

# READY. SET. PREVENT.



Abdullah, 16

**“Ready. Set. Prevent.” is a lower extremity injury prevention program developed by doctors and physical therapists at the Sports Medicine and Performance Center at Children’s Hospital of Philadelphia.**

The program has been shown to reduce injuries such as ACL tears and re-tears, as well as knee and ankle injuries, while also improving athletic performance in pediatric and adolescent athletes. Designed as a warm-up routine, the program should be performed in the first 15 minutes of practice and overseen by a coach or trainer.

*continued >*

Please use this guide in combination with our video at [chop.edu/sportspt](https://chop.edu/sportspt), which shows an athlete performing all the exercises in this program.

#### **Weeks 1-4**

- Warm-up
- Dynamic Stretching
- Strengthening Phase 1
- Plyometrics Phase 1

#### **After Week 4**

- Warm-up
- Dynamic Stretching
- Strengthening Phase 2
- Plyometrics Phase 2

#### **LEARN MORE**

at [chop.edu/sportsmed](https://chop.edu/sportsmed) or call 215-590-1527.

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## Warm Up

Mark out a distance of 10 to 15 yards. Do two laps each of a forward and backward shuttle run, a side shuffle, and a carioca running drill.

### FORWARD/BACKWARD SHUTTLE RUN



### SIDE SHUFFLE



### CARIOCA RUNNING DRILL



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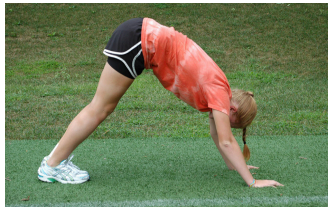
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## Dynamic stretching

Dynamic stretching prepares muscles for activity while also addressing common flexibility deficits in younger athletes. The athlete must use proper form while stretching. Rest 10 seconds between each exercise.

### INCHWORM STRETCH



Begin in a modified push-up position. Slowly walk your feet toward your hands, keeping your knees straight and back flat while pushing your heels toward the ground. When you feel the stretch in the back of your legs, pause for 2 seconds, then walk your hands forward. Repeat this sequence 5 times.

### SPIDER STRETCH



Begin in a push-up position. Bring one leg forward until your foot is next to your hand. Push your hips toward the ground while keeping your back knee straight. Pause for 2 seconds and repeat on the opposite side. You should feel a stretch in the hips and groin. Repeat 5 times per side.

### STRAIGHT-LEG MARCH



Lift your arms straight out in front. While walking forward, kick one leg up toward your hands, keeping your knees straight and toes up. Repeat on the opposite leg. Make sure to keep your back straight. Do not round your lower back. Repeat for a total of 10 kicks.

### LEG CRADLE



Step forward and lift one leg up. Grasp under your knee and ankle and gently pull your leg toward your chest until you feel a stretch. Release the leg. Step forward and repeat on the other side. Continue walking forward, alternating legs for a total of 10 cradles. Make sure to keep your head and trunk upright. Do not round your lower back.

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## Strengthening Phase 1 (weeks 1-4)

The strengthening program has two phases. The first phase is for weeks 1 through 4. It is designed to provide a framework for proper form development and baseline strength gains. Phase 2 (below) is more challenging and should be performed from week 5 through the end of the season. Exercises must be done with proper form. Rest 10 seconds between each exercise.

### DOUBLE-LEG SQUAT



Stand with your feet hip-width apart and toes pointing forward. Bend your knees and lower into a squat as if sitting in a chair. Keep your knees in line with your toes. Make sure to keep your weight shifted back so your knees remain behind your toes. If you need help balancing, you can hold your arms out. Repeat 20 times.

### ALTERNATING LUNGE



Begin with your feet hip-width apart. Lunge forward until the front thigh is parallel to the ground. Push off your front heel and return to standing. Repeat on the other side. Make sure to keep your knee from collapsing inward and keep your toes pointing forward. From the side view you can see that the knee does not progress beyond the toes. Perform 20 repetitions.

### DOUBLE-LEG BRIDGE (BALL OR GROUND)



Lie on your back. Place your feet on top of a soccer ball or basketball. Pressing down through the heels, lift your hips until your body is in a straight line. Slowly lower back down. If a ball is not available, simply keep your feet on the ground. Repeat 20 times.

### SIDE-LYING PLANK



Lie on your side with your elbow directly under your shoulder and your feet stacked on top of one another. Lift yourself up until your body is in a straight line. Do not let your hips roll backward and do not flex at your trunk. Hold this position for 10 seconds. Repeat 3 times on each side.

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## Strengthening Phase 2 (after week 4)

After four weeks of performing Phase 1 move on to Phase 2. Rest 10 seconds between each exercise.

### SINGLE-LEG SQUAT



Begin balanced on one leg. Bend at your knee and lower into a squat as if sitting in a chair. Lower as far as you can with good control. Make sure to keep your toes pointed forward and your knee in line with your foot. Keep your weight back and do not allow your knee to progress beyond your toes. As you improve, you will be able to squat lower. Repeat 10 times per leg. Never sacrifice technique to squat lower.

### SIDE LUNGE



From a standing position, step out to the side and lunge, so your thigh is parallel to the ground, while keeping your toes pointed forward. Keep your opposite knee straight. Press back to center and repeat on the opposite side. Make sure the bent knee does not progress beyond the toes. Repeat 10 times per leg.

### SINGLE-LEG BRIDGE (BALL OR GROUND)



Lie on your back. Place one leg on top of a soccer ball or basketball. If a ball is not available, keep your feet on the ground. Extend your opposite leg so the knee is straight. Press down through your heel and raise your hips off the ground. Pause when your body is in a straight line. Slowly lower back to the ground. Repeat 10 times per leg. You can use your arms to stabilize, but do not press down with your arms to create movement.

### SIDE PLANK



Lie on your side with your elbow directly under your shoulder and your feet stacked on top of one another. Lift yourself up until your body is in a straight line. Do not let your hips roll backward and do not flex at your trunk. Hold this position for 15 seconds. Repeat three times on each side.

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## Plyometrics Phase 1 (weeks 1-4)

Plyometrics are explosive jumping exercises that increase strength, power and speed. The plyometric program has two phases. Phase 1 is for weeks 1 through 4. Proper technique must be emphasized. Pay special attention to soft landings in a squat position with knee and ankle in good alignment. There should be no knock-kneed positioning upon landing.

### WALL JUMP



Stand with your arms overhead. Perform small quick ankle bounces straight up and down, staying in one place. Keep landings quiet and knees soft. Repeat 15 times.

### SQUAT JUMP



Begin in a squat position with good alignment, knees hip-width apart and toes pointing forward. From this position, jump straight up and land in a squat position. Attempt to land in the same spot. Repeat 15 times. Make sure the landings are soft, and your knees do not collapse inward. Your knees should remain in alignment with your feet.

### DOUBLE-LEG LOW CONE HOP (SIDE-TO-SIDE)



Stand next to a collapsible cone in a squat position. Jump rhythmically side to side over the cone. Land softly in a squat position keeping your knees in proper alignment. Repeat 15 times.

### 180° JUMP



Begin in athletic stance. Jump straight up, turn 180 degrees (facing the opposite direction), and land softly in a squat. Immediately jump again, turn in the opposite direction, and land in a squat again. Repeat this sequence 10 times. Control the movement to prevent over rotation or under rotation.

### JUMP, JUMP, VERTICAL JUMP



Begin by jumping forward two times. After the second landing, immediately jump straight up as high as possible and land in the same spot. Repeat this sequence 5 times. All landings must be soft, and you must keep good lower-extremity alignment.

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## Plyometrics Phase 2 (after week 4)

Phase 2 is more challenging and should be performed from week 5 through the end of the season. Proper technique must be emphasized. Pay special attention to soft landings in a squat position with knee and ankle in good alignment. There should be no knock-kneed positioning upon landing.

### SINGLE-LEG SQUAT JUMP



Begin balanced on one leg. Jump vertically and land on the same leg in a squat. Make sure you have your balance before starting the next jump. Landings should be soft, with no inward movement of the knee. Repeat 10 times per leg.

### SINGLE-LEG CONE HOP



Using one leg, jump side to side over a cone and land softly with a slight bend in your knee. Repeat 10 times per leg. Make sure the knee does not collapse inward upon landing.

### LUNGE JUMP



Begin in a lunge position. Jump straight up, switch legs in the air, and land back in the lunge. Landings should be soft and balanced. Repeat 10 times per leg. As athletes improve, encourage higher jumps.

### SINGLE-LEG FORWARD HOP



Perform consecutive single leg hops making sure to land softly – in a balanced position – with a flexed knee. Repeat 5 times per leg. Encourage athletes to jump as far as they can while keeping proper form.

**LEARN MORE** Taking the time to learn this program will help your athlete stay strong, healthy and injury-free. For more information, call **215-590-1527** or visit [chop.edu/sportsmed](https://chop.edu/sportsmed).