



My child is a mouth breather.
Does it matter?

My child is breathing through the nose
but grinding his teeth.
Do I have to worry about it?



INFORMATION FOR PARENTS AND PATIENTS
A system of stimulators
for the treatment of oral motor disfunctions



The treatment that helps patients around the world.

What is MFS system?

It is a set of silicone stimulators used to re-educate the most important motor functions of the oral cavity, such as:

- nose respiration
- swallowing
- weakened or increased tone of the masseter and perioral muscles

Why is nasal breathing so important?

When breathing through the nose, air reaches the paranasal sinuses: maxillary, frontal, sphenoidal, ethmoidal.

These are air spaces located within the cranio-facial skeleton. During inhaling, the pressure reaching paranasal sinuses decreases, and it rises above atmospheric pressure on exhalation.

During the period of growth and development this change in pressure is a factor conditioning proper growth within the craniofacial area.

Thanks to the function of the nose cleansed, heated and humid air is delivered to the respiratory tract, both during the day and at night.



What can I do to help my baby breathe through his mouth?

The child should be diagnosed for obstruction in the respiratory tract, for example, it could be an overgrown adenoid. If the airway is normal and the child is still breathing through his mouth, this is called habitual mouth breathing. They are often seen in children who, after time of mouth breathing (e.g. following an infection) do not return to the correct breathing pattern.

The reasons are twofold: first - nasal breathing is more difficult, involves more muscular effort than mouth breathing, second, the circular muscle of the mouth has weakened.

The way from the mouth to the bronchial tree is shorter and therefore easier to cover, as a result, children often fail to resume normal breathing. It can be also caused by shortened sublingual frenulum.

What are the consequences of prolonged mouth breathing?

As a result of long-term habitual mouth-breathing, the following occurs:

- weakening of the orbicular muscle of the mouth and imbalance of the perioral muscles.
- imbalance in the muscles that lower and raise the mandibula and the posterior neck muscles, which are also antagonists of the mandible lowering muscles.

As a result, the head takes a hyperextended position;

- lack of a resting position of the tongue on the palate;
- atypical swallowing;
- weakened development of the maxilla in transverse dimension;
- tendency to infections and colds - no preliminary filtering, heating the air in the nasal cavity;
- a tendency to craniofacial growth, called the long face syndrome (dolichocephalic);
- speech disturbances due to anatomical, functional and occlusal changes.



My child has been diagnosed with an atypical type of swallowing (infantile type of swallowing).

Swallowing disorders, known as atypical or infantile swallowing, are disorders which must be treated as they directly affect the development of the palate and the formation of malocclusion and speech disturbances.

Swallowing difficulties can be the result of, among other things, persistent mouth breathing, reduced mobility of the tongue against the background of the shortened lingual frenulum.



Before use

After use

Martina

- open bite with the background of habitual mouth breathing, shortened sublingual frenulum, atypical swallowing. Frenotomy was made, she used: **Mouth obturator, Nasal stimulator, Stimulator for the treatment of open bite.**



Before use



After use
(With the Stimulator)

Simon

- increased muscle tension, teeth grinding at night, impacted canines. He was using the **Antybruxismus Stimulator.**



My child breathes through his nose, but grinds his teeth at night. Could this have any consequences and cause malocclusion in the future?

Unfortunately yes.

In patients with increased muscle tension, clenching or grinding teeth, forces generated in the area of molars and premolars can be extremely big. Those forces will limit the growth of the alveolar processes in vertical dimension. According to many researchers, the growth of the alveolar process, incl. Creekmore, accounts for roughly 70 percent 1/3 of the lower face height, achieved during growth and development. Depending on the length and intensity of parafunction, we will be dealing with facial development referred to as the syndrome of "short face" - the so-called brachycephalic type of craniofacial growth.

Stress stimulates the limbic system in humans, which is responsible for emotions. Over stimulated limbic system sends stimulating impulses to the reticular formation of the brain. The reticular formation normally controls the harmonious work of the masseter muscles. Excessively stimulated limbic system causes dysfunction of reticular formation as a result of stress. As the effect the muscles that raise and lower the mandible undergo constant and increased contractions.

Therapy of patients with increased muscle tone, clenching or grinding teeth should be focused on reduction of stress factor. This is not always possible.

Another way to reduce the negative effects of over-exposure of muscle tension is interrupting the information from receptors located around the teeth to the reticular formation and thereby reducing the activity of the masseter muscles.

We achieve this by using the front bite plate, which eliminates the contact of premolars and molars. The MFS Antybruxismus Stimulator is used for this.

If the teeth in the posterior segment are not in contact, there is no abrasion and alveolar processes can grow in height, in addition, there is no excessive tension in the masseter muscles, sternocleidomastoid, posterior necks and scalene muscles.



Are there any contraindications to the use of stimulators?

The very young age of the patient is a contraindication to the use of stimulators and complete obstruction of the upper respiratory tract by an overgrown pharyngeal tonsil.

From what age can stimulators be used?

Stimulators can be used from the age of 5, however, with the possibility of matching the stimulator based on the anatomy of the oral cavity, good patient cooperation and parental involvement they can be worn even in younger children.

Madeline

-diagnosed poor development of dental arches, shortened sublingual frenulum, impact canine, teeth grinding at night. Currently, after phrenotomy, has recently been wearing a partial fixed appliance and ***Antybruxismus Stimulator*** at night.



What is the diagnosis based on?

The therapist will test the patient, mainly:

- for airway patency,
- the size of the nostrils,
- range of tongue mobility, swallowing functions,
- correct posture,
- pronunciation,
- tooth wear,
- the appearance of the cheek mucosa for signs of biting the cheeks or tongue.

Finally, will interview the parents.

About the creator of the system.

The creator of the MFS system is Professor ***Jose Duran Von Arx***.

Head of the World Institute of Orthodontics in Barcelona.

Founder and head of the orthodontic department of a children's hospital in Barcelona.

Retired longtime head of the Department of Orthodontics at the University of Barcelona.

Author of a number of publications and over 300 scientific articles
and four books on orthodontics.

An exceptionally valued practitioner and researcher in the field
of orthodontics known both in Spain and in the world.



Questions and Answers:

Are the stimulators safe?

Stimulators used in accordance with the recommendation are safe, CE certified, which is a declaration that the product meets the requirements of the European Union Directive concerning safety of use, health and environmental protection.

How to care for the stimulator?

After use, the stimulator should be thoroughly rinsed under running water, and then disinfect with a preparation dedicated to the MFS-Velox spray system, after 30 seconds, rinse again under running water. Store in a dry environment, in a special case. Do not bend, bite, or store near heat sources.

What is the durability of the stimulators?

The lifetime of the stimulators is 6-7 months.

How many hours per day should the stimulators be worn?

To achieve the effect, stimulants should be worn at night and a few hours during the day.

When will I notice the first effects?

The first effects will be visible after 3 months of use.



How long does stimulator therapy last?

The duration of therapy depends on the number of disorders and the age of the patient at which treatment was started. The sooner therapy is started, the better. If your child has multiple disorders, such as habitual mouth breathing, problems with mobility of the tongue, atypical swallowing, altered muscle tone, this therapy must take into account the hierarchy of re-educated disorders.

Therapy always begins with breathing re-education.

The necessary negative pressure is only created inside the mouth when the lips are seal together to ensure the correct functioning of the tongue, to create conditions to correct swallowing function and normal muscle tone in patients with weakened tone.

Where can I buy a stimulator?

The stimulator you can be purchased in certified surgeries, after diagnosis and choosing the right size.

You can rely on the knowledge and experience of MFS Orthodontic Functional Therapists.

The group of highly recommended therapists was created based on people with experience in working with the system who are actively using the MFS system and for people who have graduated modular training in the MFS system and are fully competent to work with the system.



Natalie

- wears a **Antybruxismus Stimulator** to reduce muscle tension at night (teeth grinding) and stimulate the proper development of dental arches.



Simon

- second class malocclusion, problems with mobility of the tongue in background of shortened sublingual frenulum, currently after phrenotomy, wears a **Lip Stimulator**.



Diagnosis and therapy.

More questions will be answered by MFS Orthodontic Function Therapists.

You can find a map of certified offices on the following website:

www.mfs-world.com

Prepared (in consultation with Professor Jose Duran von Arx)

MFS Ambassador - dentist Monika Oško

Master Universitario di Secondo Livello in Orthognatodonzia Clinica Avanzata,

Diplomat Orthodontic, Orthodontic Senior Instructor.

Speaker at Barcelona Orthodontic World Institute.

The study was based on medical knowledge and current research in this field.

System stimulators:



Nose
stimulator



Obturator



Lip
stimulator



Muscle
relaxant



Open bite

