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Treating OSA and Chronic Facial Pain (TMD)

(Keeping It Simple)

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In the previous three-part series of articles "The Future of Dentistry" (March, August and 100th anniversary issues 2011), I discussed the relationships between Obstructed Sleep Apnea (OSA), chronic pain, headaches, TMD and bruxism.

Dentists and dental auxiliaries have the opportunity to evaluate the oral airway on every visit. It is likely that every third adult that you or your hygienist sees today will have a Sleep Disordered Breathing (SDB) condition¹ and/or jaw/facial pain disorder² that you could treat.

The problem is the voluminous amount of material and techniques necessary to treat these disorders and the lack of education.

In my experience, the answers to treating these disorders comes down to three things:

- Controlling inflammation
- Controlling mandibular para-function
- Maintaining an airway

Trauma is the origin of osteoarthritic changes to a joint and facial muscle pain. Pain has its origin in the cascading inflammatory process of free radical generation, mast cell release, serotonin modulated release of inflammatory neurotransmitters (Substance P and Calcitonin Gene Related Peptide (CGRP), bradykinins, etc.) that plastically change the nervous system.

Micro-trauma of maintaining an airway and clenching, the result of chronic pain, are frequently the source of this free radical generation and the reason why patients fail to heal from macro-trauma injuries to the face and jaw.

Breathing is the brain's highest priority to protect the survival of the human organism. The human body can withstand amazingly long periods without food and water but only minutes without oxygen.

Dentistry has long understood the importance of the first two of these directives but not with the understanding of how it affects breathing. Nightguards can increase the number of apnea (cessation of breathing) and hypopnea (a reduction of blood oxygen concentration by 3-4%) events.³⁴ This results in an increase of co-morbid medical conditions (hypertension, cardiovascular disease, diabetes).

The University of Tennessee College of Dentistry has post-graduate courses in the screening and treatment of OSA and how the dentist can assist in the treatment of SDB. Please learn how to avoid aggravating your patients' existing medical conditions.

The future is now. **OH**

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Oral Health welcomes this original article.

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