

PEP: Injury Prevention Exercise Program

Warm-up

1. Jog (line to line) – 30 seconds –
 - **Purpose:** Allows the athletes to slowly prepare themselves for the training session while minimizing the risk for injury.
 - **Instructions:** Complete a slow jog from near to far sideline. Educate athletes on good running technique; keep the hip/knee/ankle in straight alignment without the knee caving in or the feet whipping out to the side.
2. Shuttle Run (side to side) – 30 seconds –
 - **Purpose:** Engage hip muscles. Promote increased speed. Discourage inward caving of the knee joint.
 - **Instructions:** Start in an athletic stance with a slight bend at the knee. Leading with the right foot, sidestep pushing off with the left foot (back leg). When you drive off with the back leg, be sure the hip/knee/ankle are in a straight line. Switch sides at half field.
3. Backward Running – 30 seconds –
 - **Purpose:** continued warm-up; engage hip extensors/hamstrings. Make sure that athlete lands on toes. Be sure to watch for locking of the knee joint. As the athlete brings her foot back and make sure there's a slight bend to the knee.
 - **Instruction:** Run backwards from sideline to sideline. Land on your toes without extending the knee. Stay on your toes and keep the knees slightly bent at all times.

Plyometrics

1. Lateral Hops – 30 seconds
 - **Purpose:** increase power/strength emphasizing neuromuscular control.
 - **Instructions:** Stand with a 2' cone to your left. Hop to the left over the cone softly landing on the balls of your feet and bending at the knee. Repeat this exercise hopping to the right. Progress to Single leg hops.
2. Forward Hops – 30 seconds
 - **Purpose:** increase power/strength emphasizing neuromuscular control.
 - **Instructions:** Hop over the cone softly landing on the balls of your feet and bending at the knee. Now, hop backwards over the ball using the same landing technique. Be careful not to snap your knee back to straighten it. You want to maintain a slight bend to the knee.
3. Single leg hops (30 seconds)
 - **Purpose:** increase power/strength emphasizing neuromuscular control.
 - **Instructions:** Stand with a 2" cone to your left. Hop to the left over the cone softly landing on the balls of your feet and bending at the knee. Repeat this exercise hopping to the right. Progress to single leg hops.

Stretches

1. Calf Stretch (30 seconds x 2 reps)
 - **Purpose:** Stretch calf muscle of the lower leg
 - **Instructions:** Stand leading with your right leg. Bend forward at the waist and place your hands on the ground (V formation). Keep your right knee slightly bent and your left leg straight
2. Quadriceps Stretch (30 seconds x 2 reps)
 - **Purpose:** Stretch the quadricep muscle of the front of the thigh
 - **Instructions:** Place your left hand on your partner's left shoulder. Reach back your right hand and grab the front of your right ankle. Bring your heel to buttock. Make sure your knee is pointed down toward the ground. Keep your right leg to close to your left. Don't allow knee to wing out to the side and do not bend the waist. Hold for 30 seconds and switch sides.
3. Figure 4 Hamstring Stretch (30 seconds x 2 reps)
 - **Purpose:** To stretch the hamstring muscles of the back of the thigh
 - **Instructions:** Sit on the ground with left leg extended out in front of you. Bend your left knee and rest the bottom of your foot on your knee. Do not round your back. If you can, reach down toward your toes and pull them up toward your head. Do not bounce. Hold for 30 seconds and repeat with the other leg.
4. Inner-thigh Stretch (20 seconds x 3 reps)
 - **Purpose:** elongate the muscles of the inner thigh.
 - **Instructions:** Lunge forward leading with your right leg. Drop your left knee down to the ground. Placing your hands on top of your balance and lift back for the left ankle and pull your heel to your buttocks. Hold for 30 seconds and repeat on the other side.
5. Hip-Flexor Stretch (30 seconds x 2 reps)
 - **Purpose:** elongate the hip-flexors of the front of the thigh.
 - **Instructions:** Lunge forward leading with your right leg. Drop your left knee down to the ground. Placing with your shoulders. If possible, maintain your balance and lift back for the left ankle and pull your heel to your buttocks. Hold for 30 seconds and repeat on the other side.

Strengthening

1. Lunges (1 minute)
 - **Purpose:** Strengthen the thigh (quadriceps) muscle
 - **Instructions:** Lunge forward leading with your right leg. Push off with your right leg and lunge forward with your left leg. Drop the back knee straight down. Make sure that you keep your front knee over your ankle. Control the motion and try to avoid your front knee from caving inward. If you can't see your toes on your leading leg, you are doing the exercise incorrectly.

2. Russian Hamstring (1 minute)

- **Purpose:** Strengthen hamstrings muscle.
- **Instructions:** Knee on the ground with hands at your side. Have a partner hold firmly at your ankles. With a straight back leading forward leading with your hips. Your knee, hip and shoulder should be in a straight line as you lean toward the ground. Do not bend at the waist. You should feel the hamstrings in the back of your thigh working. Repeat the exercise for 30 seconds and switch with your partner.

3. Single Toe Raises (1 minute)

- **Purpose:** This exercise strengthens the calf muscle and increases balance.
- **Instructions:** Stand up with your arms at your side. Bend the left knee up and maintain your balance. Slowly rise up on your right toes with good balance. You may hold your arms out ahead of your in order to help. Slowly repeat 30 times and switch to the other side. As you get stronger, you may need to add additional repetitions to this exercise to continue the strengthening effect of the exercise.

Agilities

1. Forward Run (1 minute)

- **Purpose:** Increase dynamic stability of the ankle/knee/hip complex
- **Instructions:** Starting at the first cone, sprint forward to the second cone. As you approach the cone, use a 3-step quick stop to decelerate. Continue on to cone 2 using the same strategy to deceleration. Do not let your knee extend over your toe. Do not let your knee cave inward. This exercise is used to teach the athlete how to properly accelerate and decelerate while moving forward and the hip, buttock and hamstring musculature.

2. Lateral Diagonal Run (1 minute)

- **Purpose:** To encourage proper technique/stabilization of the hip and knee. This exercise will also deter a knock knee position from occurring – which is a dangerous position for the ACL.
- **Instruction:** Face forward and laterally run to the first cone on the right. Pivot off the right foot and shuttle run to the second cone. Now pivot off the left leg and continue onto the third cone. Make sure that the outside does not cave in. Keep a slight bend to the knee and hip and make sure the knee stays over the ankle joint.

3. Bounding Run (1 minute)

- **Purpose:** To increase hip flexion strength/increase power/speed
- **Instructions:** Starting on the near sideline, run to the far side with knees up toward chest. Bring your knees up high. Land on the ball of your foot with a slight bend at the knee and a straight hip. Increase the distance as this exercise gets easier.