

“Braking Bad”

Eccentric Control from Talking to Walking

Nechama Karman, PT, MS, PCS



Children's[™]
Healthcare of Atlanta

Monday, April 28, 2025

Children's Healthcare of Atlanta

[Arthur M. Blank Hospital](#), Classroom 1401

2220 N. Druid Hills Rd.

Atlanta, GA 30329

Agenda

7:30-8:00 am	<i>Registration & Continental Breakfast</i>
8:00-8:30 am	Introduction to Topic: Eccentrics!
8:30-9:45 am	Biomechanical and Neuromuscular Links Between Respiration, Posture and Movement
9:45-10:00 am	<i>Break</i>
10:00-11:25 am	Elements of, and Impediments to, Achieving an Energy-Efficient Gait Pattern --Importance of eccentric control
11:25 am-12:15 pm	Lab: Introduction to PNF Agonistic Reversal Technique --Eccentric resistance training and neuromotor re-education
12:15-1:15 pm	<i>Lunch (on your own)</i>
1:15-2:15 pm	Lab: Treatment Techniques --Practicing eccentric resistive exercise techniques with a wide variety of activities and postures with the goal of optimizing postural control for safety and efficiency of movement
2:15-2:30 pm	<i>Break</i>
2:30-4:30 pm	Lab: Treatment Techniques, continued
4:30-5:00 pm	Lab & Course Summary --Show 'n Tell: In small groups, solve a motor problem and show your results to the class.
5:00 pm	<i>Adjourn</i>
= 7.5 Hours of Instruction	

Course Description

Eccentric muscle contractions are the brakes of the human movement system. Although there is yet little direct research on voicing eccentrics, preliminary data shows that glottal control is integral to upright postural control. Modulation of glottal constriction, such as during voicing, regulates intra-thoracic pressure, and by extension, intra-abdominal pressure, both of which are necessary for finely tuned postural control. The speakers will present novel ideas on the role of eccentrics in trunk control from talking to walking. In the normal gait pattern, the majority of muscle contractions are eccentric, yielding remarkable efficiency: harnessing momentum and ground reaction forces to minimize the energy cost of walking. In individuals with neurological injuries, movement impairments impede the ability to generate eccentric contractions or to time muscle contractions correctly, yielding co-contraction and inefficiency. The speakers will identify how these impairments impede postural control and gait ability and how to specifically address them using voicing as a mechanism to promote eccentric muscle contractions in intervention programs to minimize negative effects on gait and maximize walking performance. Interactive laboratory experiences will allow participants to practice application of these methods across a variety of functional tasks.

Registration (includes continental breakfast and snacks)

Rehab Professionals	\$165
2 or More Participants from Same Facility	\$140
Children's PRN Rehab Staff	\$100
Children's Full/Part Time Rehab Staff (Manager approval required)	FREE

Register online today at <https://cvent.me/3eKmlQ>

Contact michelle.moore@choa.org for more information.

If you must cancel your conference registration, notify us at least seven days before the course and we will issue a refund, minus a \$25 administrative fee. No-shows or cancellations received less than seven days prior to the course will not receive a refund.

Target Audience

Physical, occupational and speech therapists.

Learning Outcomes

At the conclusion of the conference, the participant will be better able to:

- State how the mechanics of breathing, talking, and postural control are inter-active and inter-dependent components of normal movement strategies using a soda-pop can as a conceptual model.
- Discuss the potential benefits of utilizing voicing/breathing strategies with eccentric trunk activities to refine postural control.
- Identify inefficient elements of gait patterns that are often present in individuals with neurological impairments.
- Select and perform intervention strategies and/or techniques to elicit eccentric muscle contractions and address timing and alignment deficits that adversely affect reach, gait, transfers, sustained phonations, and voice volume in a wide range of patients across the lifespan.

Continuing Education

Continuing Education Credits for Physical Therapists have been approved through the **APTA Georgia for 7.5 contact hours**. These credits may apply toward licensure in other states.

Direct contact hours for Occupational Therapists have been approved through the **Georgia Occupational Therapy Association (GOTA) for 7.5 contact hours**. These credits may apply toward licensure in other states.



ASHA CE
APPROVED PROVIDER

Children's Healthcare of Atlanta

Intermediate Level
.75 ASHA CEUs

Satisfactory completion of this activity for ASHA credit involves active participation in the conference, and completion of the post test and evaluation at the conclusion of the conference.

Accommodations

Marriott Atlanta Northeast/Emory Area

2000 Century Boulevard NE
Atlanta, GA 30345

[Click here](#) for Children's Corporate Rates

The Brookhaven Atlanta Hotel

2061 North Druid Hills Road
Atlanta, GA 30329-1808

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Speaker

Nechama Karman, PT, MS, PCS received her MSPT from Columbia University in 1994, her Advanced MS in orthopedic PT from Touro College in 1998, and has completed her Health Sciences PhD coursework at Seton Hall University. Nechama is an APTA board-certified pediatric clinical specialist and the chief clinical educator at Mobility Research for LiteGait nationally and internationally. In addition, Nechama owns a private practice in NYC focusing on complex neurological conditions and complex pelvic conditions.

Nechama has completed two invited Massery faculty apprenticeships. In 2016, she became Mary's first certified faculty member for the "Breathing" course! And in 2019, she was the first certified faculty for Mary's "I Survived" musculoskeletal course. Two huge accomplishments! In addition, she co-authored the "Braking Bad" course with Mary.

One of Nechama's proudest "Mary Massery" moments occurred when she treated a man suffering from prostatectomy-related incontinence using Mary's approach. She taught him to transfer without incontinence for the first time in 9 months - all in under 15 minutes! She is passionate about helping other therapists learn these important concepts.

Speaker Disclosure

Nechama Karman, PT, MS, PCS—Consultant for Mobility Research, receiving an honorarium from Children's Healthcare of Atlanta.

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