

Efficacy of a Systemic Enzyme Formulation in the Treatment of Shoulder Tendinitis

Commentary by: Commentary by Joseph J. Collins, RN, ND

Reference: Szczurko O, Cooley K, Mills EJ, Zhou Q, Perri D, Seely D. Naturopathic treatment of rotator cuff tendinitis among Canadian postal workers: a randomized controlled trial. *Arthritis Rheum.* 2009;61(8):1037-1045.

Design: A prospective randomized clinical trial.

Participants: Canadian postal workers with rotator cuff tendonitis/tendinitis for a duration of greater than 6 weeks. The "Naturopathic Care" group had 43 members, of whom 25 were women and 18 were men. The "Physical Exercise" group had 42 members, of whom 25 were women and 17 were men.

Study Parameters Assessed: Patients were randomized to "Naturopathic Care" (NC) which included acupuncture, recommendation of an anti-inflammatory diet, and Phlogenzym® (which is called Wobenzym® PS in the United States), and enteric-coated polyezyme formulation containing trypsin, bromelain and rutin; or to the "Physical Exercise" (PE) group, which included physical exercise, hands-on shoulder muscle and joint therapy, and matched placebo tablets. Both groups consisted of well-developed therapeutic doctor-patient relationships, patient motivation, and consumption of a pill.

Primary Outcome Measures: The primary outcome measure was the Shoulder Pain and Disability Index (SPADI), and secondary outcomes were the pain Visual Analog Scale (VAS), Short Form 36 (SF-36), Measure Yourself Medical Outcomes Profile (MYMOP), and shoulder maximal range of motion.

Key Findings: Final total SPADI scores decreased by 54.5% in the NC group and by 18% in the PE group. Between-group differences in changes to SPADI scores showed statistically significant decreases in shoulder pain and disability in the NC group compared with the PE group. Significant differences between groups were also observed in the VAS, MYMOP, SF-36, and shoulder extension, flexion, and abduction, with the NC group showing superiority in each outcome.

Practice Implications: Naturopathic care that included acupuncture and Phlogenzym®/Wobenzym® PS dramatically improved patient outcomes compared to standard physical therapy. Significant results were achieved within 8 weeks of treatment and no serious adverse events were reported. A recent study by Lathia, et al, reported that acupuncture may be an effective treatment for chronic shoulder pain.¹ Although it is not possible to isolate the role of Phlogenzym®/Wobenzym® PS in this small study design, improvement in periartthritis humeroscapularis tendopathy was previously reported by Kullich and Klein, in a study in which Phlogenzym®/Wobenzym® PS was at least as successful as the non-steroidal anti-inflammatory drug diclofenac, with a moderate superiority of the enzyme formulation when calculated by the Mann-Whitney statistics.² Further, Szczurko and colleagues rightly point out that the Phlogenzym®/Wobenzym® PS formulation has demonstrated anti-inflammatory effects in a number of previous studies related to diseases or trauma of the joints, including osteoarthritis, rheumatic disease, and traumatic injury.^{3,4,5,6} In addition to shoulders, treatment with Phlogenzym®/Wobenzym® PS has also demonstrated improvement of function in knee and hip joints, including decreased pain and has been used as an adjuvant in the treatment of rheumatoid arthritis.^{7,8,9} Inflammatory tendinitis is mediated at least in part by cytokines, including elevated levels of TGF-beta.¹⁰ It has previously been reported that intestinal absorption of the Phlogenzym®/Wobenzym® PS formulation triggers the formation of TGF-beta binding species of alpha-2-macroglobulin (a naturally occurring serum protein), such that high concentrations of TGF-beta are reduced via enhanced clearance of alpha-2-macroglobulin-TGF-beta complexes.¹¹ Noting that the Phlogenzym®/Wobenzym® PS formulation was used successfully in conjunction with diet and acupuncture and observing that multimodal therapies are common in both naturopathic and allopathic medicine, Phlogenzym®/Wobenzym® PS might be a reasonable adjuvant, or component of comprehensive treatment, for the management of inflammatory joint pain.

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About Joseph J. Collins, RN, ND

Joseph J. Collins, RN, ND, is a board certified naturopathic physician who trained at the National College of Natural Medicine. He is also a registered nurse, with specialization in critical care. He is the author of *Discover Your Menopause Type*. His naturopathic medical practice has always focused on an integrative approach to healthcare, with an emphasis on integrative and functional endocrinology and cellular signaling. He has participated in the development and expansion of diagnostic laboratories and integrative healthcare clinics on both United States coasts. As an experienced medical educator he has presented educational lectures to physicians, pharmacists, and consumer groups on diagnostic and therapeutic applications within the integrated, functional medicine model.

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