

MASON'S MIRACLE

By AAPD member Dr. Amy Luedemann-Lazar



As quickly as time flies, it also applies to advanced pediatric dental techniques. In 1990, when I began my career in dentistry, an ankyglossia assessment was to ask a patient to stick their tongue out. If they could stick their tongue out past the lower incisors, our assessment was that their tongue was fine. Sadly, today, there are many providers in the dental and medical field still using this antiquated, subjective assessment, even though in the past decade volumes of research have been published documenting the negative effects of a tongue tie over the course of a person's life. More than 20 years later, there are now reliable assessment tools at our disposal.



Mason Motz and his family walked into our practice in March of 2017. His family came to our practice Kidstown Dental, because of our reputation using Dr. David Tesini's D-Termined Program for children with special needs. On his first visit, my associate Dr. Rachael Garrett, recommended that Mason have sedation to complete his dental treatment. A little over a month later, I met Mason's family in pre-op. It was there that all of our preoperative conversations occurred, including reviewing all of the possible treatments a child may need. We ask permission, prior to starting, to treat any diagnoses found—Mason's family gave permission. In addition to cavities, I diagnosed a tongue-tie. As part of completing his care, I did a frenectomy. The procedure went well, and as per our protocol, Mason followed up with our in-office myofunctional therapist Nichole, to learn about our Myobrace System a few weeks later. Mason's family followed our recommendations and what a miracle his story has been.

When Mason's family returned they had a lot to say, and as his story spread, we all shed tears of joy hearing it. Mason was six years old at the time of treatment and only spoke six words.

Incredibly, hours after he was discharged, Mason began speaking in complete sentences. We had been treating tongue ties routinely after an “awakening” at the Academy of Applied Myofunctional Sciences 1st Congress. Our office attended this groundbreaking meeting and learned about the many negative effects of ankyloglossia, as well as the more objective, accurate assessment tools and myofunctional therapy, as it relates to tongue tie treatment. This information proved to be life-changing for Mason.

After starting the Myobrace System more things began to change for Mason. Prior to the surgery he had many of the “hallmark issues” related to tongue-tie: speech delay, gagging with eating, mouth breathing, cavities, ear infections, sleep issues and malocclusion.

Six months later, Mason no longer grinds his teeth or snores at night, and has not had one ear infection since the frenectomy. Mason eats better and rarely gags. With his crossbite and crowding corrected, he is now a chatterbox. In addition, he now has an improved airway, ability to sleep, eat and communicate as a vibrant 7-year-old. Mason loves coming to our office and is able to sit for a typical dental cleaning and X-rays without restraint or sedation.

Is Mason a miracle? Yes he is! But guess what? We routinely see similar miracles! I was thrilled at the opportunity to write this article for *PDT* and I want to share why. Today, we stand poised in pediatric dentistry to affect children’s lives like no one else in medicine. This is the best time to be a pediatric dentist!

At the end of this article, I hope that you will have learned or been reminded on how a tongue tie can affect eating, speech, breathing, sleep and growth. I also want to share that parents are calling from all over the world asking if I can consult with them about their special needs children. I have learned from this whole experience that it is sadly common for providers to neglect looking for a tongue tie in the special needs population.

While I cannot imagine it is intended, it comes across to these loving, advocating parents as an unspoken statement of, “Look, your child has special needs and this is as good as it’s going to get. No, there is no tongue tie and even if there is, fixing it isn’t



going to do much for your child.” Actually, the second sentence above is often said out loud, as reported by parents I consult with, and I find it to be a sad indication that the provider is not current on their respective research. Every child deserves a chance at his/her best life. If we know a tongue tie can cause problems with everything mentioned above, then it is our responsibility and privilege to learn to do a proper assessment and treat anyone with the diagnosis.

I am going to do my best with the rest of this article to summarize something I routinely teach, and that holds the pearls I want to share that are hidden in Mason’s story. I wish I had room to go into greater detail because I think it is important and I am very passionate about educating and informing both providers and

patients. If you find this helpful and want more details, please feel free to checkout my Kidstown Dental YouTube Page where I have several videos available. I also have a blog on my website where I go through the effects of an untreated tongue tie in greater detail.

The tongue is eight paired muscles innervated by four nerves. It is actually an organ, and a very important one. The tongue is part of the floor of the mouth in utero and begins to separate via apoptosis, just like our webbed fingers and toes separate. When a tongue does not separate enough, embryonic fibers remain and overly restrict the range of motion of the tongue. A frenum is simply a muscle attachment to bone. Everyone has a frenum under their tongue as they should, and it attaches the organ of the tongue and all of its muscles to the mandible. The function of a frenum is to restrict motion, and the tongue frenum is a critical structure in stabilizing the mandible's position during chewing, speaking and in maintaining the airway.

The tongue exerts 500 grams of force on swallow and we swallow 1500+ times per day. For reference, it takes 1.7 grams of force to move a tooth. There are two critical results of this consistent force:

- First it serves as a pumping action to release all cranial sinuses. When the tongue is tied and fails to exert its full force on the palate, often the child will suffer more congestion and ear fluid buildup. I call them “junkie breathers.”
- A second purpose of this force is to drive growth and development of the face, jaws and airway. The tongue pushing against the roof of the mouth creates prominent cheekbone development, broad, healthy arches that have enough room for all teeth. When the tongue has an altered swallow pattern face/jaw and airway growth, development will be affected adversely.

Feeding can be affected by a tongue tie. First, breastfeeding can be affected. Of course not all breastfeeding issues relate to ankyglossia, and we should always defer to an IBCLC for a complete assessment when a mom is suffering with breastfeeding issues. In addition, some moms will breastfeed just fine when their baby is obviously tongue-tied. These moms' breast anatomy and milk supply compensate

for her baby. Another issue with ankyglossia and feeding is solid food introduction. Tongue-tied children often have issues with gagging. They frequently self-select soft, processed foods. Their tongue isn't able to do the normal movements, such as creating a bolus and shooting it “down the hatch” instead just before swallow the child has “scatter” causing gagging. This soft food diet increases the risk of cavities and exacerbates growth and development issues caused by the tongue tie because the second most important factor in face/jaw/airway growth and development is chewing fibrous foods from an early age.

The next issue possible to ensue from a tongue tie is speech, specifically articulation issues. When we treat a patient, no matter the age, with a tongue tie who has articulation issues, their speech changes the same day!

There is so much more to detail, but the last thing I want to mention here is sleep. Dr. Christian Guillemainault showed in 2016 that a tongue tie is a marker for sleep apnea. For this reason alone, I believe when a person has a diagnosis of ankyglossia, or tongue tie, they should have it treated. And because we are pediatric dentists, I will leave you with this interesting fact: In Australia, it is illegal to give children ADD/ADHD medicine without doing a sleep study first because the clinical presentations are identical.



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