



Jacobs Ladder used in Lower Body and Back Rehabilitation

Jacobs Ladder was initially designed to accommodate people who had back pain and were unable to get aerobic exercise on traditional commercial equipment. The patented design resulted in a commercial cardio piece that accommodated not only people with back issues but also people with knee, ankle and hip problems.

USER CONTROLLED SPEED - Jacobs Ladder automatically adjusts to your speed. The faster you go, the faster it goes. Because of the unit's unique design, Jacobs Ladder immediately adjusts to speed up and slow down to match its user. This allows the attending medical professional to insure that the patient is not over or under worked. The readouts in Rate (Ft/Min), Distance, Calories, and Elapsed Time give the patient the ability to monitor progress over time.

MUSCULAR INVOLVEMENT AND ANGULAR POSITION - Induced by its ability to utilize a greater muscle mass (quads, calves, gluts, lats, pects, triceps, etc..) over a greater range of motion, Jacobs Ladder has the ability to strengthen previously injured areas without the impact of traditional techniques. Jacobs Ladder places the subject on a 40 degree angle thereby taking stress off of knee and hip joints while promoting closed chain lower extremity strengthening. This forward inclination of the body also reduces vertical loading of the thoracic and lumbar spinal segments, and facilitates recruitment of the intrinsic spinal musculature for stabilization and postural control. The simultaneous use of upper and lower extremities while controlling trunk movement can be used to supplement a core stabilization program. Jacobs Ladder places the subject in a position that takes load off of injured areas but offers the ability to work muscles adjacent to that area in an effort to stabilize and increase the healing process by inducing blood flow. Subjects have the ability to either use the rungs in a climbing motion or the side rails to work lower extremities alone.

INJURY PREVENTION - Similar to elliptical exercise, Jacobs Ladder is low impact on joints, back, shoulders and hips. This offers the subject the ability to develop both aerobically and anaerobically while strengthening areas susceptible to injury. Quad, knee, ankle and calf injuries are all reduced by a well-constructed periodization program involving Jacobs Ladder, weight training and flexibility.

Readouts give the user quantitative measures in which progress can be calculated. Distance in Feet, Rate in Feet/Minute, Heart Rate, Time and Calories all combine as a way for the subject and medical professional to measure rehabilitation progress.

Jacobs Ladder is also designed for the rugged commercial market. A welded, tubular steel frame, a chain and sprocket drive train, easy-to-clean ABS housing and solid wood rungs are all components of a machine that was built to last without costly maintenance. There is no motor drive as in most cardio equipment which further reduces costly repairs and increase life.