



Warm-up

Warming up and cooling down are a crucial part of a training program. The purpose of the warm- up section is to allow the athlete to prepare for activity. By warming up your muscles first, you *greatly reduce* the risk of injury.

Jog line to line (cone to cone): Elapsed time: 30 sec	Complete a slow jog from near to far sideline	Purpose: Allows the athletes to slowly prepare themselves for the training session while minimizing the risk for injury. 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.
Shuttle Run (side to side) Elapsed time: 30 sec	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.	Purpose: engage hip muscles (inner and outer thigh). This exercise will promote increased speed. Discourage inward caving of the knee joint.
Backward Running Elapsed time: 30 sec	Run backwards from sideline to sideline. Land on your toes without snapping the knee back. Stay on your toes and keep the knees slightly bent at all times.	Purpose: continued warm- up; engage hip extensors and hamstrings. Make sure the athlete lands on her toes. Be sure to watch for locking of the knee joint. As the athlete brings her foot back, make sure she maintains a slight bend to the knee.

Agilities

Shuttle run with forward and backward running Elapsed time 1 min	Starting at the first cone, sprint forward to the second cone, run backward to the third cone, sprint forward to the fourth cone (etc...).	Purpose: Increase dynamic stability of the ankle/knee/hip complex
Diagonal runs (3 passes) Elapsed time 1 min	Face forward and run to the first cone on the left. Pivot off the left foot and run to the second cone. Now pivot off the right leg and continue onto the third cone. Make sure that the outside leg does not cave in. Keep a slight bend to the knee and make sure the knee stays over the ankle joint.	Purpose: To encourage proper technique/stabilization of the outside planted foot to deter the position from occurring.
Bounding run (44 yds) Elapsed time 1 min	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.	Purpose: To increase hip flexion strength/increase power/speed



Strengthening:

This portion of the program focuses on increasing leg strength. This will lead to increased leg strength and a more stable knee joint. *Technique is everything*; close attention must be paid to the performance of these exercises in order to avoid injury.

<p>Walking Lunges (3 sets x 10 reps)</p> <p>Elapsed time: 1 min</p>	<p>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 you front knee from caving inward. <i>If you can't see your toes on your leading leg, you are doing the exercise incorrectly.</i></p>	<p>Purpose: Strengthen the thigh (quadriceps) muscle</p>
<p>Russian Hamstring (3 sets x 10 reps)</p> <p>Elapsed time: 1 min</p>	<p>Kneel on the ground with hands at your side. Have a partner hold firmly at your ankles. With a straight back, lead 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 3 sets of 10, or a total of 30 reps.</p>	<p>Purpose: Strengthen hamstrings muscles</p>
<p>Single Toe Raises (30 reps x 2 reps)</p> <p>Elapsed time 1 min</p>	<p>Stand up with your arms at your side. Bend the left knee up and maintain your balance. <i>Slowly</i> rise up on your right toes with good balance. You may hold your arms out ahead of you 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.</p>	<p>Purpose: This exercise strengthens the calf muscle and increases balance.</p>



Plyometrics

These exercises are explosive and help to build, power, strength and speed. The most important element when considering performance technique is the landing. *It must be soft!* When you land from a jump, you want to softly accept your weight on the balls of your feet slowly rolling back to the heel with a bent knee and a straight hip. These exercises are basic; however, it is critical to perform them correctly. Please take the time to ensure safe and correct completion of these exercises.

<p>Lateral Hops over Cone (20 reps) Elapsed time 1 min</p>	<p>Stand with a 6" cone to your left. Hop to the left over the cone softly landing on the balls of your feet land bending at the knee. Repeat this exercise hopping to the right.</p>	<p>Purpose: Increase power/strength emphasizing neuromuscular control</p>
<p>Forward/Backward Hops over cone (20 reps) Elapsed time: 1 min</p>	<p>Hop over the cone/ball 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. Repeat for 20 reps.</p>	<p>Purpose: Increase power/strength emphasizing neuromuscular control</p>
<p>Single Leg hops over cone (20 reps) Elapsed time: 1 min</p>	<p>Hop over the cone/ball landing on the ball of your foot 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. Repeat for 20 reps. Now, stand on the left leg and repeat the exercise. Increase the number of repetitions as needed.</p>	<p>Purpose: Increase power/strength emphasizing neuromuscular control.</p>
<p>Vertical Jumps with headers (20 reps) Elapsed time: 1 min</p>	<p>Stand forward with hands at your side. Slightly bend the knees and push off jumping straight up. Remember the proper landing technique; accept the weight on the ball of your foot with a slight bend to the knee. Repeat 20 times and switch sides.</p>	<p>Purpose: Increase height of vertical jump.</p>
<p>Scissors Jump (20 reps) Elapsed time: 1 min</p>	<p>Lunge forward leading with your right leg. Keep your knee over your ankle. Now, push off with your right foot and propel your left leg forward into a lunge position. Be sure your knee does not cave in or out. It should be stable and directly over the ankle. Remember the proper landing technique; accept the weight on the ball of your foot with a slight bend to the knee. Repeat 20 times.</p>	<p>Purpose: Increase power and strength of vertical jump.</p>



Stretching

It is important to incorporate a short warm-up prior to stretching. Never stretch a “cold muscle”. By doing the exercises outlined here, you can improve and maintain your range of motion, reduce stiffness in your joints, reduce post-exercise soreness, reduce the risk of injury and improve your overall mobility and performance.

- Do a large muscle warm- up such as brisk walking for five to 10 minutes before stretching.
- Don't bounce or jerk when you stretch. Gently stretch to a point of tension and hold.
- Hold the stretch for 30 seconds. Concentrate on lengthening the muscles when you're stretching.
- Breathe normally. Don't hold your breath.

<p>Calf stretch (30 seconds x 2 reps)</p> <p>Elapsed time: 1 min</p>	<p>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. Make sure your left foot is flat on the ground. Do not bounce during the stretch. Hold for 30 seconds. Switch sides and repeat.</p>	<p>Purpose: Stretch the calf muscle of the lower leg</p>
<p>Quadricep stretch (30 seconds x 2 reps)</p> <p>Elapsed time: 1 min</p>	<p>Place your left hand on your partner's left shoulder. Reach back with 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 close to your left. Don't allow knee to wing out to the side and do not bend at the waist. Hold for 30 seconds and switch sides.</p>	<p>Purpose: Stretch the quadricep muscle of the front of the thigh</p>
<p>Figure Four Hamstring stretch (30 sec x 2 reps)</p> <p>Elapsed time: 1 min then with the other leg.</p>	<p>Sit on the ground with your right leg extended out in front of you. Bend your left knee and rest the bottom of your foot on your right inner thigh. With a straight back, try to bring your chest toward 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</p>	<p>Purpose: To stretch the hamstring muscles of the back of the thigh.</p>
<p>Inner Thigh Stretch (20 sec x 3 reps)</p> <p>Elapsed time: 1 min</p>	<p>Remain seated on the ground. Spread you legs evenly apart. Slowly lower yourself to the center with a straight back. You want to feel a stretch in the inner thigh. Now reach toward the right with the right arm. Bring your left arm overhead the stretch over to the right. Hold the stretch and repeat on the opposite side.</p>	<p>Purpose: Elongate the muscles of the inner thigh (adductor group)</p>
<p>Hip Flexor Stretch – (30 sec x 2 reps)</p> <p>Elapsed time: 1 min</p>	<p>Lunge forward leading with your right leg. Drop your left knee down to the ground. Placing your hands on top of your right thigh, lean forward with your hips. The hips should be square 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.</p>	<p>Purpose: Elongate the hip flexors of the front of the thigh.</p>



Alternative Exercises – Warm Down and Cool Down

We all know how imperative a cool down is. Please don't skip it. It allows the muscles that have been working hard throughout the training session to elongate and deters the onset of muscle soreness. Please emphasize the importance of adequate fluid intake (optimally water). Athletes should have a water bottle by their side during the cool down. The cool down should take approximately 10 minutes. It should begin with a slow jog to allow the heart rate to come down before stretching. This should be followed by some light strength training exercises. We are recommending two strengthening exercises (see below). Finally, stretch the hamstrings, calves, inner thigh, quadriceps, and low back (all of these are explained in the protocol). In addition to those basic stretches, we are offering some additional stretches to target 3 muscle groups that are often forgotten.

<p>Bridging with Alternating Hip Flexion (30 reps)</p>	<p>Lie on the ground with your knees bent with feet on the ground. Raise your buttocks up off the ground and squeeze. Now, lift your right foot off the ground and make sure that your right hip does not dip down. Lower your right foot and now lift your left foot making sure your left hip does not dip down. Repeat 30 times on each side. As you get stronger, you will place your feet on top of a ball and repeat the exercise.</p>	<p>Purpose: Strengthen outer hip muscles (Hip abductors, flexors) and buttocks</p>
<p>Abdominal Crunches (30 reps x 2 reps)</p>	<p>Lie on the ground with you knees bent. Place your hands behind your head with your elbows out wide. Support your neck lightly with your fingers. Take a deep breath in and slowly contract your abdominal muscles as you exhale. Repeat 30 times. Drop your legs off to the right side. Slowly crunch up with your elbows out wide. You should feel your oblique muscles working on the side of your waist. Repeat 30 times and switch to the other side.</p>	<p>Purpose: Strengthen the abdominals (rectus abdominus, obliques)</p>
<p>Single and Double Knee to Chest (supine) (30 sec x 2 reps)</p>	<p>Lie on your back. Bring your right knee toward your chest and hug firmly. Keep your left leg out straight in front of you. You should feel a stretch along your low back and into your buttocks. Hold the stretch for 30 seconds and switch sides. Now bring both knees to chest. If you feel any pain in the low back, discontinue the stretch and inform your coach/trainer.</p>	<p>Purpose: Elongate the low back muscles</p>
<p>Figure Four Piriformis stretch- supine (30 sec x 2 reps)</p>	<p>Lie on your back and bend both of your knees. Fold your left ankle over your right knee. Place your hands behind your right thigh and pull your right knee to chest. You should feel a good stretch in the left gluteals region and the side of the thigh. Hold for 30 seconds and repeat on the other side. If you experience and low back pain with this stretch, slowly lower your legs down and let your coach/trainer know.</p>	<p>Purpose: Elongate the rotators of the hip.</p>
<p>Seated Butterfly stretch - seated (30 sec x 2 reps)</p>	<p>Sit up bringing your feet in so that the soles of your feet are touching. Gently place your elbows on your knees and slowly push down. You should feel a good stretch of the inner thigh. Hold this for 30 seconds and repeat 2 to 3 times.</p>	<p>Purpose: Elongate the inner thigh muscles (adductors).</p>