

# 4<sup>th</sup> European Otolaryngology-ENT Surgery Conference

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## 3<sup>rd</sup> International Conference on Craniofacial Surgery

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### Neuromuscular electrical stimulation in Obstructive Sleep Apnea Syndrome (OSAS)

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Obstructive sleep apnea syndrome (OSAS) is characterized by repetitive episodes of upper airway occlusion during sleep associated with sleep fragmentation and daytime hypersomnolence. It's well established that the most effective treatment for OSAS is continuous positive airway pressure (CPAP) but adherence is limited. However, new and promising therapeutic modalities have been used to improve the management of swallowing, voice and orofacial myofunctional conditions. One of them is the neuromuscular electrical stimulation (NMES) used to promote sensory and excitatory stimuli that facilitate strength gain and endurance of musculature and improve orofacial functions as well.

Based on studies of other specialties and on our clinical experience, we perform a therapy using intraoral neuromuscular electrical stimulation at a sensory and excitatory level with the FORMA® extensors on the soft palate, lateral pharyngeal wall, lips, tongue (lateral/lower side) and cheeks; myofunctional oral and oropharyngeal exercises are associated. Noticeable improvement on the Mallampati score, sleep questionnaires (Epworth and Pittsburg), polysomnography data and snoring measures were achieved as result.

Details of two OSAS cases will be shown demonstrating the technique including parameters of electrical stimulation used. The combined use of NMES, and "conventional" therapy techniques was effective to reduce the symptoms of sleep apnea and offer stronger patients adherence.



### Biography

Dr. Ana Paula Lefèvre M. - Speech Therapist; Master in Health Sciences; PhD in Public Health Coordinator of the Epidemiology Committee of the *Sociedade Brasileira de Fonoaudiologia* Founding partner of ENSI - National School of Integrated Health, São Paulo, Brazil Experience as a graduate and post-graduation teacher; also work as clinical therapist on orofacial and myofunctional disorders and neurological rehabilitation. Currently coordinates the Training course in Electrical Stimulation applied to the Speech and Hearing Clinic

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