

The Obstructive Sleep Apnea Link to Pain and Pain Management

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The purpose of this article is to clarify relationships between the human anatomy responsible for the control of air flow in breathing and our experience and expression of pain.

Obstructive sleep apnea (OSA) refers to obstruction of breath during sleep. Since, obstruction refers to the physical and anatomical, I suggest that the anatomical structural relationship our body has must have an impact on airflow while we are awake.

There is a threshold, upon which our body receives a signal of a threat of death that activates the “fight or flight” or “stress response”. The most immediate threat to life is loss of oxygen to brain cells. This is the foundation of CPR’s ABC (airway-breathing-circulation) sequence of action that transports oxygen to and carbon dioxide from our cells.

In my article, this February, titled: Impaired Oral Function and Stress, I discuss the relationships associated between how open your airway is and what we refer to as “Stress”.

In prior articles I have described body posture compensations that help create more room for breathing by increasing the space for airflow behind the tongue where it becomes close to the spinal column. A delicate equilibrium manages our posture to maintain sufficient airflow. Any upset in the equilibrium can cause airway obstruction. This in turn triggers a stress response, instantaneously opening our throats for airflow until the body rebalances.

I believe that this also applies to the Stress-Pain Cycle as the sensation of pain is a distraction that destabilizes the airway. That is why we are able to reduce the pain sensation and stress response by deep focus, including meditation and deep breathing. Healthful deep full breathing increases our oxygen reserve, thus raising the threshold required to trigger our “stress” response.

In the case of OSA, continuous positive airway pressure (CPAP) therapy helps maximize oxygen levels and through pressure, stabilizes the airway while asleep.

Oral appliances offer an advantage in that they can improve the jaw-tongue-throat anatomical relationship to one that is more opened and stable and, unlike CPAP, they can provide this even while awake, thus allowing for normal breathing through a patent airway. Focus and meditative techniques coupled with healthful breathing add further pain management benefits while awake.

Although size, convenience and ease of use show oral appliances preferable by most patients; resolution of OSA is more challenging in cases of severe OSA, where their use is indicated for patients unwilling or unable to use nasal CPAP.