weeks prior to the operation, you will need an outpatient appointment to check details, discuss any problems or answer any questions you may have and arrange routine radiographs, photographs and dental impressions.

You will usually be admitted to hospital the day before your operation. The surgery is carried out under general anaesthetic.

It is important to bring a small child's toothbrush into hospital to help clean your teeth after the operation.

Speech

Sometimes surgery to the upper jaw can have an effect on speech. Moving the upper jaw forwards can have an effect on the size of the gap at the back of the throat. Occasionally, this may make speech sound more nasal or less nasal. There are also some sounds such as 'p', 'b', 'f' and 's', which may be easier to pronounce after surgery. A speech assessment is carried out before you begin your jaw surgery treatment, so that we can advise you on whether or not your speech is likely to be affected. A specialist speech and language therapist will also see you after your surgery, to check whether you have any concerns about your speech.

Psychological advice and support

The cleft psychology service routinely provides advice and support for all patients affected by cleft lip and palate, including those who are undergoing orthognathic treatment. Where we provide this support, we will aim to see you before and after surgery in order to complete questionnaires and provide you with the opportunity to discuss treatment, changes in appearance resulting from surgery and any other issues which may arise. This is confidential and any concerns you may have will only be discussed with others if we have your consent.

Surgery

Your operation will take place in the hospital and will be performed under general anaesthetic in the operating theatre. The recovery period in hospital is usually two days.

Before the operation takes place, routine blood screening and other checks, including a physical examination, are necessary to ensure that you are fit for the operation to be carried out. In addition, the anaesthetist will examine you and you will have an opportunity to request further information regarding the anaesthetic from him/her. If you live locally, you may be invited to the hospital the week before your operation so the checks can be done in advance. If this is not possible, you will be admitted the day before your operation to allow these checks to take place.

Before going to theatre, you will be given pre-medication to help you relax. Wherever possible, the surgery is carried out from inside the mouth to avoid producing scars on the face. This kind of surgery involves moving the jaw bones into new positions. They are often fixed there with small plates and screws – these rarely need to be removed later.

You will probably need to wear light elastic bands between your upper and lower teeth (which you can put on and take off yourself) for a few weeks after the operation.

Very rarely at the end of the operation, we may need to wire your jaws together to stop them moving. You will still be able to eat, speak and clean your teeth. In this case, it is routine to transfer you to intensive care or the high dependency unit for 24 hours before being returned to the ward. Jaw wiring is usually in place for around six weeks.

Very rarely, you may require a blood transfusion to replace blood lost during the operation.

Some patients may need a bone graft. This involves taking a small piece of bone from the tibia (shin bone). If you need a bone graft, this will be discussed with you.

After surgery

Pain, swelling and numbness

Some swelling can be expected following these procedures. The amount of swelling varies according to the individual and the type of surgery carried out. Steroids will be given to you to reduce the swelling. Most of the swelling will resolve itself within two or three weeks, but some minor swelling may persist for several months depending on which operation was carried out. Antibiotics are given to prevent infection.

Patients are generally worried about pain following surgery. Analgesia (pain control) is always available, but many patients are surprised to find that they feel very little pain and describe it as 'discomfort' only.

For the first one to two days you may have some tubes in your nose or skin. The tubes help with reducing the swelling and making it easier to breathe through your nose. These are only temporary and will be removed as soon as possible. It is also normal for dried blood to come down your nose for a week or

two after this.

It is common after this kind of surgery to have numbness in the areas of the mouth and face which have been operated on. This usually resolves itself though it can sometimes take several months. In the area of the lower lip and chin especially, it does not always fully recover.

Swallowing

The next day after surgery you will be able to swallow normally and you will be encouraged to take fluids and food by mouth. It is very important to maintain a high standard of oral hygiene and you will be encouraged to brush your teeth and clean your mouth after each meal. An antiseptic mouthwash will be prescribed, but this is not a substitute for good tooth brushing.

Diet

Consultations with the dietitian will be arranged while you are in hospital and you will be given a diet sheet to take home. You will be able to have a liquid diet after surgery and usually soft semi-solid foods. After surgery, it can be up to four weeks before you can start eating normally. You may lose some weight, but you will usually regain the weight quite quickly as you recover.

Post-operative treatment

X rays will be taken before leaving hospital to enable the consultant to check the new position of your jaws. Following discharge from the ward, you will be seen at regular intervals, at first frequently, then at yearly intervals, to monitor your progress. This is for us to check that your operation is stable and further photographs, models and X rays may be taken. These visits are also for you to talk to us about any problems you may have.

Further treatment

Further orthodontic treatment to complete the alignment of the teeth is almost always required for several months after the operation. When the fixed brackets are removed, you will normally need to wear a removable retainer plate at night for a minimum of 12 months.

In some cases, more than one operation may be planned, such as surgery to your nose and/or chin. These are usually more straightforward procedures.

If you have any further questions, please make a written note (so that you don't forget) and bring this to your appointment so you can discuss it with your consultant.

Further information

The British Orthodontic Society DVD 'A patient guide to orthognathic surgery' is available at: <http://www.bos.org.uk/index/event-booking-shop/books-leaflets-and-dvds/orthognathicdvd>.

A short British Orthodontic Society patient information leaflet about orthognathic surgery is available to download at the following address: <http://www.bos.org.uk/Resources/British%20Orthodontic%20Society/Migrated%20Resources/Documents/Ortho20Surgery.pdf>.

NHS Constitution. Information on your rights and responsibilities.

Available at www.nhs.uk/aboutnhs/constitution.

South West Cleft Service
0117 342 1177
website: www.uhbristol.nhs.uk/cleft

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While your child is under our care, you may be approached about them taking part in research. To find out more please visit: www.uhbristol.nhs.uk/research-innovation or call the research and innovation team on **0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/

Hospital Switchboard: 0117 923 0000



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For an Interpreter or Signer please contact the telephone number on your appointment letter.



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