

# Published Study Results: IM for Rehab of Blast Related TBI



## Course Description:

Dr. Nelson will present the findings of a recently completed randomized controlled, trial of Interactive Metronome (IM) therapy in the treatment of persisting cognitive symptoms following blast-related traumatic brain injury in a sample of active duty Soldiers. Soldiers were randomly assigned to receive either standard rehabilitation care, or standard care plus Interactive Metronome therapy. Initial findings show that IM therapy significantly improved Attention, Immediate Memory, and Delayed Memory functioning. Indicators of neuroplastic change suggest that brain changes due to IM therapy account for large portions of the variance in neuropsychological test performance. Six month follow-up data are currently being collected. Preliminary results were published in the journal *Neuropsychology* in 2013 with additional publications pending completion of the study and further analysis of electro-cortical and follow-up data.

**\*Contact hours are offered pending successful completion of a written exam at the end of the course.**

## Target Audience:

This course welcomes the following professionals who have completed the Interactive Metronome Certification Course.

- Speech and Language Pathologist
- Speech and Language Pathology Asst
- Audiologist
- Occupational Therapist
- Certified Occupational Therapy Asst
- Physical Therapist
- Physical Therapy Asst
- Athletic Trainer
- Licensed Medical, Rehabilitation or Mental Health Professional
- Music Therapist
- Educator

## Instructional Level:

Introductory

## Learning Outcomes:

Upon completion of this course, participants will be able to:

- Explain the effects of blast related traumatic brain injury on daily function;
- Discuss specific cognitive functions affected by IM therapy;
- Discuss brain changes related to IM therapy;
- Explain brain-behavior relationships involved in IM therapy.

**\*Note: This course covers information that pertains to licensed therapists and therapy assistants. COTA and PTA professionals must practice IM under the supervision of a licensed OT or PT.**

## Specific Learning Outcomes for Speech-Language Pathologists & Audiologists:

- Explain the effects of blast related traumatic brain injury on cognitive-communicative and social/behavioral skills;
- Discuss specific cognitive-communicative functions affected by IM therapy;
- Discuss brain changes related to IM therapy;
- Explain brain-behavior relationships involved in IM therapy.

**\*Note: This course covers information that pertains to licensed therapists and therapy assistants. SLPA professionals must practice IM under the supervision of a licensed SLP.**

## Instructor:

**Lonnie Nelson, Ph.D.**

**Dr. Nelson** earned his Ph.D. in Clinical Psychology from the University of Arizona in 2004. He completed a postdoctoral fellowship in Rehabilitation Psychology at the University of Washington Harborview Medical Center in 2005. He has worked with the Defense and Veterans Brain Injury Center as a Research Neuropsychologist since 2007. His primary research

interests are in the domain of neuroplasticity, neural repair, and health promotion. He is currently an Acting Assistant Professor at the University of Washington School of Public Health, Department of Health Services.

**Disclosures:**

**Instructor Financial Disclosure(s):** Dr. Nelson first presented on this topic during the IM Conference 2012 & was compensated for travel & lodging expenses by Interactive Metronome, Inc. He did not receive any form of compensation for the presentation of the same content again in this course. Dr. Nelson does not receive royalties or any form of compensation for the continued publication of this course and does not sell or receive compensation for the sale of Interactive Metronome products.

**Instructor Nonfinancial Disclosure(s):** Dr. Nelson has conducted independent research on the use of Interactive Metronome technology for blast-related traumatic brain injury. Interactive Metronome provided training and material support for the research, but did not provide funding.

**Course Content Disclosure:**

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**Agenda (60 minutes):**

- Speaker introduction & disclosure
- Study design and inclusion/exclusion criteria
- Measures
- Sample Descriptive Statistics
- Intervention and Adherence to Protocol
- Neuropsychological Outcomes
- Electrocortical Markers of Neuroplastic Change
- Summary
- Q&A
- Online post-test & course evaluation

**Instructional Methods:**

LECTURE, PPT

**CEUs Offered for:**

0.1 ASHA (SLP)

0.1 AOTA / 1.25 NBCOT PDUs (OT/COTA)

PT/PTA & Other Disciplines Not Listed Above: If your discipline or state is not listed above, you may submit paperwork to your state board or association for CEUs if they allow you to do so. Please check with your state board/association prior to registering for this course.

This is not a co-sponsored or cooperative course offering. Interactive Metronome, Inc. is the organization responsible for creating the content & awarding ASHA & AOTA CEUs.



Interactive Metronome is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. See course information for number of ASHA CEUs, instructional level and content area. ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.

This course is offered for 0.1 ASHA CEU (Introductory level, Professional area).

Effective July 1, 2011, individuals must meet at least one of the following conditions in order to be eligible to earn ASHA CEUs.

- ASHA Member (includes Life member and International affiliates)
- ASHA Certificate of Clinical Competence (CCC) Holder
- Licensed by a state or provincial regulatory agency to practice speech-language pathology (SLP) or audiology
- Credentialed by a state regulatory agency to practice SLP or audiology

- Credentialed by a national regulatory agency to practice SLP or audiology
- Currently enrolled in a masters or doctoral program in SLP or audiology



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Therapy Association, Inc.**

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