Biomechanics of Running in Cerebral Palsy

Investigators

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Summary / Overview

This project seeks to characterize the biomechanics of running in children with cerebral palsy ages 7-14. Children with spastic diplegia, spastic hemiplegia and topical development will be compared and walking will be compared to running. Biomechanical variables under study are lower extremity 3-kinematics, kinetics, and temporal spatial characteristics. Lower extremity range of motion, alignment, and arch structure will also be compared. The central hypothesis is that children with CP who are able to run, have lower extremity alignment, biomechanical characteristics and running performance that are different from their peers without CP and that the magnitude of the differences is related to diminished participation. The long-term goal of this research direction is to develop and
implement safe and effective therapeutic interventions to enhance the running ability of children and adolescents to support meaningful participation in life activities, play, fitness and sport activity. The current study will be part of a series of studies necessary to inform and propose a running intervention clinical trial for children and adolescents with CP.

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Participating Sites

Shriners Hospital of Philadelphia
University of Delaware

Related Link

http://www.cpirf.org/

Contact Us

If you are interested in learning more about our current running study projects, please contact Dr. Margo Orlin at Margo.N.Orlin@drexel.edu.