

# **TEMPOROMANDIBULAR JOINT DISORDERS**

## **A PATIENT'S GUIDE**

### **General overview**

Temporomandibular (or jaw joint) disorders are a common problem and occur in up to one third (1 in 3) of the population. The majority of people who have these disorders do not require management in hospital and cope with their symptoms such as clicking, occasional pain or mild restriction of opening. Of those who are referred for hospital consultation the majority can be managed very simply and do not require open joint surgery.

Most people with these disorders do not progress on to develop anything serious or worrying, such as arthritis.

### **Cause**

The “normal” jaw joint consists of the lower jaw, a cartilage disc in between and the base of the skull. The first couple of centimetres of opening occurs by rotation of the lower jaw against the cartilage disc and the subsequent mouth opening is by sliding of the lower jaw and disc along the base of the skull.

The jaw clicks in about one third of the population because the position of the disc is slightly anterior (*forward*) to that which is considered “normal” although this position can be considered to be a normal variant. In these cases, the first portion of opening occurs between the lower jaw and the tissues which lie behind the disc (the retro-discal tissues). These normally adapt to the extra force put upon them by movements of the jaw. The initial rotation occurs in the usual manner and then, on sliding the disc clicks back into its more “normal” relationship with the lower jaw to complete the opening path. This is what causes the click within your jaw joint.

Occasionally, due to injury or other problems, inflammation may develop within the retro-discal tissues and this causes pain around the joint, similar to that which you would sustain if you were to sprain a joint. When a joint is sprained you get pain in and around the joint but you also get pain in the muscles around the joint. The reason for this is that the body's reaction to an injury is to try and protect the joint and the muscles around the joint contract to form a type of splint to hold the joint steady. Continued long term contraction of the muscles cuts off the blood supply and the products of muscle contraction build up in the area. These products cause pain and they cannot be removed as the blood supply is reduced. This is called muscle spasm. The muscle spasm in addition causes an increase force on the joint which sets up more joint inflammation and hence a vicious cycle of joint inflammation and muscle spasms.

Restriction of opening may be caused by muscle spasm, a change in lubrication within the joint due to inflammatory changes or the physical position of the disc blocking further opening and not reducing with a click.

*The aims of treatment are addressed towards reducing joint inflammation and reducing muscle spasm.*

## **Simple Treatment**

The best way of managing a sprain of the joint is to rest it. It is obviously difficult to rest your jaw, as you have to talk and eat. There are, however, some simple measures, which will help to rest the joint as much as possible.

### **Softer diet**

Try to take a softer diet, avoid steaks and instead have minced meat, try fish and mashed potatoes. You should avoid sticky toffees and chewing gum as these increase the amount of chewing. Crusty bread is often difficult.

### **Avoid Wide Mouth Opening**

Try to avoid opening your mouth wide. Cut apples up into small pieces, avoid Big Mac's etc and if you are about to yawn try to stifle this. Dental treatment should be divided into several short visits rather than one long one.

### **Clenching**

If you notice yourself clenching your teeth during the day then stop, swallow and let the teeth rest apart in this position for 5 seconds. This rests the jaw by placing it in the most relaxed position.

### **Topical non-steroidal anti-inflammatories (NSAID)**

Topically applied gels containing NSAIDs work very well to reduce the inflammation and pain in and around the joint. These have less systemic effects than taking tablets, such as Ibuprofen, and work just as well.

The gel should be applied over the area of the joint (in front of the ear) regularly four times a day and should continue for four weeks. Examples include ibuprofen, diclofenac and piroxicam gels.

The above two measures alone are usually helpful to reduce or even abolish pain in the majority of patients.

### **Soft bite raising appliance**

We often use a lower soft bite-raising appliance (splint), which you should wear at nights only. This is a clear splint (like a gum shield), which is soft and fits over your bottom teeth. You need an impression, which may be taken on the day of your attendance or by your dentist. A model is made of your lower teeth and the splint is made over these. You

will be charged for this appliance although it is cheaper than you can get from your dentist.

Initially some people find it difficult to keep this in their mouth and they find that they have discarded it by the morning. It is important to persist with the splint and it can take up to six weeks to start having some effect.

The splint works in three ways:

1. Because it is soft it spreads the load and reduces the force that is being transmitted to the joint.
2. Because it increases the gap between the teeth it allows the muscles to stretch and therefore helps to reduce muscle spasm and it also helps to reduce clenching of teeth overnight.
3. By a mechanism of the lever and fulcrum principle the force exerted by biting the teeth together is now acting further towards the back of the mouth and therefore the load, which is passing through the joint, is reduced.

## **Conclusion**

All these factors will have been discussed in your clinic appointment, but this is just a summary so that you can go away and be able to read through what has been discussed.

We are not concerned with a click in your jaw and we will discharge you if this is your only problem. We will however continue to treat any jaw joint problem, which is related to pain, locking or restriction of opening.

I hope this has clarified any points but please discuss things again should you have any problems or concerns.

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