

Physical Therapy as a Catalyst to Address Health Disparities Experienced by Adults with Cerebral Palsy

Lead Presenter:

Mary Gannotti, PT, PhD

Course Description

Persons with disabilities face many health inequities resulting from stigma, discrimination, poverty, exclusion from education and employment, and barriers faced in the health system itself. Among persons with disability, adults with cerebral palsy (CP) are a particularly vulnerable subgroup. In general, persons with disabilities have twice the risk of developing conditions such as depression, asthma, diabetes, stroke, obesity or poor oral health; while adults with CP have three, four, or five times the risk for these same conditions. More than 60% of adults with CP experience functional decline and 70% experience chronic pain with aging. Yet, adults with CP and musculoskeletal pain are less likely than adults without CP to use physical therapy. It is time to change that!

Physical therapy can be a catalyst for addressing the health disparities that exist for adults with cerebral palsy. Exercise can mitigate many secondary conditions, and a life span approach is needed. The cardiovascular and musculoskeletal system should be targeted in adolescence, alongside strategies for joint protection. Wellness, mindfulness, and an ongoing fitness plan are critical for young, middle, and older adults with CP. Evidence exists to support the efficacy of variety of interventions for adults with CP. Changes in spasticity, weakness, and fatigue that occur with aging can be mitigated by targeted therapeutic exercise and energy conservation techniques. Identifying ways to participate in aerobic exercise, group exercise, or any type of adapted fitness can improve social participation, depression, and anxiety. Maintenance therapy may be warranted to manage pain intensity and interference, maintain transfer status, or for overall wellbeing. A variety of interventions will be reviewed along with considerations for adults with CP. Sports, orthopedic, pelvic floor, and neurologic physical therapists have much to offer to close the gap in health outcomes for adults with CP.

Learning Objectives

1. Be able to identify the risks adults with CP face for secondary conditions.
2. Be able to identify the ways exercise and skilled physical therapy can provide preventative care for lifespan wellness
3. Be able to identify the ways exercise and skilled physical therapy can mitigate the symptoms associated with functional decline and chronic pain.
4. Be able to identify institutional, federal, or policy barriers to adults with CP experience when trying to access therapeutic exercise for lifespan wellbeing.

High Intensity Gait Training and Exercise with individuals with neurologic dysfunction and significant motor impairment

Lead Presenter:

Mary Gannotti, PT, PhD

Jillian Kossbiel and Erika Ozdemirer

Course Description

In this session, we will review the assessments and interventions employed with participants with significant motor impairment who are enrolled in a high intensity gait training and exercise program. Hawks in Motion: High Intensity Gait and Exercise Program for People with Neurologic Disability is a community-based exercise program designed and implemented by doctoral students at the University of Hartford. The program aims to implement the American Physical Therapy Association, Academy of Neurologic Physical Therapy (ANPT) Clinical Practice Guidelines for High Intensity Gait Training and the American College of Sports Medicine recommendations for power training by modifying recommendations from 3x's a week to 2x's a week. The program has used implementation science as a framework and is in its fifth and final Plan Do Study Act Cycle. Outcomes are being assessed using both person reported and APTA CORE Outcome measures. Several of the participants in the program have presented with significant motoric impairments, and have required problem solving to achieve therapeutic intensity and to document measurable change. We will review several case studies of participants with significant motor disability from a variety of etiologies, such as acquired brain injury, multiple cerebral vascular accidents, cerebral palsy, incomplete spinal cord injury. Therapeutic interventions include high intensity gait training with and without body weight support, exercise focusing on power training and speed of movement, and obtaining rate of perceived exertion over a 6/10 for 60% of the 1-hour session, along with continuous heart rate monitoring. Presentation will include videos of interventions, discussion of rationale, and presentation of alternative activities.

Individual and programmatic outcomes to date will be reviewed. Recommendations will be made to clinicians for optimizing dose for individuals with significant motor impairment in both the clinic and community.

Learning Objectives

1. Participants will recognize the limitations of the ANPT CORE outcome measures for individuals with significant motor disability.
2. Participants will identify the benefits of high intensity exercise for people with significant motor disability from a neurologic condition.
3. Participants will identify indicators to monitor intensity for individuals with significant motor disability and appropriate outcome measures.
4. Participants will be able to design a treatment session that provides opportunities for high intensity exercise for people with significant motor disability.

Mary Gannotti bio: Training in physical therapy, medical anthropology and public health. Work includes validation of Spanish translation of the Pediatric Evaluation of Disability Inventory, ethnography of childhood disability, outcomes of adults with cerebral palsy, dosing, and health services research. Interests include dosing for bone health and pain management among adults with cerebral palsy. CP Research Network Co-chair Adult Work Group and Community Registry Adult Surveys on Function and Pain.

(will be updated to include pediatric objectives and case study)