

# Emerge



A Child's Place

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Occupational Therapy  
Speech Therapy

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Serving children from  
birth to 14 years old

### Using therapy to improve conditions such as:

Delayed Speech  
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Non-communicative Speech  
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Language Disorders  
Feeding Difficulties  
Autism/Asperger's/PDD  
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Cerebral Palsy  
Sensory Integration  
Disorders  
Sensory Modulation  
Disorders  
Handwriting Impairments  
Fine & Gross Motor Delays

A Private, Independent  
Provider

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## Can Sensory – Motor Training Cure ADD / ADHD?



Bonnie Hacker, OT  
Founder / Director

In a study published last year in the *International Journal of Adolescent Medicine and Health*, Gerry Leisman, MD and colleagues sought to measure the effects of a sensory - motor training program including Interactive Metronome on children diagnosed with attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD). After only 12 weeks of treatment including 36 one-hour sessions, all children were tested on the Brown Attention Deficit Disorder Scale, and **81% tested as no longer demonstrating ADD/ADHD behaviors.**<sup>1</sup>

We have previously reported to you on the ability of Interactive Metronome training to create improvements in reading, attention, coordination, aggression, and impulsivity. Leisman's study focusing on Interactive Metronome and the ADD/ADHD diagnosis is the latest addition to the growing body of literature. With the Interactive Metronome at Emerge, 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. Dr. Leisman made Interactive Metronome part of their program of sensory stimulation, motor training, aerobic strength and conditioning, and academic training.



They treated 122 children ages six through twelve who had a confirmed diagnosis of ADD or ADHD. Children with significant co-existing conditions were excluded. All children were on stimulant therapy, and their stimulant therapy remained unchanged throughout the study period. At the beginning and end of the twelve week treatment period, all children took the Wechsler Individual Achievement Tests [WIAT-II] and the Brown Attention Deficit Disorder Scales [BADD]. Dr. Leisman's study was designed primarily to measure changes in academic ability. **As with previous studies,<sup>2-5</sup> children demonstrated a two grade level improvement or greater in listening comprehension (82% of children), spelling (52%), and written expression (76%).** For inclusion in the study, researchers tested each child for ADD/ADHD. Dr. Leisman and colleagues took the extra step of testing the children for ADD/ADHD at the conclusion of the study. Eighty-one percent no longer met ADD/ADHD diagnostic criteria on the Brown Scale.

In discussion, Gerry Leisman, MD made statements that mirrored earlier discussions of ADD/ADHD in this bulletin. Citing some support from electrophysiologic coherence studies of the brain, he hypothesized that ADD/ADHD has strong underpinnings in sensory processing and motor coordination deficits. The right amount of arousal from somatosensory input strongly influences learning processes and social functioning. This is an optimistic hypothesis in that sensory processing in children can be remodeled.



## The Fun Place for Therapy

At Emerge, children find spacious rooms, large windows, colorful surroundings, and lots of toys and playful equipment. In general, Emerge is a place children like at first sight and look forward to visiting again. Important therapy has never been so much fun.

Please tell parents about Emerge – A Child's Place.

## References

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