

## **The Sleep Apnea Clue To What is Missing, Yet Within Plain Sight**

By

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Throughout time the human airway has been assumed to be stable in allowing air to through the mouth and nostrils through the pharynx and windpipe into the lungs. Most of this passageway is supported by bony framework and structure that is stabilizing; however, in humans, the throat is not.

In humans the mouth and nose join in the throat, an intersection that makes the front of the throat the back surface of the tongue. And, this is controlled by the jaws, including teeth jawbone, gums and associated structures and a free floating bone called the hyoid bone. The tongue, not only connects, through its twelve muscles, to the jawbone, the back of the throat, the palate, bony extensions from the lower back sides of the skull, but also to the hyoid bone, located below it in the neck.

Significantly, other hyoid bone muscle connections extend to the side of the skull behind the ears, the shoulder blades, the collar bone, the top of the breast bone, that connects the ribs on either side of the chest, and thyroid cartilage in our "Adams's Apple area.

Can you see the relation of all of this to our head, body and back posture? Can you picture how, our jaws moving up and down, back and forward and from side to side or in any combination of these movements, influence the posture and position of the tongue and our head and body posture? Can you see how movement of the tongue in swallowing and speaking not only affects the posture and position and even shape and contours of the tongue in the throat, as the front of the throat? Can you see how it not only impacts ease and effectiveness in these functions of swallowing and speaking but it also, more importantly, how it controls airflow and our ease and ability to breathe?

Dentistry has worked with swallowing and speaking in addressing the making of false teeth, when replacing all of the teeth with full dentures. Since the late 1980's dentists have recognized the jaw position relationship to airflow during sleep in the treatment of OSA. Yet these same anatomical structures and relationships appear to be more significant in having influence and being influenced not only while asleep, but as evidenced in ease of swallowing and speaking, while awake.

This and these relationships, which one may expect to be evident to both medical and dental professions, are what "is missing yet", by observation of anatomy textbooks and in both medical and dental interventions, "within plain sight"!

One may find it hard to imagine how, through the ages, basic scientific inquiry to understand how the body functions has not yet addressed this. However, if you read my December 2012 Your Health Magazine article "Trapped in Sleep", you will recognize how public, "grass roots" action can bring this into "plain sight", scientific inquiry then application.