Facial Meltdown!

by Carol Vander Stoep, RDH, BSDH, OMT

Attractive people enjoy advantages. Of course! They are not just perceived as more intelligent, they often are – partly because they receive more attention. They often receive superior economic and career opportunities – reasons enough to make the best use of genes. The most attractive faces are also beautiful. A beautiful face, like a beautiful building, makes people feel good. This, in fact, is why a beautifully developed face pays enormous health dividends – and to a large degree, is under each person’s control.

To help your child avoid snoring/apnea, ADHD, or, a real, not just perceived, tooth crowding, consider sufficient tongue space and a wide, clear airway. But many children – and adults – choke on their tongues regularly at night due to a common problem called sleep apnea, yet few are aware of their airway obstruction. We may consider sufficient tongue space and a wide, clear airway a birthright, but many westerners do not have one. Most of us have adjusted to and assumed a profile that looks like resulting minor health annoyances. We send children in droves to orthodontists to fix expected tooth crowding, not realizing we are treating a symptom, not the root cause of tooth crowding. We are not born with extra bone space; we must actively extract crowded teeth in pursuit of an attractive smile, and believe wisdom tooth extraction a rite of passage. We sigh when we note our children are not developing the attractive, square, closed jawline and desire higher cheekbones and hollowed cheeks we want for them. We rarely realize they are not maximizing their genetic potential for beauty or optimal oral health throughout life.

I’m Melting! Consequences of Mouth Breathing

Consider for a moment how orthodontics works: light, gentle pressure on teeth over time slowly moves them. It takes a step further and realize intricate muscles around the face also remodel facial bones over time. If facial posture is incorrect, facial form is incorrect. Children’s faces are nearly fully formed by age twelve. Before this, their bones are plastic. If a child consistently mouth breathes for any reason, most commonly due to unresolved allergies, this habit creates a 3-dimensional facial contraction. The lower third of the face grows down and backwards, leaving a long, narrow-appearing face. Cheekbones, sinus cavities, and eye orbits do not expand as they should for best function.

In profile, the lower jaw can look like a bump in the neck, many men grow beards to hide a weak lower jaw. The front of jaw underdevelopment, back teeth crowding; wisdom teeth impact. The tongue also crowds into a smaller space. It becomes a “Suburban in a Mini-Coop garage”. A final airway assault occurs as the lower jawline trends from horizontal to more vertical. The jaw and tongue move into airway space, as the images above show.

If you have jaw problems, this article likely applies. The lower jaw remodels back in the jaw joint socket, often leading to pain, dysfunction, and sometimes debilitating movement disorders as it pinches critical nerves. Equalizing pressure in ear canals, flying or scuba diving is difficult, if not impossible. A mouth breather must neste most of his tongue on the floor of his mouth. But if the tongue does not properly lock onto the palate, this muscle cannot counterbalance the inward forces of cheek muscles. The face narrows in a second dimension as cheek muscles crush the palate (the arch formed by the roof of the mouth). Front teeth also crowd, further constricting tongue space.

A “normal” airway is about 1 1/4 minus 2 inches is optimal. Many operate with less than a 4mm airway – about the size of a red straw. Which would you choose?

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Maximizing the Beauty Gene
Snap judgement: “black-jawed! First thought? Yup, just closing your mouth adds about 30 IQ points to people’s perception of your brain power. What else does correct oral posture offer? When the tongue locks front-to-back against the roof of the mouth:

• It naturally expands facial width by stimulating stem cells along the palatal midline. A triple benefit results: a wide airway plus more room for teeth and tongue. Teeth erupt in a wide pattern around the tongue.
• The tongue is “toned”, thus compact and less likely to choke off the airway.
• When the tongue undulates gently against the roof of the mouth during a proper swallow, eustachian tubes twist and their internal pressure changes. These constant pressure changes clear them and anesthetize the middle ear. Children suffer less middle ear infections!
• During a correct swallow, pressures build on a chain of bones that milks the pituitary gland of its important growth, thyroid, sex, and blood pressure regulating hormones. Why skip these free, critical hormones?
• Together with a lip seal, it allows the tongue to naturally suspend the lower jaw in space, relieving the need to clench even while sleeping. Mouth breathers also typically have low CO2 levels because their breathing rate and volume is doubled compared to those who use their noses.

Carbon Dioxide – It’s a Gas! Gas!
Wait a minute! Weren’t we taught exhaled carbon dioxide is a waste

Three Critical Oral Postures

| First | Good oral posture means keeping lips sealed together while not using them during intimacy, or while eating or talking. Our tongues were never meant to be breathing tubes; bad things happen when we use them that way. Your nose is on your face for a reason! |
| Second | Where is your tongue right now? Is it plastered to the roof of your mouth or resting on the floor? Does your tongue tip touch your front teeth? |

Breathing Easy

Breathing is fundamental. If your child were to choke, you know you’d jump to clear his airway. But many children – and adults – choke on their tongues regularly at night due to a common problem called snoring/apnea, yet few are aware of their airway obstruction. We may consider sufficient tongue space and a wide, clear airway a birthright, but many westerners don’t have one. Most of us have adjusted to and assumed a profile that looks like resulting minor health annoyances. We send children in droves to orthodontists to fix expected tooth crowding, not realizing we are treating a symptom, not the root cause of

The Fibonacci Golden Ratio in Nature’s Beauty Code. We find spatial relationships defined by the Golden Ratio, (1 to 1.618...) throughout nature – in insects, flowers, art, architecture... and in faces. This marks a face in harmony with the Golden Ratio. When the overlaid features of this mask match a person’s photograph, we perceive the person as attractive. Maybe more importantly, we can guess they breathe well.

The Breathe Right Golden Ratio in Nature’s Beauty Code. We find spatial relationships defined by the Golden Ratio, (1 to 1.618...) throughout nature – in insects, flowers, art, architecture... and in faces. This marks a face in harmony with the Golden Ratio. When the overlaid features of this mask match a person’s photograph, we perceive the person as attractive. Maybe more importantly, we can guess they breathe well.

Poor Oral Posture Can Influence:

- Unexplained weight gain
- Unbalanced facial features that fall outside of the “Golden Ratio”
- Narrow airway and insufficient tongue space; both often lead to snoring and sleep apnea
- Inflammatory diseases such as heart disease, diabetes, gum disease, high blood pressure, and osteoporosis
- Early facial wrinkles
- Gummy smiles/gum disease
- Attention deficit hyperactivity disorder – ADHD
- Depression/anxiety/bad mood
- Tilted head, shoulders, and lips with a S-shaped spine.
- Forward head posture (FHP) is typical. FHP leads to sore neck and shoulder muscles and fibromyalgia
- Daytime sleepiness
- TMJ/jaw joint problems; clenching
- Morning headaches
- Nightmares
- Erectile dysfunction
- Ear infections; inability to clear ears
- Crowded teeth
- Bed wetting through early adolescence

Taking Five

Lip seal: standard 4mm soda straw between your lips, exclusively breathing through it for five minutes. Better yet, try a cocktail straw. Difficult, yes? Yet this is the size airway many people operate with because they did not maximize their genes by learning “good oral posture”.

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Exploring Root Causes of Disease

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Low Carbon Dioxide (CO2) Levels – The Missing Link in Poor Health Outcomes

There is a growing awareness that a person’s acid-base balance (pH) rules health - that unbalanced conditions favor disease via unhealthy germ populations and excessive blood clotting. Those in the loop know inflammatory diseases such as heart disease and gum disease become more prevalent as acid conditions reign. Alkalizing diets are increasingly popular. Could proper breathing be a major key?

CO2 contributes to our bicarbonate buffering system, which guards against pH swings. If we are short on this buffer, our saliva or urine may register as too acidic or too alkaline. If your Control Pause (CP) is between 1-20 seconds, you will likely show some of the symptoms in the following list. If your CP is between 20 – 40 seconds, symptoms are not apparent, but can quickly show up or urination may register as too acidic or too alkaline. If your CP is over 40 seconds, buffering capacity is very low and a lack of buffering ability can result in body structure problems.

• Low CO2 levels cause muscle excitability and excess excitability of heart muscle fibers and irregular heart beats (labyrinthics) are possible. ADHD is misdiagnosed all too often. Those with ADHD not only exhibit muscle excitability, but may be intuitively trying to build blood CO2 levels by hard physical exertion. Working muscles produce CO2. Perhaps 25% of children diagnosed with ADHD actually have obstructive sleep apnea; their learning difficulties with behavior problems can be the consequence of chronic fragmented sleep as well as poor oxygenation. Children with sleep disturbances are often well below their peers in terms of height and weight.

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• Low CO2 levels in blood does not allow its release. The less CO2, the less vital organs including the brain are oxygenated, thus function poorly. Noticeable symptoms may be breathlessness, dizziness, irritability, obsessiveness, or panic. And again, brain fog.

• CO2 rich bodies of excess ammonia and urea. Ammonia is the body’s primary detoxification time. If a person often has to take a bathroom break at 4 AM, he likely has this ammonia-based problem. The body cannot take ammonia to urine without enough CO2, so it irritates the bladder and has the person to make a bathroom run.

• Low CO2 levels lead to poor sleep quality. When CO2 levels drop, rapid eye movement sleep decreases significantly.

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• Osteoporosis anyone?

• Low CO2 levels trigger nasopharyngeal changes to genioglossus muscles causing airway deficiency. Proper breathing is without realization the mouth is a downstream “leak.” In circular misfortune, stuffy noses encourage mouth breathing, thus more CO2 loss in a vicious cycle.

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• Low CO2 levels reduce total calcium, phosphorus, and ionized calcium blood levels.

• Muscles and organs only when enough carbon dioxide is used to relate the physical body to metabolism, and healing. Why let poor posture change that ratio for the worse?

It is All Connected

Health interrelationships are often more complex than we recognize. The common diagnosis of one on your chart and what matters it exits from infancy can affect the heart, blood vessels, lungs, bones, kidneys, arthritic joints – and sexual responses. The complex subject of orofacial development and its broad health ramifications highlight these interconnections.

To review, mouth-breathing generally creates skeletal deformations that lead to obstructive sleep apnea by means of narrowed airways, violent flapping of the tongue in all directions and enlarged tonsils. Small airway development is a result of an oblique jawline, facial narrowness and one misaligned with the spine and soft palate. This general muscle flaccidity also helps lead to airway collapse during sleep as the tongue and other structures fall into the airway. These structures fall into the airway.

If a person has apnea, it is difficult to control blood pressure or lose weight. Drops in growth and thyroid hormones also lead to weight problems. Many people lose 40-50 pounds within a few months of successful apnea treatment or breathing normalization.

Chairman of Eric Dalton, Certified Myoskeletal Therapist
Breastfeeding affords benefits beyond nourishment. Immune-globulins and human proteins in breast milk help infants resist allergies while formula is often a significant source of protein allergens and starchy carbohydrates. Nasal passages allow babies to breathe through their noses instead of learning to mouth breathe. Breastfed babies also learn to work their lips, cheeks and tongues distinctly different than bottle-fed babies. The coordination for the headwaters, becoming aware of the eyes and slumping shoulders can indicate allergies, poor sleep, and poor oral posture. Do not ignore allergies or large tonsils or adenoids. Blocked noses lead to open mouth postures.

2. Watch for flattened cheeks or unusual mouth shape. These conditions almost always worsen. Dark circles under the eyes and swollen sinuses can indicate allergies, poor sleep, and poor oral posture. Do not ignore allergies or large tonsils or adenoids. Blocked noses lead to open mouth postures.

3. Look for parted lips or chewing through her mouth. Her sister (right) predomi-

4. Do you have five fingers that anchor the tongue to the floor of the mouth? If not, this is often a sign of mouth breathing. Do you feel a tightening sensation when you lift your lips? This is often an indication of mouth breathing.

5. The tongue should be in the palate and swallow. Releases also relax shoulder girdle muscles. See https://vimeos.com/onederland/tonguereleasemotionexerc...e.

For anyone with wide gaps between the front baby teeth. Their lips at all. Once this happens, it is very difficult to correct by means other than surgery. Persuade your child to keep his mouth closed at rest. Do not even try to close these spaces. There is no facial muscle and only an undulation of the tongue as it rests on the palate. An active, incorrect swallow activates muscles surrounding the lip and chin muscles that often look like a lumped ball. Air swallowing is as active, in particularly older clients whose wrinkles have become permanent. The tongue pushes forward to touch the jaw joint with every swallow. The eustachian tube. Small changes and remodeling can help.

Do not take the possibility of apnea lightly. It is an adaptive mechanism that pulls the tongue forward and away from the throat. This cutaway image shows how little the tongue must fall back to obstruct the breathing by pushing on the epiglottis. Pulling the lower jaw forward is one way emergency responders open the airway to begin resuscitation.

Where Should Teeth Be?

Orthodontic practitioners use techniques that involve facial growth improvement beginning at an early age. Dr. William Hang describes one way to tell if a child is developing horizontally rather than vertically:

Cosmetic Line: Measure the correct position of the upper front teeth. Put a pencil mark on the most forward point of the nose and measure to the most upper part of the front teeth. Ideally, for Caucasians, it should be 28mm at the age of five and increase one mm each year until puberty, when it should be 38 to 42mm for a girl of sixteen and 40 to 44 for a boy of seventeen. If the measurement exceeds this by more than five millimeters, there will be some irregularity of the teeth and facial disfigurement; if more than eight millimeters the child is certain to grow up with an less attractive face than they should have.

Asian noses are about 4mm shorter than Caucasians, so correct for this in your calculations.

Screening Your Child or Yourself for Orofacial Myofunctional Therapy or Butykey Needs

Adults can also benefit from repatterning oral and facial muscles as needed; evaluating and referring children who are still developing has the potential for the greatest health gains. Children also develop new neuromuscular pathways faster than adults. It is estimated that for those adults with mild to moderate sleep apnea, myofunctional therapy may benefit 39% of them to the exclusion of other therapies. For others needing help, orofacial myofunctional therapy works in concert with all other treatment modalities including CPAP. Full Breath Solution (http://www.ihatecpap.com), lower jaw advancement positioners, and orthodontics. Facials remodel throughout life so it is important to learn to exclusively nasal breathing. We all should attain a Control Panic of at least forty seconds. To screen yourself for myofunctional therapy needs:

• Take a profile picture with tears exposed. Observe if you have a forward head posture where the ear canal does not line up directly with the shoulder, but is forward of it. Look also for the telltale backward tilt of the head. You can also back up against a wall and measure the number of inches between the wall and neck. It should be less than three inches.

• Notice if it is your upper chest (incorrect) or abdomen that rises during breathing, if you sit with your spine in a C-shape, whether you draw breaths from the mouth or nose, and whether you maintain a lip seal when not talking or smiling. Sometimes it takes months to figure out breathing patterns. Do not ignore sleep hours. If you snore, or wake up with a dry mouth, you are likely mouth breathing.

• Look for allergy indications: dark circles under the eyes, sunken cheeks, large tonsils, and small, unused nostrils. Modern dairy and wheat products are common allergens.

• Do you show signs of yawning? Sniffing or sneezing? These are signs of low CO2. Consider Butykey training.

• Check for tissue that anchors the tongue too tightly to the floor of the mouth. Open your mouth as wide as you can and measure the distance between the tips of the bottom and top teeth, next put the tip of your tongue about a half an inch behind the front teeth. This is called the Spot. If you can easily pass your index finger between the front teeth without any barrier, this indicates that your child may need treatment. Properly done, an expansion will open the tongue root position and swallow. Releases also relax shoulder girdle muscles. See https://vimeos.com/onederland/tonguereleasemotionexerc...e.

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Obstructive sleep apnea sufferers are six times more likely to chug or grim their teeth. Oddly enough, chugging at night is one way to bring and keep the lower jaw forward to open the airway. It is an adaptive mechanism that pulls the tongue forward and away from the throat. The cutaway image shows how little the tongue must fall back to obstruct the breathing by pushing on the epiglottis. Pulling the lower jaw forward is one way emergency responders open the airway to begin resuscitation.

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UPSIDE DOWN BREATHING

Most people breathe “upside down”. Their breathing is shallow. Chest and shoulders rise with each breath. However note that very little of the lungs reside in the upper chest. There is far less blood flow in the upper lungs compared to the lower lungs, so air exchange is low. Bacteria and allergens clear slowly as a result. This is not how we are designed to breathe. We did not breathe this way as babies.

Neither chest muscles nor abdominal muscles are involved in correct breathing. To breathe more deeply, flip your breathing back to what many call “diaphragmatic breathing”. The diaphragm muscle crosses the body just under the lungs. As the diaphragm contracts, it moves downward, pulling the bottom of the lungs with it. The larger volume of the lower lungs inflate as the lower ribs expand outward. This allows maximum air ventilation and lung clearance. It also allows profound relaxation.

This is one of the reasons breathing skills are so important during meditation. My experience shows people with upside down breathing have weak diaphragms through disuse.

For this reason I am making the BreathSlim device, a device I successfully use to increase my Control Pause and strengthen diaphragm muscles, available on my website. Normal breathing is 8-10 breaths per minute. Use PROMO CODE: CVS005 to receive a 10% discount.


Four millimeter airway prior to orthodontics to widen palate and release jaw forward. I chose to forgo surgery, curious as I am to know what “optimal” feels – and looks like. Nonetheless, myofunctional therapy significantly opened my airway in one dimension and toned my tongue, making it smaller. In the other dimension, the jaw release accomplished as a result of palatal expansion, arch broadening, and uprighting tilted teeth gave me about 2mm additional airway compared to the pre-orthodontic image above. It is enough so that I breathe easily at night and no longer clench.

Appreciation to Dr. William Hang for my orthodontics and his extensive work to change the field of facial development and orthodontics – it was worth it to fly to California! Also to Reza Movahed, DMD in St. Louis for offering to make his excellent oral surgery services available.