PAIRS

Prevention program to Assist with Injury Reduction in Sport

PART 1: Warm-Up • Flexibility • Neuromuscular Activation (4 minutes)

Start position: All players in 2 rows facing each other (in pairs) approx. 15m/50ft apart. Approach and mirror each other's movements.

1. Forward/Backward Run Quickly jog forward keeping your hip/knee/foot in line. As you approach your partner, use a 3 step quick deceleration and circle around them. Quickly back peddle to the start keeping your hips and knees slightly flexed. **Repeat x2.**

2. Hip Out & In Jog forward 3 steps, lift your knee forward and rotate your hip *outwards* and put your foot down. Repeat with the other leg. The hip/knee/foot of the supporting leg should be aligned with the pelvis level. When you meet your partner, turn and quickly jog back to the start. **Repeat x2.** Replicate the drill, this time lift your knee out to the side, and rotate your hip *inwards*. **Repeat x2.**

3. Walking Straight Leg Kicks – High Knees Walk forward, alternate and lift each leg up as straight as possible while reaching your opposite arm towards your toes by bending at the hip slightly. Your trunk should be straight and your head/eyes up. Quickly jog with high knees back to the start. **Repeat x2.**

4. Side Shuffle & Contact Start in an athletic stance with knees bent and trunk slightly forward. Sidestep by pushing off with the back leg. When you meet your partner, jump up and make shoulder-to-shoulder contact in the air. Land on both feet with your hips and knees bent and in line. Do not let your knees buckle inward. Shuffle back to the start, turn 180°, replicate the drill leading with the other side. **Repeat both directions x2**

5. Long Jumps Bend your trunk, hips and knees and repeatedly jump forward as far as you can until you reach your partner. Land softly on the balls of both feet with your hips and knees slightly bent and your trunk slightly forward. Do not let your partner's knee buckle inwards or go past the foot. Quickly back peddle to the start. **Repeat x2.**

PART 2: Strength • Agility • Plyometrics • Balance (4 minutes)

Start position: All players in 2 rows facing each other (in pairs) approx. 2m/6ft apart. Approach and mirror each other's movements.

Level 1	OR	Level 2

6A. Two-Legged Squats – Calf Raise
Stand with feet hip-width apart. Face your partner and slowly bend your hips, knees and ankles until your knees are bent to 90°. Keep your trunk slightly forward. Watch that your partner's knees do not go past the toes or buckle inwards. Upon rising straighten your legs and go up on your toes. **Repeat x20.**

6B. One-Leg Squats – Calf raise
Lightly hold on to your partner beside you and stand on one leg. Slowly bend your knee as far as you are able without going past the toes. Make sure your pelvis is level and that your partner's knee does not buckle inwards. Keep your hip and knee in line with your trunk slightly forward. Upon rising straighten your leg and go up on your toes. **Repeat x10** each leg.

7A. Lunge & Twist
Lunge forward and bend your lead leg until your hip and knee are flexed to 90° and your back knee is bent to 90° with the knee just off the ground. Keep the front knee aligned with the foot. Keep your upper body straight and pelvis level, While down, twist your trunk side to side and stand back up. Watch that your partner's knee does not go past the toes or buckle inward. **Repeat x10** each leg**.**
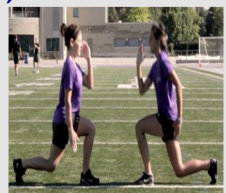
7B. Scissor Jumps
Start in a lunge position with your front knee directly over your ankle. Power jump and alternate leg positions with the knee just off the ground. Do not let your partner's knees go past the toes or buckle inwards. Keep your pelvis level. Land softly on the balls of your feet with your trunk slightly forward. **Repeat x20.**

8A. Two-Legged Jump (forward-back side-side)
Stand with feet hip-width apart. Jump quickly with both legs over an imaginary line forwards and backwards **x20** then side to side **x20**. Bend the knees slightly as you land and do not let your knees buckle inwards.

8B. One-Leg Hop (forward-back side-side)
Balance on one leg with your hips and knees slightly bent. Hop quickly over an imaginary line forward and backward **x10** then side to side **x10**. Make sure to land on the ball of your foot with your knee slightly flexed and that your knee does not buckle inwards. **Repeat on each leg.**

9A. Single-Leg Stance with Swings
Stand on 1 leg and swing your other leg forward and back like a big pendulum, then swing your leg forward and back as quickly as you can with a small arc 4 times. Keep your pelvis level and make sure your partner's knee does not buckle inwards. **Repeat x5** on each leg.
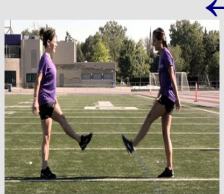
9B. Single-Leg Stance Partner Perturbations
Stand on 1 leg at arm's length from your partner. Keep your balance while you and your partner take turns trying to gently push the other off balance at the shoulder and hip. Keep your pelvis level and make sure your partner's knee does not buckle inwards. **Repeat x30 sec** on each leg.

10A. Single Leg Toe Touch – Butt Kicks
Balance on one leg, bend forward at the hips while you lift the other leg backwards. Slowly reach your hands towards your toes until you feel a stretch in the back of your leg, then return to start position **x5**. While still balancing, bend your knee and lift your heel to your buttocks as quickly as you can **x30**. **Repeat the drill** on the other leg.

10B. Hamstrings
Kneel on the ground, have your partner firmly hold your ankles down and keep your body straight from the shoulder to the knee throughout the exercise. Cross your arms and slowly lean forward as far as possible without bending at the waist. When you can no longer sustain the position, fall into a push up position. **Repeat x8**. Switch partners.

PART 3: Speed (2 minutes)

Start position: All players form 4 lines: "Follow the leader"

11. Bounding Stand upright on 1 leg with the hip/knee/foot in line. Jump forward and land, as high and far as possible, on the opposite foot. Land softly with a slightly bent knee. Do not let your knee buckle inwards. Alternate legs quickly all the way to the other side of the playing surface. **Repeat there and back x2.**

12. Run, Plant & Cut Run 3 steps on a sharp angle, then plant the outside leg and cut to change directions. Accelerate with 3 steps and plant and cut again in a zigzag pattern. When cutting, your hips and knee should be bent and your trunk over the leg. Do not let your knee buckle inwards. Continue until you reach the other side of the playing surface. **Repeat there and back x2.**

13. Sprinting Sprint across the playing surface to the other side and sprint back to start at 80-90% max effort. **Repeat x2.**

PAIRS

What is PAIRS?

PAIRS stands for: "**P**revention program to **A**ssist with **I**njury **R**eduction in **S**port"

'PAIRS' is a **10 minute** structured injury prevention program for all athletes (males/females) participating in various court and field sports across all ages (teens to adults). It is designed to teach proper muscle patterning/muscle memory required in sport to reduce the risk of injury. Also, the program educates teams (coaches, training staff, players & parents) on faulty movement patterns commonly seen during sports that predispose athletes to lower extremity injuries. It elevates heart rate, increases the body's core temperature and activates the nerves that control the muscles (neuromuscular system) to prepare the body for activity.

EQUIPMENT:
NO equipment is required.

FREQUENCY:
This dynamic warm up program is to be carried out before *all* practices and games during and off-season.

Why PAIRS?

PREVENTION OF INJURY:
The success of an injury prevention program is dependent on the *compliance* of using the program and the effectiveness in modifying injury risk factors (faulty movement patterns). The key to lower extremity injury prevention is developing the ability to control high forces on the joints when most of the body weight is transferred onto one leg such as landing from a jump, pivoting, cutting/change of direction and deceleration maneuvers. Specifically, these are all risk factors for ACL injuries in sport.

ADDITIONAL PROGRAMS:
This program should be performed in conjunction with a regular strength and stability training program that addresses the core, hip, knee and ankle. Specific ball skills for each sport can be addressed during practice time or prior to a game, after the PAIRS program has been completed.

Understanding the Program:

Starting the Program:
Trainers, coaches or team captains can execute the '13 exercise' program but it is important for all players to be educated to identify faulty movement patterns. They need to recognize when they, or their teammates, have a faulty lower extremity patterning in order to assist with movement correction and promote improvements in motor control.

There are 3 parts to the program:
Part 1: All players are in 2 rows facing each other (in pairs) 15m/50ft apart. **Goal**: Partners mirror movement patterns, identify faulty movements and cue partners during 5 exercises.

Part 2: All players are in 2 rows facing each other (in pairs) 2 m/6ft apart. **Goal**: Partners mirror movement patterns, identify faulty movements and cue partners during 5 exercises. There are two levels within this part of the program. All teams should start training at *Level 1* to encourage proper form with movement execution. When movement patterning is efficient, players and/or teams can progress to one or more exercises in *Level 2*. It is not mandatory to perform all exercises in Level 2 when advancing. For example, players can chose the A or B option in either column but are still required to perform 5 exercises in Part 2.
- *Level 1* is comprised of fundamental exercises designed to execute proper form.
- *Level 2* has more advanced exercises designed to challenge the neuromuscular system.

Part 3: All players form 4 lines. **Goal**: Follow the leader, execute proper movement patterns at higher speeds and changes of direction.
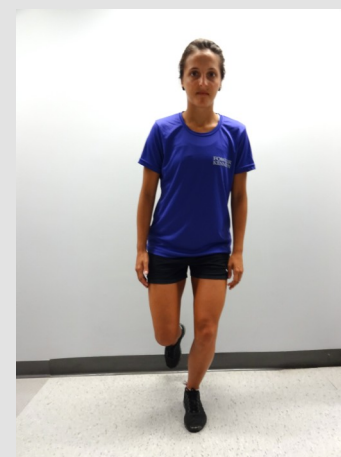
What to Look for:

Poor Patterning:
Risky patterns include decreased knee bend, inward knee collapse, and excessive leg internal rotation while most of the weight is shifted over the weight-bearing leg that is fixed on the playing surface. These patterns cause faulty trunk, hip and knee alignment and high joint loads predisposing an athlete to injury.

POOR   GOOD