

Maxilla to Mandible

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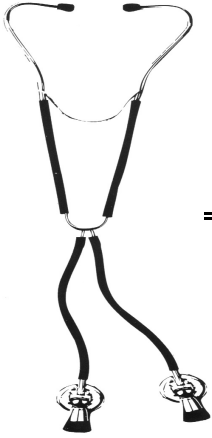
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Editorial

Sleep is interwoven with every facet of our health and well-being, our moods and behavior, energy and emotions, marriages, jobs, our very sanity and happiness. There are over 80 known sleep disorders that occur due to stress, health conditions and other factors.

Today, with dentistry's new knowledge and diagnostic skills, many times we can provide assistance for the snoring or sleep apnea patient. Working together with the pulmonologist or sleep doctor and other health care professionals brings effective "team management" to the patient to minimize or correct the problem.



Frequently, complaints from poor sleeping habits include daytime fatigue, headaches, irritability, cardiovascular problems, memory loss, reduced sex drive and inability to focus. A few of the medical and dental conditions that lead to snoring can be evaluated

such as a small, retruded jaw and airway obstruction. Routinely, lifestyle and behavior changes are recommended as well, such as:

- regular exercise
- weight loss
- limiting alcohol intake
- limiting nicotine intake
- stress management
- restricting sleeping pills

Facts About Obstructive Sleep Apnea:

- Sleep disorders are prevalent in over 70 million North Americans
- Thousands of hours are lost on the job with the cost in production exceeding \$60 billion annually
- Ninety percent of snorers exhibit some apneic tendencies
- Hypertension is present in approximately 50% of patients with obstructive sleep apnea (OSA)
- Vascular pressure in the brain increases with OSA increasing the risk of a stroke
- Sixty percent of males and forty percent of females over 60 years of age snore (female snoring increases after menopause)
- Snoring noise can reach 90 decibels
- Over long periods, sleep apnea results in memory loss and intellectual deterioration
- Left untreated, snoring increases risk of heart attack and stroke
- Drowsiness is blamed for some 200,000 to 400,000 automobile accidents annually

Treatment includes:

- CPAP - while this provides successful treatment, compliance is a problem.
- Surgery - surgery is effective in approximately 50% of cases.
- IntraOral Orthotic (Snoreguard) - a conservative treatment is to make a dental orthotic for use during sleep. These are light and easy to wear. It's purpose is to move the lower jaw forward and downward causing a positive change in jaw and/or tongue position which opens the airway. An appliance worn during sleep helps prevent the airway from collapsing by creating extra airway space.

The orthotics can be an effective supplement to sleep centers and physician care. In many cases it can be the total answer to a patient's problem.

Dr. Wexler has 28 years experience in the field of jaw treatment. He is a Diplomate, American Board of Orofacial Pain, member of the American Academy of Craniofacial Pain, American Academy of Orofacial Pain, American Headache Society, and the American Academy of Dental Sleep Medicine. He is a Fellow of Academy of General Dentistry, member of the Canadian and Ontario Dental Associations and the Ottawa Dental Society. His practice is limited to treatment of temporomandibular disorders and orofacial pain.

Anterior Repositioning Appliance Therapy for TMJ Disorders

In this study, the authors attempted to determine the effect of anterior repositioning appliance (ARA) therapy on specific symptoms of TMD and to relate changes in symptomatology to disk position and status at maximum medical improvement (MMI). Evaluation of symptoms was accomplished through qualitative survey of 48 patients who sought care in a referral-based practice.

Maxillary and mandibular anterior positioning devices were custom fabricated for each patient. The treatment goal was to reposition the condyles in the fossae at the Gelb 4/7 position. The mandibular appliance was worn when the patient was awake, and the maxillary appliance was worn when the patient was reclined or sleeping. Pre-appliance and post-appliance disk positions were assessed via magnetic resonance imaging.

Prior to treatment, patients with normal bilateral or unilaterally displaced condyles exhibited an average of 47 symptoms. Patients with bilateral condylar displacement exhibited a statistically greater number of symptoms (54). ARA therapy resulted in a significant reduction in symptoms (95%), down to an average of 11. Prior to treatment, condyles were consistently located posterior to the Gelb 4/7 position. Regardless of condyle position, with or without reduction or recapture, ARA was effective in significantly reducing symptom frequency.

Symptoms that were significantly reduced or eliminated include cephalgia, retroorbital pain, loss of equilibrium/vertigo, tinnitus, preauricular pain, TMJ pain, sinus symptoms, TMJ popping, paresthesia, pain on opening or closure of mouth, mouth locking, tooth pain, difficulty in chewing, nausea and clenching. Thus, the authors conclude that ARA therapy is effective in reducing TMD symptoms by recapturing and repositioning the TMJ to a more normal relationship in the fossa.

J Craniomandib Prac 23: 89-100, 2005.

TMD Among Smokers and Non-Smokers

The aim of this study was to determine if smoking was a risk factor for the development of TMD. A random sample of subjects 35, 50, and 65 years of age

was drawn from the general population. Within the sample population, smokers were identified and matched to non-smokers.

Results demonstrated that there was not a significant difference in TMD signs and symptoms in smokers when compared to non-smokers. The author concludes that smoking is not a risk factor for the development of TMD.

J Orofac Pain 19: 209-217, 2005

MRI Follow-Up of TMJ Internal Derangement With Closed Lock After Successful Disk Reduction With Mandibular Manipulation

A 21 year-old female presented with the chief complaint of sudden limited mouth opening with pain. History of her illness included pronounced bilateral clicking in her TMJ with pain for the past 6 months. Over the past 10 days the patient noticed a disappearance of joint sounds and an increase in pain with limited mouth opening. Physical examination revealed that the patient had anterior disc displacement without reduction. Interincisal mouth opening was limited to 30mm.

The patient was opened using mandibular manipulation. The patients interincisal opening increased from 30-50mm, joint sounds were reestablished and pain was decreased. After mandibular manipulation was completed, the patient was treated with a maxillary repositioning splint to posture the mandible in a stable anterior position. The patient was instructed to use the splint continuously except for meals and speech.

The patient was followed over the course of the next 11 years. MRIs were obtained throughout the course of her treatment and follow-up. MRI studies reveal successful disk reduction with mandibular manipulation. MRI also showed successful use of the anterior repositioning splint and improvement in the disks from non-reducing to reducing. These studies suggest that non-surgical mandibular manipulation may prevent progressive changes in the course of TMJ internal derangement.

Dentomaxillofac Radiol 34: 106-111, 2005