

Linking Muscle Structure and Function in Individuals with Cerebral Palsy: Implications for Exercise Prescription Across the Lifespan

June 21

Tuesday, 12:30pm

Hybrid - Rosedale Room and Zoom

For Researchers



Speaker:

Noelle G. Moreau, P.T., Ph.D.

Professor

*Department of Physical Therapy
Louisiana State University Health
Sciences Center*

Host: Kathleen M. Friel, Ph.D.

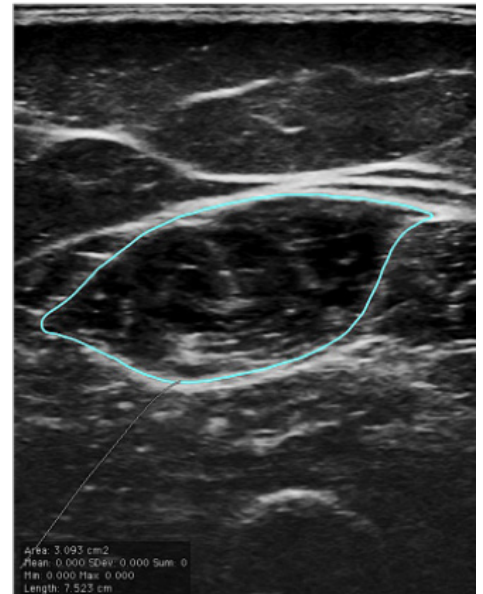
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Abstract

Using the ICF model as a theoretical framework, this lecture will describe the relationships between muscle structure and function across the lifespan in individuals with cerebral palsy (CP). Structural and functional changes in muscle will be linked with activity and participation, with an emphasis on gait and mobility. The speaker will place an emphasis on treatment strategies with established criteria for dosing—including frequency, volume, duration, intensity, and movement speed—with a focus on structural and functional changes of muscle in CP.



1. Moreau NG, Lieber RL. **Effects of voluntary exercise on muscle structure and function in cerebral palsy.** *Dev Med Child Neurol.* 2022 Jun;64(6):700-708. doi: 10.1111/dmcn.15173. Epub 2022 Feb 10. Review. PubMed PMID: 35142371; PubMed Central PMCID: PMC9086177.
2. Bergwell H, Trevarrow M, Corr B, Baker S, Reelfs H, Wilson TW, Moreau NG, Kurz MJ. **Power training alters somatosensory cortical activity of youth with cerebral palsy.** *Ann Clin Transl Neurol.* 2022 May;9(5):659-668. doi: 10.1002/acn3.51545. Epub 2022 Mar 17. PubMed PMID: 35297546; PubMed Central PMCID: PMC9082383.
3. Busboom M, Corr B, Reelfs A, Trevarrow M, Reelfs H, Baker S, Bergwell H, Wilson TW, Moreau NG, Kurz MJ. **Therapeutic Lower Extremity Power Training Alters the Sensorimotor Cortical Activity of Individuals With Cerebral Palsy.** *Arch Rehabil Res Clin Transl.* 2022 Mar;4(1):100180. doi: 10.1016/j.arrct.2022.100180. eCollection 2022 Mar. PubMed PMID: 35282149; PubMed Central PMCID: PMC8904886.

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