

If it is  
being done  
It is probably

impossible

Anne-Maree Cole, B.D.Sc, MScMed, LVIM

**T**he academic literature is replete with acknowledgement that when it comes to growth and development, form follows function. The structure and how we develop is not a blue print of our genetic code but an intangible expression of that template and its unique interaction with how we function, our internal environment. Humans are born obligate nasal breathers enabling the highly orchestrated muscular action of breastfeeding, whilst continuing to breathe. This soft tissue signaling initiates the stimulus for optimum jaw development, out from under the cranium.

It is an interesting interplay that function develops the structure and the structure supports the function. The complex nature of the relationships between the head, neck, jaw, face and airway mean that even small transitions away from expected soft tissue signaling can mark the beginning of a divergence from normal genetically encoded growth and development. Prolonged compromised adaptation away from physiologic norms results in maladaptation. This failure to develop the nasomaxillary complex, jaws, face, posture and airway results in the potential for lifelong physiological and structural stress, illness and disease, not the least of which is sleep disordered breathing.

As clinicians, we have a very serious role to play in the prevention of these anomalies. Crooked teeth are the least of our worries. We have to recognize, educate, train, and intercept early, very early.

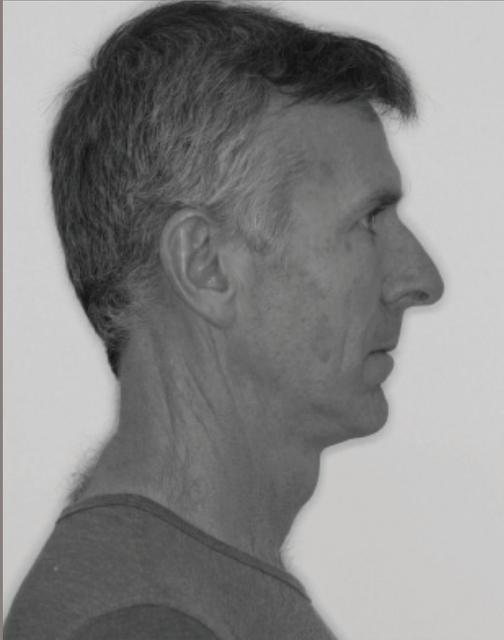
But when is it too late? Most would argue that you cannot grow bone and develop arches in adults. The problem with that presumption is that the concept of growth is associated with changes in height. We get to a point where we stop 'growing'. But if that were true, we would never heal following a fracture as an adult. Are we not 'growing bone' in that healing process? The difference between a fracture and the normal homeostatic state is the trauma. Given appropriate stimulus, the body is quite capable of laying down new bone at any and every age.

Semantics aside, regardless of whether it is called bone growth or remodeling, orthopedic orthodontic tools exist today to develop jaws to an optimal size, shape and position, at any age. To create jaws with more than enough room to house all the permanent teeth, bringing them out from under the cranium where they belong, leaving an airway less susceptible to collapse during sleep.

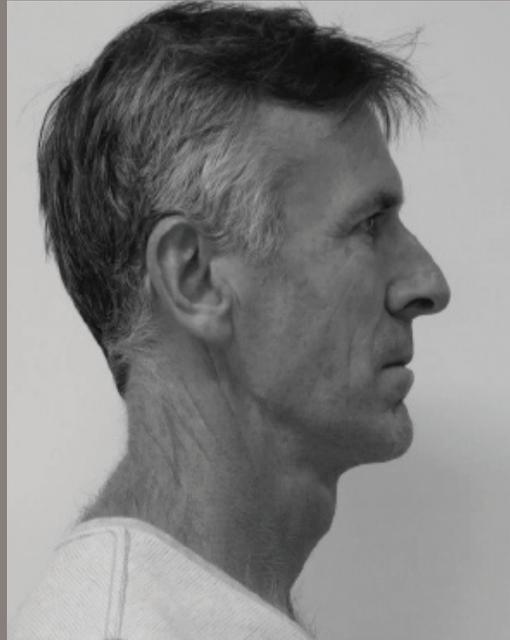
The tools used, create a 'micro-trauma', and this along with a change in function stimulate the body to respond and lay down new bone, not linearly, but 3-dimensionally. It is a physiological process, not a mechanical one. It steps away from traditional orthodontic, mechanically based thinking to an understanding of physiology and working alongside physiology to create organic change. It is a major paradigm shift and may well hold the key to true health and longevity.

This case is 10 months into treatment. The patient is a dentist with obstructive sleep apnea. Through the processes of Jaw Development Orthodontics™, we are stimulating new bone to form, bringing the jaws out from under the cranium, where they belong and in doing so, optimizing the airway to reduce the impact from sleep disordered breathing.

**BEFORE TREATMENT**



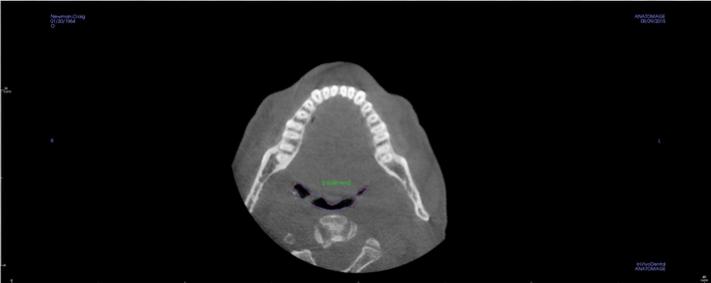
**10 MONTHS INTO TREATMENT**



**When you develop the jaw you develop the airway. When you fail to develop the jaw you contribute to the development and/or perpetuation of sleep apnea.**



**BEFORE TREATMENT**



**Minimum Airway Area: 216.69mm<sup>2</sup>**

**10 MONTHS INTO TREATMENT**



**Minimum Airway Area: 509.80mm<sup>2</sup>**

**BEFORE TREATMENT**



**Indicator Line Measurement: 55.35mm**

**10 MONTHS INTO TREATMENT**



**Indicator Line Measurement: 49.51mm**

**BEFORE TREATMENT**



**Enlarged turbinates prior to treatment**

**10 MONTHS INTO TREATMENT**



**Improved nasal airway / no surgical intervention**

**BEFORE TREATMENT**



**Sagittal view**

**10 MONTHS INTO TREATMENT**



**Note improved cervical lordosis and position of hyoid**

The Jaw Development Orthodontics™ techniques illustrated here are now being taught at LVI, the premium institute for Physiologic Based Dentistry. If it is being done... it is probably possible!

**nosefacts**

During sneezing irritants are expelled at a speed of 100 miles per hour.