

## **Common Injuries: Football**

### **Lower body:**

#### **Knee:**

**ACL (anterior cruciate ligament) injury:** The ACL is one of four ligaments in the knee. Its purpose is to connect the bones of the upper and lower knee. An ACL injury is a tear or sprain in the ligament.

**MCL (medial collateral ligament) injury:** The MC ligament attaches to the femur and tibia. An MCL injury is similar to an ACL in that it can sprain, stretch, or tear. This type of injury usually occurs after impact to the outside of the knee.

**Meniscus tear:** A meniscus is a cushion or pad between the joints of the thigh and shin bone (knee). Meniscus tears are most commonly caused by a twisting or turning suddenly with the foot in place and the knee at a bend.

**Non contact ACL injuries** are usually torn as a result of a quick deceleration, hyperextension or rotational injury. In most cases it is accompanied with a quick change of direction. When the knee is hit from the side, injuries to the ACL are often combined with a meniscus tear and MCL injuries. Dynamic knee valgus (knees in toes out) contributes to ACL injuries because of the torque applied to the knee joint. Research has also shown that a lack of hamstring strength can also contribute to ACL injuries.

#### **Ankle injuries:**

**Sprains:** An ankle sprain is an injury to a ligament (anterior tibiofibular, posterior tibiofibular, and interosseous ligament and membrane of the ankle. This injury most commonly occurs when the ankle rolls outward beyond its normal range of motion and sprains or tears the ligaments between the tibia and fibula. It can also happen when an athlete lands from a vertical jump, or a gets stepped on by another athlete. It is also associated with a quick change of direction.

#### **Upper thigh injuries:**

**Hamstring strain:** Is when the hamstring muscle is torn or strained.

**Quadriceps Strain:** Is when the quadriceps muscle is torn or strained.

The muscles in the upper thigh (hamstring, quadriceps, and adductor) work together as a team. Improper muscle balance can increase risk of injury. If one muscle is stronger than the others it puts the weaker muscle at a higher risk of injury. Tight muscles also increase risk of injury. These muscle groups are at a higher risk of injury (strain), because they cross

the hip and knee joint and are major muscles groups used in full speed activities, such as football and track.

### **Upper Body:**

#### **Shoulder Injuries:**

**Dislocation:** This injury occurs when the athlete falls directly on the shoulder and causes the top of the arm bone to be forced out of the shoulder socket.

**AC (acromioclavicular) joint injury:** The AC joint is where the collar bone meets the shoulder blade. The most common injuries to the AC joint are separation, and fractures (collar bone) which can lead to arthritis. The most common causes are a direct hit or fall on the tip of the shoulder or out stretched arm.

The shoulder girdle is the foundation of the shoulder joint and helps keep the shoulder stable. A lack of strength in the muscle that makes up the shoulder girdle and the upper back (trapezius, levator scapular, and rhomboids) can increase the risk of a shoulder injury. The throwing motion also places a high level of stress on the shoulder.

## **Injury Prevention Circuit**

This circuit is designed to minimize the risk of injury in the lower extremities, while increasing performance through sports specific movement exercises. In this circuit we will focus on the quadriceps, hamstrings, hip flexor, and gastrocnemius muscle groups. It is also important to stress proper landing technique, correct posture and minimize lateral knee movement.

### **Part 1: Flexibility/Stretch**

#### **Knee Hugs: 1 set x 25 yards**

- While standing upright lift the right foot off the floor and bring your knee to your chest
- As knee comes into chest grab your right leg below the knee
- Pull your right knee in as close as you can to your chest and as you do contract your left glute muscle.
- Step forward and repeat with the left side.
- Continue alternating sides as you walk forward.



Stretches the glutes, hamstrings, and hip flexor muscles.

**Hamstring Kicks: 1 set x 25 yards**

- While standing upright lift the right foot off the floor and bring your heel back to your hamstring.
- As your foot comes up bring your knee up
- Keep your knees high
- Step forward and repeat with the left side.
- Try not to take long strides.
- Alternate sides as you run



Stretches the glutes, hamstrings, and hip flexor muscles.

**Walking Forward lunges with trunk rotation: 1 set x 25 yards.**

- Step forward: Slowly lift the right foot off the floor and step forward, Keeping the abdominals engaged
- Lower your body toward the floor until your right knee is at a 90 degree angle
- While in this lunge, lean forward slightly at your hips. Keep the abdominals braced to stabilize the spine. Reach your hands forward toward the ground.
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- While in the lunge, rotate torso keeping your right hand on the ground rotate and lift your left arm toward the sky
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- Slowly rotate left arm back to the ground in front of your right leg and center your weight over the right leg, bring your upper body back upright.
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- Bring the left leg off of the ground and slowly swing it forward to initiate the next lunge.
- Repeat alternating sides.
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This exercise stretches the hip flexor of the back leg and the glute of the front leg as well as the core muscles. Increase body core temperature

**Heel to butt kicks: 1 set x 25 yards:**

- Bring right foot/heel straight back to butt
- As you bring right foot back right arm swing back, left arm swing up
- Next as right foot comes back down to the ground left foot comes up and back to butt
- As left foot comes back, left arm swing back, right arm swing up



This exercise stretches the quadriceps and hamstrings muscles.

## Part 2: Strength

### **Hamstring Curls with body ball: 2 sets x 10**

-Athlete should begin lying on their back placing the backs of your lower legs and heels on the top of a body/stability ball. Feet should be lined up with your hips and your foot in slight dorsiflexion.

-Arms should be flat on floor with palms down.

-Begin by contracting abdominal/core muscles to flatten lower back into the floor.

-Keeping the abdominals engaged, lift your hips up off the floor. While doing so press the backs of your lower legs and heels into the ball until your body is in a straight line from your heels to your shoulder blades.

-Slowly bend your knees and pull the ball toward your hips until you can rest the soles of your feet on top of the ball.

-Next, begin to move the ball away from your hips until the knees are straight, making sure the core, hamstrings, glutes remain engaged.

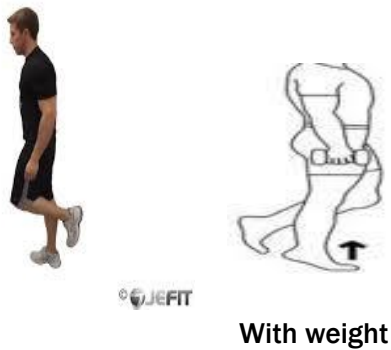


This is a hamstring strengthening exercise

**Single leg calf raises: 1 set per leg x 50**

- Start standing with the feet 8-12" apart
- Hands should be placed on a wall
- Begin with left foot off the floor and left knee bent. Slowly raise your right heel off the floor while keeping your knee straight.
- Hold the raise briefly and then lower right heel back to floor.
- Repeat with left heel for prescribed number of reps.

Variations: this exercise can also be done on an elevated surface, weight can be added (dumbbell in hand), or in a seated position with a weight over calf that is being elevated.



Seated with weight

This exercise strengthens the gastrocnemius muscle



### **Standing Squat with band: 2 sets x 15**

- Standing with the feet shoulder width and a resistance band around the knees.
- Band should be slightly tight at this position, but loose enough to fall off when knees are brought together
- While keeping back straight, lower the buttocks toward the floor. Make sure knees don't move past the toes.
- As lowering, squeeze knees outward
- Lower until knees are approximately 90 degrees

Variations: Can also use bands and do a more traditional squat. Keep bands under your feet and handles above shoulders. When performing exercise this way keep knees in shoulder width.



This exercise strengthens the glutes, quads, hamstrings. When band is around knees exercise also engages your hip muscles.

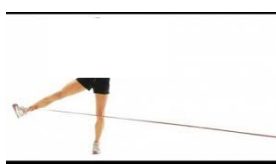
**Standing hip abduction/adduction with band: 1 set each way per leg x 10**

- Athlete will begin by standing with resistance band around left foot.
- The other end of the band should be securely anchored.
- Begin with abduction (leg swings away from body)
- Keep right leg firmly on the ground with your body weight on the right foot lift left foot slightly off the ground.
- Begin to swing left leg away from the body making sure you keep the leg straight.
- Swing out leg to regular range of motion.
- Repeat for recommended number of reps and repeat for right leg.

**Adduction:**

- Athlete will begin by standing with resistance band around left foot.
- The other end of the band should be securely anchored.
- Adduction (leg swings toward from body)
- Keep right leg firmly on the ground with your body weight on the right foot lift left foot slightly off the ground.
- Begin to swing left leg toward and across the body making sure you keep the leg straight.
- Swing leg to regular range of motion. Repeat for recommended number of reps and repeat for right leg.

Abduction



adduction

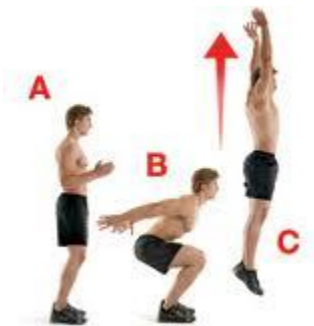


**This exercises strengthens the hip flexor muscles**

### **Part 3: Plyometrics**

#### **Squat Jumps: 2 sets x 10**

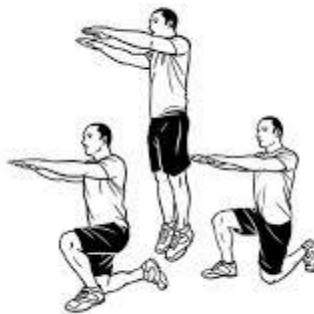
- Start standing with your feet shoulder width and arms by your side.
- Bend the waist and lower the butt toward the floor
- Lower to your knees are approximately 90 degrees
- Pull shoulder blades back and swing arms back
- Hold squat briefly
- Explode up through your lower body, extend your knees, hips, and ankles. Keep feet level and parallel to the floor.
- Land softly on the mid foot and roll into the heels. Push the hips back to help absorb impact. Waist should be slightly bent forward on landing.
- Make sure you do not lock knees on landing.



This exercise strengthens the glutes, hamstrings, and gastrocnemius as well and activating the core muscles. This exercise will also help develop proper landing technique.

**Scissor Jumps: 2 sets x 10**

- Start standing with your left leg forward and right leg extended behind you.
- Bend your left knee and lower your knee toward the floor. (lunge position)
- Hold arms straight out in front of you.
- Make sure the front knee is over the front feet
- Hold position briefly and then quickly jump up and switch legs.
- As you land and absorb impact through the legs, assume lunge position again
- Lower right knee to floor and repeat.



This exercise strengthens quadriceps, glutes, and hamstrings. It also develops proper landing technique.