

REHABILITATION TECHNIQUE IMPROVES ARM AND HAND USE IN PATIENTS WHO HAVE HAD A STROKE

Constraint-Induced Movement Therapy Improves Motor Ability and Use

ALEXANDRIA, VA, November 1, 2006 — Patients who have had a stroke reported great improvement in arm motor ability and use after Constraint-Induced Movement Therapy (CIMT), according to a randomized controlled trial published in the November 1 issue of the *Journal of the American Medical Association (JAMA)*.

The Extremity Constraint-Induced Therapy Evaluation (EXCITE) trial was a prospective, single-blind, randomized, multi-site trial conducted at seven US academic institutions between January 2001 and January 2003.

Physical therapist and lead researcher Steven L Wolf, PT, PhD, FAPTA, of the Emory University School of Medicine's Department of Rehabilitation Medicine in Atlanta, Georgia, and colleagues found that the CIMT group showed a 34 percent greater reduction in the time to complete tasks on the Wolf Motor Function Test than the usual customary care control group and .43 and .48 point greater increases in the amount and quality of movement scales of the 6-point Motor Activity Log at 1-year follow-up. In addition, the CIMT patients showed a greater decrease in self-perceived hand function difficulty than the control group.

In the CIMT approach, the less-impaired upper extremity was restrained (arm or hand; usually by placing the arm in a sling or the hand in a mitt for most waking hours) over a 2-week period. This encouraged use of the more-affected extremity. The approach also involved working with a clinician who used repetitive practice and shaping procedures among tasks selected by participants. Single-site studies have suggested that a 2-week program of CIMT may improve upper extremity function.

"The results of the EXCITE trial clearly suggest that a subset of patients who have had a stroke can experience more recovery than was previously thought possible," Wolf said. He added, "We really have no idea yet of the lengths that may be achieved by harnessing the learning powers of the human brain. Many more therapeutic and mechanistic clinical trials of stroke recovery must be conducted in the future."

The American Physical Therapy Association (APTA) is a national professional organization representing more than 69,000 physical therapists, physical therapist assistants, and students. APTA's goal is to foster advancements in physical therapist practice, research, and education.

To view the *JAMA* EXCITE Trial Video News Release, please go to www.jamamedia.org. For access to the EXCITE trial *JAMA* article and for more general information, please go to jama.ama-assn.org.