

CLAIMS OF IMPROVING MUSCLE "TONE" SHOULD BE AVOIDED

I am concerned about the inclusion of the terms "low muscle tone" and improving muscle "tone" in the reports and discussions of many **orofacial** myofunctional clinicians. In my opinion, descriptions of "muscle tone" are out of place in orofacial myology. Here is why:

The concept of "tone" in muscles is defined as the *resistance* of muscles to *passive elongation* or *stretching*. Muscle "tone" describes the state of muscle tension inside a muscle or muscle groups when in a **resting state**. Discussions of muscle tone usually relate to muscle contractions that impact the **movement of bones around joints**. Normal muscle tone means that there is a correct amount of "tension" inside the muscle at rest, and that the muscle is inherently able to contract upon command.

Most of us, including individuals with OMDs, have "normal" muscle tone, meaning that our muscles are in a state of slight contraction and are ready to be activated. Those of us blessed with normal muscle tone are able to sustain a prolonged contraction and then return the muscles involved to a relaxed rest position. It is important to stress that **muscle tone is not the same as muscle strength and muscle resistance**.

The degree of muscle tone a person exhibits is regulated by the cerebellum. There are many disorders that have an impact on cerebellar function, and thus on muscle tone, leading to either **hypertonia** or **hypotonia**; both of which are abnormal conditions. Individuals with Down syndrome, for example, often exhibit **hypotonicity**, or a reduction in muscle tone. Any abnormality in muscle tone not under a person's conscious control will affect the way a muscle responds to stretch. Muscle **strength** and **resistance** testing cannot be accomplished accurately on individuals with abnormal muscle *tone*.

A reduction in muscle tone (**hypotonicity**) represents a more relaxed than "normal" situation at rest. Such muscles are slower to contract when stimulated and lack the ability to either contract fully or to sustain a contraction. Hypotonic muscles appear floppy at rest and may be "flaccid".

Contrary to popular opinion, working out in a gym does not improve muscle tone since it does not change the cerebellum's role of regulating muscle tension at rest. The benefit of working out, however, serves to reduce the ratio of fat-to-muscle. Although a fat-to muscle change can positively impact the appearance of increased definition of muscles, such a situation is not an example of increased muscle "tone", in spite of the claims made in advertisements.

Assessments of muscle tone involve musculoskeletal and neurological assessment tools that are not appropriate for use in orofacial myofunctional therapy. The Original Ashworth Scale that you may be aware of is a test of resistance to passive movement **around a joint** with varying degrees of velocity. Scores range from 0-4, with 5 choices. A score of 1 indicates no resistance and a 5 indicates rigidity. The Modified Ashworth Scale is similar to the original Ashworth, but adds a 1+ scoring category to indicate resistance through less than half of the movement. Thus scores range from 0-4, with 6 choices. Obviously, the Ashworth scale is not an appropriate assessment tool where there is suspicion that a specific muscle, not related to a joint, is weak or flaccid.

The term "low tone" that has been used by OMTs, is probably intended to mean that there is an apparent lack of muscle "tension" in a muscle or area that is observed to be droopy, or weak. A better term than "low tone" would be a "reduction in muscle tone", however, the idea that one can increase muscle tone in specific oral, pharyngeal and facial muscles *with exercises* is a **concept and goal that is incorrect and has no place in orofacial myology**.

The field of orofacial myology will advance and benefit further when correct terminology is used. Questionable and inaccurate terms to describe what we do will not serve to elevate and advance the field. Accordingly, I encourage orofacial myologists to entirely refrain from labeling an individual as having "**low muscle tone**", *by visual inspection or observations of a lack of full range of movement* or lack of *elevation of a structure* such as the tongue; or to claim that muscle "tone" has been improved or increased with myofunctional exercises.

To continue to claim success in identifying and improving the "tone" of individual muscles through exercises, including references to individual muscles that are deeply imbedded in areas with many other muscles have been targeted and further "toned", begs the question of how one would validate such questionable claims?

Giving up terminology related to "toning" muscles in orofacial myofunctional therapy will avoid the potentially skeptical perceptions that may arise among referral sources when claims are made about "toning" muscles. Instead, it would be better to focus and report on "strengthening" muscles, or "increasing muscle resistance" (your choice as per preference) such as with the orbicularis oris ring that may appear to be **flaccid** (rather than having "**low tone**") where there is an everted lower lip; or, in discussing apparently weak lateral margins of the tongue; or, reporting on deficiencies observed in the tongue during suction activities.

A fact to remember is that if there is truly some reduction in muscle tone that an OMT would see, it would be seen throughout the face or oral cavity; but not localized in one or more specific muscles.

Instead of discussing "low tone", therapy exercises should focus on *increasing muscle strength* of the lips, tongue or face when muscle *weakness* is diagnosed that would indicate the need for *resistance exercises* that are either *isotonic*, *isometric*, or *isokinetic*. The use of appropriate descriptive terminology in clinical reports will serve to enhance the field of orofacial myology while continued use of the inaccurate perspective of "toning" muscles will not impress referral resources that know better.

I make a plea for trainers to impart this information in their courses.