Managing Sleep Apnea by Managing Oral Function

By Arthur M. Strauss, DDS

If you have an oral appliance made and fitted for treatment of sleep apnea and it does not work out for you, don't give up on "oral appliance therapy". Consider how customized the treatment was for you. Consider the variations of size, shape and positioning of your jaws and the nine muscles that make up your tongue and the importance of your appliance being customized to your individual uniqueness.

The one size fits all approach results in limited success in this interrelated system that requires the tongue function in swallowing, speaking and ongoing unobstructed breathing during sleep as it relates to obstructive sleep apnea (OSA).

Dentistry has taught dentists about the impact of tooth and jaw position and even the impact of the shape of gum tissue on our ability to swallow and speak because of its affect upon the shape and positioning of the tongue and its functionality.

The field of functional orthodontics has developed to address the negative impact of crowding the tongue when straightening and aligning teeth, favoring expanding jaw size to create more room for teeth, rather than removing teeth and shrinking jaw size and tongue space.

Oral surgeons have discovered, through the dental relation to sleep apnea that shortening a protruded lower jaw can cause sleep apnea, while extending the upper jaw to enhance the cosmetic and functional tooth relationship can help prevent it.

The amount of space between the top and bottom teeth, referred to as "the freeway space", has been shown to play a critical roll in oral function. This is a serious consideration when any "dental work" done, from complete dentures to complete mouth reconstruction with bridges, to orthodontics and (orthognathic) jaw surgery.

What is the freeway space? It's the space that allows the tongue to function. The tongue moves during breathing and speaking and intimately touches the surfaces of the teeth during swallowing speaking and breathing (the tongue moves and changes posture and position in association with exhaling and inhaling). Obviously the tongue has to have appropriate room to do these things.

Any imbalance in these relationships has been shown to impact numerous TMJ symptoms including: cardiovascular, musculoskeletal, auto-immune and emotional. And, I suggest that jaw position impacts tongue position and these together control our airway and breathing. This makes managing tongue position our body's highest priority for survival. And, compromised tongue position can be the source of a variety of serious medical conditions.

Therefore, carefully consider the selection, fitting and customizing of a specific oral appliance to best support your oral function to best manage sleep apnea. Given, our jaw-tongue-throat relationship exists while we are awake, daytime intervention is likely to help you, too.