

A New Horizon for the Treatment of Bruxism in Children

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Recently, a new type of dental protection has been developed that offers another way of treating bruxism. Unlike ordinary night guards whose only purpose is to focus on preventing the involuntary or habitual grinding of the teeth typically during sleep (by covering the teeth surfaces), the new appliance (BTH4) relies on a direct biofeedback mechanism to reduce or eliminate the onset of bruxism.

What is the problem with conventional mouth protectors?

The oral nightguards that dentists offer are more prescribed to protect teeth against damage from bruxism. Usually, these guards do not have a mechanism that can eliminate this habit, but only create a protective layer on the teeth so that no abrasive or compressive force is applied directly to the teeth. Such night guards do not resolve other symptoms of bruxism, such as headaches and jaw and neck pain that are caused by excessive force in the jaw. This is one of the main differences between BTH4 and conventional night guards.

Instead of focusing solely on controlling the damage caused by bruxism, the BTH4 guard focuses on removing the basic problem of bruxism by providing direct feedback to the palate and sending impulses to the brain that bruxism is an undesirable action. Exerting pressure on the jaw when using BTH4 causes a person's immediate discomfort, and this discomfort is proportional to the force implanted by the jaw.

What is the mechanism of this device?

The principles of this device are somewhat like an Eliminating finger-sucking habit device. In this case, undesirable behavior is excessive pressure. When using BTH4, the movement of the lower jaw through the feedback mechanism is transferred to the device, which intensifies the contact on the palate; cause an immediate discomfort that makes the user immediately stops this undesirable behavior. The goal is to eliminate or reduce the habit of bruxism radically because the cause of squeezing and clenching teeth on one another is the excess pressure that is applied by the jaw.

What does distinguish the new mouthguard from the other devices?

Many biofeedback devices have sophisticated electronic systems and rely on batteries. Some even have batteries that are placed in the mouth that can potentially be harmful. Another problem that often happens in electronic biofeedback devices is what is called a "false trigger". Many of these devices focus on the diagnosis of muscle activity and identify any movement that may not be related to bruxism, but will still give feedback; for example: when a person turns around in bed while sleeping.

This makes it impossible to detect unwanted behavior precisely because it sends the pulse device when it is not needed. The new appliance works without the need for an advanced electronic battery. It's not only simple, but it also reduces the size and potential risks associated with battery-powered devices, and the cost is considerably lower which makes it more accessible to more people.

Prevention of some symptoms

All the symptoms caused by excessive force by the jaw are the target of BTH4. These symptoms include headaches, neck pain, earache, jaw and facial pain, damage to the teeth, mandibular joint aches, as well as jaw's lock and gingival recessions.

Another advantage of using this device is the reduction of bruxism on awakening, due to its performance principle. By undesirable feedback, this device teaches the user while sleeping that do not do this habit. On the other hand, when using this device while awake, the frequency of bruxism decreases even when the device is not used.

Why this new appliance should be prescribed?

Common oral night guards are effective in preventing tooth damages, but they cannot prevent many of the destructive effects of bruxism. They also require multiple referrals to regulate and usually exacerbate the symptoms of bruxism. BTH4 by eliminating the excessive pressure prevents the teeth from squeezing together; encourages the individual to relax more naturally so that reinforces the desired behavior. Moreover, it effectively eliminates the need to refer to the guard's adjustment.

Finally, resistance to change, with the arrival of a new product, is natural. It is very difficult to deal with bruxism, so every time a new product is marketed, dentists' doubts are justified. However, due to the positive response of parents, the use of this appliance has started to become popular.

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