

## **Obstructive Sleep Apnea and the Stress Response**

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The mindless act of breathing is the most fundamental body function. This explains the focus of cardio-pulmonary-resuscitation (CPR) is first airway and breathing, then circulation.

The body's efforts to maintain a patent (opened) throat or airway is first priority. The jaw-tongue-throat relationship is at the heart of this effort. Problems with the tongue being held in the mouth are associated with snoring, sleep apnea and associated disorders. The muscular balance needed is supported and maintained by the autonomic nervous system (ANS). As with CPR, first address airway and breathing then circulation. The ANS controls adrenaline type hormone levels that determine when we are in calm (parasympathetic) or emergency (sympathetic) state.

- Increased levels of adrenaline type hormones are characteristic of the sympathetic or fight-or-flight state. From an airway management perspective, this facilitates compensations to open the airway by increasing muscle tone to:
- Alter body posture (generally to a more forward head posture),
- Increase jaw muscle activity (as in clenching that increases tongue and some throat muscle tone) and grinding (that moves the lower jaw and attached tongue forward and out of the throat),
- Increase overall airway muscle tone.

These hormones also increase breathing rate, heart rate and blood pressure, facilitating the increased delivery of oxygen to cells of muscles and tissues where it is most vitally needed when under a survival threat, as that of "perceived" choking.

The body is ongoingly maintaining a balance between these compensations in managing the airway. The compensations are a chronic strain on the body and its resources from a musculo-skeletal and hormonal perspective which further adds to "on-edge" sensations. Any distraction, physical or mental, potentially upsets the balance that keeps the tongue out of the throat. Deep or sudden relaxation causes loss of muscle tone, including that which helps keep the tongue out of the throat. Therefore, the potential for tongue collapse into the throat, from sudden relaxation or distractions or sleep apnea, determines our susceptibility to triggering the adrenaline response that the medical community terms "stress".

Talk therapy helps desensitize us to "distracting" thoughts. Can these thoughts be what our mind assigned as the reason for "on-edge" feelings, which were caused by a physical distraction or sudden relaxation? Drugs short circuit the experience of the "on-edge" feelings and, perhaps, distracting thoughts. Physical activity burns up adrenaline, allowing us to feel more relaxed. Relaxation leads to choking in susceptible people, increasing their need for postural body and jaw compensations. Oral Systemic Balance Therapies makes the oral component of breathing easier and improves the jaw-tongue-throat relationship, reducing the need for compensations.