

# Oral Maxillo Facial

## Orthognathic Information Sheet (Orthodontic Aspects)

The type of surgery that you are being considered for is known as orthognathic surgery, that is surgery to change the position of the teeth and jaws. Its purpose is:

- To improve the alignment of your teeth and therefore the way they work
- To improve the relationship between the upper and lower jaws
- To improve the appearance of the face.

### Planning

Each patient has their treatment individually planned and in order to decide which method of treatment is the best for you. A number of investigations are carried out. The clinical examination of the mouth and jaws is undertaken in a dental chair. Impressions of your teeth are taken, to make models used for planning. Special x-rays and photographs of your face and jaws are taken. This information together with the aid of a computer helps us, the surgeons and orthodontists, to decide on overall treatment plan. Several appointments may be necessary before a final decision is made and explained to you.

The following information will have been given to you at the time that the surgery was discussed but you might find it helpful to have it in writing.

### Why is it necessary to have surgery to correct my teeth?

The distance between your top and bottom is too great to correct by simply moving your teeth.

### What is Orthodontics (braces)?

Orthodontics is a special discipline of dentistry concerned with aligning the teeth and jaws to improve one's smile and oral health. 'ortho' means correct or straight, and 'odont' means tooth. Orthodontic treatment straightens your teeth so they look and work better. It may even make your face look better, and help your jaw muscles function properly. Orthodontic treatment used braces or other appliances to put gentle pressure on your teeth and eventually move them into the right position. There are four parts to braces:

1. The bracket or band (the metal ring) that is attached to each tooth;
2. The cement or bonding material that attaches the bracket or band to each tooth;
3. The arch wire that fits into all brackets;
4. Elastics or wire ties that hold the wire into the bracket or band.

Most of the time, brackets, bands and arch wires are made of metal, but brackets and elastics can also be clear, tooth-coloured or multi-coloured.

### **Why do I have to have my teeth straightened before surgery?**

The teeth and jaws are rather like the cogs of a clockwork mechanism—if they fit together properly then the machine runs smoothly. It is important that the teeth are moved to their ideal positions before surgery with fixed orthodontic appliances (braces) so that following surgery the teeth mesh together. The correct dental relationship also helps to stabilize the jaw position after surgery and gives the greatest improvement in facial appearance.

### **How long do I have to wear fixed appliances before and after surgery?**

The orthodontic appliances are worn for about 18 months before surgery (pre-surgical orthodontics) and about 3-9 months after surgery. Your appearance may change during the pre-surgical phase as it is sometimes necessary to make the bite more prominent before surgical correction. The fixed appliances remain in the mouth during the surgery and are used to help guide the bite postoperatively.

### **What are the risks of fixed orthodontic appliances?**

You may feel some discomfort for a while when your braces are first put on and when they are adjusted. This is relieved with simple painkillers.

If you have braces, do not bite on hard things such as ice cubes, nuts or pencils. Do not eat sticky foods like gum (sugar or sugar-free) or toffee. They can loosen brackets and pull them off your teeth. Your treatment will take longer as a result.

Neglect, poor oral hygiene and sweets/fizzy drinks are highly damaging to your gums and teeth. In some cases permanent marks can occur beneath the braces of which it is not possible to visualize until the treatment is finished. These markings known as decalcification are permanent. If markings do start to appear on your teeth, treatment will be discontinued. Very few patients experience these problems as they are careful when looking after their braces and are excellent tooth-brushers with a low sugar diet.

### **How often will I need to come in for adjustments?**

We will see you for adjustment of the appliance approximately every 6 weeks.

About 10-30 days before your operation we arrange an extra appointment to take study casts (moulds of your teeth), photographs and add hooks to the orthodontic appliance. From the study casts, the departmental technicians make an acrylic wafer to fit in between your teeth. This helps the surgeons to accurately reposition your jaw during surgery. The hooks on the wires are also for use by the surgeon to help localize your new jaw position.

### **What about home care of my teeth with braces?**

With braces, oral hygiene is more important than ever. Braces have tiny space where food particles and plaque get trapped. Brush carefully after each meal with fluoride toothpaste, an interdental and a soft-bristled toothbrush. Rinse thoroughly and check your teeth in the mirror to make sure they're clean. Take time to floss between the braces and under wires with the help of a floss threader or special TePe brushes. Have your teeth cleaned every six months to keep your gums and teeth

healthy. Insufficient cleaning while wearing braces can cause enamel staining around brackets or bands.

### **Will I have teeth removed?**

It is sometimes necessary to remove teeth to provide space to line up your remaining teeth.

The need for this depends entirely on your particular requirements and will be discussed with you by your orthodontist. It is often necessary, particularly if a lower jaw operation is required, for you to have your wisdom teeth removed. The position of these teeth can interfere with the operation.

### **What does surgery involve?**

The technical aspect of the surgery will be explained to you in detail by the surgeon.

### **How long will the operation take?**

The operation will be carried out under a general anaesthesia and will take approximately 2-5 hours to complete. The timing will vary depending on your particular type of operation and again, more detail will be discussed with you by your surgeon.

### **Will the operation change my appearance?**

As you know, the operation is to be carried out to correct the position of your teeth and to change the relationship between your jaws. Movement of your jaws will change your facial appearance. We will try to describe the changes we expect as a result of surgery. A change in appearance is sometimes quite difficult to accept, particularly for your friends and family. We will be very happy to discuss any anxieties you or your family/friends may have and will arrange counselling if this is something you or your family /friends would find helpful.

### **Are there any risks?**

All operations involve a degree of risk related to general anaesthetic. However, this is a very rare occurrence. Following your operation you will experience a numbness related to the operation site. This numbness lasts for approximately 6 weeks to 6 months. It is very rare that nerve damage is permanent.

Risks vary depending on your operation and should be discussed in detail with the surgeon.

### **Why is it necessary to wait until I have stopped growing?**

The jaw follows the growth of the rest of the body. Early surgery may mean that the operation has to be repeated when the growth is completed due to continuing change in the jaw relationship. The earliest age at which surgery is normally considered is in the late teens. Surgery is usually undertaken when growth is complete. Operations are usually planned during holiday periods and after important exams, although it is not possible to always give a definite date. One or two weeks before the operation you will be seen again for a final check prior to admission.

**Does the operation work?**

All the operations performed result in substantial improvement in the function and appearance of the jaws and face. The stability of the final result depends on the type of operation and an individual's response to the operation.

Details of your particular operation should be discussed with the surgeon.

**Retention and relapse**

At the end of treatment your fixed appliances will be removed and retainers will be fitted. Retainers keep teeth in the right place once braces have been removed. All patients are given retainers as the position of the teeth and jaws can alter throughout life. Some retainers are removable and can be worn intermittently. Other retainers are fixed behind the teeth permanently. This will be discussed with you when the appliances are removed. Regular wear of the retainers is essential as this gives you the ability to maintain the new position of the teeth and prevents movement or relapse.

**When should I see my dentist?**

It is important that your teeth and gums are healthy. You must keep regular check ups with your dentist throughout the time you are receiving treatment. Your dentist will need to monitor your cleaning and the need for any fillings as this work is not undertaken in the department.