

ACL Tear Prevention with the PEP Program

Adapted for Ultimate Frisbee by Jamie Nuwer, MD

See attached video

Before you begin

You should begin the exercises at 1/3 the amount listed and do that for 2 weeks

Then increase the regimen to 2/3 the amount listed for 2 weeks

Then do the full workout for the rest of the season

For more information: www.aclprevent.com/pepprogram.htm

This should take at most 20 minutes including warmup jog and dynamic stretching

Field setup before practice

- 10 yards marker for dynamic stretching
- Set up 3 sets of cones for shuttle and diagonal runs: 3 cones in a line 5 yards apart, then 5 yards wide and staggered 2.5 yards another 3 cones in a line 5 yards apart

Dynamic Stretching – warm up jog 3-5 minutes first

Exercise	Form tips	Muscle groups stretched
Heel to toe raise	Rise up on toe	Calves
Heel walk		Shins
High knees(Foreward, Backward)	Drive knees up	Hamstrings
Butt kicks (F, B)	Heel to butt	Quads
Slides (F, B)	Butt low	Groin and Hips
Jackknife to lunge-twist to ballerina	Pull leg up, twist both sides fully, reach back far enough to feel it in your hip flexor in ballerina (make sure you lean to the same side as your front leg)	Butt, lower back, abs, hip flexor, upper back, lats
If you are <i>not</i> doing plyos, ie. at a tournament, then add these:		
Grapevine (F, B)	Fast feet	Full body
High jumps (F, B)	3 step and explode, land on 2 feet with correct form	Full body

Plyos

Balancing

Exercise	Form tips	Muscle groups worked
2 x 20 Lunges (10 forward, 10 backward)	Align knee with ankle (no wobbling or caving), must be able to see your toes in front (never less than 90 degree angle)	Quads (F), Hamstrings (B)
2 x 10 Kickbacks each leg	Stationary leg is slightly bent with good hips-knee-ankle alignment (no wobbling or caving), Kick straight back as high as you can, use your arms to balance	Hamstrings
2 x 30 Calf raises each leg	Slowly rise up with good hips-knee-ankle alignment	Calves

Jumping

For all of these emphasize a soft landing where you land on the ball of your foot with knees slightly bent and roll back to your heel. NEVER snap your knee back to straight. Emphasize good hips-knee-ankle alignment (no wobbling or caving)

Exercise	Form tips	Muscle groups worked
20 lateral hops	Focus on landing (not speed or height)	Legs and core
20 F,B hops	Focus on landing (not speed or height)	Legs and core
20 single leg F,B hops	Focus on landing and alignment (not speed or height) – extra careful not to snap knee back to straight	Legs and core
20 scissor jumps	Focus on landing and alignment: align knee with ankle (no wobbling or caving), must be able to see your toes in front (never less than 90 degree angle)	Legs and core

Running

Exercise	Form tips	Skill worked
Shuttle runs for 60 s – forward and backward 2.5 yards at the cones set up	Fast feet, short steps, just tap lines with one leg and push off with other leg	Agility – forward to backward
Diagonals – 3 times through each, work on form, NOT speed	Sprint facing cone and at last step turn sideways to prepare for the turn, accelerate hard off the turn, just tap lines with one leg and push off with other leg, maintain good hip-knee-ankle alignment (no caving or wobbling)	Agility - diagonal
Bounding 40 yards x 2	Drive knee up. Focus on landing and alignment.	Sprinting form – “pistons”

Final word on ACL tear prevention:

Remind your players to land on the balls of both feet and bend their knees deeply when landing a jump. Also tell them that if they get hit in the air it is safer to fall over than to attempt to land on your feet.

You can help your players understand their own knee alignment by video-taping them during these exercises. It may help motivate them to improve their running, jumping, and landing mechanics.

Don't forget to encourage your athletes to hit the gym to determine quad-hamstring imbalances and leg vs leg imbalances. The hamstring should lift 75% of what the quad can lift. Do single leg weights to make sure each leg is equal.