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Arrowhead Lakes Dentistry

Arrowhead Lakes Dentistry Newsletter

In This Issue

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In our last newsletter, we discussed TMD (Temporal-Mandibular Disorders or Trigeminal-Mediated Disorders) which included problems that may arise with the TMJs (Temporal-Mandibular Joints). We are often asked how we diagnosis or detect problems in the joints.

There are many ways the joints can be examined. We will palpate or touch the areas around the joints to detect tenderness or tension in the tissues. We can utilized xrays to view the bony structures of the joints. We can observe the jaw movement as the patient opens and closes their mouth. We can use a stethoscope or doppler ultrasound to listen to the joint sounds. However, these methods are mostly subjective. We prefer to use a more objective and repeatable way to determine the health of the joints.

BioPak JVA and EGN

When surfaces rub together they create friction, and friction creates vibration. A functioning joint is simply surfaces rubbing together. In health, the structures are very smooth and lubricated and create very little vibration. With joint changes and breakdown, friction increases and vibrations result. By measuring those joint vibrations in a reliable way, we can more clearly understand the level of destruction and degeneration that exists.

We utilize precision equipment from BioResearch Associates known as BioPack JVA and EGN. JVA is joint vibration analysis. The BioJVA is a pair of accelerometers that look like a set of small headphones which are placed on the skin over the joints. These accelerometers act as pressure wave sensors (vibration transducers) which detect vibrations and relay them to the computer software for objective documentation and interpretation. This allows us to detect subtle vibrations from the joint, but does not detect noise and sounds from the room.

The JVA is sometimes used alone to look only at the joints or combined with the jaw tracker to evaluate joint vibrations as they relate to jaw positions. The jaw tracker (electrognathology or EGN) uses an electromagnetic field to track mandibular motions. Precise recordings of mandibular velocity, range of motion, and smooth fluid movements (or lack thereof) provide further diagnostic information.

These two modules provide the doctors with reliable, repeatable data to augment diagnostic decisions. In our office, the staff members are trained to gather the data and the doctor can immediately view the results. Since the acquisition of data is relatively quick and non-invasive, it allows us to work towards a thorough diagnosis without added risk for the patient.

Arrowhead Lakes Dentistry will continue its quest to utilize state of the art equipment and techniques to benefit our patients. If you have any concerns for yourself or a family member about TMJ problems, please contact our office. Some of this discussion is courtesy of Dr. Barry Glassman and BioResearch Associates. If you have any further questions about the information of this article or any other dental concerns, please visit our website or give our office a call at 623-362-9616. We would love to answer any questions.

We wish you good health,
Sincerely,

Ronald Shelley DMD
Arrowhead Lakes Dentistry PC

Forward email