

ACL INJURY PREVENTION

Full 30-Minute Program · For Serious Athletes

YOUR PROGRAM AT A GLANCE

WHO IT IS FOR	Competitive and serious recreational athletes in cutting, jumping, and pivoting sports: soccer, basketball, football, volleyball, skiing, pickleball
HOW LONG	About 25 minutes before you play, plus 5 minutes of stretching after
HOW OFTEN	At least 3 times a week , all season and every season. It replaces your usual warm-up
EQUIPMENT	A resistance band, a low box or step, a cone or line, a padded surface, and a partner for Nordic curls
THE ONE RULE	Quality over quantity. Land softly, bend your hips and knees, and keep your knee lined up over your foot , never caving in
WHEN IT WORKS	It takes 6–8 weeks of consistent work for the safer movement patterns to become automatic

Why This Program Works

About **70% of ACL tears happen without contact**: landing, stopping suddenly, or cutting and pivoting. The knee usually gives way in the same position: nearly straight and collapsing inward (called **valgus**), with the foot planted. That position comes from how the body moves, which means it can be trained.

Knee control starts at the **core and hips**: weak hip muscles let the thigh drop inward, and the knee follows. Strong **hamstrings** pull the shin bone back and protect the ACL. A tear happens in a fraction of a second, too fast to react, so this program trains the safe pattern until it is **automatic**, even when you are tired.

The payoff	Structured neuromuscular warm-ups like FIFA 11+ and PEP reduce ACL injuries by 50% or more , and lower ankle, hamstring, and other knee injuries too
Who is most at risk	Female athletes are 2–8 times more likely to tear the ACL than male athletes in the same sport
Why it matters	Only about 55% of athletes return to competitive sport after ACL reconstruction, and up to 30% of young athletes who do return tear an ACL again within 2 years

Learn more and watch the videos

The research, the FIFA 11+ program, and my ACL video series:
merrittsurgery.com/surgeries/acl-injury-prevention



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How to Do Every Exercise

The protective effect depends entirely on good form. Advance only when you can do the current level perfectly.

The four cues

- **Knee over foot.** Keep each knee pointing over your second toe. Never let it cave inward. Your knee may travel forward past your toes; that is fine as long as it stays lined up
- **Land soft and quiet.** Land on the ball of your foot and roll to the heel, bending at the hips, knees, and ankles
- **Hips back, chest up.** When you land or stop, sink your hips back and down like sitting in a chair. Never stop on stiff, straight legs
- **Stick it.** Hold landings for 2–3 seconds before the next rep. If you can't, slow down or make the drill easier

Phase 1: Dynamic Warm-Up and Mobility

About 5 minutes. Raises your temperature and loosens the hips, knees, and ankles.

Exercise	Time / reps	How to do it
Jogging and dynamic movement	2 min	Light jog for 30 sec, then about 30 sec each of high knees , butt kicks , and lateral shuffles in a low athletic stance. Stay light on your feet; don't click your heels together on the shuffles
Walking lunges with torso twist	1 min	Step forward into a lunge, both knees bent to about 90°, back knee hovering above the ground. Keep the front knee lined up over your foot . Rotate your torso over the front leg, back to center, then step through with the other leg. Chest up; twist from the upper body, not the low back
Leg swings, forward and side to side	30 sec each leg	Hold a wall or partner. Swing one leg forward and back like a pendulum, then turn to face the wall and swing it across your body. Keep the torso still; the motion comes from the hip
Inchworms	1 min	Hinge at the hips, hands to the floor, legs as straight as is comfortable. Walk your hands out to a high plank, hold for 2 counts, then walk your feet up to your hands. Keep your back flat and hips from sagging

Phase 2: Strength and Activation

About 10 minutes. Builds the core, hip, and hamstring control that keeps the knee from collapsing. Do as a circuit, 2 rounds, with minimal rest.

Exercise	Time / reps	How to do it
Plank	30–60 sec	On forearms and toes, elbows under shoulders, a straight line from head to heels. Brace your core and squeeze your glutes. Don't let the hips sag or pike up; look at the floor just ahead of your hands
Side plank with leg lift	30 sec each side	On one forearm, elbow under shoulder, feet stacked. Lift the hips into a straight line, then slowly raise and lower the top leg. Keep the hips stacked and high; lift with the glute, not momentum

Glute bridge	15 reps	On your back, knees bent, feet hip-width and a few inches from your glutes. Drive through your heels and lift until shoulders, hips, and knees are in a line. Hold 2 sec, lower slowly. Don't arch the low back
Banded monster walks	10 steps forward, 10 back	Band around the ankles or just above the knees, quarter-squat stance. Step forward and slightly out, then backward. Keep tension on the band and push your knees out against it
Nordic hamstring curls	Build up gradually (see below)	Kneel on a pad with a partner holding your ankles. Keeping a straight line from knees to head, lower yourself toward the floor as slowly as you can. Catch yourself in a push-up position and push back up. Hinge at the knees only; the slow lowering is what counts

Nordic curls: start low and build

Nordic curls are the single best exercise for hamstring strength, and they cause real soreness if you start too fast. Do them **in one round only**. Start with **3–5 reps** for the first 2 weeks, then add 1–2 reps a week up to **8–10 reps**. Some soreness for a day or two is normal early on; don't start them in the 2 days before a game.

Phase 3: Plyometrics and Landing Control

About 10 minutes. The most important phase: it rehearses safe landing, stopping, and cutting until they are automatic.

Exercise	Sets × reps	How to do it
Box jumps with a stuck landing	2 × 8	Start with a low, stable box (12–18 inches). Dip, swing your arms, and jump onto the box. Land as quietly as possible on the midfoot in a quarter squat, knees over feet, and hold 2–3 sec. Step down; don't jump down
Lateral hops over a cone	2 × 10 each side	Stand on one leg next to a low cone or line. Hop sideways over it, landing softly on the other leg, then hop back. Keep a slight bend in the landing knee and the torso upright. Quick but controlled
Single-leg forward and back hops	2 × 8 each leg	On one leg facing a line, hop forward over it and land on the same leg, then hop back (1 rep). Land on the ball of the foot and roll to the heel, absorbing through a bent knee and hip. Knee stays over the foot
Scissor jumps	2 × 12 total	From a lunge, jump straight up and switch legs in the air, landing in a lunge with the other foot forward. Absorb each landing and control the descent. Chest up, core tight
Deceleration drills	2 × 4	Cones 10 yards apart. Sprint toward the second cone and stop completely in 3 steps , finishing in a balanced athletic stance. Sink the hips back and down; absorb the stop through the hips and thighs. Walk back and repeat

Phase 4: Cool-Down and Flexibility

About 5 minutes, after practice or the game. Hold each stretch 30 seconds per side and breathe deeply.

Stretch	Hold	How to do it
Standing quad stretch	30 sec each side	Hold a support if needed. Pull your heel toward your glute, knees together, and push the hips slightly forward
Standing hamstring stretch	30 sec each side	Heel on a low step, leg straight. Hinge forward at the hips with a straight back until you feel the back of the thigh
Figure-four stretch	30 sec each side	On your back, cross one ankle over the other knee. Pull the bottom thigh toward your chest to stretch the glute and hip
Kneeling hip flexor stretch	30 sec each side	Kneel in a lunge position. Keep the torso upright and gently push the hips forward to stretch the front of the back hip
Butterfly stretch	30 sec	Sit with the soles of your feet together and gently press the knees toward the floor with a straight back

Making It Stick

Consistency	The protection lasts only as long as you keep doing the program. Programs done only in the preseason don't work as well as those kept up all season . Make it the team's standard warm-up so it never gets skipped
Short on time	If 3 full sessions a week feels like too much at first, start with 2 and build up to 3. Something is far better than nothing
Strength progression	Stronger bands for monster walks, a weight on your hips for bridges, planks with alternating leg lifts
Plyometric progression	Gradually raise the box height or lengthen the hops, only when landings are quiet and the knees stay lined up
Balance progression	Single-leg balance on a foam pad or balance disc, then with eyes closed
Train tired	Form breaks down with fatigue, and so does protection. Once the basics are solid, practice a few landing and stopping drills at the end of practice, too
Get feedback	A coach, a partner, or a phone video is the best way to catch a knee that caves in

Check with me first if

You have knee pain, swelling, or a recent injury, or you are coming back from ACL or other knee surgery. After ACL surgery, this program starts in late rehab once your therapist and I clear you. Stop any exercise that causes sharp or giving-way pain.

Watch: how the ACL works

Knowing how the knee works makes prevention easier to understand:
youtu.be/MGLFQBTXril



Scan to watch the video

The Full Program on One Page

Print this page for practice. Before you play: Phases 1–3, about 25 minutes. After: Phase 4.

Phase	Exercise	Dose	Key cue
1. Warm-up (5 min)	Jog, high knees, butt kicks, shuffles	2 min	Light on your feet, upright
	Walking lunges with twist	1 min	Front knee over foot; twist from the torso
	Leg swings, forward and side	30 sec each leg	Torso still; move from the hip
	Inchworms	1 min	Flat back; firm plank
2. Strength (10 min, 2 rounds)	Plank	30–60 sec	Straight line; brace; squeeze glutes
	Side plank with leg lift	30 sec each side	Hips stacked and high
	Glute bridge	15 reps	Drive through heels; 2-sec hold
	Banded monster walks	10 forward, 10 back	Push knees out against the band
	Nordic hamstring curls (1 round)	3–5 reps, build to 8–10	Hinge at knees; slow lowering
3. Plyometrics (10 min)	Box jumps, stuck landing	2 × 8	Quiet landing; hold 2–3 sec
	Lateral hops over a cone	2 × 10 each side	Soft, bent knee; controlled
	Single-leg forward and back hops	2 × 8 each leg	Knee over foot; no caving in
	Scissor jumps	2 × 12 total	Soft, controlled lunge landings
	Deceleration drills	2 × 4	Stop in 3 steps; hips back
4. After play (5 min)	Quad, hamstring, figure-four, hip flexor, butterfly	30 sec each side	Breathe; no bouncing

Key references

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