

Problem Solvers 16 Treatment of TMJ pain can be a pain!

Synonyms: full mouth reconstruction, full mouth rehabilitation, orthotics, orthodontic treatment for tmj, neuromuscular dentistry, centric relation position dentistry, braces for tmj, splints, appliance therapy, anterior repositioning splints, craniomandibular dysfunction.

The TMJ is a complex joint that can be very difficult to treat when injured. The joint goes through motions of rotation and translation, which can influence pain, chewing, bite relationships and muscular spasm. So the treatment for TMJ pain can be complex and there are different philosophies regarding the best way to treat this disorder.

What are the different ways of treating TMJ?

- Neuromuscular treatment
- Centric relation position

What can I do before I go to the dentist for treatment of jaw pain?

Regardless of the philosophy of the dentist, it is always best to be conservative in your treatment for TMJ problems. If you have TMJ pain the first course of treatment is to eat soft foods, apply ice packs as needed for discomfort. As well, you should limit jaw opening by avoiding gum chewing, caramels and sticky foods, large sandwiches and yawning. To further decrease stress on your joint you should cut up food into small pieces for a period of several weeks to decrease the trauma on your joint. If you are able to take NSAID 's or non-steroidal anti-inflammatories such as ibuprofen, this can decrease joint pain and inflammation as well. If you need this for a prolonged period of time, however, you should see your physician or dentist. It is also helpful to practice relaxation exercises such as meditation and yoga to help relax your overall musculature.

How does a neuromuscular dentist treat TMJ problems?

Neuromuscular dentistry uses instruments to track jaw movement, muscle positions when you are at rest as well as jaw relationships to the skull and path of jaw closure to evaluate abnormalities. They often use Sonography to record jaw sounds and x-rays to evaluate how your jaw may be deviating from normal. The neuromuscular dentist will use TENS units or ultra low frequency transcutaneous electrical neural stimulation to relax the muscles and increase blood flow. They also feel that endorphins released may decrease pain from this treatment modality.

The next step is to stabilize the bite by using mouthguards and orthotics that allow the bite to be stabilized.

The next step would be to try and effect permanent change by incorporating:

- Equilibration or tooth adjustment to change your bite and eliminate problem areas
- They may use long term appliances that are worn on the teeth called overlay partials.
- Full mouth reconstruction or full mouth rehabilitation may be used to build crowns on all the teeth to permanently change the position of the jaws and location of the teeth. This is a permanent change that may need to be done several times over the course of your life and is non-reversible.
- Orthodontics may be used to change the teeth to a more desirable position.

How do Centric Relation Dentists or Traditional Dentists treat TMJ problems?

Centric relation is considered the ideal orthopedic mandibular position of the mandibular condyle (ball) within the Glenoid Fossa (socket) of the skull. The C.R. dentist is taught that the muscles, tendons, ligaments and bony structures are all in harmony if the condyle is in (or can reach) the superior most braced position in the skull or centric relation position during maximum intercuspation (all your teeth being together). To do this they will evaluate the bite, perform splint therapy and then perform an equilibration to normalize the bite and insure people can get into an ideal intercuspation position where all teeth fit together ideally.

The centric position dentist will try to establish a canine guidance or mutually protected centric occlusion position or MPO. This means that all teeth couple properly and that the canines will be built to glide left and right allowing posterior teeth to separate during grinding. Any lateral contacts that are excessive are adjusted so that maximum intercuspation can be achieved. They believe that if there is not a protective coupling and guidance of the anterior teeth, then craniomandibular dysfunction or TMJ can result.

Treatment may include an occlusal splint to build the ideal bite. This plastic orthotic can be built to idealize tooth contact and simulate a protected occlusion to relieve muscular soreness and allow the jaw joint to move in a normal non-pathologic glide path. Once the bite is ideal and jaw symptoms have subsided more permanent solutions can be undertaken.

The goal of splint therapy is both diagnostic and therapeutic. This splint can be adjusted and the patient “weaned” off of it until it may even be able to be eliminated.

The goal of splint therapy will be to reposition the mandible into centric relation, rehabilitate the joint tissues, improve the path of closure and diagnose final treatment. Splint therapy should not be used long term or to create permanent

changes in the bite. It is used to give the jaw and teeth a break and to allow proper healing to occur.

Sometimes the dentist will recommend orthodontics or crowns to effect permanent change for a person's bite. It should be noted that irreversible procedures should always be avoided if possible.

Which is correct neuromuscular or centric relation position?

This is too controversial to pick a side. The truth may lie somewhere in between. The use of irreversible treatments such as crowns, full mouth reconstruction, and extensive grinding of teeth should be avoided if at all possible, as it may not work and can make your situation worse.

My dentist wants to use an anterior repositioning splint-what is that and is it safe?

Moving the lower jaw forward with a splint is done to try and take pressure off of the vascular attachment that holds the tmj cartilage in place. If this is torn, the dentist may try and position the lower jaw forward to try and recapture this disc. Then by incremental adjustment they may try and walk the joint back and recapture the disc.

Using repositioning splints to try and recapture a disc that has been detached may work or may help create a pseudo disc or area where the disc can work with less pain but this is controversial. As long as this therapy is used for short periods of time it may be an effective modality to decrease pain. However using this treatment for long periods of time may change the anatomy of the joint and lead to altered positions of the teeth. This type of irreversible treatment has been found to be ineffective according to the National Institute of Health.

Surgery is the last treatment for TMJ and should only be used when no other treatment can be found that will give relief. There are surgical procedures from arthroscopy to clean out the joint to implants used and they are all of questionable success. The replacement of jaw joints with artificial implants may cause severe pain and permanent jaw problems.

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