

# Emerge



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A Child's Place

Sept. 2013

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## Children with ADD/ADHD Advance Two Grade Levels in 12 Weeks



Bonnie Hacker, MHS, OTR/L  
Founder / Director

In July, Gerry Leisman, of The National Institute for Brain and Rehabilitation Sciences, and colleagues published a promising, controlled study of a non-pharmacological treatment for attention deficit disorder (ADD) / attention deficit hyperactivity disorder (ADHD).<sup>1</sup> This study followed 122 American children ages six through 12 with verified ADD/ADHD. Children in the treatment group received 36 1-hour sessions over 12 weeks. Pre and post testing revealed that, at the end of the 12 weeks, the majority of children advanced two-grade levels in tests that could benefit from improved attention alone: Word Reading (62%), Spelling (52%), Written Expression (76%), and Listening Comprehension (82%). **Parental ratings in the Brown Attention Deficit Disorder Scales improved so much that 81% of the children no longer rated as ADD/ADHD on the Brown Scale.**



The treatment plans in this study were individualized and multimodal, but the core of the treatment plan was synchronized metronome training (SMT), also known as Interactive Metronome. **Emerge - A Child's Place offers this sort of treatment plan including SMT.** The interdisciplinary, multimodal activities in the study included sensory stimulation, motor training, aerobic strength and conditioning, academic training, reflex inhibition exercises, dietary changes, and lifestyle management. In synchronized metronome training, a child wears a headset and hears tones in a rhythmic pattern. Children try to clap or tap their toes at the exact time of the tone. Emerge's Interactive Metronome uses sensors at the child's feet or worn on the child's hand to measure the timeliness of the clapping or toe tapping. This computerized system determines the accuracy of movements in milliseconds. The Interactive Metronome provides both visual and auditory feedback about the accuracy of the tapping or clapping so children can continuously improve their performance. The SMT treatment builds on the understanding that mental skills of motor planning and sequencing serve as part of the foundation for many other skills. Improvements in motor planning and sequencing have been connected with improvements in attention, concentration, reading skills, behavior, balance, gait, endurance, strength, and coordination.

**This current study adds to a growing body of research demonstrating the effectiveness of SMT, especially for children with attention challenges.**<sup>2-6</sup> In a double-blind, placebo-controlled study of children diagnosed with ADHD, children working with the Interactive Metronome showed significant improvement in attention, coordination, reading, aggression, impulsivity, and other measures. In another study involving 40 students with low reading achievement, students working with the Interactive Metronome increased their reading fluency the equivalent of 1.67 grade levels after just 12 Metronome sessions. A separate study involving 585 children found that 12 sessions of Interactive Metronome improved reading fluency by 2.25 grade levels and math fluency by 1.7 grade levels. Various reports have found SMT helpful with pediatric challenges such as sensory integration disorder, non-verbal learning disorder, ADD, ADHD, autism spectrum disorder, dyspraxia, and developmental coordination disorder. If you have a child facing any of these challenges, please feel free to contact Emerge - A Child's Place to discuss therapeutic alternatives.

Please tell parents about Emerge - A Child's Place  
Believing in a Child's Potential to Flourish

## References:

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