

# Comprehensive Frenulum Inspection Workshop: Infants, Adolescents, and Adults

Presented by Irene Marchesan, PHD

with James Murphy, MD, Douglas Galen, DDS, Eyal Botzer, DMD, Catherine Watson-Genna, IBCLC

- A three day intensive on frenum inspection that also addresses frenotomy and frenectomy
- Live demonstrations of frenectomies and frenotomies on infants, adolescents, and adults by scissors, laser, and scalpel
- Overview of surgical techniques and procedures, including scissors, scalpel, and laser

The Millennium Biltmore Hotel, Los Angeles, CA  
August 25th-27th 2016

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## Learning Objectives:

- How to classify the different types of lingual frenulum
- Lingual frenulum definition and the importance of assessment
- Possible interferences of the altered lingual frenulum and consequences
- The importance of using a protocol, and not only visual inspection
- Criteria for assessing lingual frenulum using specific protocols for infants, children and adults

The tongue participates actively in the functions of sucking, swallowing, chewing and speech. A small fold of mucous membrane, called lingual frenulum, connects the underside of the tongue to the floor of the mouth. The lingual frenulum effects the movement of the tongue. When the lingual frenulum cells don't undergo apoptosis completely during the embryologic development, the residual tissue may restrain the movements of the tongue. Differentiating the anatomical variations requires extensive knowledge of the anatomy of the tongue and the floor of the mouth in order to identify whether the findings may compromise the tongue movements and the orofacial functions.



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**Dr. Irene Marchesan** is director of the prestigious CEFAC Institute in Sao Paulo and President of the Brazilian Speech Language Pathology Society, is one of the foremost leaders of myofunctional therapy in the world. She is the most published researcher in the field and a visionary for the establishment of myofunctional therapy as a standard of care. One of the most published authors of articles on frenum inspection, she, along with Roberta Martinelli, is lead architect of Brazil's "Frenum Inspection Law" requiring as of January 2015 that all babies born in that country have their frenulum inspected and, if warranted, to be revised to avoid myofunctional disorders later in life.

**Dr. James G. Murphy** is an Assistant Professor of Pediatrics at the F. Edward Hébert School of Medicine, Uniformed Services University of the Health Sciences in Bethesda, Maryland. He is a former Governing Council member of the International Affiliation of Tongue Tie Professionals, a member of the International Lactation Consultants Association and, since 2009, an Internationally Board Certified Lactation Consultant. Dr Murphy began performing lingual frenulotomies in Oct 2003 and has performed over 3000 of these procedures to date including posterior sub-mucosal fibrous bands. He has also performed over 600 upper lip frenotomies.

**Dr. Douglas Galen** is board certified and a Diplomate of the American Board of Oral and Maxillofacial Surgery. He is a fellow of the American Association of Oral and Maxillofacial Surgeons. In addition, Dr. Galen is the president of the Advanced Treatment Planning Dental Study Group. Dr. Galen is associated with Cedars Sinai Medical Center and UCLA Medical Center. He is also a member of the attending faculty in the Department of Oral and Maxillofacial Surgery at the UCLA School of Dentistry.

**Eyal Botzer** has a DMD from the Hebrew University School of Dental Medicine, 1990. Post Graduate program in Pediatric Dentistry, 1995. Research Fellow at the NYU Dental School, 1995-96, training in a new technique for the treatment of cleft lip and palate at the NYU Medical Center Institute of Craniofacial Reconstructive Plastic Surgery. Since 2007, I have served as the Director of the Pediatric Dentistry Clinic at the Tel Aviv Sourasky Medical Center. My specialties are pediatric dentistry and the treatment of neonates with craniofacial anomalies. Since 2000, I have been engaged in tongue tie research and have participated in the first three IATP Summits in 2009, 2010 and 2013 as a founding member of the IATP. I have co-authored several articles on Tongue Tie and performed over 10 thousand frenotomies on newborns with breastfeeding difficulties.

**Catherine Watson-Genna** is an IBCLC, textbook author "Supporting Sucking Skills in Breastfeeding Infants" (Jones and Bartlett, 2013) and Selecting and Using Breastfeeding Tools (Hale, 2009) and acclaimed presenter. Current research studies sucking with ultrasound and suck:swallow rhythms via cervical auscultation. She is Associate Editor of USLCA's official journal Clinical Lactation.

When health professionals evaluate the lingual frenulum, they diagnose it as normal or altered depending on the criteria used. Usually, professionals evaluate the lingual frenulum by observing the appearance and the mobility of the tongue. When assessing babies, health professionals also observe breastfeeding. It has proven to be an efficient tool to evaluate lingual frenulum alterations.

For an accurate evaluation, it is necessary to observe certain aspects of the tongue and frenulum, such as the mobility and habitual position of the tongue, as well as speech articulation. In general, existing protocols only evaluate the mobility of the tongue and frenulum by itself and the results depend on what the evaluator considers normal or altered. Diagnosing frenulum alterations can be difficult because the evaluator has to be aware of the anatomy of the tongue, including different aspects of the frenulum and adjacent regions. In addition, the evaluator must know what functions may be affected by the alterations of the lingual frenulum.

When the lingual frenulum is altered the greatest divergence from normal is in the area of speech production. Some studies claim that such alterations are rare or insignificant. Some authors claim that the incidence of speech disorders is low; while others say that it is difficult to relate altered frenulum to speech alterations.

In addition, other authors suggest that the occurrence of speech distortions in subjects with altered frenulum is present in 50% of the cases. Perhaps the authors who do not relate altered speech to altered frenulum are the ones who consider only omissions and substitutions as speech alterations, without considering distortions, which are the most frequent alterations.

The divergence of views includes many aspects, such as terminologies, assessment methodology and the consequences of the altered frenulum. Frenulum surgeries are also subjects of divergence, since there are frequent questions about whether to perform surgery or not, when to perform surgery, what the best technique is for the surgery, and, even, who would be the most qualified professional to perform it. This diversity of views, as well as the differences among the authors may be due to the lack of common parameters for evaluation and diagnosis, and lack of extensive knowledge about the consequences of frenulum alterations.

Some of the existing protocols evaluate the size of the frenulum, where it is attached, and propose objective measurements. Other authors focus on one or another specific item, which they consider a determining factor to diagnose frenulum alterations. Considering the diversity of points of view mentioned two protocols with scores were designed to evaluate the tongue and the frenulum. As the tongue takes part in orofacial functions, aspects such as shape, size, and range of movements must be tested.

The content of the presentation consists of presenting and demonstrating the administration of two protocols: a lingual frenulum protocol with scores designed for infants and the other for children over 5 years old and adults. These protocols enable health professionals, such as: speech language pathologists, dentists and physicians to evaluate and diagnose lingual frenulum alterations. The lingual frenulum protocols with scores have been efficient tools to diagnose altered lingual frenulum.

The protocol for infants is a two-part protocol designed to evaluate the lingual frenulum. The first part consists of clinical history with specific questions about family history and breastfeeding. The second part consists of clinical examination: anatomico-functional, non-nutritive and nutritive sucking evaluations.

According to the scores, the frenulum can be considered altered or normal. When the sum of history and clinical examination is equal or higher than 9, lingual frenulum may be considered altered.

Evaluating simultaneously the characteristics of the lingual frenulum and the functions of sucking and swallowing during breastfeeding is important for an accurate diagnosis. This protocol provides assessment of the tongue shape, fixation, thickness, potential movements and functions. The protocol with scores for infants is considered to be an effective tool for health professionals to use for assessing and diagnosing the anatomical alterations of the lingual frenulum, and its possible interference with breastfeeding.

The protocol with scores for children and adults is designed to diagnose possible frenulum alterations, as well as to provide information to relate anatomical frenulum alterations to functional alterations. It consists of history and clinical examination. The history relates the subject's complaints and general identification questions. The specific questions investigate the relationship among the frenulum and other aspects, such as family history, breastfeeding, swallowing, chewing, oral habits, speech, voice and previous frenulum surgeries. The clinical examination is divided in two parts: the first investigates general aspects of the frenulum and tongue, and the second investigates the tongue's mobility and position in the oral cavity, speech production and compensatory patterns used by the subject. According to the scores, the frenulum can be considered altered or normal. When the sum of general tests is equal or higher than 3, lingual frenulum may be considered altered. The interference of the lingual frenulum in oral functions can be considered when the sum of functional tests is equal or higher than 25. The present protocol has been applied and tested consistently for many years. It has proven to be an efficient tool to evaluate lingual frenulum alterations.

Early lingual frenulum assessment avoids early weaning, future speech alterations, which may interfere with self-esteem, social and professional life.

