

TEMPOROMANDIBULAR JOINT (TMJ)

DISORDERS - A PATIENT'S GUIDE

General overview

Temporomandibular (or jaw joint) disorders (TMD) are a common problem and occur in up to one third (1 in 3) of the population. Most 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. Those who are referred for hospital consultation can usually be managed very simply and do not require joint surgery. Most people with these disorders do not progress on to develop 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. This usually occurs because the disc has been compressed by constant clenching and “slips” forwards. 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 repeated clenching, inflammation may develop within the retro-discal tissues and this causes pain in and around the joint, similar to that which you would sustain if you were to sprain a joint. This pain may feel as though it is coming from your ear. When a joint is sprained you get pain in 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 try to hold the joint steady. Continued long term contraction of the muscles cuts off their 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. This can be temporary – locking – or persistent.

The aims of treatment are to reduce joint inflammation and reduce muscle spasm.

Simple Treatments

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. Jaw exercises should be avoided. 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. If you need dental treatment this should be in short visits or with frequent 1 minute rests during the treatment. You may however still get increased discomfort afterwards.

Topical non-steroidal anti-inflammatories (NSAID)

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

The gel should be applied over the area of the joint regularly four times a day and should continue for four weeks. The joint is found just in front of the little prominence in the middle of the front of your ear (Tragus) and when you open your mouth you will find a small depression develops behind the joint. This is where to apply the gel.

Muscle Massage

There are often areas of tension in the muscles due to muscle spasm and feel like you are rolling your finger over a "speed bump". These should be felt and massaged for 1 minute 4 times a day. This should be uncomfortable if you are in the right place. It works by stretching the muscle, improving the blood supply and the discomfort causes your body to release its own pain killers – endorphins – which help to relieve the pain. These muscles lie in front of and below and above the ear.

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

Soft bite raising appliance

A bite splint is often used which you should wear at nights only. This is a clear splint (like a gum shield), which is often soft and fits over all of your bottom teeth. You need an impression of your teeth which can be taken by your dentist. A model is made of your teeth and the splint is made to cover all of the teeth on one jaw.

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 summary helps to remind you of the main points.

The click in your jaw is of little concern and you should be discharged if this is your only problem. The aims of treatment are to relieve pain, restriction of opening or locking. You will be reviewed around 6 weeks after trying all of these to determine whether further intervention is needed.

Prepared by:

Mr Andrew J Sidebottom FDSRCS, FRCS, FRCS(OMFS)
Consultant Oral & Maxillofacial Surgeon

Appointments

Spire Hospital Nottingham, NG12 4GA

Tel: (0115) 9377801

BMI The Park Hospital, Nottingham NG5 8RX

Tel: (0115) 9662122

Updated October 2021