

College of Nursing, Health and Human Services

Dept. of Kinesiology, Recreation, and Sport Terre Haute. IN 47809

Phone: 812-237-4065 Fax: 812-237-4338

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Group X LLC c/o Jerry Hornback

Dear Mr. Hornback:

Described below are the ISU Exercise Physiology laboratory evaluation results of the GluteForce exercise equipment. The apparatus has been determined to be safe and effective for strengthening the hamstring and gluteus muscle groups with proper use. Studies that have focused on eccentric hamstring movements suggest such training is effective for the prevention of hamstring injuries and improved performance.

Sprinting is a common activity for athletes at all levels of competition. However, hamstring pulls are quite common. This is the result of quadriceps strength that overpowers weaker hamstrings. As the leg swings forward, it is the responsibility of the hamstrings to slow down the forward motion of the leg and prepare it for another propulsion phase. In this situation the quadriceps generate the force necessary for the leg to move forward by shortening or a concentric muscle contraction. The hamstrings control the forward movement generated by the quadriceps by generating force as it lengthens or an eccentric muscle contraction. If the hamstrings are not able to generate sufficient eccentric force, the concentric force of the quadriceps will overpower and overstretch the hamstring muscles causing a painful muscle pull. A simple exercise to increase eccentric hamstring strength and reduce the chance of a hamstring pull is the hamstring extension (also known as the Nordic Curl). The exercise is completed while an individual kneels on a floor and lowers himself to the floor in a facedown position while a partner secures the ankles. This is a challenging exercise even for those who are well trained and kneeling on a floor or some other solid surface is not too comfortable.

The Glute Force is an apparatus that was designed to take care of these problems: Padded pegs allow individuals to secure their ankles without the assistance of a partner, individuals kneel on a Bosu ball increasing comfort, and the angle can be adjusted to compensate for various user abilities.

The Glute Force is a much needed, well-designed piece of exercise equipment. It is functional and safe for all to use. I recommend it.

Thomas W. Nesser, PhD
Associate Professor
Department of Kinesiology, Recreation, and Sport
Indiana State University
Terre Haute, IN 47809