ACL Injury Prevention Program
What is the ACL???

The ACL or anterior cruciate ligament, attaches the front top portion of the shin bone (tibia) to the back bottom portion of the thigh bone (femur). This stops the tibia from sliding forward.

There are two ways in which the ACL can become injured. The first is through contact, which is typically seen in football.

The second is through non-contact. This usually happens when the athlete suddenly changes direction or lands from a jump with a hyperextended knee (AOSSM 2008).
Self Myofascial Release Exercises

**ITB Roll Out**

On your side, roll from the hip down to the outside of the leg. Stop just before the knee. Use your opposite leg to control the amount of pressure. Hold on the tender spots for 30-90 seconds. Perform 1-2 sets, daily.

**Hamstring Roll Out**

Start with the roller at the top, back portion of your legs. Roll down your leg until right above the back of the knee. Hold on tender spots for 30-90 seconds. Perform 1-2 sets, daily.

**Quadricep Roll Out**

On your stomach, roll from the bottom of the hip to just above the knee. Hold on any tender spots for 30-90 seconds. Perform 1-2 sets, daily.
**Latissimus Dorsi Roll Out**

Lying on your side, place the foam roller on the outer aspect of your shoulder blade with your arm fully extended. Use your legs to move back and forth on the roller. Perform for 30-90 seconds, 1-2 sets, daily.

**Adductor Roll Out**

Lying on your stomach, place both your hip and knee at 90 degrees over the foam roller. Starting at the groin roll toward the inside of the knee. Perform daily 1-2 sets and hold for 30-90 seconds.

**Calves Roll Out**

Support body weight with hands and calves only. Roll from the heel and stop just before the back of the knee, using your upper body to move over the roller. Hold for 30-90 seconds and perform 1-2 times, daily.

**Peroneal Roll Out**

Place the roller to the outside of the lower leg. Keep your hips off of the ground. Roll from below the knee to right above the ankle. Perform 1-2 sets daily. Holding for 30-90 seconds on any tender spots.

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Dynamic Stretches
(3x’s/wk   10-15 repetitions   1-3 sets)

Walking Lunges

Stand tall with both feet together, making sure to keep the back straight step forward with your right leg approx. 1-2 meters. Bend both knees and drop hips straight down toward the ground. The right thigh should be parallel with the ground, knees should not go past your toes. Push off with the back leg to standing and perform on the left.

Lateral Lunges

Step out with the right foot, make sure toes stay forward, foot flat, knee in line with toes. Squat through your right hip, keep your left leg straight. Make sure to keep your back flat and chest up. Come back to center flat and repeat on left side.

Hip In/Out

Hip In: Begin by lifting knee straight out to the side and rotate inward, then bring the leg down.
Hip Out: Begin by lifting knee straight up in front, then rotate out to the side and bring the leg down. Repeat on the opposite side.
Scorpions

Start lying face down, arms out the side so that you form a “T”. Lift one leg and cross it over the body to the opposite side. Bring the leg back to the starting position and repeat on the opposite side.

Inchworms

Keeping knees straight, reach down to the ground. Walk the hands out to the plank position, make sure to keep legs and elbows straight and do not let the back sag. Then slowly walk the feet in toward the hands. Continue to repeat.

Mountain Climbers

Start in the push up position, weight should be placed on the hands and toes. Begin by flexing the hip and the knee so that the knee is approx. inline with the hip. Reverse the position by extending the bent hip and knee, and flexing the opposite hip and knee.
Strength
(3x's/week 10-15 repetitions 1-3 sets)

Walking Lunge w/ Rotation

Lunge forward and drop your hips straight down to the ground, bending both the front and back knee. With your arms straight out, rotate your trunk and head to the right and return to starting position. Then rotate to the left. Do not let your front knee buckle inward or move past your toes.

Single Leg Squat

Starting in a single leg stance, maintain a tight core and drop hips straight down. Make sure knee does not move past your toes and that it does not buckle inward.

Forward Step Down

Standing on a step (4”, 6”, or 8”) place your hands on your hips. Step forward and have your heel gently tap the floor, then straighten your step leg. Maintain level hips and straight back. Do not let knee buckle inward. Repeat on opposite side.
Planks

On your stomach, come up to your elbows. Lift your hips off the floor and draw your bellybutton in to maintain a tight core. Your body should form a straight line. Back should not arch and hips should not sag.

Single Leg Glute Bridge

Lying on your back, bend your knees, making sure to keep them level. Straighten out one knee and push off your heel, lifting your hips off the floor. Return to starting position. Perform on opposite leg.

Vector Touch

Balance on one leg with your knee slightly bent. With your opposite leg reach out in front, out to the side, back on the angle and cross behind the leg. Hold each position for 3 seconds. Maintain level hips, flat back, head and chest up.
Side Plank with Abduction

Start in a traditional side plank position. Come up onto your elbow and lift your top leg. Hips should remain level and chest up.
Running
(3 x’s a week)

Forward Run w/ 3 Step Deceleration
Starting at one cone, sprint forward. As you begin to approach the second cone use a quick 3 step to decelerate. Continue this for 1 minute. Do not let knees go past the toes or let the knees buckle inward. (6 cones total)

Plant and Cut
Jog five steps forward then plant with your right and change direction to the left and accelerate. Continue another 5-7 steps (80-90% speed) before decelerating and planting on the left foot and changing direction to the right for a total of 6 times. Perform the exercise twice.

Bounding Run
Take 6-8 bounding steps with a high knee and jog. With each bound try to lift the knee as high as possible and swing opposite arm across the body. Do not let knee buckle inward, and maintain an upright torso.

Lateral Diagonal Run
Facing forward, run laterally to the the right. Stopping at the cone. Pivot off the right foot and laterally run to the left. Continue to alternate making sure that the hips and knees remain slightly bent and in line with the ankle. Avoid letting the knee move inward. Perform a total of 6 times.

Quick Forward and Backward
With an upright body, run quickly to the second cone and transition to running backwards to the first cone. Maintain a slightly flexed hip and knees and keep them inline with your feet. Repeat until course is completed. (6 cones total)
Plyometrics
(Perform for 30 seconds)

Lateral Hops over Cones
Place a 2” cone to your left and hop over it, making sure to land softly on the balls of your feet and bending your knee. Avoid letting the knees buckle inward. Repeat on the right side.
Progression: single leg hop.

Forward/Backward Hops over Cone
Standing with the 2” cone in front of you, hop over the cone making sure to land on the balls of your feet with your knees slightly bent. Now hop backwards with the same technique.
Progression: single leg hop.

Scissor Jumps
Standing in a split stance with your right leg forward, and knee in line with ankle. Push off your right foot and swing the left leg forward. Land on the ball of your foot with a slightly bent knee.
Make sure knee does not buckle inward.
Static Stretching
(Perform 30 seconds x2 each side)

ITB Stretch

Lying on your back, knee out straight begin to lift your leg with the strap and crossover to the opposite hip until a stretch is felt to the outside of the raised leg.

Piriformis Stretch

Lying on your back, bend both knees. Bring your left ankle to your right knee. Place your hands behind your right knee and pull toward your chest until you feel a gently pull in the left gluteal muscles.

Latissimus Stretch

Sitting on your knees, rest your wrist and hand on the physioball, drop your hips toward your heels.
Adductor Stretch

Spread legs evenly apart and slowly lower yourself toward the ground. A gentle stretch should be felt to the inner thighs. Make sure not to bounce.

Hamstring Stretch

With your right leg straight out in front of you, bring your left foot to your right inner thigh. Keeping your back straight, slowly lower your chest toward the ground. A stretch should be felt behind the extended leg. Do not bounce.
**Hip Flexor Stretch**

Lunge forward with your right leg, and bring your left knee down to the ground. Lean forward from your hips until a stretch is felt in the front of the left hip. Make sure your right knee does not go past your toes.

**Gastroc/Soleus Stretch**

Soleus- Standing with right foot back, knee slightly bent and forward leg bent. Be sure to keep your heel on the floor. Lean into the wall until a stretch is felt.

Gastroc- Standing with right foot back, leg straight and forward leg bent. Be sure to keep your heel on the floor. Lean into the wall until a stretch is felt.
References


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