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Unblocking the Nose

by Trisha E. O’Hehir, RDH, MS,
Hygienetown Editorial Director

The first step in switching from mouth breathing to nose breathing is making sure the nose is clear. Many mouth breathers experience nasal congestion and even blame their mouth breathing on this congestion. Strange as it might seem, mouth breathing causes nasal congestion. It’s a vicious cycle – the more one mouth breathes, the more congested the person is and therefore the more he or she breathes through the mouth. Mouth breathers are also overbreathing, leading to lower carbon dioxide levels. The brain responds to low carbon dioxide levels by producing more mucous in the nasal passages, making nose breathing difficult. Therefore the mouth breathing continues.

Since reduced carbon dioxide levels cause the nose to block, unblocking the nose can be done by increasing the carbon dioxide levels in the body to reverse the process. Slowing down the breathing will elevate the carbon dioxide levels. A simple six-step exercise outlined in the book Close Your Mouth by Buteyko Breathing instructor Patrick McKeown will unblock the nose.

The steps are as follows:
1. Sit up straight.
2. Take a small breath in through your nose, if possible, and a small breath out. If your nose is quite blocked, take a tiny breath in through the corner of your mouth.
3. Pinch your nose with your fingers and hold your breath. Keep your mouth closed.
4. Gently nod your head or sway your body until you feel that you cannot hold your breath any longer. (Hold your nose until you feel a strong desire to breathe.)
5. When you need to breathe in, let go of your nose and breathe gently through it, in and out, with your mouth closed.
6. Calm your breathing as soon as possible.

This exercise can be repeated several times until the nose is unblocked. Wait 30 seconds before repeating the exercise. With the nose unblocked, nasal breathing is possible and the switch can be made from mouth breathing to nose breathing.
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Mouth Breathing Reduces Exercise Capacity

Mouth breathing leads to functional, structural, postural, biomechanical, occlusal and behavioral impairments. More males suffer with mouth breathing than females. Those who mouth breathe adapt a forward head posture by bending their head forward and extending their neck to reduce airway resistance.

Researchers at the State University at Campinas School of Medical Sciences in Campinas, Brazil compared exercise capacity and respiratory muscle strength between mouth and nose breathing in children eight to 12 years of age. Of the 92 study subjects, 30 were mouth breathers and 62 were nose breathers. For the exercise section, children completed a six-minute walk test according to the American Thoracic Society recommendations.

Mouth breathing children were recruited from the Mouth Breather Clinic of the Otolaryngology Department of the State University. Nose breathers were recruited from a nearby elementary school. Clinical and endoscopy examinations were completed on all students to evaluate the nasopharynx and adenoids.

Inhalation and exhalation muscle function was measured prior to and during exercise. Measurements were made with a mechanical pressure gauge that was connected to a plastic mouthpiece. A 15-minute rest period was allowed between measurements taken at rest and during the walk.

Forward head posture was not a significant predictive factor for muscle function during exercise. Mouth breathing showed significantly less respiratory muscle strength compared to nose breathing.

Clinical Implications: Recognize and reverse mouth breathing in your patients as early as possible to enhance breathing biomechanics and enhance exercise inhalation and exhalation muscle strength.


Mouth Breathing Changes Facial Morphology

In the oral cavity, a balance of functions should exist between breathing, suckling, swallowing, chewing and speech. Debate still exists about the impact of mouth breathing on development of orofacial structures. Despite the fact that bone is the second hardest substance in the body, it is susceptible to small, continuous forces from muscles. Mouth breathing results in changed tongue positioning from the palate to the floor of the mouth, resulting in inferior positioning of the mandible and changes in neck and facial musculature changing dental and facial characteristics.

Researchers at the Medical University in Lucknow, India evaluated cephalometric tracings to compare landmarks in a group of 100 children ages six to 12 years. Mouth breathers accounted for 54 children in the group and nose breathers accounted for 46 subjects. Significant differences were evident between nose breathers and mouth breathers for facial development. Mouth breathers showed significant increase in facial height, mandibular plane angle and angle of the mandible. The palatal plane to mandibular plane angle was greater in mouth breathers. There was mandibular retrusion in relation to the spine in mouth breathers compared to nose breathers.

At as early as three years of age, mouth breathing and low tongue posture produce an elongation of the lower anterior facial height, which is more commonly detected after age five. Posterior rotation of the mandible in mouth breathers leads to the increased facial height. Palatal changes are also evident as the maxillary arch narrows and the height of the palate increases.

Clinical Implications: Early intervention with mouth breathers will prevent morphological changes associated with Long Face Syndrome.


continued on page 5
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Mouth Breathing Results

Mouth breathing results in many facial changes in a growing child, including changes in the dental arches, tooth position, facial bone structure, palatal development, chin positioning and lips. Those who mouth breathe complain of dry mouth, halitosis, restless sleep, snoring, drooping shoulders, daytime sleepiness, flaccid lips and protrusion of the anterior teeth.

Researchers at the Metropolitan University de Santos in Sao Paulo, Brazil evaluated bad breath in a group of 55 children between the ages of three and 14 years. Of this group, 22 were mouth breathers and 33 were nose breathers. Nose or mouth breathing was determined by clinical evaluation of the following signs: long face, drooping eyes, thin upper lip, dry lips, hypotonic lips, inverted lower lip, narrow nostrils, high-arched palate, inadequate lip seal and anterior open bite. A mirror test was used placing a flat double-sided mirror under the nostrils to see vapor formation from the nose or the mouth. A water test involved having the children hold water in the mouth without swallowing for three minutes. If unable to keep the mouth closed for three minutes, they were considered a mouth breather.

Halitosis was measured using a portable sulfite monitor. Of the 20 children with no odor, 18 were nose breathers and 2 were mouth breathers. Of the 35 with bad breath, 15 were nose breathers and 20 were mouth breathers. Mouth breathing significantly influenced bad breath.

Humming Increases Nasal Nitric Oxide Production

Nitric oxide is produced and released in the nasal airways during nose breathing. It is released from nasal tissue and inhaled into the lungs. Nitric oxide is not produced or released with mouth breathing. In healthy sinuses nitric oxide levels are high. Congested airways lead to lower levels of nitric oxide and mouth breathing. Nitric oxide is important for many things including smooth muscle relaxation and vasodilation.

Researchers at the Karolinska Institute in Stockholm, Sweden hypothesized that humming would produce oscillating airflow-enhancing nasal airflow, resulting in higher release of nitric oxide in the nasal passages. Ten healthy, non-smoking subjects participated in the study measuring nitric oxide in exhaled air from both the nose and the mouth. Measurements were taken at rest with gentle breathing and again while humming.

Humming resulted in a 15-fold increase in nasal nitric oxide levels compared to relaxed breathing. During relaxed nasal breathing, nitric oxide levels were 189 nl/minute and increased to 2,818 nl/minute with humming. Nitric oxide levels with relaxed mouth breathing averaged 103 nl/minute and were 104 nl/minute for mouth breathing and humming. Air needs to pass through the nasal passages to trigger the release of nitric oxide. With mouth breathing and humming there was no increase in nitric oxide levels. Nose breathing produces more nitric oxide than mouth breathing. When humming is added to nose breathing, nitric oxide production increases significantly.

Clinical Implications: Encourage mouth breathing patients to hum with the tongue resting on the palate to ensure nose breathing. This will increase nitric oxide production while practicing lips together posture, tongue on the palate nasal breathing.

Children who nose breathe show normal craniofacial growth. Those who mouth breathe show abnormal craniofacial development, malocclusion, narrowing and deepening of the palate, tendency toward open bite and/or cross bite, protrusion of maxillary incisors and changes in head position relative to the neck.

Researchers at the University of Sao Paulo in Brazil evaluated 27 children ages seven to 14 years to determine any relationship between cephalometry used by orthodontists and polysomnography, the gold standard when testing for obstructive sleep apnea. Fifteen of the children were mouth breathers and 12 were nose breathers. Mouth breathing was identified by parents reporting child sleeping with an open mouth, dribbling on the pillow three times or more per week or adenoid obstruction identified with nasofibroscopy.

Overnight polysomnograms were performed on all the children. All of the mouth breathers snored and only one child in the nose breathing group snored. The mouth breathers all had lower oxygen saturation levels than nose breathers. The mouth-breathing children were more likely to have a retruded mandible than nose breathers. Other measurements showed mouth breathers to have more inclined occlusal planes, steeper mandibular planes and smaller airways compared to nose breathers. Snoring was the most important variable associated with abnormal craniofacial morphology. Early detection and treatment of mouth breathing can change the child’s facial development, oxygen saturation to brain and muscles, and general quality of life.

Infant Sleep Disordered Breathing Leads to Childhood Behavior Problems

Sleep disordered breathing (SDB) ranges from snoring to obstructive sleep apnea (OSA), with mouth breathing as a common clinical sign. SDB occurs in children as young as six months. SDB causes abnormal gas exchange, interferes with sleep and restorative processes, and disrupts cellular and chemical balance. Dysfunction of the prefrontal cortex impairs attention, executive function, behavioral inhibition, self-regulation of affect and arousal, and other socio-emotional behaviors. Neurological effects may be irreversible as sleep is so critical to brain development in infants and young children. Attention-deficit/hyperactivity disorder is also linked to SDB.

Three hallmark signs of SDB are snoring, mouth breathing and witnessed apnea. Researchers from Albert Einstein College of Medicine in Bronx, New York, and University of Michigan in Ann Arbor, Michigan, analyzed the data from more than 11,000 children in the Avon Longitudinal Study of Parent and Children. A total of 14,541 pregnant mothers in the county of Avon in the southwest of England entered this study between April and November of 1991. Data up to age seven was analyzed. Mothers reported on SDB symptoms and completed strengths and difficulties questionnaires at ages four and seven. The incidence of SDB in this group was identified in clusters accounting for 55 percent of the sample. The clusters reflected the onset and end or not of the SDB symptoms. Early SDB symptoms had a strong, persistent effect on subsequent behavior problems in the children.

Clinical Implications: Begin checking infants as young as six months for sleep disordered breathing, in particular mouth breathing and snoring.
Abstract

Nose breathing and mouth breathing both bring oxygen into the lungs but with different consequences and different oxygen absorption levels. Dental and dental hygiene education in the past touched only briefly on problems associated with mouth breathing, primarily dry, inflamed oral tissues around maxillary anterior teeth. There is now evidence that mouth breathing has far more serious and long-lasting implications than drying of oral tissues. A simple five-step screening process identifies factors affecting nasal breathing.

Objectives

At the end of this program, participants will be able to:
1. Understand physiologic differences between nasal breathing and mouth breathing.
2. Describe symptoms of mouth breathing.
3. Understand the impact of mouth breathing on malocclusion.
4. List the five steps in the mouth-breathing screening exam.
5. Recognize the role of RDHs in preventing mouth breathing.
Humans are designed to be nose breathers, but for a variety of reasons the switch can be made to mouth breathing, with serious consequences. The nose and mouth have different functions. Each nostril functions independently and synergistically to filter, warm, moisturize, dehumidify and smell the air. It’s like having two noses in one. Breathing through the mouth provides none of these benefits of nose breathing and a lengthy list of adverse effects. The problems associated with mouth breathing begin in the mouth by changing the tongue rest position, thus changing the normal growth pattern of the palate, both maxillary and mandibular jaws and the airway. Inadequate skeletal growth leads to crowded teeth, a high-vaulted palate and abnormal occlusion, called the Long Face Syndrome. In mouth breathers, the tongue rests down and forward, not in the palate as it should, leading to tongue thrust, abnormal swallowing habits and speech problems. A significant problem with mouth breathing is reduced oxygen absorption leading to a cascade of sleep, stamina, energy level and ADHD problems. Dryness of the oral and pharyngeal tissues from mouth breathing leads to enlarged tonsils, tonsil stones, dry cough, swollen tongue, halitosis, gingivitis and caries. Mouth breathers chew with their mouths open, swallowing air, leading to gas, bloating, flatulence and burping. Lips become flaccid with mouth breathing because they don’t close regularly to provide the necessary lip seal.

Dental and dental hygiene education in the past touched only briefly on problems associated with mouth breathing, primarily dry, inflamed oral tissues around maxillary anterior teeth. Adding to that knowledge, there is now evidence that mouth breathing has far more serious and long-lasting implications than drying of oral tissues.

Many misconceptions about mouth breathing persist today. In some circles, mouth breathing and nose breathing are thought to be equivalent and in athletics, mouth breathing is still assumed to be better than nose breathing. Assuming that mouth breathing and nose breathing are no different ignores basic physiologic facts about the exchange of oxygen and carbon dioxide. Today professional athletic teams are being coached to train with their mouths closed, focusing on nose breathing to increase endurance, stamina and muscle memory. Another misconception is assuming more oxygen is absorbed with a big inhale through the mouth doesn’t take into consideration the fact that oxygen is absorbed on the exhale, not the inhale. Sleep medicine writings assume mouth breathing and sleep apnea are not connected, which is not supported by scientific evidence. Mouth breathing and obstructive sleep apnea (OSA) are connected.

Dental professionals are in a perfect position to evaluate mouth and nose breathing, check for tongue rest position and intervene early with young children to assure normal skeletal development and help mouth breathers of all ages become nose breathers. Understanding the physiology of breathing and implementing a simple five-step screening system raises awareness of the significance of this problem and provides an opportunity to implement far-reaching changes in patients’ lives.


Oxygen is absorbed on the exhale, not on the inhale. The back-pressure created in the lungs with the slower exhale of nose breathing compared to mouth breathing allows more time for the lungs to transfer oxygen to the blood. The exchange of oxygen in the blood requires the presence of carbon dioxide. Approximately 98 percent of oxygen is carried in hemoglobin. Carbon dioxide levels need to be at five percent in the alveoli and arterial blood before the oxygen molecules are released from hemoglobin to reach brain and muscle cells. Lower than five percent carbon dioxide levels lead to an elevation in blood pH and the oxygen “sticks” to the hemoglobin, this is the Bohr Effect, first described in 1904 by physiologist Christian Bohr.

Nitric oxide is released in the nasal cavity and inhaled with nose breathing. Nitric oxide increases the efficiency of oxygen exchange. With nitric oxide, blood oxygen increases by 18 percent. Mouth breathing bypasses the nitric oxide.

Seventy-five percent of the inhaled oxygen is exhaled. During strenuous exercise, 25 percent of the oxygen inhaled is exhaled. Mouth breathing to take in more air does not increase the level of oxygen in the blood, which is already 97-98 percent saturated. Mouth breathing with big breaths actually lowers the carbon dioxide level in the lungs and the blood leading to lower carbon dioxide exchange. Nasal breathing will increase oxy-

**Signs of Mouth Breathing**

Determined if someone is a mouth breather is not always easy. Some people admit they always breathe through their mouth. Others believe they are nose breathers, but if you watch them, their mouth is open most of the time. Sitting still, they might have their mouth closed, but if they get up and walk across the room, their mouth is open. Telltale signs of mouth breathing are an addiction to chap stick or lip balm. An open mouth leads to drooling, both awake and asleep, causing chapped lips and a tendency for mouth breathers to lick their lips frequently. Closed mouth lip seal is efficient at keeping saliva in and air out but chronic mouth breathers find it very difficult to hold their lips together. Mouth breathing at night causes drooling and dries the oral tissues so the mouth, teeth, tissue and throat are all dry upon waking. If someone wakes with a dry mouth, he or she is likely a mouth breather at night, which means he or she is also mouth breathing during the day.

The tongue normally rests against the palate, without touching the teeth. With mouth breathing, the tongue drops down and forward. It might in fact be that the down and forward tongue position triggers mouth breathing. Mouth breathing is impossible with the tongue resting against the palate. A simple tool to self-test for mouth breathing is the square plastic bag closers used on plastic bread bags. Place the square plastic chip between the lips and have the person go about their daily activities. If the chip falls out, they are mouth breathing.

**Mouth Breathing – What Goes Wrong**

Several things go wrong with mouth breathing, beginning with oxygen/carbon dioxide exchange, the change in tongue rest position and swallowing air. The low carbon dioxide levels associated with mouth breathing trigger the activation of breathing faster than usual, leading to over breathing or hyperventilation. With less oxygen being delivered to the brain, muscles and all the cells of the body, the body functions less than optimally. Sleep is often disturbed and of poor quality, leaving the mouth breather tired in the morning and feeling fatigued mid-afternoon. Attention-deficit hyperactivity disorder (ADHD) is also linked to mouth breathing. This dryness and lack of air filtration in mouth breathing causes enlarged and inflamed tonsils and adenoids and increased risk of upper respiratory infections. Lower levels of carbon dioxide cause smooth muscle spasms associated with gastric reflux, asthma and bedwetting. Smooth muscle is found throughout the body in the respiratory system, digestive system, all hollow organs and all tubes and ducts.

The tongue resting in the palate provides passive pressure, stimulating stem cells located in the palatal suture and within the periodontal ligaments.
around all the teeth to direct normal palatal growth. When the tongue rests in the palate, the teeth erupt around the tongue, producing a healthy arch form. The lateral pressures from the tongue counters inward forces from the buccinator muscles. When the tongue is down and forward, the buccinator muscles continue to push unopposed, causing the upper arch to collapse. Children who mouth breathe have an underdeveloped, narrow maxilla with a high vault. They develop a retrognathic mandible and generally have a long face. Harvold et al. surgically blocked noses in monkeys and they all developed maloccclusions from mouth breathing. Mouth-breathing-related problems of skeletal development will set children up for obstructive sleep apnea later in life.

It might seem logical that mouth breathing occurs because the nose is congested, but that is not always the case. The brain of a mouth breather thinks carbon dioxide is being lost too quickly from the nose and stimulates the goblet cells to produce mucous in the nose to slow the breathing. This creates a viscous circle of mouth breathing triggering mucous formation, nasal passage blocking, leading to more mouth breathing. So in fact, mouth breathing can cause nasal congestion leading to more mouth breathing.

In some cases, mouth breathing is caused by ankyloglossia, or a tight lingual frenum keeping the tongue from effectively moving in the mouth to assist in chewing and swallowing and comfortably resting on the palate. Unless a frenectomy is done, mouth breathing will continue. Ankyloglossia can be diagnosed and treated in the first few days after birth. However, many cases are ignored until significant problems have developed. Early intervention prevents subsequent problems.

### Changing from Mouth to Nose Breathing

Bringing a person’s mouth breathing to his or her attention starts the process of breaking the habit. Some people will change back to nose breathing when made aware of it. To remind people to keep their lips together, paper tape is often used by breathing coaches. It may sound strange, but easy-to-remove paper tape helps people experience the many benefits of nose breathing for themselves. Be sure they can breathe through their nose before taping. Best to test this during the day before trying it overnight while sleeping. Try the tape yourself before suggesting it to a patient. A variety of oral appliances are available that position the tongue to the roof of the mouth, close the lips and encourage nose breathing. In many cases, the tongue might need to be exercised since it’s been laying on the floor of the mouth and doesn’t have the stamina to rest on the palate all day or all night. Orofacial myofunctional exercises are important at this stage. These exercises are essential for those receiving a frenectomy to treat ankyloglossia. In adult cases of life-long mouth breathing, orthodontics to expand the palate may be necessary to make room for the tongue.

Screening for mouth breathing is easy and takes very little time with the five-step process. The first three steps are easily answered with observation and questions to the patient. First, are the lips together, second, can the person breathe through their nose and third, where is their tongue at rest? The next two steps require measurement, first the mouth opening and second the mouth open with the tongue touching the roof of the mouth. Most people can open the width of three fingers stacked vertically. With the tongue on the roof of the mouth, they should be able to open at least two fingers. Less than that and there is a problem with the lingual frenum, either ankyloglossia or a tight lingual frenum. The last screening step is to measure the maxillary cross arch distance between the bicuspids. The distance should be equal to a standard cotton roll.

The earlier mouth breathing is recognized and converted to nose breathing, the fewer and less serious the problems will be. Dental hygienists are the ideal dental professionals to screen for mouth breathing. Despite the fact that people are more often asked to open their mouths in a dental office, checking for a closed mouth is essential to oral and general health.

### Author Bios

**Trisha O’Hehir** is currently the Editorial Director for Hygienetown.com and Perio Reports. She received her education at the University of Minnesota and her four-decade career has included roles as clinician in the USA and Zurich, Switzerland, faculty at the Universities of Minnesota, Washington, Arizona and Louisville, international speaker, writer, instrument designer, inventor and entrepreneur.

**Amy Francis** is both a dental hygienist and an orofacial myologist, teaching people how to breathe, chew and swallow. Amy was working in clinical practice when she went on for more training by completing her orofacial myology certification program in 2010 in Los Angeles. Amy spoke at the 2011 Townie Meeting on the importance of nose breathing. Amy lives and works in Lake Havasu, Arizona.
Prophies, Parafunction and Your Patients

by Anita McMillen, RDH

Over the past 25 years, I’ve seen patients in my chair for prophes or SRP that exhibit the artifacts of parafunction. Whether I’m noting the chart about a fractured crown on #3 or wear facets on anteriors, the one constant is that patients are almost never aware of their clenching or grinding. After I notify patients that they brux, they typically tell me that they don’t. My observation is usually met with a chorus of ‘no one has ever said they heard me grind my teeth.’ Then I use my mirror or the monitor to show them what I’m seeing. Sometimes I’ll ask them to clench their teeth together as hard as they can and hold that position. Then I’ll ask what they heard. After that, most patients accept they are indeed parafunctioners. After they’ve arrived at that determination, I’ll begin asking about symptoms such as TMD, headaches, migraines and face, neck or head pains that are often associated with parafunction. Most patients don’t see any correlation between their bruxism and painful symptoms, so I help connect the dots for them.

I ask patients if they have had a night guard in the past. I find that they need to be educated on why they are wearing an occlusal guard while they sleep. Oftentimes, patients balk when I mention occlusal guards, complaining that they’re too bulky and cumbersome. This allows me to go into depth about the NTI-tss Plus. I discuss its small size, unique design and benefits experienced from wearing it. I tell them that it usually only covers four teeth so it’s easy to wear, and also that it’s different from traditional night guards because it guarantees canine and posterior separation not only during excursions but also during a centric clench. I usually ask them to clench their teeth together with their hands on their temples. Doing this, they can feel the muscles tense and bulge beneath their fingers. Then I have them do it again with a tongue depressor between their central incisors. They feel the decreased intensity of the clenching and you can almost see the light bulb go off for them.

Sometimes patients take issue with the cost of an appliance. Unfortunately, too often, splints are not covered by insurance. I assure patients that the NTI’s unique design is durable, easy to wear and might not only alleviate their symptoms but also reduce the need for expensive dental work in the future. It will protect their teeth and restorations, decreasing the need for pricey crowns and future root canals.

I am able to allay many of their concerns by sharing my own experience with the NTI. Much of my life I’ve suffered from facial, neck and head pain. Throughout the years I tried many different treatments, including mouth guards, with little to no relief of my symptoms. My pain was caused from nocturnal clenching and the full coverage guards did not relieve the pain. Like many other clenchers, these full coverage appliances made my symptoms worsen. About five years ago, I heard about the NTI-tss Plus and Dr. Greg Hillery prescribed one for me. Almost overnight, my pain was eliminated.

It wasn’t too long before I realized that most of my clenching occurred during the day while working chairside with patients. Knowing that, I started wearing both a nighttime and daytime appliance. This is very helpful when patients comment that they “cannot wear an appliance during the day because their job dictates that they speak on the phone with customers.” At this point I ask them if they are having a hard time understanding my speech and I lower my mask to show them I am wearing my daytime NTI.

For me the NTI has been a godsend. I’m still practicing and I wear it daily. Using my own experience and showing my patients the actual device in my mouth helps convince them that it truly does bring relief and it won’t affect their daily lives in a negative way.

Author’s Bio

Anita McMillen graduated from the New Hampshire Technical Institute, Dental Hygiene Program and now works as a periodontal therapist in Concord, New Hampshire. Her greatest passions are strong family bonds and providing the best possible care for her patients. Hygienetown online participation has provided Anita with a wealth of knowledge and expertise. Anita can be reached at needardh@hotmail.com.
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Sleep Apnea and Sleep Disordered Breathing Cause More than Hypoxemia

Hygienists discuss the importance of sleep apnea care to a patients' overall health, and their role in it.

JUN 19 2012
Trisha O’Hehir
Member Since: 05/22/03
Post: 5 of 18

Regarding obstructive sleep apnea (OSA), hygienists can begin by checking patients for mouth breathing and tongue resting down and forward – not up on the palate where it should be. For those taking sleep courses, add the Buteyko Breathing course – it's fascinating and you can help so many people before they develop sleep problems, from kids to old folks. Anyone else taken the Buteyko Breathing course taught by Patrick McKeown from Ireland?

JUN 26 2012
Healthy Smiles
Member Since: 10/25/11
Post: 6 of 18

We have our own home sleep screenings but we also work very closely with some sleep centers and physicians. We had to make a separate business, I think due to insurance payments. Seeing the patients after they get their appliance and hearing how great they feel is amazing! I hope this spreads through the dental community because we really can catch it early. There have been children as well that suffer from what they think is ADHD but we refer to ENT to get tonsils and adenoids taken out, and like magic, they are off the meds!

JUL 7 2012
batkinson
Member Since: 06/01/12
Post: 8 of 18

We’re convinced that dental hygienists are the front line in the battle against OSA. No other health-care professional has expertise in oral/soft palate anatomy and the access to patients like the dental hygienist. Primary care has no financial incentive to screen for OSA and most aren't familiar with the subjective/objective screenings, or the anatomical signs. (I've asked MDs about the Mallampati score and most have never heard of it.)

When we set up a practice to begin providing dental sleep services, we train the hygienists on the subjective screenings (Epworth, STOP-BANG, HRQOL) and anatomical signs of OSA. It's all captured on a Web-based tablet computer. The results are displayed graphically for the patient. This two-minute screening might be the most powerful tool for helping combat the OSA epidemic. I hope more hygienists take an interest in dental sleep. We need more health-care providers like you to help us combat OSA.
Interesting and timely topic. Earlier this year I took the Orofacial Myofunctional Therapy (OMT) Course offered by Joy Moeller in San Francisco. There was discussion about OSA and how OMT can be helpful in treating this disorder.

Roger Price, a respiratory physiologist, wrote a paper on “Sleep Apnea and Dysfunctional Breathing” (2007) and is of the opinion that OSA is very frequently misdiagnosed in many individuals. People who have “OSA” more likely have dysfunctional breathing in that they are taking shallow breaths, often through the mouth, and are therefore required to breathe many times per minute more than if one were deep breathing. His premise is that if a person can be trained to breathe deeply and change their inhalation habits, the snorting and gasping for air while sleeping will disappear, and he has a lot of research to back that up. He also states that many asthma patients were successfully treated with breathing therapies. It is not stated in the literature if he used Buteyko Breathing or not but that would be my guess. ■ Doris Waite, RDH, OMT

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search Sleep Apnea Hypoxemia

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Hygienetown Research:
Mouth Breathing

How are your hygienist peers treating mouth breathing? We surveyed them to find out. Here are the mouth-breathing poll results, conducted from July 5, 2012 to August 1, 2012 on Hygienetown.com.

**Do you check patients for mouth breathing?**

85% Yes
15% No

- Do you ask patients if they wake up with a dry mouth?
  - 87% Yes
  - 13% No

- Do you ask adult patients if they snore?
  - 69% Yes
  - 31% No

- Do you ask child patients if they snore?
  - 32% Yes
  - 68% No

- Do you ask adult patients if they snore?
  - 69% Yes
  - 31% No

- Do you ask child patients if they snore?
  - 32% Yes
  - 68% No

- Do you check tongue rest position?
  - 40% Yes
  - 60% No

- Do you check for tongue thrust on adult patients?
  - 48% Yes
  - 52% No

- Do you check for tongue thrust on child patients?
  - 76% Yes
  - 24% No

- Do you check tongue rest position?
  - 40% Yes
  - 60% No

- Do you check for tongue thrust on adult patients?
  - 48% Yes
  - 52% No

- Do you check for tongue thrust on child patients?
  - 76% Yes
  - 24% No

- Do you check tongue rest position?
  - 40% Yes
  - 60% No

- Do you check for tongue thrust on adult patients?
  - 48% Yes
  - 52% No

- Do you check for tongue thrust on child patients?
  - 76% Yes
  - 24% No

- Do you chart frenum attachments for the lips?
  - 54% Yes
  - 46% No

- Do you routinely chart open bite?
  - 87% Yes
  - 13% No

- Do you routinely chart cross bite?
  - 88% Yes
  - 12% No

- Do you chart frenum attachments for the tongue?
  - 52% Yes
  - 48% No

- Do you check for tongue thrust on adult patients?
  - 48% Yes
  - 52% No

- Do you check for tongue thrust on child patients?
  - 76% Yes
  - 24% No

- Do you record tonsil size?
  - 34% Yes
  - 66% No