T-I-051

Functional adequation of the stomatognathic system by means of maxillae functional orthopedic treatment and prevention of respiratory disorders related to sleep disorders - case report.

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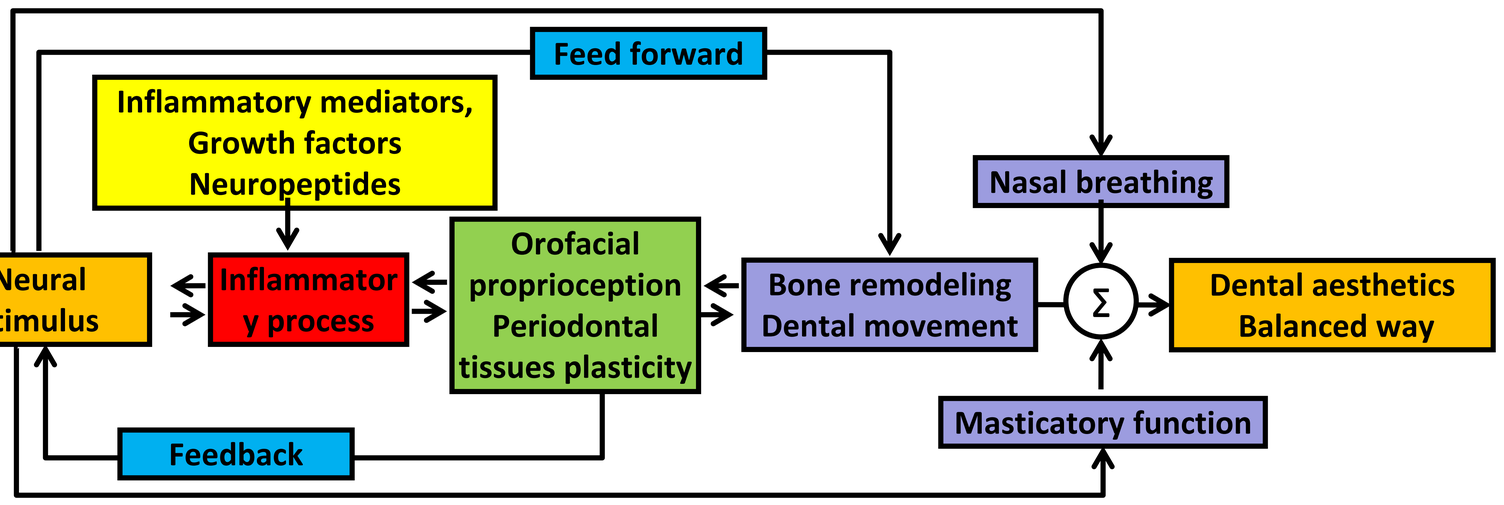
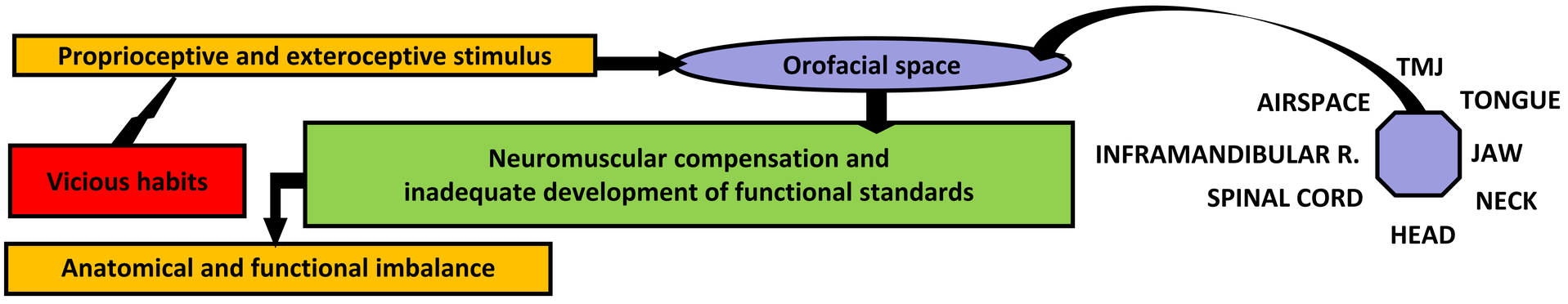
A precondition for the bone remodeling and dental movement activities is the occurrence of an inflammatory process triggered by the neural stimulus by means of the Functional Jaw Orthopedic (FJO) appliance, captured by the orofacial proprioception. Inflammatory mediators, growth factors and neuropeptides play roles in the periodontal tissues plasticity with varied degree of connectivity through synaptic mechanisms that act in a vast neural net. This vast neural net is interconnected by feed forward and feedback structures projections in the transmission of neural stimulus with high neuroplasticity potential. They are closely related with dental eruption, occlusion and mastication, suggesting that the mechanical stimuli due to the dental eruption are a necessary condition to the differentiation and maturation of the dentoalveolar process. Together with the mouth functions, nasal breathing is also a factor of equal importance in the conformation of the dental arches for both the masticatory function and the dental aesthetics to occur in a balanced way.

Functional Jaw Orthopedic appliance:



This neuromolding interface is observed in the functional priority octagon, where the head, neck, jaw and tongue position is intimately connected to the airspace, inframandibular region, and spinal cord. The intention of presenting two clinical cases is to show how the FJO treatment stimulates the growth direction and the development of the bone bases with the correction of oral functions.



Two male children, with mouth-breathing and alteration on functional priority octagon with skeletal and dental open bite treated with FJO appliance as Simões Network and Planas.

Pat. #1 07/19/96

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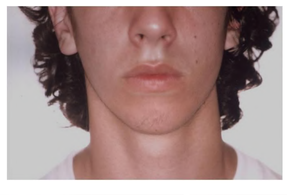
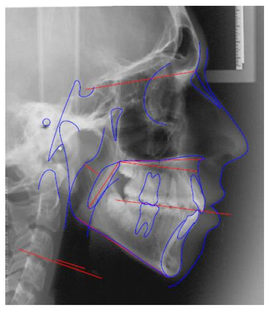
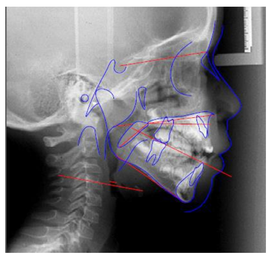




Cephalometric analise

	Patient 1		Patient 2	
Age	610m	15y	4y6m	12y5m
Mandibular Angle	138,5°	130°	140°	124°
Mandibular Diagonal	98 mm	135 mm	100 mm	116 mm
Superior Posterior Pharingeal Space	9,51 mm	13,15 mm	12,94 mm	11,07 mm
Inferior Posterior Pharingeal Space	12,55 mm	19,45 mm	11,81 mm	11,68 mm
Lower Posterior Pharingeal Space	11,53 mm	20,57 mm	5,18 mm	7.93 mm

Pat. #2 11/17/99



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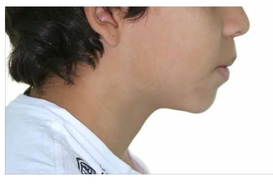

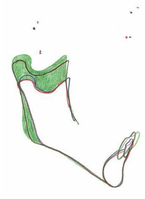

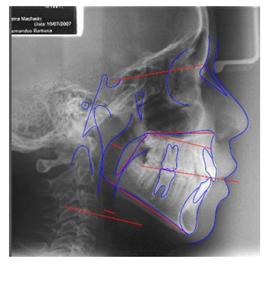

After the treatment, we observe the recovery of the functional priority octagon, with alteration of growth direction of mandible and the interrelationship with the maxilla, increase in the air space with reduction in the soft palate length. Additional studies must be performed with objective data related to sleep, comparing the restoration of the functional skeletal pattern and the quality and architecture of sleep.