

TMD SERIES

# Neuromuscular Dentistry Diagnosis

When diagnosing problems with your bite, we may use advanced technology to measure the function of your jaw muscles and the movement of your jaw joint. Depending on the situation, this technology may include tomography, sonography or joint vibration analysis, electromyography, jaw tracking, and a TENS unit.

## Initial Measurements

### Tomographs

Tomographs are specialized x-rays that give us a detailed view of the jaw joint. This allows us to check the health and position of the bones of your jaw joint.

### Sonography or joint vibration analysis

The sonograph or joint vibration analysis equipment measures the sounds in your jaw joint as you open and close your mouth. These measurements can help us identify joint damage or other problems.

### Electromyography

With electromyography, we can measure the tension in your chewing muscles. When muscles are tense or strained, they give off tiny electrical currents.

### Jaw tracking

To track your jaw movements, we'll place a tiny magnet just below your lower front teeth. The sensor array then records the movement of the magnet when you move your jaw open and closed, side to side, and forward and backward.



Electromyography measures muscle tension



The TENS unit

## Relax the muscles, and measure again

Once we have measurements that show how your muscles and jaw presently work, we'll need to compare them to others taken after your jaw muscles are relaxed and comfortable. If we discover a difference between the two sets of measurements, a bad bite is likely to be the cause of your problems.

To make sure your muscles are in the most comfortable position, we use a TENS unit. This sends a mild, ultra-low frequency pulse into your chewing muscles to relax your jaw muscles and reduce muscle pain. We'll have you wear the unit for about 45 minutes. When the TENS treatment is complete, we'll repeat the electromyography to determine if your muscles are more relaxed.

If they are more relaxed, we'll then use the TENS unit and jaw tracking equipment together. The TENS will make your jaw move slightly along its most relaxed path of closure, and the jaw tracking equipment will draw a line that displays that path. This shows us the jaw position that will allow your jaw joint and muscles to be the most stable and comfortable at rest, and when chewing, talking, and swallowing.

## Treatment

After the diagnostic workup is completed, we'll create a treatment plan that will enable your bite to stay in this comfortable, stable position.