

NEW RESEARCH SHOWS PROMISE FOR WHIPLASH DIAGNOSIS

Physical Therapists Lead in Discovery of Changes in Neck Musculature Following Injury

ALEXANDRIA, VA, November 30, 2006 — Researchers suggest that the replacement of muscle with fatty tissue of the extensor muscles of the neck following an injury might be the link in determining whether a patient has experienced a significant whiplash injury or experienced neck pain from another cause.

Female subjects with persistent whiplash-associated disorders (WAD) were found to have significantly greater fatty tissue following an injury, according to a cross-sectional investigative study.

American Physical Therapy Association member and lead physical therapist researcher James Elliott, PT, MS, along with colleagues at Regis University in Denver, Colorado, and The University of Queensland, Australia, discovered that, following a whiplash injury, women with WAD experienced a significant amount of fatty "infiltration" of the extensor muscles of the neck. Researchers studied 113 women between ages 18 and 45; 79 women had experienced chronic neck pain and disability lasting 3 months to 3 years following the initial injury, and 34 women in the study served as healthy control subjects. A magnetic resonance imaging (MRI) study was used to measure and quantify the fatty infiltrate in the cervical extensor muscles. The MRI results of the women with persistent long-term pain following a whiplash injury showed that large amounts of fatty tissue replaced the extensor muscles of the neck. The healthy group's MRI results did not reflect any fatty tissue.

"This is the first MRI study to identify specific muscular changes in the neck from people who have experienced long-term pain and disability following a whiplash injury," Elliott said. "Through our research we were able to conclude there is a difference in neck extensor muscles in patients with chronic WAD."

These findings may have significant medical and legal implications, as they relate to the automobile accidents. There are more than 16 million automobile accidents in the US each year. The costs associated with whiplash specifically brought on by rear-end automobile accidents costs the US \$2.7 billion annually.

The American Physical Therapy Association (APTA) is a national professional organization representing more than 70,000 physical therapists, physical therapist assistants, and students. APTA's goal is to foster advancements in physical therapist practice, research, and education.