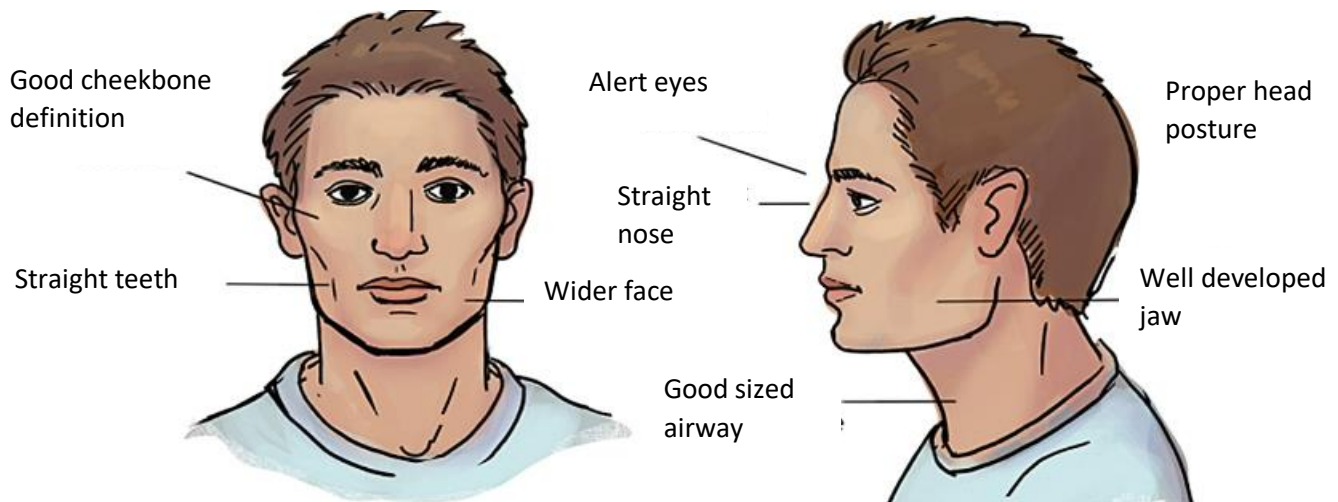


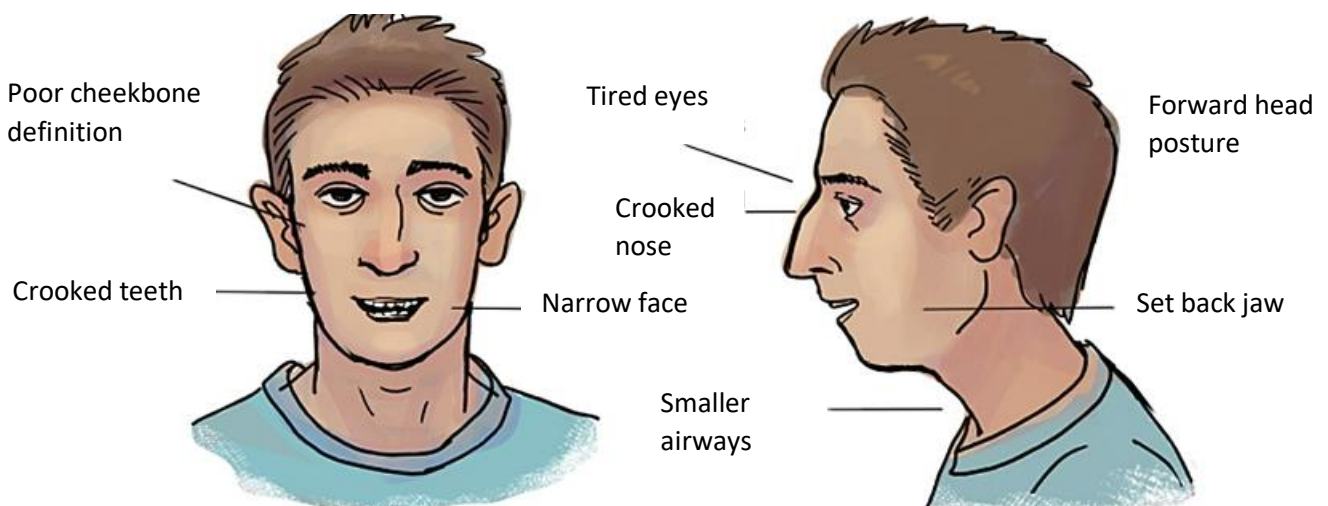
Oral Dysfunction in Children – Nose & Mouth

We don't tend to think much about how we use our nose and mouth. But we should because it has huge consequences on our emotional and physical development as children – from the way we look to our emotional regulation to our risk for chronic disease and sleep apnoea as adults. In this fact sheet, we take a look at how “the big two” – our nose and mouth – impact our growth and development and intervention-based treatments.

NOSE BREATHING GROWTH PATTERN



MOUTH BREATHING GROWTH PATTERN



The Nose is for Breathing

The nose is for breathing. Babies are obligatory nose-breathers and should never breathe through their mouth when awake or asleep. Children and adults should only mouth-breathe during extreme physical exertion or temporary nasal blockages (like allergies or illness). Breathing should be passive and effortless; meaning the diaphragm should expand and collapse automatically from the belly without needing help from muscles of the chest and shoulders.

The Mouth is for Eating and Speaking

The mouth is for eating and speaking. Our lips should be closed at rest without any tension or strain in the muscles of our face. When we swallow, our tongue should push against the top of our mouth without needing help from the muscles of our chin, lips or cheeks or thrusting forward against your lips and teeth (hint, if you can't swallow a tablet without water, throwing your head backward or blinking then you probably aren't swallowing properly). When we aren't swallowing or talking, our tongue should be sucked flat against our palate with the tip of our tongue resting just behind our upper front teeth.

Why Breathing Right Matters

Overall health – breathing through your nose is one of the most beneficial things you can do for the overall health of your body and longevity because it is the main production site for Nitric Oxide. Nitric Oxide plays a role in every organ of your body and plays an important role in immune defense, memory and learning, hormone secretion and protecting our skin from harmful UV radiation.



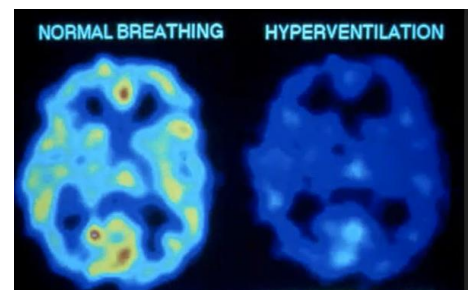
Facial development and growth – the floor of our nasal passages and jaws grow wider when we nose breathe with the tongue to the top of the mouth. This has the obvious advantage of creating a more aesthetic facial profile. But it also impacts the chance you will need orthodontic treatment and/or develop sleep apnoea when you grow older because there is more room for the teeth and airways

Efficient oxygenation – mouth breathers are tired a lot of the time because breathing uses more energy and releases less oxygen. Specifically, mouth breathers take more breaths (they hyperventilate) but they lose too much CO₂ which prevents oxygen being released from the blood's haemoglobin so it can be used by your body. One minute of hyperventilation reduces blood flow up to our brain by a massive 50% and reduces glucose availability for proper brain function

Behavioural and emotional development – chronic mouth breathing in children often presents as ADHD-

like behavioural problems at school and home including problems concentrating and paying attention, lack of attention to detail, mood swings, irritability, quick tempers and oppositional defiance type behaviours.

Posture & pain – mouth breathing forces the tongue to sit down low which in turn forces our heads into a forward position so air can flow over the tongue and into our airways. This compresses the nerves running through the spine into the cranium as well as the muscles at the back of the neck. It also compresses our diaphragm making it much harder to breathe without involving the chest muscles. This is why adults, and sometimes children, who mouth breathe are more prone to myofascial pain, headaches and other pain-related problems



Treating Oral Dysfunction

Early intervention puts growth and development back on track. The first step is recognizing that a dysfunction exists. Once recognized, we need to establish why the dysfunction exists. For some children, this might be a physical blockage like large adenoids or tonsils and require referral to an ENT or other specialists. For others, and for those who have undergone ENT surgery, dysfunctions are habitual and are corrected with oral myology. Oral myology is a fancy word for exercises which retrain the way we use our nose and mouth. This is usually an 8-week Take-Off program where children are seen and assessed weekly until function is maximized. Some children will require parallel and/or follow-on treatment with orthodontists or other specialists.

