FOR KIDS WITH DYSFUNCTIONAL BREATHING

The first step in a Myobrace® evaluation of a child is to screen for possible sleep disorders. This is now a directive from the World Dental Federation (FDI), the American Dental Association (ADA) and American Association of Orthodontists (AAO).

While MRC has developed the Myobrace® system to promote jaw growth and naturally align teeth, it has always included evaluation of breathing as a priority and the first treatment goal.

Children who have more severe breathing and sleep-related symptoms may have a restriction of their airway or, more commonly, an easily collapsible airway. Therefore, they need to be treated differently from a regular Myobrace® patient.

The first priority is to assist the child day and night to resolve airway obstruction BEFORE moving to the Myobrace® K1 appliance to establish nasal breathing.

All patients who are being evaluated for orthodontic or Myobrace® treatment require screening using the Myofunctional Orthodontic Evaluation form (available from MRC).

Once the specific signs and symptoms have been identified, the priority is then to establish better airway function by opening the airway day and night, which has the subsequent effect of transitioning the child from mouth to nose breathing.

Myobrace® K0 establishes functional airways through the mouth and nose while allowing transition to nasal breathing.

MRC has developed the Myobrace® system to correct mouth breathing and myofunctional habits, which in turn promotes correct jaw growth and naturally aligns teeth. The system has always included evaluation of breathing as a priority and the first treatment goal for the last 30 years.

With the increased awareness of the prevalence of sleep-related breathing disorders (SRBD) in children, the World Dental Federation (FDII), the American Dental Association (ADA) and American Association of Orthodontists (AAO) have recommended screening all children for SRBD by Dentists and Orthodontists. This can be achieved by using the Myofunctional Orthodontic Evaluation (MOE) from MRC.

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SCREENING AND EVALUATION FOR PAEDIATRIC BREATHING AND SLEEP DISORDERS

Parents may bring their child to the Dentist or Orthodontist with the intention of only having their orthodontic problem/s evaluated. However, the World Dental Federation (FDI), the American Dental Association (ADA) and American Association of Orthodontists (AAO) all now have a directive to:

- Universities and national dental associations to provide students and dentists with basic knowledge regarding the important role of dentistry in preventing and treating SRBD, in particular early detection in children and prevention of late onset forms. This can include immediate management as well; World Dental Federation

- All dental and medical health forms to include questions about the patient’s sleep quality and related data to do the screening of SRBDs;

- Dentists to provide proper information to patients to understand the process of screening, treatment options and the role of the care providers involved; World Dental Federation (https://www.fdiworlddental.org/resources/policy-statements/dentistry-and-sleep-related-breathing-disorders)

- Dentists are encouraged to screen patients for SRBD as part of a comprehensive medical and dental history to recognize symptoms; American Dental Association

- In children, screening through history and clinical examination may identify signs and symptoms of deficient growth and development, or other risk factors that may lead to airway issues. If risk for SRBD is determined, intervention through medical/dental referral or evidenced based treatment may be appropriate to help treat the SRBD and/or develop an optimal physiologic airway and breathing pattern; American Dental Association https://www1.aaoinfo.org/wp-content/uploads/2019/03/sleep-apnea-white-paper-amended-March-2019.pdf

The K0 has a unique feature which allows mouth breathing and aids in the transition to nose breathing during the day and then at night. It also improves the airway during sleep while still allowing mouth breathing, which is an essential feature for children with sleep disorders. Treatment success is gauged when the child can progress comfortably to the Myobrace® K1.

Myobrace® and Myosa® appliances have shown to be effective in reducing the symptoms of sleep disorders in a study published in the Journal of Clinical Pediatric Dentistry March 2018. A statistical significant reduction in the AHI of the studied subjects was computed at the end of the experimental period.

Conclusion: The present results suggest the Myobrace®/Myosa® myofunctional appliance can be an alternative to treat mild to moderate OSA in children. Journal of Clinical Pediatric Dentistry: 2018, Vol. 42, No. 3, pp. 236-239

SCREENING AND EVALUATION

Indicators of Breathing Disordered Sleep (BDS)
- Chronic mouth breathing and mouth open posture;
- Snoring more than once per week;
- Noisy breathing during the day;
- Restless sleep most of the time;
- Waking up many times at night;
- Fatigue in the morning;
- Poor attention at school;
- Stopping breathing at night;
- Underdeveloped upper jaw and retruded lower jaw.

One or more of the above criteria can trigger a suspected SDB. Prioritise establishing airway function with Myobrace® or Myosa® appliances first.

INDICATIONS FOR K0 USE BEFORE MYOBRACE® TREATMENT WITH K1 or T1

Children who have positive signs of possible sleep disorders from a Myofunctional Orthodontic Evaluation (MOE)

Obstruction of the airway as evaluated or CBCT or ENT Evaluation

Paces and Nasal Breathing Test (NBTen) of 20 or less

Grade 2-3 Tonsils

Parents prefer not to have ENT referral

Children who cannot keep the K1 in place while they sleep at night.
HOW TO USE THE MYOBRACE® K0

The Myobrace® K0 assists the mouth breathing child to transition to nose breathing while improving airway function and is initially used as a daytime only appliance to allow mouth breathing. However, when closing down on the front the MYOVOSA® hole, breathing is transitioned to the nose. When the child feels they need to breathe through the mouth, they simply stop biting down and the MYOVOSA® aperture opens to allow mouth breathing. Repeat this step during the 1-hour daily use for 1-2 weeks and wear during the night while sleeping. Mouth breathing will be unrestricted at night and the airway will be kept open by holding the lower jaw forward as the thicker base opens the airway. Additionally, the tongue tag encourages the tongue to rest forward out of the airway.

Tongue press: The child can practice actively pressing their tongue against the tongue tag and holding for three breaths before relaxing to improve strength and positioning of the tongue. This exercise can be also be completed with the head tilt variation to improve the muscle strength in the pharyngeal area.

THREE APPLIANCE SEQUENCE

When placed in the mouth, the child can breathe through the mouth with the tongue on the tongue tag.

The child can then close on the anterior teeth to block the breathing aperture either partially or completely to promote nasal breathing.

The child can actively push against the tongue tag to improve tongue strength.

When the K0 is used while sleeping, it assists to open the airway and hold the mandible forward, while still allowing mouth breathing. The allowance of mouth breathing increases appliance retention while sleeping as chronic mouth breathers are able to continue habitually breathing through their mouth while sleeping and transition to nose breathing at their own pace.

In addition, the new patented tongue tag is used to improve tongue strength. Treatment protocol combines the K0 with Myotalea® and Myolay® to transition over 4-6 months to the Myobrace® K1 and the continuance of The Myobrace® System.

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CLINICAL PROTOCOL

Establish a functional airway

Advance the mandible

Establish nasal breathing

Active Myofunctional therapy for the lips, tongue, jaw and throat muscles.

CONTINUE WITH MYOBRACE® PROTOCOL K1, K2 and K3 or T1BWS, T2, T3 and T4 DEPENDING ON DENTITION
The Myobrace® K0 is a new appliance specially designed for the mouth breathing child who shows signs and symptoms of Breathing Disordered Sleep (BDS).

The K0 has specific design features to:
- Open the airway to facilitate better breathing day and night;
- Transition from mouth to nose breathing to enable continued Myobrace® treatment;
- Correct tongue resting position and improve tongue strength;
- Well tolerated by patients who are chronic mouth breathers.

1. Active tongue tag to exercise tongue muscles
2. Mouth breathing aperture with MYOVOSA®
3. Tongue elevator raises tongue to correct position
4. Lip bumpers retrain the lip muscles to stop jaw being pushed back into the airway
5. Thicker base over molars to open the airways

The increased awareness of breathing and sleep disorders by the dental and medical professions has forced a change in approach to orthodontics, TMJ disorder and routine dentistry. Myofunctional Research Co. (MRC) has been emphasising the need for breathing and myofunctional evaluation for all paediatric and adult patients for the last 30 years and has been part of the change to a health-centred approach for every patient.

MRC has developed treatment protocols for every aspect of this growing field of dentistry to allow practitioners to deliver cost effective treatment directed at the causes of malocclusion, TMJ and sleep disorders.

Attend an MRC training seminar and learn the clinical approach to evaluation, diagnosis and treatment with the most up-to-date appliances, treatment protocols and patient education techniques.

- Learn how to evaluate children for breathing disorders and establish a functional airway;
- Update your knowledge on Myofunctional Orthodontics with Myobrace® protocols;
- Learn the new Myosa® protocol for treating children with breathing disordered sleep (BDS) problems;
- Learn more on how to use the Myotalea® to improve tongue, lip and supra-hyoid muscle strength.

FOR MORE INFORMATION VISIT WWW.MYORESEARCH.COM OR WWW.MYOSA.COM