

Postural Control, Alignment and Respiration

Integrating Body Systems for Improved Function

**Η γλώσσα της ομιλίας θα είναι η Αγγλική (μετάφραση στην Ελληνική).
Οι συμμετέχοντες θα χρειαστούν μια κούκλα 18 - 24" για την πρακτική εξάσκηση των
προσομοιώσεων των θεραπευτικών στρατηγικών.**

Respiration and postural control are linked systems. The task of integrating the components of postural control, alignment, and respiratory coordination/control during the completion of functional activities is a challenge for children with neuromuscular disorders. Facilitating integration of these systems is also a challenge in our treatment, regardless of our professional discipline. Our patients may exhibit impairments specifically within the respiratory system, as well as impairments in the neuromuscular and musculoskeletal systems that may impact efficient and coordinated respiratory function. Integration of dynamic respiratory control is a key to enhancing functional skill regardless of the discipline providing treatment.

In this session, we will explore the relationships between respiration/respiratory coordination, postural control, biomechanic alignment and activation of appropriate muscle synergies in the execution of functional skills. This content will include discussion of the “dual” roles of the diaphragm as both a respiratory and postural muscle. Current research, case studies and simulation of treatment strategies will be presented to explore improvement of dynamic respiratory coordination and control, and how this integration compliments our treatment of feeding/swallowing and phonation/speech intelligibility limitations in our pediatric patients. There will be specific consideration of how application of the Contemporary NDTA™ Practice Model can complement, and more directly impact the postural system to improve function and increase participation for our patients.

Audience: PT, OT, SLP

Session Outcomes:

At the end of this session participants will be able to:

1. Delineate the anatomical/physiological relationships between the respiratory/laryngeal systems and postural control strategies.
2. Discuss the relationship between respiratory phases and the creation of positive/negative pressures to facilitate feeding/swallowing function.
3. Describe how treatment strategies to increase rib cage mobility and expansion, spinal and head/neck alignment, shoulder girdle stability, abdominal activity, and balance of flexor/extensor synergies for improved respiratory coordination, increased vocal

intensity and increased duration of phonation with potential impact upon postural control and balance.

4. Describe treatment strategies appropriate to facilitate improved efficiency and safety in feeding/swallowing in the pediatric patient.
5. In application to case studies presented, discuss development of a treatment plan sequence applying elements of the NDTA™ Practice Model to facilitate improved coordination of controlled and efficient respiration within