



DigeZyme®

Alleviates Exercise-Induced Muscle Soreness



THEORY:

DELAYED ONSET MUSCLE SORENESS

(DOMS) is a well-documented phenomenon often resulting from muscle overload or strenuous exercise that goes beyond the usual intensity or duration. Any type of activity can trigger it, from yoga or running to weightlifting or sports training. Typically beginning within 24 hours post-workout and lasting a few days, DOMS may limit physical function due to the sensation of tenderness, deep ache and stiffness in muscles. Could a multi-enzyme complex help reduce pain associated with DOMS induced by standardized eccentric exercise?



PARAMETERS:

IN A DOUBLE-BLIND, placebo-controlled clinical trial, 20 healthy male participants received either placebo or 50 mg multi-enzyme complex capsule (as DigeZyme® from Sabinsa)—containing alpha-amylase, lipase, lactase, cellulase and neutral protease—three times daily for three days. Each participant completed a supervised exercise session at the test site to induce DOMS, starting 24 hours after taking the first supplement. Mean differences within the group and between groups were assessed at each data collection time-point using Analysis of Covariance (ANCOVA) and Wilcoxon signed rank sum test for all outcome measures.



OUTCOME:

Results suggested DigeZyme recipients experienced:



A **DECREASE** in the associated pain and tenderness induced by exercise



DECREMENTS in pain perception showed high statistical significance as observed in the McGill Pain Questionnaire



A **DECLINING** trend in the level of pro-inflammatory biomarkers (creatine kinase and lactate dehydrogenase) associated with muscle damage



IMPACT:

As most people are known to overdo their exercise from time to time, most people are therefore susceptible to DOMS.¹ Despite significant research, no single treatment has been shown to prevent or treat DOMS.² Nonsteroidal anti-inflammatories (NSAIDs) such as ibuprofen are widely used, but have been implicated in impairing and lengthening the healing process, as well as causing various side effects. A multi-enzyme complex that improves the outcome measures related to DOMS could serve as a welcome alternative. Sabinsa's Health Canada claim states, "DigeZyme helps reduce pain and tenderness associated with delayed onset of muscle soreness (DOMS) after exercise."

1. American College of Sports Medicine. 2011. acsm.org

2. *J. Strength Cond. Res.* 2001;23(4):7-13.

Source: Majeed M et al. "Multi-Enzyme Complex for the Management of Delayed Onset Muscle Soreness after Eccentric Exercise: A Randomized, Double Blind, Placebo Controlled Study." *Sports Nutr Ther.* 2016;1(3):113. DOI: 10.4172/2473-6449.1000113.