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Jacobs Ladder : The Next Level in Performance Conditioning

Jacob's Ladder, Inc. is a patented climbing machine with ladder-type rungs on a non-motorized continuous treadmill. The device was originally developed as an alternative to running, to take the stress off the back and to work the upper body. The result was the creation of Jacob's Ladder, a unique way to provide a high-intensity cardiovascular workout.

The Jacob's Ladder total body exerciser features ladder-type rungs on a 40 degree angled non-motorized continuous treadmill. To use the machine, exercisers simply snap on the control belt and begin climbing. The higher the exerciser reaches, the faster the ladder moves, and the more intense the workout becomes. To work at a more comfortable pace, the climber simply slows down. A braking device ensures that the Ladder stops when the exerciser reaches the lower rungs or stops climbing altogether. The machine also offers digital feedback on how many feet were climbed, rate of speed, what level of effort was put out, and how many calories were used in the process. But for all its simplicity, Jacob's Ladder offers its users some serious benefits.

Study after study confirms that exercise using both the arms and legs require more energy expenditure, and therefore burn more calories, than exercises using just the arms or the legs. So, unlike stair-climbers, stationary bikes, and other standard club equipment, Jacobs Ladder can offer exercisers a superb cardiovascular workout in a relatively short amount of time.

AEROBIC ENDURANCE - Because of the unit's unique design, Jacob's Ladder can be used to increase aerobic capacity beyond traditional stair climbers, ellipticals and treadmills. Unique in its ability to utilize a greater muscle mass (quads, calves, gluts, pects, triceps, etc..), Jacobs Ladder not only increases heart rate quicker than other machines but, correspondingly, results in increased VO2MAX levels. Aerobic capacity can be increased by longer (20-45 minutes) workouts at 70% maximum heart rate.

ANAEROBIC CAPACITY- Jacob's Ladder also offers the athlete/professional the option of HIIT (high intensity interval training). Because speed of the rungs is determined by the athlete/professional, HIIT interval training can be achieved by utilizing 1-3 minute intervals at 85-90% maximum heart rate. Jacob's Ladder emulates sprinting or stair climbing without incurring the high impact on joints. This is particularly important in sports such as soccer, wrestling, tennis, football, track, hockey, basketball and volleyball where lactate production and oxygen debt are key components to anaerobic capacity and improved performance.

INJURY PREVENTION - Similar to elliptical exercise, Jacob's Ladder provides low impact exercise for the back, shoulders, hips, and knees. This offers the athlete/professional the ability to develop both aerobically and anaerobically while functionally strengthening areas susceptible to in-season injury. Quad, knee, ankle and calves injuries are all reduced by a well constructed periodisation program involving Jacob's Ladder, weight training and flexibility.



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, Jacob's Ladder has the ability to strengthen previously injured areas without the impact of traditional techniques. Jacob's 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 and deep abdominal 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. Jacob's Ladder places the subject in a position that reduces loading of injured areas while offering the ability to work adjacent muscles in an effort to stabilize and increase the healing process by promoting blood flow. Subjects have the ability to either use the rungs in a climbing motion or the side rails to work lower extremities alone.

While traditional stair climbers, ellipticals and treadmills are well-suited for the recreational athlete, Jacob's Ladder was designed to offer the training athlete an improved training method for in-season, pre-season and post-season workouts. It offers the training professional a low-impact method of increasing aerobic endurance and anaerobic capacity. Its simple yet effective design offers the athlete/professional an unmatched cardio experience. 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 athlete, professional and the coach to measure aerobic and anaerobic capacity and therefore improved performance.

Jacob's 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.