



## **Frenectomy**

An increasing number of children, as young as 18 months, are being referred to me for a surgical procedure called a *frenectomy*. The term *frenectomy* means the removal of a *frenum*; a frenum being the tissue that attaches the lip or cheek to the gum margins. There is also a *lingual frenum*. This is the soft tissue tag attaching the surface underneath the tongue to the gum behind the lower front teeth. It is frequently referred to as a tongue tie.

### **Why a frenectomy?**

Any of these frenum attachments can present problems for the patient. The lip frenum can make tooth brushing difficult and result in toothbrush trauma to the tissue that becomes sore, ulcerated or may bleed. It can also limit movement of the lip and when the lip moves, the movement exerts tension on the gum margin that may result in gum recession at the front of the tooth. The lingual frenum beneath the front of the tongue can severely limit the movement of the tongue in a forward or upward movement and may become damaged, split or ulcerated when the tongue is pushed forward. In some cases a lingual frenum can be extensive and involve a considerable degree of connective tissue under the tongue in the midline restricting the upward movement of the tongue required in normal speech.

### **Not all frenectomies are the same....**

The term “frenectomy” applies to a surgical procedure that can vary in its extent enormously. From a procedure that may take only a couple of minutes to a much longer and more involved operation, frenectomies vary a great deal in different patients.

### **Who refers “frenectomy” patients?**

In some cases, young children are referred by their GP, others are referred by their dentist or hygienist and other children are referred by their speech pathologist due to delayed speech development or incorrect speech.

### **The more involved frenectomies....**

It is often the referral from speech pathologists that are the most involved as they usually indicate a delay in normal speech development due to a fibrous “tethering” of the central part of the tongue into the floor of the mouth, thus preventing the tongue from lifting up into the palate.

The absence of this tongue lift prevents the tongue from filling the roof of the palate. This limits the degree of maxillary growth and maxillary widening leaving the palate narrow and the vault (roof) of the palate low.

The inability to lift the tongue up into the vault of the palate during the formation of certain sounds when speaking, compromises the patient’s pronunciation. Such patients can be identified if one looks at the tongue when asking the patient to perform certain tongue movements. The appearance of cupping can be seen in the centre of the tongue that demonstrates that the tongue is being held down.

### **Extent of surgery varies....**

In its more minor form, a frenectomy is a very minor surgical procedure that involves removing the thin soft tissue tag that attaches the upper lip to the gum between the two upper central incisor teeth. In some cases this may involve only a small amount of tissue removal using a laser and can be completed in a few minutes. The aim of the laser is to use the power of light energy to vaporise tissue producing a cut and sealing the tissue preventing any bleeding. Diathermy can be used to achieve the same outcome.

In the past a frenectomy was performed using a surgical scalpel or tissue scissors but nowadays post-operative results are better using a laser or diathermy. The benefits of both are an absence of bleeding during the procedure and hence improved visibility, reduced post-operative discomfort and less post-operative swelling. In the case of laser use, quicker healing is also seen due to the effects of the laser energy on the remaining tissue cells. The laser energy is



absorbed by the mitochondria (the battery that powers each cell) and this up-regulates the metabolism of the cells and this speeds up healing.

### **Thick lip frenum....**

Some lip frenum attachments may include a thick band of connective tissue beneath. If these are not treated correctly they can easily reattach and may need to be repeated. The use of a laser helps to ensure that reattachment is prevented and makes the removal of the thick tissue far easier and quicker than using a surgical scalpel. It can also be accomplished using diathermy, which is the use of electrical energy to cut and seal tissue. However while it also prevents bleeding and thereby improves visibility at surgery, there can sometimes be more swelling afterwards and the diathermy does not “up-regulate” the tissue’s healing capacity post-operatively.

### **Lingual frenectomy....**

Lingual frenectomies (removal of the tissue often referred to as a tongue tie) exhibit the greatest variation in complexity. The thin tissue tag may be easily cut and if it is very thin, there may be very little blood supply and therefore very little bleeding when cut with tissue scissors. If this tissue tag is very thin, the procedure may take only a couple of minutes.

The main concern is that the cut must be placed away from the salivary gland duct in the floor of the mouth under the front of the tongue or scarring may occur leading to narrowing of the duct or closure of the duct and consequently problems with the drainage of saliva into the mouth. It is important to know the anatomy of this area to ensure a good outcome every time.

In those cases where the tongue is tethered down, as in many of the cases referred by speech pathologists, the procedure must be rather more extensive. The initial small incision allows the laser tip to be inserted into the tissues and then slowly and carefully it is used to cut the tight fibrous band of tissue in the midline that holds the tongue down and restricts the upward movement of the tongue.

A laser is the best way to perform this procedure as you can safely work inside the tissues under the tongue and inside the base of the tongue, and carefully cut away tight tissues and avoid excessive bleeding. As long as the laser remains in the midline, there are no important structures that can be cut and damaged hence normal feeling will be felt in the tongue after surgery and very little bleeding is experienced.

Generally following laser surgery very little suturing is required. This makes the healing period more comfortable. Reattachment of tissue to its former position is generally not possible after both lasing and the use of diathermy, and that is another benefit over the conventional surgical technique using a scalpel. In addition, infection is unlikely in tissue cut by a laser or diathermy unit because the tissue is sealed at the site of the cut and therefore the ingress of bacteria is unlikely.

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