

Novel hamstring stretching device to treat lower back pain

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Technology description

Researchers at the UT Health SA have designed a machine that effectively stretches the hamstring muscles while reducing strain on the lower back. This machine maintains lumbar stability while stretching the hamstring muscles, resulting in the optimum posture needed for safe and effective stretching exercises with minimal lumbar strain. A measuring tool is incorporated into the device which can be used to record a variety of measurements to track the progress of a patient. The machine contains foot, leg and hip supports and is fully adjustable to accommodate a wide range of body types and sizes. The machine can be used in the doctor's office setting as well as the gym, home and even on the sidelines of sports events. The machine can be exceptionally useful in several sports such as football, soccer, track, gymnastics, ballet and martial arts to increase flexibility, as well as in the physical therapy gym for therapeutic purposes. The capability of this device to maintain pelvic stability allows for enhanced targeting of the hamstring muscles and stretching exercises that effectively ease hamstring tightness and alleviate lower back pain.

Background:

Lower back pain is a major problem in the United States. It is currently the leading cause of job-related disability and a common cause of missed work, resulting in impacted productivity and cost. Lower back pain is worsened and often directly caused by hamstring tightness. Hamstring tightness results in an inability to maintain correct posture which can further stress spinal discs, facet joints and ligaments, ultimately leading to lumbar pain. Patients suffering from lower back pain are often instructed to perform hamstring stretching exercises to ease muscle tightness and alleviate lower back pain. Unfortunately, traditional hamstring stretching exercises are ineffective because they fail to properly stabilize the pelvis while stretching.

Advantages

Safe and effective method to stretch hamstring muscles to treat lower back pain

Enables healthier, more active lifestyle

Fully adjustable to accommodate a wide range of body types and sizes

Incorporated measuring tool to allow user to accurately measure progress

Can be incorporated into an exercising routine to alleviate hamstring muscle tightness

Can be used in an athletic capacity to increase performance and ease muscle tightness

Institution

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