



# Injury Prevention Program

Designed for athletes ages 13+

## Young Athlete Center

**Children's**  
HOSPITAL • ST. LOUIS  
BJC HealthCare

 **Washington**<sup>®</sup>  
University in St. Louis

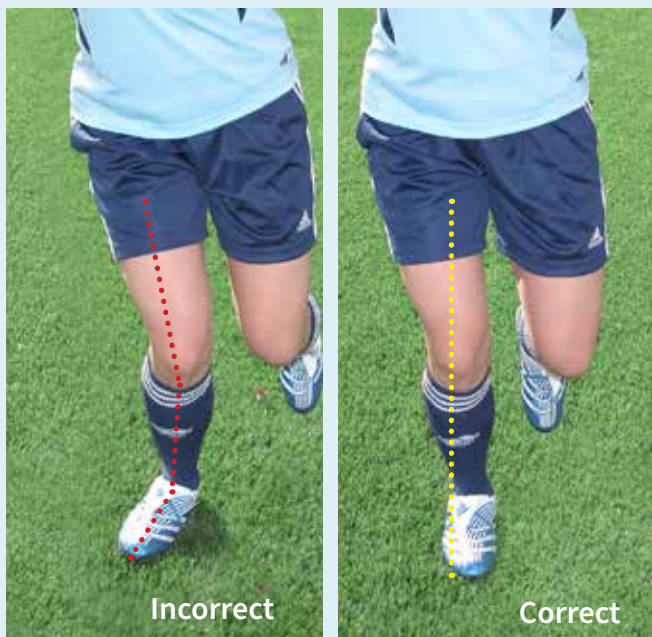
Physicians



# About Our Program



This Injury Prevention Program incorporates the best available scientific techniques to keep athletes safe on the field, utilizing the proven techniques from the FIFA 11+ ACL Prevention Program. The dynamic FIFA 11+ warm-up routine has been shown to decrease knee injuries, including ACL tears, hamstring strains, and ankle sprains, as well as improve athletic performance. This program was originally created for soccer, but can be modified for any sport, and will keep you at the cutting-edge of athlete safety.



Incorrect

Correct

## Body position

A key point in the program is to use the proper technique during all of the exercises. Pay full attention to correct posture and good body control, including straight leg alignment, knee-over-toe position and soft landings.

The correct body position displays a straight leg alignment, with knee-over-toe position.

# Part 1: Running Exercises



## 1. Straight ahead

Jog straight to the last cone. Make sure you keep your upper body straight. Your hip, knee and foot are aligned. Do not let your knee buckle inwards. Run slightly more quickly on the way back. **2 sets.**



## 2. Hip out

Jog to the first cone, stop and lift your knee forwards. Rotate your knee to the side and put your foot down. At the next cone repeat exercise on the other leg. Repeat until you reach the other side of the pitch, then jog back to the start. **2 sets.**



## 3. Hip in

Jog to the first cone, stop and lift your knee to the side. Rotate your knee forwards and put your foot down. At the next cone repeat exercise on the other leg. Repeat until you reach the other side of the pitch, then jog back to the start. **2 sets.**



## 4. Circling partner

Jog to the first cone. Shuffle sideways towards your partner, shuffle an entire circle around one other (without changing the direction you are looking in) and then shuffle back to the first cone. Repeat until you reach the other side of the pitch, then jog back to the start. **2 sets.**



## 5. Shoulder contact

Jog to the first cone. Shuffle sideways towards your partner. In the middle, jump sideways towards each other to make shoulder-to-shoulder contact. Land on both feet with your hips and knees bent. Shuffle back to the first cone. Repeat until you reach the other side of the pitch, then jog back to the start. **2 sets.**



## 6. Quick forwards and backwards

Run quickly to the second cone then run backwards quickly to the first cone, keeping your hips and knees slightly bent. Repeat, running two cones forwards and one cone backwards until you reach the other side of the pitch, then jog back to the start. **2 sets.**



## Part 2: Strength, Plyometrics and Balance

### 7.1 THE BENCH: Static

**Starting position:** Lie on your front, support upper body with forearms. Elbows directly under shoulders.

**Exercise:** Lift upper body, pelvis and legs up until your body is in a straight line from head to foot. Pull in stomach and gluteal muscles and hold the position for 20-30 seconds. **3 sets.**

**Important:** Do not sway or arch your back. Do not move your buttocks upwards.

### 7.2 THE BENCH: Alternate legs

**Starting position:** Lie on your front, support upper body with forearms. Elbows directly under shoulders.

**Exercise:** Lift upper body, pelvis and legs up until your body is in a straight line from head to foot. Pull in stomach and gluteal muscles. Lift each leg in turn, holding for a count of 2 seconds. Continue for 40-60 seconds. **3 sets.**

**Important:** Do not sway or arch your back. Do not move your buttocks upwards. Keep pelvis stable and do not let it tilt to the side.

### 7.3 THE BENCH: One leg lift and hold

**Starting position:** Lie on your front, support upper body with forearms. Elbows directly under your shoulders.

**Exercise:** Lift upper body, pelvis and legs up until your body is in a straight line. Pull in stomach and gluteal muscles. Lift one leg about 10-15cm off the ground and hold the position for 20-30 seconds. Repeat with other leg. **3 sets on each leg.**

**Important:** Do not sway or arch your back. Do not move your buttocks upwards. Keep pelvis is stable and do not let it tilt to the side.

### 8.1 SIDEWAYS BENCH: Static

**Starting position:** Lie on your side with the knee of lowermost leg bent to 90 degrees, support yourself on forearm and lowermost leg. Elbow of supporting arm directly under shoulder.

**Exercise:** Lift pelvis and uppermost leg until they form a straight line with your shoulder and hold the position for 20-30 seconds. Repeat on other side. **3 sets on each side.**

**Important:** Keep pelvis stable and do not let it tilt downwards. Do not tilt shoulders, pelvis or leg forwards or backwards.

### 8.2 SIDEWAYS BENCH: Raise and lower hip

**Starting position:** Lie on your side with both legs straight, support yourself on forearm. Elbow of supporting arm directly under shoulder.

**Exercise:** Raise pelvis and legs until your body forms a straight line from the uppermost shoulder to the uppermost foot. Lower hips to the ground and raise them back up again. Continue for 20-30 seconds. Repeat on other side. **3 sets on each side.**

**Important:** Do not tilt shoulders or pelvis forwards or backwards. Do not rest head on your shoulder.

### 8.3 SIDEWAYS BENCH: With leg lift

**Starting position:** Lie on your side with both legs straight, support yourself on forearm and lower leg. Elbow of supporting arm directly under shoulder.

**Exercise:** Raise pelvis and legs until your body forms a straight line from the uppermost shoulder to the uppermost foot. Lift uppermost leg up and slowly lower it down again. Continue for 20-30 seconds. Repeat on other side. **3 sets on each side.**

**Important:** Keep pelvis stable and do not let it tilt downwards. Do not tilt shoulders or pelvis forwards or backwards.

## Part 2: Strength, Plyometrics and Balance

### 9.1 HAMSTRINGS: Beginner

**Starting position:** Kneel with knees hip-width apart; partner pins your ankles firmly to the ground with both hands.

**Exercise:** Slowly lean forward, while keeping your body straight from the head to the knees. When you can no longer hold the position, gently take your weight on your hands, falling into a press-up position. **3-5 repetitions.**

**Important:** Do exercise slowly at first, but once you feel more comfortable, speed it up.

### 9.2 HAMSTRINGS: Intermediate

**Starting position:** Kneel with knees hip-width apart; partner pins your ankles firmly to the ground with both hands.

**Exercise:** Slowly lean forward, while keeping your body straight from the head to the knees. When you can no longer hold the position, gently take your weight on your hands, falling into a press-up position. **7-10 repetitions.**

**Important:** Do exercise slowly at first, but once you feel more comfortable, speed it up.

### 9.3 HAMSTRINGS: Advanced

**Starting position:** Kneel with knees hip-width apart; partner pins your ankles firmly to the ground with both hands.

**Exercise:** Slowly lean forward, while keeping your body straight from the head to the knees. When you can no longer hold the position, gently take your weight on your hands, falling into a press-up position. **Minimum of 12-15 repetitions.**

**Important:** Do exercise slowly at first, but once you feel more comfortable, speed it up.

### 10.1 SINGLE-LEG STANCE: Hold the ball

**Starting position:** Stand on one leg, knee and hip slightly bent and hold the ball in both hands.

**Exercise:** Hold balance and keep body weight on the ball of your foot. Hold for 30 seconds, and repeat on the other leg. Exercise can be made more difficult by lifting the heel from the ground slightly or passing the ball around your waist and/or under your other knee. **2 sets on each leg.**

**Important:** Do not let your knee buckle inwards. Keep pelvis horizontal and do not let it tilt to the side.

### 10.2 SINGLE-LEG STANCE: Throwing ball with partner

**Starting position:** Stand on one leg, face a partner at a distance of 2-3m.

**Exercise:** Keep balance while you throw the ball to one another. Hold in your stomach and keep weight on the ball of your foot. Continue for 30 seconds and repeat on the other leg. Exercise can be made more difficult by lifting the heel from the ground slightly. **2 sets on each leg.**

**Important:** Do not let your knee buckle inwards. Keep pelvis horizontal and do not let it tilt to the side.

### 10.3 SINGLE-LEG STANCE: Test your partner

**Starting position:** Stand on one leg, at arm's length from your partner.

**Exercise:** Keep balance while you and your partner in turn try to push the other off balance in different directions. Continue for 30 seconds and repeat on the other leg. **2 sets on each leg.**

**Important:** Do not let your knee buckle inwards. Keep pelvis horizontal and do not let it tilt to the side.



## Part 2: Strength, Plyometrics and Balance



### 11.1 SQUATS: With toe raise

**Starting position:** Stand with feet hip-width apart, hands on your hips.

**Exercise:** Slowly bend hips, knees and ankles until your knees are flexed to 90 degrees. Lean upper body forwards. Then straighten upper body, hips and knees, and stand up on your toes. Then slowly lower down again, and straighten up slightly more quickly. Repeat for 30 seconds. **2 sets.**

**Important:** Do not let your knee buckle inwards. Lean upper body forward with a straight back.



### 11.2 SQUATS: Walking lunges

**Starting position:** Stand with both feet hip-width apart on the ground and your hands on your hips.

**Exercise:** Lunge forwards slowly at an even pace. As you lunge, bend your hips and knees until your leading knee is flexed to 90 degrees. The bent knee should not extend beyond the toes. Keep your upper body straight and your pelvis horizontal. Do 10 lunges on each leg. **2 sets.**

**Important:** Do not let your leading knee buckle inwards or extend beyond your toes. Do not twist or tilt your hips to the side.



### 11.3 SQUATS: One leg squats

**Starting position:** Stand on one leg, loosely hold on to your partner.

**Exercise:** Slowly bend your knee, if possible until it is flexed to 90 degrees, and straighten up again. Bend slowly then straighten slightly more quickly. Repeat on the other leg. 10 squats on each leg. **2 sets.**

**Important:** Do not let your knee buckle inwards. Keep upper body facing forward and pelvis horizontal.



### 12.1 JUMPING: Vertical jumps

**Starting position:** Stand with your feet hip-width apart, hands on your hips.

**Exercise:** Slowly bend hips, knees and ankles until your knees are flexed to 90 degrees. Lean upper body forwards. Hold this position for 1 second then jump as high as you can, and straighten whole body. Land softly on the balls of your feet. Repeat for 30 seconds. **2 sets.**

**Important:** Jump off both feet. Land gently on the balls of both feet with your knees bent.



### 12.2 JUMPING: Lateral jumps

**Starting position:** Stand on one leg. Bend hips, knee and ankle slightly and lean upper body forwards.

**Exercise:** Jump from your supporting leg approximately 1m to the side onto the other leg. Land gently on the ball of your foot and bend your hips, knee and ankle. Hold this position for about a second and then jump on the other leg. Repeat for 30 seconds. **2 sets.**

**Important:** Do not let your knee buckle inwards. Keep upper body stable and facing forward and pelvis horizontal.



### 12.3 JUMPING: Box jumps

**Starting position:** Stand with feet hip-width apart, and imagine you are standing in the middle of a cross.

**Exercise:** Jump with both legs forwards and backwards, from side to side, and diagonally across the cross. Keep upper body slightly leaned forwards. Jump as quickly and explosively as possible. Repeat for 30 seconds. **2 sets.**

**Important:** Land softly on the balls of both feet. Bend hips, knees and ankles on landing. Do not let your knee buckle inwards.

# Part 3: Running Exercises



### 13. Across the pitch

Run approximately 40m across the pitch at 75-80% of maximum pace and then jog the rest of the way. Keep your upper body straight. Your hip, knee and foot are aligned. Do not let your knees buckle inwards. Jog easily back. **2 sets.**



### 14. Bounding

Take a few warm-up steps then take 6-8 high bounding steps with a high knee lift and then jog the rest of the way. Lift the knee of the leading leg as high as possible and swing the opposite arm across the body. Keep your upper body straight. Land on the ball of the foot with the knee bent and spring. Do not let your knee buckle inwards. Jog back easily to recover. **2 sets.**



### 15. Plant and cut

Jog 4-5 steps straight ahead. Then plant on the right leg and cut to change direction to the left and accelerate again. Sprint 5-7 steps (80-90% of maximum pace) before you decelerate and plant on the left foot and cut to change direction to the right. Do not let your knee buckle inwards. Repeat the exercise until you reach the other side of the pitch, then jog back. **2 sets.**

## My Notes

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# Young Athlete Center

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**St. Louis Children's Hospital | St. Louis Children's Hospital Specialty Care Center**

**Young Athlete Center 24-hour Injury Hotline: 314.273.9200**

**[StLouisChildrens.org/YoungAthlete](http://StLouisChildrens.org/YoungAthlete)**

