

# Have your say!

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1.

**Lou Chmura** [April 8, 2019 at 10:01 am](#)

As Dave Paquette stated, this terminology, which we coined, HAS been hijacked by all manner of orthodontists, some of whom are, in fact, using it for marketing. However, in response to your comments: “But, how do we deliver airway loving care? This is clearly stated in the AAO report. We should screen our patients as part of our examination, preferably using a screening tool. If we detect that a patient may have OSA, then we should make the appropriate referral. Finally, we should provide the proper treatment following the relevant medical/surgical procedure, but only if this is not successful.”, how many orthodontists really screen for airway problems-how many are screening every non-adult with a PSQ, or deliberately looking at for clinical signs and symptoms? A precious few. In 2012, almost none. In fact, there are still orthodontists who crow that anything regarding airway is not even in the bailiwick of the orthodontist. In fact, unless we become deliberate about this subject, we won't be “screening”. So the simple difference is to start there. On a related note, earlier this year, I believe you indicated that there was no difference orthodontists could make RE: OSA and I sent you over a dozen articles showing just that, asking that you summarize those-as still, this hasn't happened. Yet, this is your second blog about what we can't do-I would respectfully ask you to take a moment to look at the articles sent and realize that although some have grabbed the “airway friendly” label and used it for marketing alone, many others are taking a more scientific approach-positing anatomical changes that may reduce airway resistance and testing those hypotheses. There is no “cookbook” approach to this multifactorial problem and most successful treatments involve cooperation between professions, but we can certainly do better than argue against the possibilities while not even learning the basics of how to screen and recognize problems

[Reply](#)



Kevin O'Brien [April 8, 2019 at 10:39 am](#)

Thanks for the comments. I reviewed the papers that you sent to me and they were generally not of a high standard. As a result, I decided not to post about them because they did not add anything to the posts that I had previously published. Furthermore, the AAO meeting did a far better review of the literature than I could and they came to similar conclusions. As I said in my post there is a role for orthodontists in the screening and onward referral for OSA, but at present claims are being made for much more?

[Reply](#)

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Lou Chmura [April 8, 2019 at 9:45 pm](#)

I am disappointed to hear that stance, but understand. I realize what you in England have been up against and I suspect anyone mentioning airway and orthodontics in the same breath are immediately suspect. Still, perhaps hearing WHY you feel they are poor studies will guide us to a discussion of what types of studies would be appropriate. Would you consider reviewing the articles regarding the Steiner analysis? When cephalometrics was first used, there were a number of “analyses” used and it seems everyone had their own. I know that the Steiner analysis (or, pick another) is still being used by some. Since we’re holding any new ideas to a high standard of proof, it would be instructive to hear your learned comments on how valuable ceph analyses are. Respectfully, Lou Chmura  
PS: I would also be interested in whether there really is science showing that “adenoid faces” is a real thing-I know it’s been discussed and taught in many universities, but I don’t see the kinds of studies needed to prove it’s validity.

## [Reply](#)

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### **Peter Doyle** [April 10, 2019 at 10:54 pm](#)

Why is it half the profession practice happily successfully with a 5 % extraction rate , and the other half have a 30 -40 % extraction rate.

One technique is airway friendly, tmj friendly , facial growth encouraging . The other is slightly less so .

The more pro extraction team seem to be the ones posting the more sarcastic , and condescending posts, and don't seem open to discussion, and the possibility that they could improve what they are doing.

Comes across as the complete opposite of the scientific method they proprot to endorse.

### **Amanda Wilson** [April 8, 2019 at 11:24 am](#)

My philosophy is to screen airway on every patient and collaborate with medical professionals, when indicated, with mindful treatment philosophies that encourage nasal breathing and proper tongue placement and mechanics that move forward and not backwards. It's nothing new for me but the fact that many docs don't do it is concerning.

## [Reply](#)

**Daniel Babiec** [April 8, 2019 at 12:37 pm](#)

I believe that most dentists, including orthodontists, do not understand the relationship between airway dysfunction and malocclusion. This is sad, since the medical/dental literature for over one hundred years has discussed this. This relationship discussion was more prevalent in the medical literature than in the dental literature during the early years. But it appears that this concept has been lost over the succeeding years and now being “discovered”. According to the literature 25-40% of the patients in a typical dental practice have some sort of SDB pattern, and we are talking adults. Since “the child is father to the man” (from the Moody Blues) you could infer that that relationship fits with the child population as well. In the childhood orthodontic population, I believe that the incidence of SBD, myofunctional dysfunction, and poor airways are a greater proportion of that cohort. Unfortunately, most doctors do not screen properly, do not know how to screen, and have a failure to be able to look beyond the teeth. I have seen too many cases where the symptoms were treated (malocclusion) and the cause (compromised airway) was never recognized. I just find it hard that if you have an orthodontic practice and don’t recognize at least one OSA case a month on a child, then you are not providing a real service to your patients, nor being a “doctor” (which means teacher). That is one of the significant reasons that corporate entities are taking big bites into the orthodontic market.

[Reply](#)

**John Wise** [April 8, 2019 at 3:44 pm](#)

The American Academy of Pediatric Dentistry has a nice summary of their screening recommendations. Added to recent publications about the effectiveness of the Pediatric Sleep Questionnaire (PSQ), my protocol is this:

1. A few simple questions added to our health history form.
2. Conversational questions during the exam.
3. Clinical evaluation that includes dental and skeletal issues along with tonsil situation.

4. Administration of PSQ should 1, 2 ,or 3 point that way.
5. Appropriate referral.

**John Wise** [April 8, 2019 at 3:31 pm](#)

Fantastic Amanda! Your comment is right on. Thank you for the post. I agree that other practitioners need to take a hard look at this topic and the generally positive outcomes can only benefit our patients. As a multi-factorial disease, OSA is extremely difficult (and expensive due to the PSG requirement) to study. Orthodontists, for now, need to focus on common sense treatment mechanics and deliver treatment that is appropriate for the situation. No matter what caused the narrowness in the palate or the recessive chin or the crowding or the overjet or the crossbite... the orthodontist is uniquely qualified to have a positive effect on the growing face. We are the experts in this realm (orofacial growth) and need to take a leading role in the identification through screening and treatment where appropriate. This not radical or 'out there" its just common sense.

[Reply](#)

**Carlos Flores-Mir** [April 8, 2019 at 2:22 pm](#)

The discussion so far in regards to this posting has been centred around the concept of identifying patients at high risk of OSA so that they can be referred for fully appropriate diagnosis by a sleep physician. That is from my point of view one significant service we can do to our patients. We are not supposed to diagnose OSA but we can screen for it. Some may not want to consider screening for a medical problem and that is still OK as we do not have the legal expectation to do so.

Multidisciplinary management is the next point. We can be of help, when indicated, to manage specific OSA patient's phenotypes. This is where current research is underway: Who would benefit or not from specific orthodontic approaches? In adults some patients do respond well to almost any mandibular advancement/reposition device, some only to specific designs and some to none.

**Kevin L. Boyd** [April 8, 2019 at 3:13 pm](#)

Given that the UK's NHS states(<https://www.nhs.uk/conditions/orthodontics/>):

1. Orthodontic treatment (usually with braces) is most often used to improve the appearance and alignment of crooked, protruding or crowded teeth, and to correct problems with the bite of the teeth. and;

Orthodontic treatment is usually only started after most of a child's adult teeth have started to come through.

2. This is usually when they're about 12 years old, but depends on the number of adult teeth and the growth of their face and jaws.

Prof. O'Brien, might you be curious as to whether or not it might be helpful for UK-trained (and elsewhere) orthodontists to at least screen children for malocclusion traits earlier than age twelve, say at least by age seven years as is the recommendation of the Amer. Assoc. of Orthodontists ([https://www.aaoinfo.org/system/files/media/documents/Right\\_Time\\_for\\_Ortho-MLMS-hl.pdf](https://www.aaoinfo.org/system/files/media/documents/Right_Time_for_Ortho-MLMS-hl.pdf))?

There are several scientifically-validated physical/craniofacial/malocclusion phenotypes (e.g., high/narrow palatal vault, deciduous/mixed dentition crowding, retrognathia, cross bites, open bites, etc.), and myriad behavioral traits (e.g., snoring, bruxism, habitual mouth-breathing, bedwetting, night terrors, etc.), as well as pertinent birth history circumstances (e.g., pre-term birth, low APGAR scores, maternal-gestational apnea, low birth weight/small for gestational age, first/second hand smoke exposure, etc.) that are often co-morbid with sleep and breathing

problems in children as early as the deciduous and early mixed dentition (i.e., before age seven years), and thus possibly indicative of existing sleep-airway disease, or predictive of future increased risk. Pretty much all health professionals who see children, and especially orthodontists who might on occasion see kids before age twelve in the UK, are optimally positioned to identify vulnerable children with utilization scientifically-validated screening tools (e.g., PSQ); as you state, making appropriate referral, but at much earlier ages than is now considered conventional in the UK, would be a great first step.

**Peter Bevans** [April 8, 2019 at 3:57 pm](#)

Thank you for posting this Kevin. Not sure if you are familiar with AirwayDontics. This is another term coined by some quack and basically pushes non-extraction, non-surgical, early orthodontic treatment which they call a Phase 1 Smile. You can see the damage done by this nonsense. Time to end pseudo-scientific babble. What are common sense mechanics? Are extractions allowed in Airway Friendly orthodontics? Is retraction allowed? Retraction is required and will never end (if that is the goal). If not, this is quackery. Simple.

[Reply](#)

2.

**BARRY WINNICK** [April 8, 2019 at 7:41 pm](#)

The talk about screening is good but I am a little perplexed since pediatricians see patients from infancy and the American Academy of Pediatrics has Clinical Practice Guidelines on OSA. The cited article is from 2012 and, as far as I can tell, the guidelines are still operative since there is no update. I certainly agree that orthodontists, pediatric, and general dentists can routinely screen but do you really think that many undiagnosed and untreated cases will be found? If so,

does this mean that the physician community is performing at a substandard level? Please note: I would like to distinguish undiagnosed from untreated as there may be patients that have been diagnosed but do not pursue treatment.

<https://pediatrics.aappublications.org/content/130/3/576.full>

[Reply](#)

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**John Wise** [April 8, 2019 at 9:07 pm](#)

My experience with local pediatric medical providers is that they are overwhelmed by managed care, runny noses and flu symptoms. Very few of them take the time to become educated about dental signs of OSA. And screening, which takes some time in practice, is rarely done. I've tried for years to enlist these first line providers in basic dental/orthodontic screening techniques with little to no avail. My grand hope is that the sleep apnea connection may get their attention. Time will tell. Its important for orthodontists to engage in respectful dialogue so we can have a somewhat unified position on OSA. The AAO's recent white paper goes a long way towards that end. We still have a lot to learn on the subject. Lets all keep our eyes and ears open and stop with the snide, disrespectful comments. Please and thank you.

[Reply](#)

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**BARRY WINNICK** [April 9, 2019 at 12:36 am](#)



“Very few of them take the time to become educated about dental signs of OSA. And screening, which takes some time in practice, is rarely done.” Wow I guess this is the poster child for substandard considering the American Academy of Pediatrics guidelines that were accepted and published in 2012. Granted I live in an area with a Children’s and General University Hospital network with residency and fellowship teaching programs in all medical and dental specialties. The neurology department runs a pediatric and adult sleep apnea lab/clinic headed by a Harvard and Johns Hopkins graduate who has an excellent reputation (interestingly she has also written two novels) as a clinician and researcher. To the best of my knowledge, all the pediatric offices in my area screen for OSA. However, as Dr. Wise points out, his practice is tailored to his location, which unfortunately has inadequate medical care.

### [Reply](#)

3.

**Barry Raphael, DMD** [April 9, 2019 at 12:15 am](#)

As one who has had to turn from conventional orthodontics (27 years) to airway-friendly orthodontics (10 years), I think I can add to the conversation. I did not do it for the economic opportunity though there is plenty now. I did not do it because of the evidence, of which there is also plenty now. I did it for the realization that our children are suffering from a problem for which we can help: they are having trouble breathing.

There are hundreds of reasons a child stops breathing through their nose and begins to compensate by breathing through their mouth, doesn’t use the diaphragm, and increases their breathing rate by two-fold (Kevin, I almost feel silly having to go through this, but it is not registering with many). Mouth breathing, open mouth posture, and overbreathing have significant health effects which have been documented for over a century.

The fact that open mouth posture may eventually lead to sleep apnea via swollen tonsils, inflamed tissue, or underdeveloped jaws is almost beside the point. OSA is but a SYMPTOM of poor breathing. Like malocclusion, it is the result of chronic habits. This is why we cannot

demonstrate a causal link between OSA and malocclusion. They may be associated (evidence abounds) but they do not cause each other; they come from a common etiology that is, poor breathing, soft tissue dysfunction and the consequent collapse of the facial anatomy.

To practice airway-friendly dentistry (not just orthodontics) you have to help a child have an airway that they can easily breathe through (from the tip of the nose to the bottom of the throat), and teach them how to breathe through it easily (helping them “unlearn” all their compensatory habits).

How much of that can an orthodontist do? Certainly not everything. Yes, we can help the airway enlarge by getting the jaws (both jaws) to grow forward in the face and away from the back of the throat. Yes, we can help increase tongue space in the front of the mouth so the tongue doesn't have to be relegated to the throat. Yes, we can teach kids healthy breathing habits like breathing through the nose (so the air is clean and doesn't irritate the tonsils), keeping the lips together and the tongue on the palate at rest (so the maxilla can develop fully), and how to swallow without using the facial muscles (so the teeth don't get pushed around) as a compensatory aid. These are all things that are well within the bounds of dentistry no matter where you practice. And, yes, we can be aware of any techniques we use that may work against the aforementioned goals.

And yes, we can be aware of breathing issues, whether they happen during the day or during the night, so that no child with a breathing problem goes unidentified. And we must work cooperatively with other healthcare practitioners that can do things we can't. We need help from people: who can make sure the sutures of the skull are not being hampered from proper growth, who can teach proper function to the tongue and oral musculature, who can evaluate the airway for physical obstruction and remove or repair them, and who do many other things that lend to better facial growth and development, better nutrition, better posture and better sleep.

If you are neither aware of the real problem nor know how to look for it, you'll never be able to practice airway-friendly dentistry. If you think palate expansion alone will solve the problem, there

is much more for you to learn. If you think OSA is “the problem” – like the AAO does – you are being distracted by a red herring.

And...btw, this problem is so huge, we will need every one of you to begin paying attention. Learn about Flow Limitation and its devastating effects on neurocognitive development (from studies done in the UK), on behavior, or organ function, and on overall health. Once you begin to look, you will see it in virtually every child with crooked teeth (remember, it's just an association...) There is so much to learn. I am just a beginner.

Barry

[Reply](#)

4.

**Prof Dave Singh** [April 9, 2019 at 3:23 am](#)

Interesting discussion! I also believe that there is no such thing as ‘airway-friendly orthodontics’. The upper and lower airways are typically addressed by two different medical specialists (ENTs and Pulmonologists, respectively). Orthodontics is mostly about dento-alveolar structures, unless there are complex/severe cases where the orthognathic surgeon relies on the orthodontist for ‘decompensation’. Thus, there is a need for a new dental specialty to address the upper airway, especially for those with a craniofacial phenotype that is associated with an increased risk of sleep disordered breathing (Sutherland et al. Sleep Breath, 2019). I will also be presenting some findings at Chest 2019 and the American Thoracic Society 2019 conferences that embrace the recent findings of the AAO position paper; however, the theme of my thought process is that the ‘gradual adaptations that occur with long-term oral appliance use’ may be harnessed to remodel the upper airway for a patient’s benefit (although an orthodontic finish may still be required similar to where the orthognathic surgeon relies on the orthodontist for ‘decompensation’).

Side comment: Newton's Third Law law does not apply to a biologic system that has its behavior encoded by genes. Here, we may rely on an epigenetic phenomenon to address craniofacial issues instead (Parsons et al. Mind the gap: genetic manipulation of basicranial growth within synchondroses modulates calvarial and facial shape in mice through epigenetic interactions. PLoS One. 2015)

## [Reply](#)

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**John Wise** [April 9, 2019 at 6:20 pm](#)

Dr. Singh- I appreciate your discussion and your ideas about a new specialty. I disagree somewhat with you on the effect that orthodontics, actually dentofacial orthopedics, can have on air way. Several 3D studies have shown the increase in size of the nasal passages post RPE and even root position of upper molars creates a cause and effect in the sinuses. Naturally, just because we enlarged the upper airway, it does not automatically translate to a reduction in OSA. But its a start. Common sense alone tells us that a larger upper airway will decrease resistance as air comes and goes. Studies on these matters are exceptionally difficult to perform due to the multifactorial nature of OSA.

Orthodontists are the clear experts in craniofacial growth and development, and we have 100+ years filling that role. I feel like we have a lot to say on airway and hope that additional studies can shed even more light. I am a big believer in creating a community network which will include several types of practitioners, not just ENT's and pulmonologists. We can be on that team with allergists, Pedi MD's and DDS, Neurologists, on and on.

## [Reply](#)

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**Prof Dave Singh** [April 10, 2019 at 2:12 pm](#)

Hi Dr Wise – I agree with you. Actually, we have also published a few studies with our medical colleagues supporting the points that you make, but these studies are not

targeting the 'dentofacial' tissues. The aim is to target the site and severity of upper airway obstruction. But some argue that it's not possible to 'enlarge' the airway. So, what is the mechanism(s) by which this enlargement is produced and maintained? Our studies point towards airway remodeling, in line with what you're saying. However, since dental and facial tissues are not the primary therapeutic concern, I suggest that specialty-trained dental/orthodontic professionals provide these services, since the AAO position paper makes it clear that the upper airway is not the chief concern of the orthodontic specialist.

[Reply](#)

[Reply](#)

**James Crouse** [April 11, 2019 at 12:20 pm](#)

This has been highly entertaining. I just wanted to weigh in on the discussion. I see a lot of similarities to the ortho/TMD controversies that we experienced in the past. I had an interesting situation. I had a patient, a female teen, no remaining growth, full class II with an acceptable profile. I started a treatment plan that included removal of the maxillary 1st premolars. Shortly after starting tx, they moved and the new orthodontist told them they never should of had the teeth removed because it would give her OSA. They wanted to open the space and place implants. As far as correcting the class II, they didn't have a viable plan that would not have retracted the maxillary anterior teeth and resulted in exactly the same result I would have produced. A little common sense is required ( in my humble opinion).

[Reply](#)

5.

**Prof Dave Singh** [April 12, 2019 at 1:33 am](#)

James:

An excellent response that illustrates the current dilemma that orthodontists are presented with in the face of 'airway orthodontics' (no pun intended 😊 I believe that if a patient presents to an

orthodontic office and an orthodontic diagnosis is reached, then, all things being equal, an orthodontic treatment plan can be offered. If, prior to the orthodontic diagnosis, however, screening reveals an increased risk of SDB, then appropriate referral is called for. But here's the issue; currently it is thought by Sleep specialists that, in the absence of clinical symptoms, such as hypersomnolence, a patient with an AHI < 10 is not in need of treatment. In view of this clinical scenario, I believe that a specialist in 'craniofacial sleep medicine' could address this sub-population as a preventive measure since some studies show that, left untreated, SDB worsens, sometimes to the extent that systemic consequences, such as atrial fibrillation, can't be reversed even with adequate CPAP usage in middle-aged patients with excessive daytime sleepiness. As you know, atrial fibrillation is associated with an increased risk of stroke – so, at least prognostically-speaking, a specialist in 'craniofacial sleep medicine' might not be a bad investment in terms of systemic health and longevity.