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Opinion Article

Oral Motor Rehabilitation as a Core Component of Care in Severe Ankyloglossia

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DESCRIPTION

Oral motor rehabilitation in severe ankyloglossia deserves far greater recognition as a central element of effective care rather than an optional adjunct to surgical intervention. Ankyloglossia, commonly known as tongue-tie, is often framed as a purely anatomical problem defined by a restrictive lingual frenulum. While surgery can increase the mechanical range of motion of the tongue, it does not automatically restore functional movement, coordination, or efficiency. In severe ankyloglossia, where restriction has influenced oral function over long periods, oral motor rehabilitation is not simply beneficial but essential for meaningful and lasting improvement. Severe ankyloglossia affects the tongue during critical phases of neuromotor development. The tongue is not only a muscular structure but also a highly sophisticated organ responsible for speech articulation, swallowing and maintaining oral posture. When its movement is restricted, the entire oral motor system adapts. These adaptations are often subtle but pervasive, involving altered muscle recruitment, compensatory jaw and lip movements, and inefficient coordination. Over time, such patterns become normalized by the nervous system.

One of the most compelling arguments for oral motor rehabilitation in severe ankyloglossia lies in the concept of learned compensation. Individuals with restricted tongue mobility instinctively find alternative ways to perform essential tasks such as speaking and swallowing. These strategies may include excessive jaw excursion, lip dominance during articulation, posterior tongue elevation, or generalized muscular tension within the oral cavity. While these compensations allow function to continue, they do so at the expense of precision, efficiency, and endurance. Surgery may remove the restriction, but it does not erase years of learned behavior. Without rehabilitation, the tongue often continues to move as if it were still tethered, limiting the functional gains of surgical release.

Oral motor rehabilitation challenges the assumption that increased range of motion alone translates into better function. Function emerges from coordination, timing, and sensory feedback, not merely from strength or flexibility. In severe ankyloglossia, sensory experiences of the tongue are often reduced or distorted. Limited movement restricts tactile exploration within the oral cavity, resulting in poor proprioceptive awareness. Many individuals struggle to accurately perceive tongue position or contact, which directly affects articulation and swallowing. Oral motor rehabilitation prioritizes sensory re-education, helping individuals rediscover how the tongue feels when it moves, contacts structures, and rests in an optimal position.

Resting tongue posture is a particularly important yet underestimated target of rehabilitation. A low resting tongue posture is common in severe ankyloglossia and has far-reaching implications. It influences muscle tone, breathing patterns, swallowing mechanics, and speech clarity. Simply freeing the tongue surgically does not guarantee a change in resting posture, especially if the low position has been habitual for years. Oral motor rehabilitation actively retrains the tongue to assume a relaxed, elevated resting posture against the palate. Critics of oral motor rehabilitation sometimes argue that speech will naturally improve once structural restriction is resolved. This belief underestimates the complexity of motor learning and neural adaptation. Speech is a highly automated behavior that relies on deeply ingrained motor programs. In severe ankyloglossia, these programs are built around limitation. Expecting them to spontaneously reorganize after surgery ignores how the brain prioritizes efficiency and familiarity. Oral motor rehabilitation provides the structured repetition and guided practice necessary for the nervous system to update these programs and adopt more efficient movement patterns.

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