

myobrace®

STRAIGHT TEETH THE NATURAL WAY

FOR KIDS WITH DYSFUNCTIONAL BREATHING

INTRODUCING THE MYOBRACE® K-ZERO TO ESTABLISH A FUNCTIONAL AIRWAY



With **MYOVOSA®**
Variable Opening Sleep Aperture

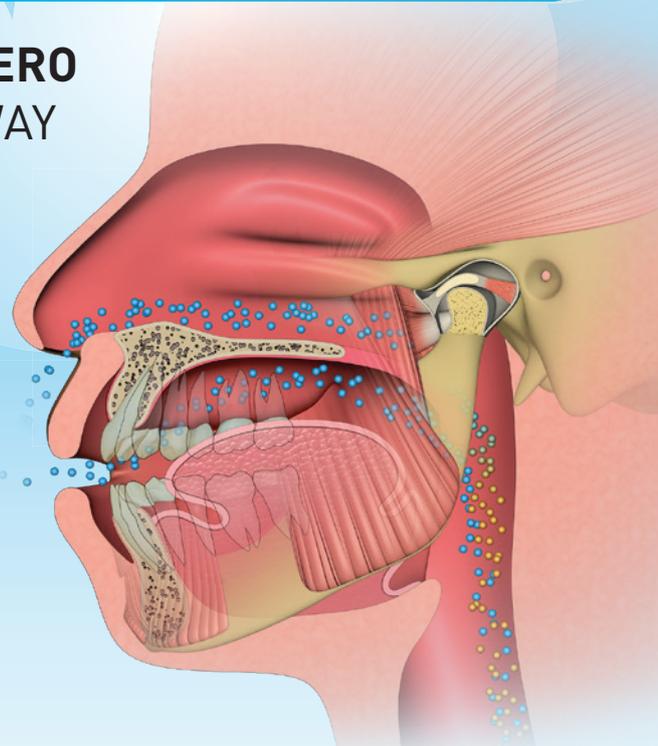
Patents and patents pending worldwide

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 (FDI), 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.

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.

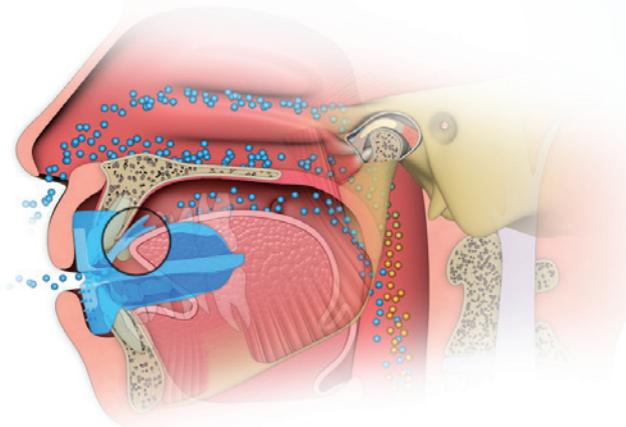
Once the specific signs and symptoms have been identified, the priority is then to establish better airway function by opening the airway day and night, which has the subsequent effect of transitioning the child from mouth to nose breathing.



TREATMENT PRIORITY

Establish a functional airway

The first priority is to establish a better functioning airway so the child can breathe without restriction. The *Myobrace® KO* is recommended as the first appliance to be used prior to starting on the rest of the program as the treatment priority is to establish a functional airway for the patient with dysfunctional breathing and sleep symptoms.



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

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 (<https://www.fdiworldddental.org/resources/policy-statements/dentistry-and-sleep-related-breathing-disorders>)
- 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.fdiworldddental.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 (<https://www.ada.org/~media/ADA/Member%20Center/Files/The-Role-of-Dentistry-in-Sleep-Related-Breathing-Disorders.pdf>)
- 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://www.ada.org/~media/ADA/Member%20Center/Files/Role_of_Dentistry_in_the_Treatment_of_Sleep_1-5.pdf)

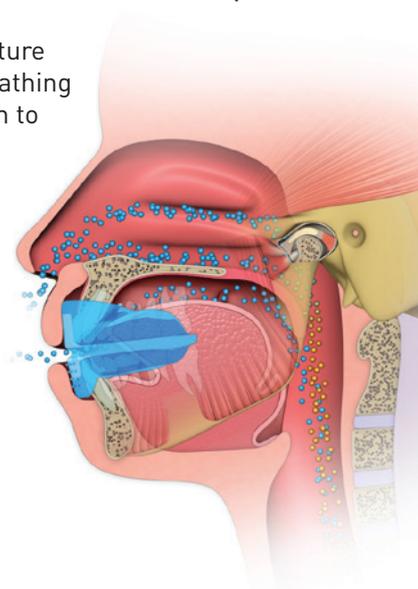
SCREENING AND EVALUATION

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.

- It is strongly recommended that orthodontists screen patients with regard to the signs and symptoms of OSA. A thorough history and clinical examination are critically important in that they establish the presence of pre-existing conditions, a basis for diagnosis, the need for referral, and a baseline for evaluating the effects of treatment. American Association of Orthodontists (<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 statistically 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

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

One or more of the above criteria can trigger a suspected Sleep-Related Breathing Disorder. Prioritise establishing airway function with *Myobrace®* or *Myosa®* appliances first.

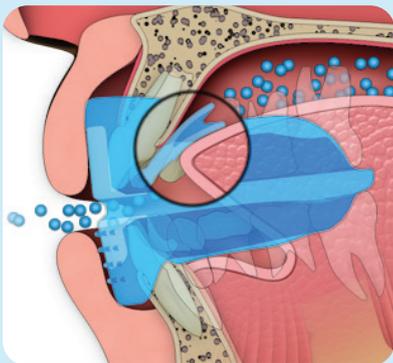
HOW TO USE THE MYOBRACE® K0

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 for the first two weeks to allow mouth breathing. However, when closing down on the *MYOVOSA*® hole located at the front of the appliance, 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 then combine daytime and night time use. Mouth breathing

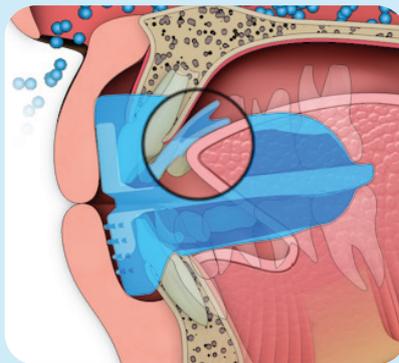
will be unrestricted at night and the airway will be kept open by holding the lower jaw forward as the thicker base opens the airway. Additionally, the tongue tag encourages the tongue to rest forward out of the airway.

Tongue press: The child can practise 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 also be completed with the head tilt variation to improve muscle strength in the pharyngeal area.

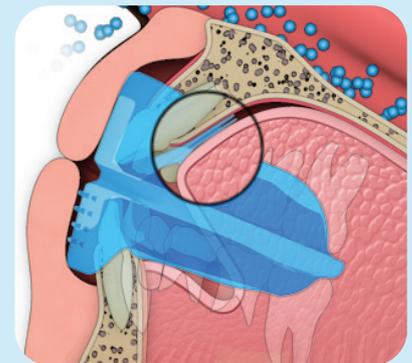
THREE APPLIANCE SEQUENCE



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



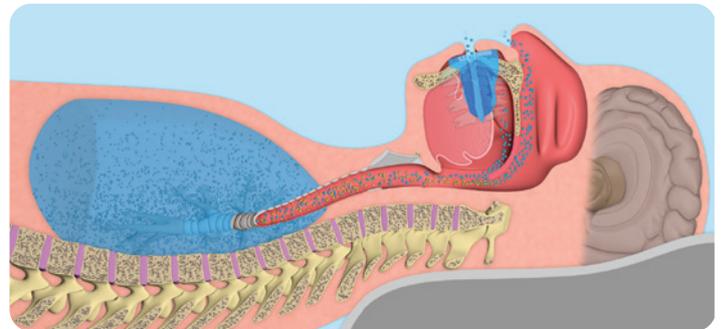
The child can then close the anterior teeth to block the breathing aperture either partially or completely to promote nasal breathing.



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. The 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.



The K0 holds the mandible forward allowing continued mouth breathing while sleeping.

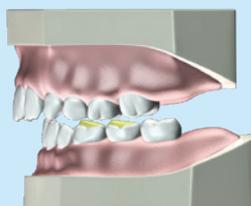
CLINICAL PROTOCOL

myobrace®
STRAIGHT TEETH THE NATURAL WAY



Establish a functional airway

myolay



Advance the mandible

myobrace®
STRAIGHT TEETH THE NATURAL WAY



Establish nasal breathing

Additional Adjunct Treatment



myoTAREA®
TONGUE AND LIP
EXERCISE APPLIANCE

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

4-6 MONTHS

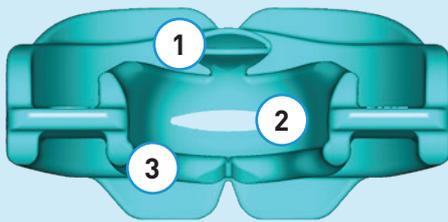
MYOBACE® FOR KIDS K0 UNIQUE DESIGN FEATURES

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®

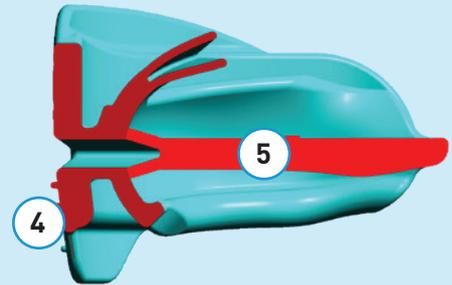
myobrace®
STRAIGHT TEETH THE NATURAL WAY



**K-ZERO
USED PRIOR TO K1**

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

MRC TRAINING SEMINARS

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



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PATENTS AND PATENTS PENDING, FOR MORE INFORMATION VISIT MYORESEARCH.COM

EUROPE

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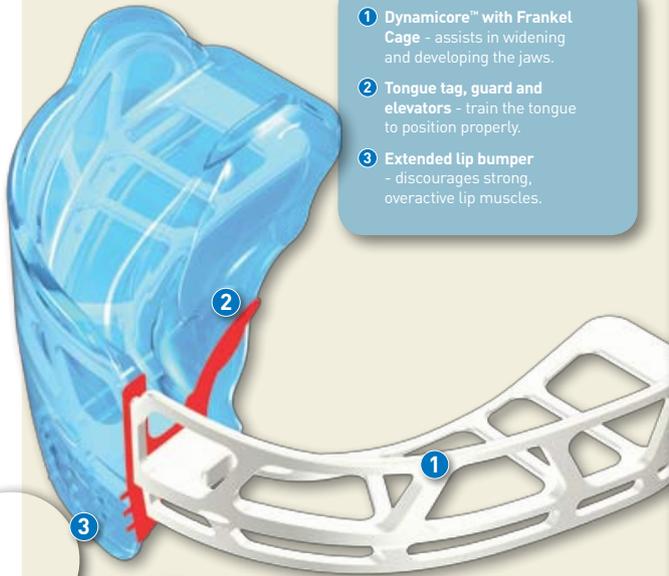
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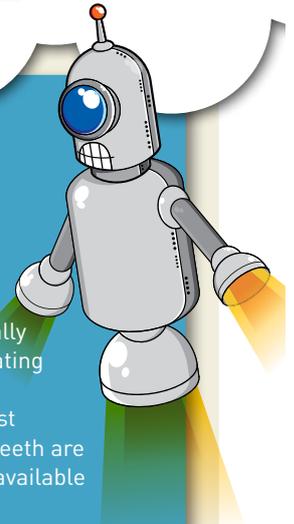
Myobrace for Kids™



- 1 **Dynamicore™ with Frankel Cage** - assists in widening and developing the jaws.
- 2 **Tongue tag, guard and elevators** - train the tongue to position properly.
- 3 **Extended lip bumper** - discourages strong, overactive lip muscles.

mixed Dentition

Myobrace for Kids™ is a three-stage appliance system designed specifically to correct poor oral habits while treating upper and lower jaw development problems. *Myobrace for Kids™* is most effective when a child's permanent teeth are coming through (ages 5 to 8) and is available in three sizes.

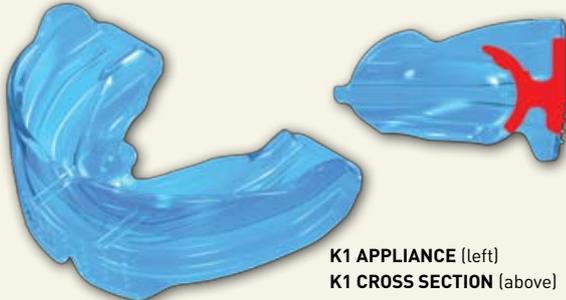


Designed for:

- Class II Division 1 + 2 malocclusion.
- Anterior (upper + lower) crowding.
- Deep bite.
- Open bite.



HABIT
CORRECTION
STAGE 1



K1 APPLIANCE (left)
K1 CROSS SECTION (above)

MYOBACE® K1

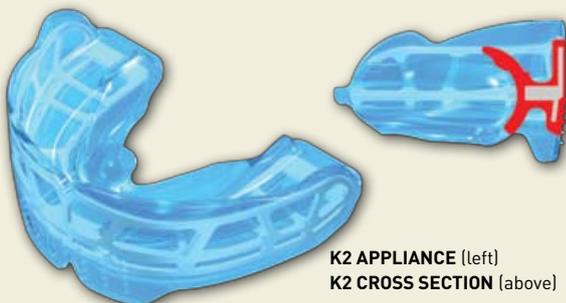
The *K1* provides habit correction.

The *K1* is made of flexible silicone to adapt to any arch-form and poorly-aligned teeth. Its flexible nature also means that it offers improved retention for night-time use.

The *K1* is available in three sizes and comes in pink and blue.



ARCH
DEVELOPMENT
STAGE 2



K2 APPLIANCE (left)
K2 CROSS SECTION (above)

MYOBACE® K2

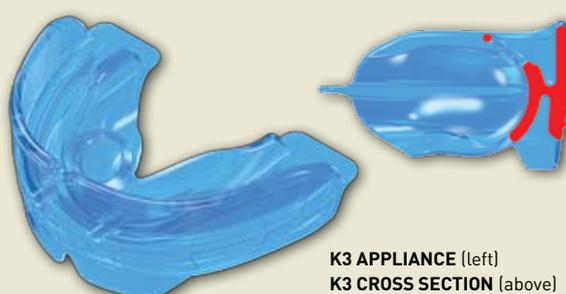
The *K2* provides arch development in addition to habit correction.

The *K2* features *Dynamicore™* with a *Frankel Cage* which assists in developing the arch-form and improving the dental alignment.

The *K2* is available in three sizes and comes in pink, blue and clear.



FINAL ALIGNMENT
AND RETENTION
STAGE 3



K3 APPLIANCE (left)
K3 CROSS SECTION (above)

MYOBACE® K3

The *K3* provides final alignment and retention.

The *K3*'s firm polyurethane construction provides excellent tooth alignment and retention. The hollow tongue tag finalises tongue position.

The *K3* is available in three sizes and comes in pink and blue.