

IM HELPS ADULTS RECOVER FROM STROKE

Bob was an active 71 year old right handed man who was independent with all tasks, enjoyed golfing, working outdoors and spending time with his family. He was admitted to Kansas Rehabilitation Hospital after suffering a left parietal CVA resulting in:

- Right Hemiparesis
- Absent Right Upper Extremity Sensation
- Apraxia
- Severely Impaired Coordination
- Aphasia
- Impaired Right Lower Right Lower Extremity Sensation
- Decreased Right Upper/Lower Body Strength
- Poor Balance

His initial OT assessment included use of the Interactive Metronome. The Interactive Metronome (IM) program 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.

Bob required "hand over hand" assistance to perform all Upper Extremity IM exercises and assistance of a second person to maintain his standing balance. Upon admission, Bob required moderate physical assistance for all basic activities of daily living (ADL) tasks and mobility. He had no functional use of his right arm despite the ability to demonstrate full active motion because of his poor sensory awareness. IM exercises were included in his inpatient OT sessions at least three times each week.

After a 20-day inpatient stay with intensive OT, PT, and ST services, he returned home with his wife at a modified Independent level for basic self care tasks and ambulated without an assistive device.



Bob continued his rehabilitation on an outpatient OT basis. These sessions included upper and lower body Interactive Metronome exercises, ADL training, visual perceptual training, strengthening exercises, fine motor coordination exercises and compensatory training for his sensory deficits.

At discharge, Bob had performed 16,000 repetitions of upper and lower body IM exercises. He was able to perform right arm IM exercises at tempos ranging from 50-100 beats/min with amazing timing despite residual sensory problems. Bob was able to use his right arm to feed himself, write his name legibly, make a sandwich, dial the phone and tie his shoes. Bob's therapist recently ran into him at a high school swim meet. He gestured to her to climb up high in the bleachers to join him where they "caught up" on all of his latest activities!

Karen Farron, OTR/L, MHS, MIMC is certified as a "Masters Interactive Metronome" provider and a Senior Occupational Therapist at Kansas Rehabilitation Hospital in Topeka, Kansas. She also uses IM with patients who diagnoses include: multiple trauma, brain injury, Parkinson's Disease, surgical amputations, Multiple Sclerosis, Lower Extremity joint replacements/repairs, and pulmonary disease.