

Obstructive Sleep Apnea Reveals Dental Connection to Chronic Disease

By
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The common denominator between obstructive sleep apnea (OSA), the teeth, jaws and related structures, and many seemingly unrelated medical conditions, is through what is referred to as “stress” or “the stress (fight or flight) response”.

Stress appears to be associated with all medical conditions in that more stress is worse and less stress is better. Stress may be seen as manic (acute) or depressed (chronic). Psychological terms, including “anxious, angry, annoyed, bored” are used to describe our body sense of the “stress response”, which is evidenced by increased levels of adrenaline type hormones in the bloodstream.

During the stress response, breathing becomes rapid and shallow, the heart rate and blood pressure increases. It is a reaction to what is perceived by the body as a threat to life. Foremost is a threat to airflow. An obstructed airway reduces airflow into the lungs and vital oxygen to and carbon dioxide from our cells.

Stress hormones induce rapid breathing, increasing airflow through a narrowed airway, and rapid flow of oxygen and carbon dioxide through our blood stream. These hormones also increase muscle tone to clear airway blockages caused by relaxation of the tongue and associated muscles collapsing into the throat.

During obstructive sleep apnea, the tongue and jaw muscles progressively relax as we move into deeper and deeper sleep stages and restful sleep. This leads to a partially, and often fully, blocked throat, choking us and initiating the stress response.

It has been shown that dental structures, including the size, shape, contours and positions of the jaws and teeth influence the posture and position of the tongue in relation to the throat when awake and asleep.

In prior articles I have referenced how our body compensates for this structural relationship while awake and asleep through:

- Clenching and/or grinding teeth (more often during sleep)
- Posture changes (poor posture while awake and postural changes while asleep)
- Increased adrenaline secreted as in the “fight or flight” response to increase muscle tone and activity support the above actions, breathing, circulation and more.

The “dental complex” has a major structural impact on the threshold that triggers the need for compensation, the amount of compensation or effort needed to keep the body even and in balance. Along with this are other heredity and environmental factors that impact the type, degree and interaction of the various means of compensating. Together they ultimately lead to specific signs and symptoms labeled as particular “dysfunctions” or “diseases”.