

## The Epidemic that Murders While We Sleep

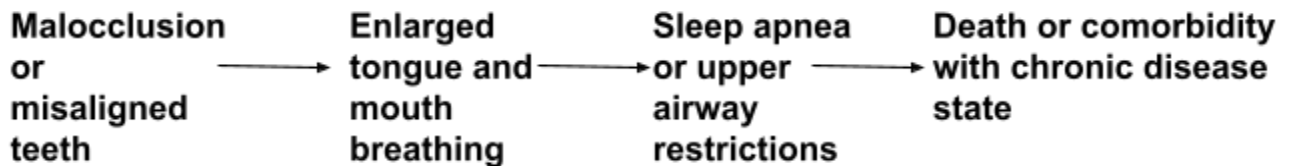
Malocclusion, misaligned teeth are always accompanied by mouth breathing. Not some of the time, but 100% of the time! Sleep apnea and airway restrictions are a new Westernized disease that we have evolved into because of a change in jaw size from room for wisdom teeth and room behind that; to tooth crowding and no room for our tongues.

Mouth breathing causes a chain of deleterious reactions. The physical size of the airway becomes cut in half by the hinge movement of the lower jaw to open the mouth. Even if the mouth is not open and oxygen is being taken in through the nose, the airway is physically smaller, restricting oxygen flow.



**This image shows mouth open, tongue falling back, oxygen restricted. This is a natural position for someone who may nose breathe during the day, but has a malocclusion.**

The effects of mouth breathing are massive on the body. For one, we can't get use of the filter of our nose that keeps harmful bacteria from entering the body, if we mouth breathe. The nose besides filtering converts oxygen to nitric oxide, a natural vasodilator called nitroglycerin. When mouth breathing, the tongue grows in size as do tonsils and adenoids. The nose changes shape getting deviations and turbinate changes because the tongue no longer rests in the palate when mouth breathing. The entire bone structure of the face changes and affects the airway, affecting oxygen delivery to tissues.



When oxygen is restricted through these evolutionary changes, the body reacts. Increased heart rate, increased blood pressure, and increased cortisol levels; the list goes on. This one finding affects every chemical reaction in the body because it involves oxygen. Low oxygen is a part of all chronic disease states.

Most people, over 70% of the world's population, have a malocclusion. They lie down at night, the mouth opens, tongue falls back, cutting the airway and the game to keep us alive begins. The sympathetic nervous system gets turned on several thousand times a night. The release of epinephrine and being in a panic state for most of the night our whole life while we sleep, affects every health condition known to man. It explains fatigue, low energy, weight gain, ADD/ADHD, thyroid, metabolism, and everything.

What has been done about this debilitating disease? If we don't train our children how to breathe and influence jaw size through appliance therapy; then our alternatives are CPAP, oral appliances, and/ or surgery; or a host of comorbidities or death.



**This shows in a lateral film the effects on the airway when the mouth is open during exercise. This starts to make sense why some experience nausea and fainting during intense exercise.**

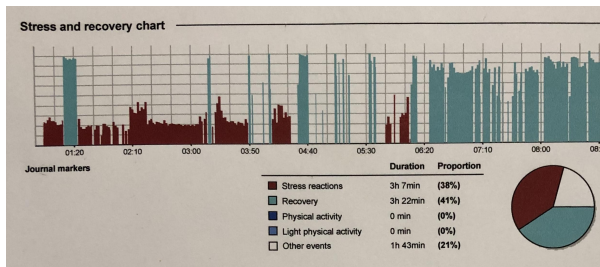
In the dental world, there are multiple oral appliances that all work under the same premise. That is to advance the lower jaw forward and move the tongue out of the way. Some appliances encourage nose breathing, some do not. For the general public to know their issue, and if they could be better; a sleep study is recommended. This sleep study needs to observe arousals caused by the SNS turning on, as well as AHI scores.



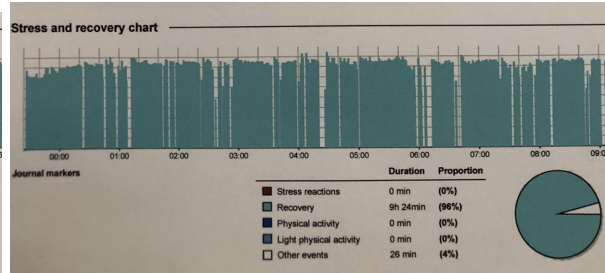
**This appliance, the Bullet, is designed to be direct to consumer, comfortable and efficient. It can be made in a 3D printer and there is no titration. The connector in the front, connecting the upper arch to the lower, encourages nose breathing while keeping the lower jaw postured forward. This keeps the airway open and parasympathetic nervous system engaged for better health.**

You can see in the graphs below arousals all through the night as the result of not having the airway open with the Bullet. The second night wearing the appliance, you see the autonomic

nervous system is engaged all night for proper rest and recovery. AHI scores went from 11.7 to 0.3.

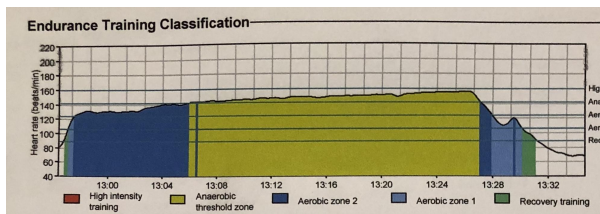


**Notice the red spikes, when SNS Turns on without the Bullet**

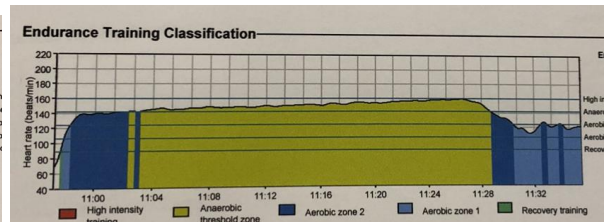


**With the Bullet, PNS stays engaged all night**

The graph below shows exercise with and without an appliance. Nose breathing with the appliance in shows faster recovery and a more intense workout for a power increase of 200%.



**Exercise without the Bullet**



**Higher intensity workout with The Bullet with faster recovery**

Dr. Mary Ann Childs  
[Drchilds@maryannchilds.com](mailto:Drchilds@maryannchilds.com)  
 (864)-423-7131