

## CLINICAL RESULTS

### SPINAL CORD INJURY

A 32-year-old male with paraparesis underwent IM rehabilitation training after demonstrating significant impairments with hip and ankle equilibrium reactions. Prior to IM, his heels were not able to touch the floor during ambulation and he could only tolerate the treadmill for 2 minutes at 0.5 mph. A total of 19 IM training sessions were conducted. After training, he was able to sit, then stand independently, walk on a treadmill for over 30 minutes at 1.2 mph, and ambulate 130 feet with only minimal contact guard assistance.

### CEREBRAL VASCULAR ACCIDENT (CVA)

A 46-year-old mortgage manager sustained a Cerebral Vascular Accident and presented with a vestibular disorder. He suffered from severe dizziness with head and eye movement, mild problem solving difficulties, pronounced ataxic gait, poor coordination, jumping difficulties, and loss of balance. After 11 sessions with the Interactive Metronome, the man performed all advanced balance skills with improved coordination. He could jump and perform jumping jacks without loss of balance, and dizziness decreased to 20% of the time. He was independent with executive level problem solving skills.

### TRAUMATIC BRAIN INJURY (TBI)

D.S. suffered a traumatic brain injury (TBI) in a motor vehicle accident when he was 19 years old. Before IM, D.S. displayed very jerky motions, an unstable waddle-like gait, and a severe speech stutter. In the years following his injury, he had been able to regain primary gross motor and speech functions. D.S. was 38 years old when he underwent IM training. By the time D.S. had completed his sixth IM therapy session, he had significantly improved precise gross motor control of his arms. Upon completing IM training, D.S. demonstrated symmetrical gait and improved speech.

## ABOUT INTERACTIVE METRONOME, INC.

Interactive Metronome was developed in the early 1990s and immediately proved of great benefit to children diagnosed with learning and developmental disorders. Backed by years of clinical research and supported by prominent medical leaders in the industry, IM soon gained national attention as a breakthrough intervention to help those patients increase attention & concentration, motor control & coordination, language processing and control of impulsivity.

In recent years, innovative therapists have discovered the positive effects that IM can have on patients with acquired neurological and motor deficits. Rehabilitation hospitals and clinics now use IM in much the same way as their learning and developmental colleagues, to care for patients diagnosed with Stroke, Brain Injury, Balance Disorders and Parkinson's.

Interactive Metronome's application is so broad because it measures and improves motor planning and sequencing, a critical part of the central nervous system. IM's Rehabilitation Technologies Division (RTD) was formed to enhance traditional approaches to rehabilitation.

Today, there are more than 2,500 certified IM providers in over 1,700 clinics, hospitals and universities throughout the United States and Canada. Each day our community of providers continues to grow. IM has received an abundance of media recognition including the CBS Early Show, CNN News, US News and World Report, as well as various segments that have aired on hundreds of TV affiliates, radio stations and national publications.



**A REVOLUTION IN NEUROLOGICAL  
AND MOTOR REHABILITATION**

## WHAT IS IM?

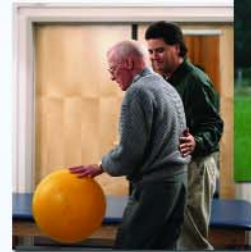
The Interactive Metronome (IM) is a brain-based rehabilitation assessment and training program developed to directly improve the processing abilities that affect attention, motor planning, and sequencing. This, in turn, strengthens motor skills, including mobility and gross motor function, and many fundamental cognitive capacities such as planning, organizing, and language.

## HOW DOES IM WORK?



The IM program provides a structured, goal-oriented training process that challenges the patient to precisely match a computer generated beat. Participants are instructed to synchronize various hand and foot exercises to a reference tone heard through headphones. The patient attempts to match the rhythmic beat with repetitive motor actions such as tapping his/her toes on a floor sensor mat or hand clapping while wearing an IM glove with palm trigger.

A patented audio or audio and visual guidance system provides immediate feedback. The difference between the patient's performance and the computer generated beat is measured in milliseconds. The score provided indicates timing accuracy.



## BENEFITS

More than a decade of clinical research and case studies on IM demonstrates that gains in motor planning, rhythmicity, timing and sequencing lead to improvements in...

- Attention and Concentration
- Language Processing
- Behavior (Aggression & Impulsivity)
- Fine/Gross Motor Skills
- Balance & Gait
- Strength & Endurance
- Coordination
- Motor Skills for Independent Living
- Independence with Prosthetic Limbs

## WHO CAN BENEFIT?

Individuals with motor planning and sequencing problems, speech and language delays, motor and sensory disorders, learning disabilities, and various cognitive and physical deficits may benefit from the IM program. Adult and pediatric patients who have benefited from IM include those with:

- Traumatic Brain Injury (TBI)
- Cerebral Vascular Accident (CVA)
- Balance Disorders
- Limb Amputation
- Parkinson's Disease
- Multiple Sclerosis
- Incomplete Spinal Cord Injury
- Decline in Function
- Developmental Disorders

## WHY USE IM?

*"We are applying IM in conjunction with traditional multidisciplinary treatment to inpatient and outpatient adults and children. IM training has expedited our clients' transition from intensive inpatient therapy to a less intensive outpatient program. We have seen significant improvements in gait and coordination as well as attention and mental processing."*

Cheryl Miller-Scott, OTR/L, National Director of Clinical Services, HealthSouth Hospitals

*"I was particularly interested in IM because, like some of the other intensive modalities with which I work, IM can help to drive changes in the brain. The result is that children can make excellent progress in short periods of time."*

Aditi Silverstein, M.A., CCC-SLP, President of Center for Rehabilitation and Development, Inc., Roanoke, VA

*"I have found Interactive Metronome to be a useful modality to improve bilateral integration skills and to increase single limb stance time. The patients displayed increased tolerance to engage in tasks which were longer in duration and more complex."*

Tracy Cueli-Dutil, DPT,  
Miami Children's Hospital/Dan Marino Center, Miami, FL