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Raising the Challenge

Using suspension training bodyweight exercise in the clinic

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Suspension Training

The story of evolution teaches us that those who are willing to change can survive. We can apply this lesson to health care.

As the owner of a private physical therapy practice, I have seen a shift in the industry where, instead of just treating an injury, practitioners are now taking a more holistic approach to an individual's health and wellness.

In our clinic, we have found the "whole body wellness" approach complements the process of returning injured patients to an active lifestyle. The approach has affected both how we train patients in the clinic and how they train themselves outside the clinic setting.

The use of physio balls, foam rollers, elastic bands and balance boards are standard practice in physical therapy schools and are excellent for use in the early phases of injury recovery. Most gym settings provide these pieces of equipment so the patient can continue the prescribed exercise after being discharged.

The problem is, the body is an amazing structure; it will eventually adapt to repetitive stress. Over time, with training and consistency, the modalities listed above do not provide the stress or challenge required for a patient to continue to see improvements.

Current research finds that introducing perturbations or unstable/outside forces that require the body to respond and react while performing an exercise effectively increases overall strength. Our clinic observed positive results when we added suspension training bodyweight exercise to our injury rehab programs.

What is Suspension Training?

Suspension training bodyweight exercise is uniquely effective at enabling "loading" and "unloading" of movements to meet individual needs and goals.

This training can be performed using a suspension trainer or other type of device where a single anchor point supports the user's hands or feet while the opposite end of the body is in contact with the ground.

Suspension training allows you to manipulate body position and stability to provide multiplanar resistive and neuromuscular exercises in a proprioceptively rich state. Suspension training bodyweight exercise provides an excellent way to:

• Unload stretching and mobility exercises, such as a chest stretch at various angles and aiding with ROM.

• Unload partial weight-bearing exercises, such as a half squat, with weight in the straps to aid with lifting.

• Provide postural stability when learning a movement or minimize the fear of falling during certain activities, such as sitting to standing, with weight in the straps to assist the movement.

From these examples, you can see how suspension training can be used to unload a movement, thus allowing patients to progress and experience improved function.

Core Stability Training

Loaded movements incorporate traditional exercises using the body as the resistance. A comprehensive training plan includes core stability training, which is the foundation of most physical therapy and rehabilitation treatment programs.

We know having a stable foundation will help reduce lower back pain in an unstable spine, improve balance and allow for better pelvic and knee alignment for stepping up and down.

From the perspective of athletic movement, core stability increases power. In the clinic, we use various pieces of equipment to challenge the patient in an unstable environment; for instance, standing on a pillow, wobble board or half ball. A suspension trainer is another great tool to provide instability at many levels.

For example, with an upper-body exercise, the patient can start the activity with a wide stance, progress to a narrow stance, then to a single-leg stance. This requires more activation of the core muscles to be able to achieve the desired exercise movement.

For a lower-extremity exercise, placing one foot in the straps while performing lunges requires core stability to preserve balance while challenging the stance leg.

Today in clinics and gyms, the plank exercise is a popular activity to improve static core stability. You can further challenge this movement by lifting an extremity, or placing the participant's hands on a half ball or their feet on a stability ball.

With suspension training, you can increase the challenge by placing the feet in the foot cradles. This requires a strong core contraction to preserve a neutral spine. Bending the knees makes this activity a dynamic stability exercise.

Case Study

A 43-year-old mother complained of lower back and posterior hip pain while transitioning from the cycling portion to the runnning portion of a triathlon. She also suffered from pain after exercise.

She noted the pain was getting more frequent and lasting longer, thus affecting ADLs: climbing stairs, sitting to standing and prolonged standing.

After evaluation, we determined she was lacking core and lower-extremity strength to the point where it affected her endurance, for both parenting and triathlon.

We saw her in the clinic for six visits and focused on decreasing her pain with manual treatment and introduction to suspension training for her home program. We introduced her to flexibility exercises for her shoulders, core exercises with the added element of instability, and lower extremity eccentric and endurance exercises.

Once she was pain free and able to demonstrate good form with the suspension trainer, she bought one for home use.

Her husband hung the suspension trainer in their garage, and she had an exercise program that was challenging and sports specific, and only took 20 to 30 minutes, two times per week.

She was excited that the suspension trainer took up minimal space in her home, it offered easy accessibility to get a quick, effective workout, and she could pack it in her suitcase when traveling to race events.

Regardless of how one defines functional training, suspension training is an effective training tool. A variety of exercises can be performed along a continuum of low to high loads, or stable to unstable positions. Suspension training allows for a broad range of physical fitness qualities and outcomes, and promotes training in a proprioceptively rich training environment.

Chris Chorak is founder of Presidio Sport & Medicine, an active lifestyle and wellness clinic that specializes in physical therapy, orthopedic rehabilitation, athletic-related and overuse injuries, and sport-specific conditioning and training. Chorak graduated from Northwestern School of Medicine in 1988 with a degree in physical therapy and earned her undergraduate degree in athletic training from Purdue University. She is a member of the American Physical Therapy Association and holds a physical therapy license in California.