

Physical Therapy for Isolated PCL Injuries

An earlier Compass article reviewed the anatomy, biomechanics, mechanism of injury and the proper examination when finding an isolated posterior cruciate ligament (PCL) injury. This article review will discuss the physical therapy (PT) involved for those who are diagnosed with an isolated PCL injury. With this type of injury, a patient is usually first referred to physical therapy for conservative treatment. If conservative treatment does not help, then a more aggressive treatment is discussed. However, the sooner the PCL injury is found and PT is started, the more favorable to outcome will be.

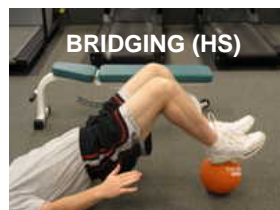
Physical therapists will mostly focus on quadriceps strengthening for patients with an isolated PCL injury. The quadriceps muscle will help limit posterior translation of the tibia on the femur, which is the normal role of an intact and healthy PCL. Stronger quadriceps muscle may also aid in absorbing forces across the knee which will help to decrease joint deterioration. This deterioration can lead to premature arthritis in the knee, particularly between the patellofemoral joint and medial femoral condyle. Open and closed kinetic chain exercises are both effective to help strengthen the quadriceps muscle. A patient can perform open kinetic chain knee extension exercises from 90°-45°. Closed kinetic chain or terminal knee extension is performed from 45°-full knee extension. This is best with the resistance applied distal to the knee.

The quadriceps muscle is not the only muscle that should be given attention to. It is also important to keep up strength in the hamstring and gastrocnemius muscles, yet, the sole focus is at the quadriceps. The hamstring muscles are of more focus when there is a deficient anterior cruciate ligament. Therefore, the best way to strengthen the hamstrings is in a closed kinetic chain exercise. An example of this is bridging. Strengthening of the gastrocnemius muscle is also recommended to help control the amount of posterior translation.

Additionally, bracing or orthotics is advantageous along with PT for those symptomatic patients if appropriate. A physical therapist will also need to educate a patient on the do's and don'ts of any other activity outside of PT. For example, running, sports, or aerobic activities will be based on progression and any signs and symptoms of the patient. Therapists follow a basic rule of thumb, if the activity causes an increase in painful symptoms or any swelling/effusion, then it is to be avoided.




CLOSED CHAIN WALL SQUATS



Reference: Garcia, C, Martin, R. Isolated posterior cruciate ligament injuries part II: natural history, rehabilitation principles and case study. *Orthopaedic Physical Therapy Practice*. 2007;19:137-141

NEWSWORTHY

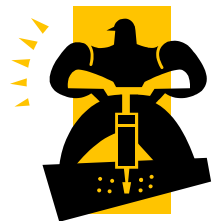
Goodbye From
Jacksonville
to Jacksonville:
Best Wishes to
Departing Therapists



Many thanks to Joe Frustaci, PT and Kelly Kippes, PT for their work as physical therapists at our clinic. Joe and Kelly are returning to Jacksonville, FLORIDA to begin work in February.

We wish them the best in their new careers and in their life together; in addition to career changes, they will be married April 12, 2008 in New Orleans, LA. They will be missed by staff and by patients!

PTCI To Present
Back Injury
Prevention Class to
Onslow Safety
Council



Leanne L. Burns, PT, MPT, Certified Ergonomics Assessment Specialist, will be presenting a Back-Safety class to Onslow county's Safety Council on February 21, 2008. The class will be held at Coastal Carolina Community College.

Burns' presentation is based on the clinic's industrial back school. She will include information on basic spinal anatomy and function, injury causes and prevention, LBI management, and basic biomechanics of lifting. All attendees will be instructed in simple back protection techniques "in the field" as well as proper lifting at home and at work.

"The highest reward for an act of kindness is not what you get by doing it, but what you become by doing it."