

# ACL INJURY PREVENTION EXERCISES

**Warm-up:** Increase heart rate and break a sweat

**10 bodyweight squats:** Biomechanics and strength

1. Stand tall with chest out and back straight. Feet should be slightly wider than shoulder width.
2. Push hips back and bend at the knees into a squat. Squat in a comfortable range of motion and pause. Then, push yourself back up in good form. This completes one rep.

*Tips:*

- Keep a natural arch in your back. Look forward with your chin up when squatting. Do not round your back and look down.
- Imagine you are sitting down in a chair. Sit back with your core engaged.

**10 forward/back hip circles:** Hip mobility

1. Use wall, fence or partner for support. Engage core. Slightly bend stance leg.
2. Bring non-stance knee to chest, out to side, back and through. Repeat and reverse by extending leg back, out to side and to chest.

*Tips:*

- Keep core engaged. Move through full range of motion.
- Do not hunch upper body.

**10 standing 90/90 knee extension:** Quad muscle control

1. Use wall, fence or partner for support. Engage core. Slightly bend stance leg.

2. Bring non-stance knee to 90 degrees and extend knee to full extension and return to 90 degrees.
3. Switch legs.

*Tips:*

- Keep it slow and controlled.
- Keep knee up at 90 degrees.

**10 glute bridge march:** Glute activation and strength

1. Lie down face up with arms down at your sides.
2. With feet flat on the ground, raise your hips up until your body forms a straight line from your knees to your shoulders. Hold this position.
3. Raise your left knee up to your chest as far as you can while your hips are still up. Pause, lower knee back down. Now, raise left knee up. Alternate.

*Tips:*

- Feet should be facing forward and flat on the floor during the entire exercise.
- If lunging to the left, your left thigh should be parallel to the floor and your right leg should be straight with foot flat on the floor.
- Keep your head up and maintain the natural arch in your back.

**30-second mountain climber:** Core stability and strength

1. Assume a standard push-up position with arms straight and hands placed below shoulders, just outside of shoulder-width.

Your body should now form a straight line from your heels to your head.

2. Bring your knee to your chest. Return to the ground. Alternate and repeat.

### **10 quadruped extension and rotation:** Core and back mobility

1. Position yourself on hands and knees. Place your right hand behind your head. Be sure your lower back is straight.
2. Rotate your upper back inward so that your right elbow is pointed toward your left knee. Rotate as far as is comfortable.
3. Pause and then raise your right elbow toward the ceiling by rotating your upper back and head to the right as far as possible. This completes one rep. Switch sides.

#### *Tips:*

- Concentrate on keeping the motion in the upper back.
- Keep the lower back still.
- Be careful not to reach your elbow too far toward the opposite knee.

### **10 bodyweight side lunges:** Glute, hamstring and quad strength and biomechanics

1. Stand with feet shoulder-width apart. Non-stance knee will drive up as you step approximately double your current stance.
2. Shift your weight to the stepping leg, push hips back, bend knee and put weight over heel. Push through heel to return to starting position. Alternate legs.

### **50-meter accelerator:** Sprint form and cardio

1. Drive phase to 65-75 percent and maintain running form. Decelerate slow and controlled.
2. Repeat. (Strategically place exercise to re-raise heart rate.)

### **25-meter RDL walk:** Eccentric hamstring strength, neuromuscular control and balance

1. Engage core. Keep back straight as chest dips to ground, leg raises and opposite arm raises to be perpendicular to ground.

Return to upright position. Take a step forward with other leg and repeat.

### **25-meter high knee power skips:** Beginner plyometrics

1. Drive opposite arm and knee in skipping motion.

### **10 box jump downs:** Landing mechanics and eccentric quad strength

1. From the top of a box, place feet shoulder-width apart. Jump down, decelerating into a squat. Focus on control and biomechanics at hip, knee and ankle.

### **10 out-n-up power jumps:** Advanced plyometrics

1. Get in a loaded position to jump by placing your feet shoulder-width apart. Lower hips, bend knees and bring arms back.
2. Jump forward landing in a squatted position and immediately explode up off the ground into squat jump. Land in loaded position and repeat.

#### *Tips:*

- Be sure to sit back on heels and maintain quality squat form.
- Focus on landing softly.

### **Single-leg V up:** Lower core strength

1. Lay down on the ground with your back flat and your arms over the top of your head.
2. Lift one leg up off the ground, and as you bring your arms forward, lift your upper body up off the ground using your abs.
3. Don't round your back as you sit up.
4. Hold for a half second at the top and then lower yourself back down. Alternate legs.

### **10 alternating plyometric lunges:** Advanced plyometrics

1. Start in a split-lunge position.
2. Lower body down until your forward thigh is parallel to the ground and back knee is almost touching the ground. As soon as you reach this point, explode back up and alternate leg positions in the air.

3. As you land, drop back down into the lunge and then explode back up and switch feet positions again.

*Tips:*

- Don't stop after each lunge. Drop into the next lunge as soon as your feet hit the ground.
- Exhale as you push up and inhale on the way down.
- Swing your arms to gain momentum and balance.

**10 double line touches with explosion to stick:**

Lateral agility, plyometrics and biomechanics

1. You will need a line for this drill. Lateral bound to the line, touch both feet to the line and lateral bound out as far as you can. Land in a low balanced position on one foot and stick.
2. Repeat. Keep your feet quick and light on the inside with a controlled two second stick on the outside. Explode as far away from the line as possible on each rep.

*Tips:*

- Outside leg will always be the stick and outbounding leg.
- Start slow and progress to an aggressive lateral bound that you can still control the landing.

**10/5 change of direction sprint:** Agility, accelerate/ decelerate mechanics

1. Line up on a marked surface. Sprint 10 yards, decelerate in a controlled fashion, plant and replace, back pedal 5 yards, plant and replace, sprint 10 yards - 5 by 25 yards.

**Kneeling hip flexor stretch:** Flexibility

1. Start in a lunge position. Back knee can be flexed to increase stretch in quads.
2. Shift your weight forward until you feel the stretch in your hip. Hold the stretch for five deep inhales and exhales. Repeat on the other side.

**Elbow to instep lunge with rotation:** Flexibility

1. Start with your feet together standing on a mat.

2. Take a long lunge step with your right leg so that your left leg is fully extended behind you and your right leg forms a 90-degree angle. At the same time, twist your core to the left so that your right elbow is near your right foot and your shoulder is next to your knee.
3. Drive your hips to the floor and elongating the left leg. Hold this position for two deep inhales and exhales.
4. Then, rotate your chest towards the sky and reach with your right hand extended leaving it pointed to the sky. Hold for two deep inhales and exhales.
5. Bring your arm down slowly and return to standing position. Repeat with the other side.