TREATING TEETH CLENCHING AND GRINDING

The most common causes of teeth clenching and grinding are; stress, anxiety, suppression of anger and frustration, abnormal alignment of upper and lower teeth (malocclusion), sleep and breathing problems and the side effects of medication.

The standard dental treatment is to provide an occlusal guard or splint. There is not sufficient evidence that these appliances are effective.\(^1\).

However, a study on mandibular advancement devices (MAD) finds significant reduction in sleep bruxism.\(^2\) Short term results using MAD
appliances are excellent, inferring that improving airway patency has a positive effect on teeth clenching and grinding. The latest research suggests a strong link between sleep disordered breathing and clenching and grinding. Unfortunately, clinically MAD appliances result in jaw joint as well as muscle pain along with tooth movement over long periods of time and have been discounted by the profession for treatment.

THE Homeoblock™ appliance has been used by patients up to 8 years without any side effects such as jaw pain or tooth movement. The appliance actually works as an orthodontic retainer.

References

1- Occlusal splints for treating sleep bruxism (tooth grinding). Macedo CR, Silva AB, Machado MA, Saconato H, Prado GF. Universidade Federal de São Paulo, Department of Medicine, Rua Pedro de Toledo, 598, São Paulo, Brazil, 04039-001. crisrufa@uol.com.br


Reduction of sleep bruxism using a mandibular advancement device: an experimental controlled study.

Landry ML, Rompré PH, Manzini C, Guitard F, de Grandmont P, Lavigne GJ. Faculté de Médecine Dentaire, Université Laval, Canada.
THE HOMEOBLOCK APPLIANCE WILL OPEN THE AIRWAY MAKE ROOM FOR THE TONGUE AND STIMULATE AIRWAY DEVELOPMENT WITHOUT SIDE EFFECTS

Without Homeoblock™ appliance
With the Homeoblock™ appliance in place the soft palate drops down and the base of the tongue contracts opening the airway which is recognized by the Hypothalmus and Cortisol production is interrupted.

Here is how our endocrine system works:

Airway constriction is recognized by the Hypothalmus in the brain which controls the autonomic nervous system. The hypothalamus signals the pituitary gland which in turn signals the adrenal glands to produce cortisol. The cortisol in our blood does not let us get a restorative night’s sleep it takes us from deep to light sleep. Cortisol and stress are synonymous. The adrenal gland is the gas pedal that keeps our system in sympathetic mode. Its antagonist is the vagus nerve, which is the calming and relaxing nerve. The vagus nerve is the brake that puts us into parasympathetic mode. The vagus nerve is the primary break on our heart rate. Without activation of the vegus nerve, the heart would fire an average of about 115 beats per minute. The vegus nerve helps slow the heart rate down. When we are angry and fearful our heart rates literally jump five to ten beats per minute. The
vagus nerve does the opposite, reducing our heart rates to a more peaceful pace.

How does the Homeoblock™ work?

1-By making more room for the tongue and by stimulating the production of acetylcholine

2-By stimulating the vagus nerve to release acetylcholine, which reduces the production of inflammatory cytokines. It is the inflammatory cytokines that stimulate the HPA axis. If we can stimulate the vagus nerve to produce acetylcholine than we can reduce the amount of cortisol in our blood. and lower our stress levels. The vagus nerve innervates most of the musculature of the pharynx and the soft palate and also has a branch to the palatoglossus muscle of the tongue. It is postulated that wearing the HomeoBlock appliance affects the pharynx, the soft palate and the tongue in a way that stimulates the production of acetylcholine and reduces inflammation to shut down the production of cortisol. The effectiveness of the appliance can be demonstrated by the EmWave ll by Heartmath Corp. The Emwave ll is designed to measure our coherence or autonomic nervous system balance through an algorithm that is based on heart rate variability.
Coherence without the appliance

Coherence with the appliance
A research project is being planned for:

Montefiore
\The University Hospital For
Albert Einstein College of Medicine

Upcoming presentations:

Upper Airway Resistance Syndrome – Screening Diagnosis and Management; connecting the dots

Instructors: Theodore R. Belfor, DDS, Mark A. Cruz, DDS
Senior Certified Instructor International Association for Orthodontics Chairman & President OrthoSmile, Inc.

Date & Time: June 21 & 22 (Friday/Saturday); 8:30-5:00

Location: Ayers Hotel Los Angeles

Tuition: $975

Synopsis: Sleep disordered breathing is an anatomic illness caused by evolutionary changes in the human upper respiratory tract. A thorough understanding of the medical and dental implications of these evolutionary changes will provide a solid foundation for not only understanding the diagnosis and management of sleep disordered breathing (OSA/ UARS) but
also provide novel, updated concepts meaningful to prosthodontics treatment planning and intervention as well as understanding the common genesis of many TMD conditions. The concepts covered will be a “game changer” for the restorative dentist in how he/she will approach treatment planning going forward.

**Topics to be covered:**

I. OSA is the “tip of the iceberg”; UARS is the base

II. Understanding why sleep disordered breathing is a pandemic condition and why the dentist is on the front line in identifying, screening and managing this medical disorder.

III. Understanding the fundamentals of facial development and its role in the development of sleep disordered breathing

IV. The appropriate use of high resolution pulse oximetry in screening for SDB and TMD

V. Proper interpretation of the CBCT study in airway function

VI. Management of UARS using a physiologic approach for a physiologic problem.

VII. Using an alternative “orthotropic” treatment protocol for the adult Sleep Apnea/UARS patient: Homeoblock™ certification.

**Day One**

Introduction

Screening for UARS: the exam

Screening for UARS: HRPO (high resolution pulse oximetry)

Does “constricted envelope of function” really exist or is it something else?

Appliance therapy and objective titration

The Homeoblock™ philosophy

How it works

Facial Evaluation and Development
Demonstration of the Homeoblock™ Protocol
Demonstration of 3dMD Face
Demonstration of FantaMorph
Demonstration of Analyze 10.0 skeletal and bone analysis
The missed and the misdiagnosed (Upper Airway Resistance Syndrome)

Day Two
Developing the airway; case studies
The aging face and airway; case studies
Designing and delivering Cases.
Adjusting the Appliance
Treatment alternative discussion: To cut or not to cut.
Questions and Answer

Registration:

Please print out this page, complete it and fax to Pat Millonzi at 949-661-9454 or scan and email to patmillionzi@markacruzdds.com.