

## The Dental Relation to Oral Function, Sleep Apnea and Related Conditions

By Arthur M. Strauss, DDS

In dental school, during the process of learning about reconstructing a mouth, that has no teeth, utilizing full dentures, sometimes referred to as upper and lower plates, we learned about the impact of the whole mouth upon the tongue as it relates to “swallowing” and “speaking” and “overall muscle balance and comfort”.

When a mouth is missing these teeth we must determine where to position the jaws:

- How up/down far apart must they be?
- What is the backward/forward relation between the top (maxilla) and bottom (mandible)?
- What is the right/left relation of them?

We also must determine from this:

- The size and shape to make the teeth
- How to best position the teeth
- How to replace and contour (even with different contours (bumps and recesses) the gums and underlying bone that replaces that of the missing jaw bone and gums.

All of this is designed to be in harmony with ease of speaking, swallowing and ease of breathing.

Ease of breathing had not been seen by many dentists as a condition directly impacted by the dental profession. In *Snoring and Obstructive Sleep Apnea*, second edition by David N. F. Fairbanks, et al, I note the first reported use of a dental appliance was in 1934 by Pierre Robin to pull the jaw and tongue forward in people with smaller (retruded or receded) lower jaws.

In the mid-1980s this concept got more attention. The dental relationship to obstructive sleep apnea has provided an opportunity to recognize the link between dentistry and airway control of airflow and breathing – our body’s most fundamental need.

As I discussed in prior articles, our knowledge of the basic CPR priority of airway-breathing-circulation (A-B-C) addresses this fundamental need and its impact on life and death.

To manage airflow our body instantly compensates for any degree of obstruction or blockage. The body adapts to make sure the airway is open and air can flow into our lungs.

Through these compensations, the body robs from “Peter” to pay “Paul” to keep us alive. The immediate and subsequent impact, of this, can be measured physiologically and readily picked up through the eyes of a trained, skilled and focused observer.

As the medical and dental communities address obstructive sleep apnea and all the complications from it, you can see that dentistry plays a major, if not the primary role.