

EXERFLY



Pacifying Patellar Tendon Pain

FWT vs Heavy resistance training





Background

Patellar tendinopathy is an injury that impacts sport participation, day to day function, and quality of life. Recommended treatment is eccentric or heavy slow resistance training exercise. Flywheel technology could be of benefit to patellar tendinopathy patients due to its eccentric loading characteristics.



A person is shown from the waist down, performing a flywheel resistance training exercise. They are standing on a black platform with a large, circular weight plate on the floor. The weight plate has "ER FLY" and "EXERCISE" written on it. The person is wearing a black tank top, black shorts, and black sneakers. A white strap is attached to the weight plate and is connected to a flywheel resistance training device. In the background, there is a rack of various weight plates on wheels. The entire image has a red overlay.

Purpose of study

The aim of this study by Ruffino et al (2021) therefore, was to determine the ability of flywheel resistance training (FRT) on reducing pain and improving function of patellar tendinopathy (PT) as compared to traditional heavy resistance training (HRT).





What they found

Both groups showed significant improvements in the variables of interest (see next slide) over the 12-week intervention with no statistically significant between-group differences in...



A photograph of an EXER-FLY exercise machine, which is a large, black, rectangular device with a circular flywheel in the center. The flywheel has the brand name 'EXER-FLY' and 'INERTIA TRAINING' printed on it. A person's feet in sneakers are visible on the machine's platform. The background is a light-colored wall. The entire image is overlaid with a semi-transparent red filter.

Variables

- Patient specific functional scale
- Visual analogue scales
- Provocative load tests
- Patellar tendon AP diameter
- Neovascularisation
- Ankle dorsiflexion
- Countermovement jump
- Triple hop for distance
- Leg extension
- Leg press
- Strength and power





Take home messages

For several decades, heavy eccentric and heavy slow resistance training have been considered the conservative cornerstone of managing lower limb tendinopathies. It appears, however, that FRT is equally effective for reducing pain, and improving function, strength, power, and tendon properties.

