

# Proficiency Gains With AAC Device

## How Interactive Metronome Helped



**“Adam”** is

a 14-year-old boy who suffers from a plethora of impairments due to a near drowning accident that occurred when he was 11 months of age. These impairments include: spastic quadriplegia with significant ATNR (asymmetrical tonic neck reflex) problems, seizure disorder, visual impairments and cortical blindness. He also required a g-tube. Adam had difficulty developing communication skills, as well as cognitive, developmental and motor challenges.

Educators used observation scales with standardized measures and determined Adam as severe/profound mentally handicapped. He was placed in a program in school for children with severe physical disabilities. This environment made it difficult to accurately assess his cognitive function. He was also poorly motivated because he had no reliable communication system. Even under these conditions, Adam’s visual skills started improving, as well as his language skills and he started to develop a sense of humor. Adam’s grandmother saw the potential Adam could make if he had more attention, therefore he was moved to being home-schooled.

Adam worked with a team of Speech & Occupational Therapists and he was introduced to the Dynavox system to help him communicate. Adam was beginning to recognize sign language and started to vocalize. Interactive Metronome was introduced to help Adam with focus, attention, and coordination.

The Interactive Metronome (IM) is an assessment and treatment tool used by over 15,000 providers in hospitals and clinics throughout the United States and Canada to improve the neurological processes of motor planning, sequencing and processing. Interactive Metronome provides a structured, goal-oriented process that challenges the patient to synchronize a range of hand and foot exercises to a precise computer-generated reference tone heard through headphones. The patient attempts to match the rhythmic beat with repetitive motor actions. A patented auditory-visual

guidance system provides immediate feedback measured in milliseconds, and a score is provided.

Initially Adam only did IM hand exercises in conjunction with his scanner in which he would point to specified letters on a 2-dimensional QWERTY keyboard and spell. Later in treatment, IM foot exercises were introduced and he was able to ambulate with a gait-trainer. The use of IM enabled Adam to become more proficient at his AAC devices; he improved accuracy on the auditory scanner with the use of his Dynavox. He was even able to use a foot switch to activate his Vanguard communication device, prior he could only use a head switch.

Before the use of IM, Adam could not perform any ADLs, he could not sit unsupported and could not feed himself. After using IM, Adam was able to demonstrate higher-level skills and was able to do math and science at his age level. He could communicate with a spell board and Vanguard. Through it all he maintained his great sense of humor. Ultimately Adam became more motivated, gained self-confidence and became independent. In 2006, Adam was awarded the Chair Scholar Scholarship, a pre-paid four-year college tuition for students with significant disabilities seeking a regular diploma. His therapist, LoRaine Jones, Ph.D. M.A. CCC-SLP, said, “...a single controlled movement with Interactive Metronome was the beginning.”

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