



**Your 1st Choice! Physical Therapy
& Movement Training Specialists**

Hello and Happy Spring!



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Physical Therapy News

April 2006 Quarterly Newsletter

You don't have to live with repeated injury and pain.

Make a difference in your health for life!

Stepping forward, backward, sideways, up and down and turning with a step out or moving from one foot to the other or movement without taking a step at all improves strength and balance! Tai Chi may be excellent cross-training for walking and may reduce symptoms and help prevent falls.

Three researchers involved in sports science, human kinetics, and physical education, compared Tai Chi, a Chinese form of exercise, to walking to determine foot movements and their impact on balance and lower body stance strengthening. Tai Chi involves 3-dimensional naturally occurring slow and even movement patterns. Walking involves naturally occurring movement patterns but of a quicker pace with fewer 3-dimensional qualities. The durations of single-limb stance in Tai Chi are almost 5x longer in duration each than in walking but occur with half the frequency. Tai Chi involves a high degree of double-limb stance while walking involves a great deal of sway (momentum) rather than balanced stance. The slow, controlled, and varied movements in Tai Chi provides opportunity to gain balance control and establish ones *center of gravity*. Adjustments for foot position accuracy in the practice of this movement facilitates and forces more muscles to be involved synergistically in the exercise leading to strength and coordination.

You can find this study in: Physical Therapy, vol. 86,#2, February 2006, 165-328.



Research Snapshots & News Briefs

Evidence-Based Clinical Practice Guidelines for Therapeutic Exercises in the Management of Rheumatoid Arthritis, RA, in Adults.

Ottawa Panel, Physical Therapy, vol. 84, 10, Oct. 2004. Results: Six positive recommendations of clinical benefit were developed on therapeutic exercises. The panel found evidence to recommend and support the use of functional strengthening for knees, whole-body functional strengthening & specifically quadriceps flexibility, general physical activity, whole-body low-intensity exercises, and management techniques for RA. 'Clinically important' benefits of pain reduction were reported to be shown for patients with RA, specifically seropositive or seronegative type, in comparing those with functional knee strengthening exercises and control group, no specific exercises. Pain relief and increased function were reported for patients at 12 weeks after participating in low-intensity, whole-body functional exercises. Those involved in high-intensity activities did not report pain relief.

This study supports low-intensity and training of specific functional strengthening with whole-body movements based on a review of controlled trials/outcomes. This study was not able to clearly identify the high and low-intensity exercises due to the design. The method involved a panel of professionals reviewing controlled trials. Further research is necessary based on current interventions and lifestyles of patients with RA.

Interactive Metronome® training for a 9-year-old boy with attention and motor coordination difficulties. By: Bartscherer, Melinda L.; Dole, Robin L.. *Physiotherapy Theory & Practice*, Dec2005, Vol. 21 Issue 4, p257-269, 13p, 3 charts, 2 graphs Abstract: The purpose of this case report is to describe a new intervention, the Interactive Metronome,® 1 for improving timing and coordination. A nine-year-old boy, with difficulties in attention and developmental delay of unspecified origin underwent a seven-week training program with the Interactive Metronome.® Before, during, and after training timing, accuracy was assessed with testing procedures consistent with the Interactive Metronome® training protocol. Before and after training, his gross and fine motor skills were examined with the Bruininiks-Oseretsky Test of Motor Proficiency (BOTMP). The child exhibited marked change in scores on both timing accuracy and several BOTMP subtests. Additionally his mother relayed anecdotal reports of changes in behavior at home.

Karen has been providing the IM program since 2001 and along with sustained focus, motor timing and coordination improvement, has found the IM to impact an individual's overall mood. Karen believes it assists in reducing "anxiety-like behaviors" for children and adults who may be experiencing sensory sensitivities, confusion & disorganization either unexplained or due to repeat whiplash, chronic pain, childhood illnesses, trauma. The mechanism is not understood but IM may decrease auditory sensitivities which if untreated, will negatively impact the nervous system as a whole.

About Us



We are a healthcare company dedicated to providing excellence in services directly to you at a price you can afford.

Certified Functional Manual Therapy Techniques

Orthopedic & Neuromuscular Physical Therapy

Back, Neck & Shoulder Pain

Joint & Muscular Dysfunction

Repetitive Injuries

Work, Auto, Sports & Leisure related injuries

Injury Prevention

Sole Supports Foot Orthotics

dress, casual, sport

Running Well™ Seminars

Injury Prevention & Joint Health

Running Form with Videotaped Analysis

Visuals & Videotaped Analysis

movement education

postural analysis & training

Neuro-rehab & Interactive Metronome

TBI, post concussion, whiplash, stroke

Sustained Mental Focus & Motor Accuracy



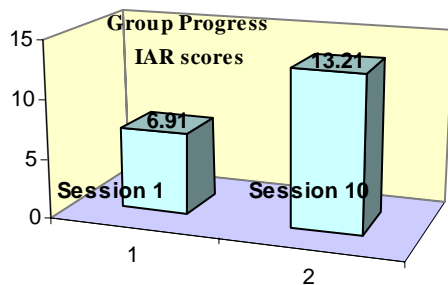
Physical & Occupational Therapy Movement Training Specialists

Interactive Metronome® is one treatment tool showing promising results for the treatment of : Attention and Executive Function; Motor Coordination; Language Processing; and Control of Impulsivity for children and adults.

Results of IM-Interactive Metronome® Program Training (2005)
www.interactivemetronome.com, research results & case studies.

Twenty nine student/athletes from St. Thomas Aquinas High School, Ft. Lauderdale, Florida, participated in IM training overall span of fifteen days. The results were measured using the IM measures of IAR, in-a-row, fig.1, and millisecond motor accuracy, fig.2.

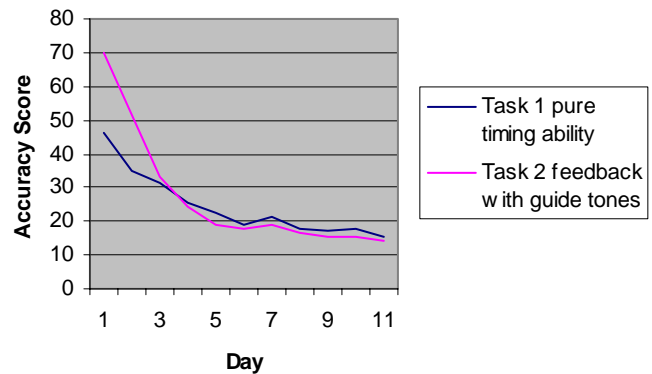
Fig. 1



IAR is the number of consecutive times a player performs within a +/- 15ms accuracy range.

Fig. 2

Group Progress in Motor Accuracy, Milleseconds, ms



The high school participants' ability to increase sustained focus and attention was observed in their ability to achieve 13 in-a-row *hits* and improve their pure timing ability (task 1) by 67% and timing using auditory feedback (task 2) by 79% and a motor accuracy score of 15.23ms placing them in the 99th % nationally. Fig.3 shows the same students' academic gains after completing the IM program. Both math and reading fluency scores improved over the same time period. Each student took a survey prior to the IM program and after completing the program.

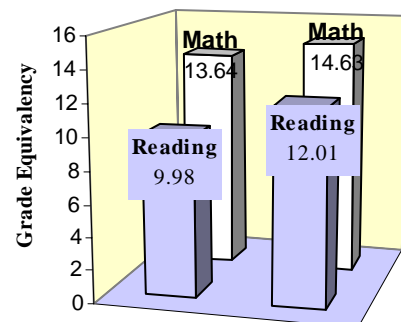
Results of the survey:

- 45% reported improved focus.
- 62% felt their team timing or synchronization improved.
- 50% decrease in offensive miscues.

Comments from the students, "I feel I get less mentally tired...", "I have been able to concentrate more at looking the ball into my hands.", "My reading concentration has improved ...", "I feel my body is more in sync with my mind and it reacts better than prior to IM training."

Fig.3

Pre/Post Reading & Math Fluency Test Results



Average Grade Pre-Test Scores Post-Test Scores

Physical Therapy & Movement Training Specialists

Affordable Physical Therapy Evaluation & Treatment Services



Your 1st Choice!

Have You Heard?

Karen Voss won the women's division in the Mardi Gras Marathon!



Yes, it is true, I was the very first woman and got to break the tape. Its funny, my arms flew up automatically when breaking the tape and I had a moment of queen for the day. It is an experience I would love for everyone to have at least once and I feel blessed to have had it. "Long may you run & when your opportunity to be a winner comes along,– go for it!"
Karen, 3:10:00 chip time.

2006 Schedule for *Running Well*[™] Seminars by Catalyst Therapies. Practice drills and video-taped analysis for running form, movement efficiency, and injury prevention!

Great preparation for early season events such as the Colfax Marathon on May 21st, the Denver marathon on October 15th, for multi-sport events, or for general wellness.

Six– Week Program , 90 minute sessions.

- on Tues Evening, 6pm. May 16th through June 20th.
- on Thurs. Evening, 6pm. June 8 through July 20. *No session July 4th week.*

Weekend *Running Well*[™] Seminars. 8 am till 12 or 1pm on Saturday and Sunday.

An intense and condensed version of the 6-wk program for individuals who would like the benefit of a small group but don't have the weekly space in their schedules. Call us if you know a group (3 or more) who would like to schedule a weekend session. Repeat video-taped analysis included.

Individual *Running Well*[™] Training Sessions available by appointment.

New! If you would like to hear more about running form and efficiency for injury prevention, schedule a one hour info-session with us. ***The session is free*** and will provide you with at least one thing you can use to begin a change in you own alignment for wellness. For scheduling a session, you will receive a \$50.00 gift certificate for our services.

A portion of each participants registration fee is donated to the charity, Colorado Youth at Risk

For more information contact Karen or Peter at 303-458-9660

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