

Tongue and lip tie

(also known as “oral restrictions”)

Tongue and lip tie is a fascinating subject but so much of the information relating to these oral restrictions remains unknown by many healthcare practitioners. This leaflet is aimed to provide a basic level of knowledge for patients who have an interest.

“**Tongue tie**” is the name commonly given to a fibrous tissue restriction of the tongue also known as *Ankyloglossia*. It is relatively common and has many far-reaching effects beyond simple restriction of movement of the tongue in the mouth.

However, there are many other effects of tongue-tie that can arise throughout life affecting a number of the body systems including the musculo-skeletal, respiratory and digestive systems.

A “**lip tie**” is a similar band of tissue that can restrict the movement of soft tissues of the lips or cheek or can interfere with the action of a toothbrush. During tooth brushing, the soft tissues can become traumatised, raw and painful.

The tongue – “chief architect” of the face

The tongue begins forming in the foetus around 12 weeks after conception. From this time, it has a major effect on the development of the mouth, the upper jaw and the face. The tongue has been described as the chief architect of the face and it affects the growth of the upper jaw, the width of the jaw and the shape of the palate from the very start of formation.

Tongue at rest

A tongue should be able to rest at the top of the mouth against the palate. This position allows neurological stimulation of the central nervous system (CNS) to assist in rest, relaxation and digestion. We call this collection of actions “parasympathetic” and they are opposite to what is known as the “fight and flight” system or sympathetic system.

Imagine someone who has no “rest” or parasympathetic system to counteract the “fight and flight” sympathetic system! They would be hyperactive, constantly on the go, unable to slow down, driven and generally in a highly anxious state. In someone who cannot rest with their tongue in the palate sending relaxing parasympathetic messages off to the CNS, we see a stressed, over-active person.

An additional link with the “rest, relaxation and digestion” parasympathetic system shows us that those individuals who cannot rest the tongue in the palate and fire off those parasympathetic calming messages to the CNS, find their digestive system can become dysfunctional. We see this in many ways from the earliest problems of abnormal faeces, colic, reflux and vomiting in babies, through to constipation and abdominal discomfort in adults.

Signs and Symptoms of oral restrictions

The earliest signs and symptoms of “oral restrictions” including both tongue tie and lip tie, involves incorrect breast-feeding. Anterior and lateral lip ties can interfere with the stretch and positioning of the lips when an infant or toddler latches onto the nipple for breast-feeding and can

result in a poor seal of the lips around the nipple and breast tissue, ineffective milk delivery, dribbling, suction of air into the mouth with the milk (aerophagia) and the consequent development of colic, reflux or vomiting and due to the poor seal with the breast, feeding demands greater effort from the infant or toddler and they may fall asleep on the breast or reject the nipple.

The tongue tie related problems Mums may face with breast-feeding include a wide range of issues:

- baby's failure to latch,
- inability to feed,
- falling asleep on the breast,
- inability for the baby to make a seal around the breast,
- clicking noise when suckling
- leaking milk during suckling,
- repeated release of the nipple by the baby,
- inability to settle
- regular crying or screaming
- air swallowed with the milk,
- choking, gagging, colic, reflux and vomiting,
- sore cracked nipples, mastitis,
- feeling of failure at not being able to breast-feed and post-natal depression.

Oral restrictions can not only influence the success of breast-feeding, but the long lasting effects of restricted tongue movement, or a tongue tethered in a low position in the floor of the mouth can affect the person for the rest of their life affecting multiple body systems.

The infant or toddler who has problems breast-feeding that is related to a tongue tie often develop an open mouth posture, frequently drool, have problems with swallowing, can be a messy eater due to tongue thrusting food out of the mouth past open lips when swallowing, they may develop habits including thumb or digit sucking, or a dummy or pacifier habit (also known as non-nutritive suckling).

Dentists often describe the open mouth posture as "incompetent lips". In order to swallow, the lips need to be brought together to seal the mouth and for these patients with an "open-mouth" posture to do this, it is often clear that there is considerable muscular activity in the cheeks (*buccinator muscle*) and chin (*orbicularis oris and mentalis muscles*) to achieve the necessary seal of the lips. Such actions are not normal and are indicators that the swallowing action is faulty. This frequently relates to a restricted tongue.

In some of these patients, this muscular activity over a prolonged period causes backward pressure on the lower jaw that can have the effect of contributing to a condition known as temporo-mandibular dysfunction (TMD). It is therefore important to identify and eliminate such faulty swallowing early in life to prevent this damaging effect on the jaw joint from compensatory muscular activity and thereby avoid the discomfort associated with TMD.

The problem of diagnosis

Tongue tie has been around for thousands of years but it seems that more recently modern day professional healthcare providers dismiss the existence of tongue tie as not being relevant to

breast-feeding or indeed anything else despite there being considerable scientific studies suggesting otherwise.

Many mothers know when their baby is not breast-feeding well and when the baby's behaviours or mood is unusual, and she may face practitioners who repeatedly deny the existence of relevance of any tie that may be seen. This is frustrating but sadly a frequent finding.

Adult problems relating to tongue and lip ties

Many people manage to survive infancy and childhood with a tongue or lip tie and reach adulthood with the tissues remaining restricted. By this stage of their life, it is often difficult to associate any medical or dental complaint to such an apparently minor tissue defect. However, issues may arise that relate to these soft tissue restrictions.

It is not uncommon for tongue-tied individuals to experience soreness and even ulceration of the tongue-tie after kissing. It may seem a minor complaint, even embarrassing, but this can be a problem and may take away the pleasure of an intimate relationship.

The tongue is sometimes described as the Janitor of the mouth due to its constant efforts at clearing up any left over food debris. It moves around the mouth rubbing food and plaque of smooth tooth surfaces and soft tissues. If the tongue is restricted in its ability to move over the teeth and clean on the cheek side of teeth, including the cheeks, then plaque accumulation may be more extensive providing a greater problem for the patient to achieve sufficient cleaning to maintain oral health. Failure to control plaque adequately may leave a patient more susceptible to both dental decay and gum disease.

The swallowing reflex is learned from the time we are in the uterus. By birth it is second nature and allows us to breast-feed as soon as we are born. If a tongue-tie is present, an infant may learn a compensatory swallowing reflex often described as an aberrant swallow. This may then persist throughout life and in some cases can lead to associated problems. One of these is a severe gag reflex. This is not an uncommon problem and can cause patients considerable embarrassment when they attempt to accept dental treatment. The gagging can prevent the dentist entering the oral cavity with fingers or instruments and the use of a dental hand piece to provide a filling with water-cooling is intolerable for the patient. It may only be possible to treat these patients either under intravenous sedation or under day stay general anaesthetic.

The gag reflex is a contraction of the muscles in the back of the tongue and the pharynx. The aim of this is to move the tongue away from the airway and maintain breathing and prevent choking or asphyxiation.

It has been accepted for many years that tongues with restricted movement can adversely affect correct pronunciation of words and sounds and many tongue-tied patients present for speech therapy to try to help them correct their speech.

The tongue is a fundamental contributor to our speech. It is involved in the production of certain sounds that rely on the correct positioning of the tip or back of the tongue against the lip, behind the upper front teeth or against the back of the palate. If a tongue is tethered in a low position in the oral cavity and its movement restricted, then some of these movements can be difficult or impossible and the patient has to compensate by making alternative movements resulting in incorrect sounds.



Speech therapists may be the person who finds that a tongue-tie is creating speech difficulty and often they may then suggest you are seen to have the restriction released.

The Tongue Tie Institute

More recently the Tongue Tie Institute, Brisbane, has begun to collate research and educate a range of healthcare workers in Australia (*paediatricians, paediatric surgeons, midwives, lactation consultants, speech therapists, chiropractors, osteopaths, dentists, oral health therapists*) in an attempt to improve awareness of tongue and lip-ties, diagnosis of oral restrictions and facilitate treatment for patients in all areas of Australia.

Dr Colin Priestland has been involved with frenectomy (*also known as frenulotomy*) since 1990 and has used laser treatment for the correction of lip and tongue-tie since 2008 and in 2017 he has completed the Tongue Tie Institute *Foundation Course* and the *Advanced – infants and toddlers course* to ensure he remains up dated on current scientific evidence and treatment protocols.

If you feel that any of your problems or those of your infant or toddler may be associated with a tongue tie, lip tie or oral restriction, contact our practice and we can arrange for an assessment consultation and you can discuss treatment options with Dr Colin Priestland.

You can call us on 07 4725 1656 or find us online at www.nqsurgicaldentistry.com.au

Our website will give you information on our practice and the treatments we offer.

