Muscle Activation Techniques™ as a way to improve the play of amateur golfers

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Fifteen amateur golfers participated in Neuromuscular Training Institute's (NMTI) golf fitness study. The program utilized Muscle Activation Techniques ™ (M.A.T.) as the basis for the biomechanical assessment and follow-up exercises. The results of this program are presented in this article.

The official explanation of M.A.T. is as follows:
Muscle Activation Techniques™ is a dynamic muscular assessment system that analyzes and corrects muscular imbalances. It has been successful in the reduction and elimination of pain and fatigue, as well as enhancing muscle recovery in athletes and non-athletes alike. This unique method was developed by Greg Roskopf, a biomechanics expert who has worked as a consultant for the Denver Broncos, Denver Nuggets and the Utah Jazz.

Golf is a bio-mechanically challenging sport. Athletes are expected to wind up their musculature on one side and rapidly unload on the other side. The acceleration/deceleration forces deliver tremendous rotational loads (torque) throughout the joints. The can happen hundreds of time during a single round of golf. It has been theorized that performance can be improved if range-of-motion and muscle strength are corrected to the point were they are similar bilaterally in all planes.

For this study, golfers were invited to demonstrate their swing in our clinic and then subjectively describe their limitations. The subjects were asked to participate in a functional screening test consisting of single-leg squats, reverse lunges and the overhead squat. Subjects were also asked to demonstrate dynamic flexibility by slowly rotating from side-to-side while standing and by slowly rotating from side-to-side while leaning forward at the waist. The entire session including the swings and the functional movement screen were videotaped for post treatment comparison.

Participants were then assessed using the Muscle Activation Techniques method. Muscle tightness was used as a screen to begin testing for muscle weakness or more appropriately, lack of proprioception. Proprioception, in this context, can be referred to as the control of muscle contraction. Over the course or 3-6 sessions, subjects were analyzed and treated using either direct palpation (to mechanically stimulate muscle spindle response) or with graded intensity isometric exercise. All subjects (except one) were prescribed specific exercises to be used as a maintenance program. One subject was found to be without functional range-of-motion or strength limitations and was excused from the study.

Post treatment, the subjects reported a feeling of "looseness" although no stretching had been performed. Subjects were asked to repeat their swing and functional movement tests while being videotaped. All reported being able to better control their movements while feeling a sense of strength and stability. Videotape analysis revealed more symmetrical range-of-motion with less "extraneous" movements during the functional tests. Club head

speed appeared to improve although the subjects claimed they weren't swinging any harder or faster.

All subjects in this study reported that they scored better in the ensuing rounds of golf. The average improvement was 3.4 strokes (range: 2-6 strokes over 18 holes). More importantly, golfers reported less muscular fatigue after a round. This may indicate that muscles groups acting synergistically don't have to work as hard. Muscle Activation Techniques can be a useful part of a golf fitness program when muscular balance is in question.

Scott Kroculick MSEd, RKT, CSCS, MAT Certified Specialist has over 20 years of experience in the Health and Fitness fields. He has worked as a Fitness Consultant, Program Director, Strength Coach, Cardiac Rehab Specialist, Registered Kinesiotherapist and Certified Personal Trainer. He has completed the requirements to become a MAT Certified Specialist and will soon be pursuing the Resistance Training Specialist Mastery certification. He is no stranger to advanced education and has written and published over 20 innovative training articles. For more info, about Scott and the The Neuromuscular Training Institute, go to www.nmti.org