

RUN DURABLE: A GUIDE TO FIXING (AND PREVENTING) RUNNING'S MOST COMMON INJURIES

Why most running injuries start at the hip — and the protocol to bulletproof yours.

The Thesis

Every stride you take is a single-leg squat under 2-3x your bodyweight. A 50-mile week puts roughly 80,000 of those impacts through your body. Running doesn't break you down — running on a weak chassis does.

Most runners, when something hurts, treat the site of pain. Knee hurts? Ice the knee. Shins aching? Compression sleeves. IT band flaring? Foam roll until you're grimacing. But the site of pain is almost never the source.

The real problem is upstream.

Modern life has quietly dismantled the muscular infrastructure that running demands. We sit 8-10 hours a day, and the muscles responsible for stabilizing the pelvis in single-leg stance — primarily the gluteus medius, gluteus minimus, and deep external rotators — atrophy. Then we lace up and ask our bodies to do something explosive and repetitive on a foundation that can't hold.

The body is resourceful. When the hip can't stabilize, it compensates — and those compensations show up as pain in different places depending on your anatomy, your gait, and your training load. But the root is the same.

I learned this the hard way. At mile 72 of a 100-mile ultramarathon, my IT band seized so badly I couldn't bend my knee. I dropped from the race. In the months that followed, I didn't just rehab the IT band — I studied the biomechanics of *why* it happened, rebuilt my hip stability from the ground up, and haven't had the issue since. What I learned is that my IT band pain, the medial shin pain I'd dealt with for years, the hip flexor tightness I always blamed on "running a lot" — they were all the same problem wearing different masks.

This guide is the protocol that fixed it.



QUICK REFERENCE: THE PROTOCOL AT A GLANCE

The science is below. But if you just want to get started, here's the full program.

Daily Prehab (10-15 min, before runs)

1. Captain Morgan — 3 x 45 sec hold/side
2. Banded Hip Flexor March (iso) — 3 x 30 sec hold/side
3. Banded Lateral Steps — 3 x 10 steps each direction
4. Banded Front/Back Kicks — 3 x 8 each direction/side
5. Soleus Wall Sit (iso) — 3 x 45 sec

Strength Sessions (2-3x/week)

6. Single Leg RDL — 3 x 8-10/side
7. Step Downs — 3 x 10/side
8. Step Ups — 3 x 10/side
9. Single Leg Glute Bridge (iso) — 3 x 30-45 sec/side

Form Cues (pick one per run)

Push, don't pull · Run on two rails · Hips tall, not sitting

Want to know why these work? Keep reading.

THE INJURIES — ONE ROOT, MANY BRANCHES

Here's how a single deficit — weak hip stabilizers — cascades into four of the most common running injuries.

IT Band Syndrome

The iliotibial band is not a muscle. It's a thickening of the fascia lata — a dense connective tissue with tensile strength comparable to steel cable. You cannot meaningfully stretch it, and foam rolling it does almost nothing to change its mechanical properties (Chaudhry et al., 2008 showed you'd need forces far beyond what a foam roller generates to deform fascia by even 1%).

So why does it hurt? When the gluteus medius is weak, the pelvis drops on the contralateral side during single-leg stance (Trendelenburg pattern). The femur internally rotates and adducts underneath. This increases compression of the IT band against the lateral femoral epicondyle — the bony prominence on the outside of your knee. Repeat that compression thousands of times per run and you get lateral knee pain.

Fredericson et al. (2000) demonstrated that runners with ITBS had significantly weaker hip abductors on the affected side compared to the unaffected side or healthy controls. A six-week hip abductor strengthening program resolved symptoms in 92% of cases. The IT band was never the problem. The hip was.

Medial Shin Pain ("Shin Splints")

When the hip can't control femoral rotation, the tibia follows the femur into internal rotation. This dumps excessive pronation demand onto the foot and ankle — and the posterior tibialis, a deep calf muscle that controls pronation, gets overloaded trying to manage rotation it was never designed to handle alone.

The result is medial tibial stress syndrome: pain along the inner shin, particularly in the lower two-thirds. Runners blame their shoes, their surface, their volume. But research consistently shows that hip abductor and external rotator weakness is a risk factor (Verrelst et al., 2014). The shin is the victim. The hip is the crime scene.

Hip Flexor Pain

This one is counterintuitive. Runners assume hip flexor pain means the hip flexors are tight or overworked from running. In reality, it often means the glutes aren't doing their job in hip extension during late stance phase. When the glute doesn't fully extend the hip, the hip flexors (primarily the iliopsoas) have to work harder to pull the leg through during swing phase. They're compensating for a power deficit behind them.

Over time, this compensatory overload creates chronic irritation — often felt deep in the front of the hip or groin, worse with higher-effort running or hills. The fix isn't stretching the hip flexors. It's strengthening the glutes and pulling the pelvis out of anterior tilt so the hip flexors can stop doing overtime.

Patellofemoral Pain

The same femoral internal rotation and adduction that causes ITBS also affects the kneecap. When the femur rotates inward, the patella tracks laterally relative to the femoral groove. This creates uneven compression on the underside of the patella — pain behind or around the kneecap, especially going downhill or downstairs.

Powers (2010) made a compelling case that patellofemoral pain in runners is primarily driven by hip mechanics rather than local quadriceps weakness. Strengthening the hip abductors and external rotators improved patellar tracking and reduced symptoms more effectively than quad-focused rehab alone.

The Pattern

Notice the pattern: four different injuries, four different pain sites, one mechanical root cause. And these are just the most common. Weak hips can contribute to achilles tendinopathy, plantar fasciitis, stress fractures, and low back pain through similar compensatory chains. If you're a runner chasing symptoms around your body, stop. Look at the hip.

THE PROTOCOL

This program is split into two tracks: a daily prehab routine you can do in 10-15 minutes before any run, and a strength session to perform 2-3 times per week. The prehab builds neuromuscular activation and control. The strength sessions build the capacity to sustain that control under fatigue and load.

DAILY PREHAB (10-15 minutes)

Do before runs, or as a standalone on rest days.

1. Captain Morgan

Stand on one leg with the other foot resting on a bench or elevated surface at roughly hip height, knee bent $\sim 90^\circ$. Drive the standing-side hip into the ground while maintaining a level pelvis. You should feel your standing-side glute med light up.

3 x 45 sec hold per side

Why: Trains the glute med in its primary function — pelvis stabilization in single-leg stance. This is the most running-specific position on the list.

2. Banded Hip Flexor March (Isometric)

Loop a light band around your feet. Stand tall. Drive one knee up to $\sim 90^\circ$ hip flexion against the band and hold. Keep the pelvis level — don't let the standing hip drop or shift.

3 x 30 sec hold per side

Why: Trains hip flexion with anti-rotation demand on the standing leg. Teaches the hip flexor and contralateral glute to co-contract, which is exactly what happens in running gait.

3. Banded Lateral Steps

Band around ankles. Quarter-squat position, chest up. Step laterally with control — don't let the trailing leg snap in. Keep tension on the band at all times.

3 x 10 steps each direction

Why: Direct glute med strengthening in the frontal plane. The controlled eccentric on the trailing leg is as important as the stepping leg.

4. Banded Front/Back Kicks (Ankle)

Band around ankles. Stand on one leg. Slowly kick the banded leg forward, return to center, then kick behind you. Control the motion — no swinging.

3 x 8 each direction per side

Why: Challenges single-leg stability through sagittal plane perturbation. The standing leg has to resist rotation and lateral shift while the moving leg changes the force vector.

5. Soleus Wall Sit (Isometric)

Back against a wall, slide down until knees are at $\sim 90^\circ$, then come up onto your toes so you could just barely slip a playing card under your heels. Hold.

3 x 45 sec

Why: The soleus is the unsung hero of running — it absorbs more force per stride than any other muscle. This isometric builds tendon stiffness and endurance in a position that mirrors the loading pattern of midstance. Also protective against achilles tendinopathy and medial shin pain.

STRENGTH SESSIONS (2-3x/week)

Perform on non-consecutive days. Can follow a run or be done separately.

6. Single Leg Romanian Deadlift

Hold a dumbbell or kettlebell in the hand opposite your standing leg. Hinge at the hip, sending the free leg behind you. Keep hips square — don't open up. Drive back up by squeezing the standing-side glute.

3 x 8-10 per side

Why: Trains posterior chain strength (glute max, hamstring) with a massive single-leg balance demand. The contralateral load forces the hip stabilizers to resist rotation — directly mimicking the demands of running.

7. Step Downs

Stand on a box or step (8-12 inches). Slowly lower the free foot toward the ground by bending the standing knee. Tap the heel lightly, then drive back up. Control the descent — that's where the work is.

3 x 10 per side

Why: Eccentric single-leg quad and glute loading. This is one of the best exercises for durability, especially over longer races because it trains the exact deceleration pattern that running demands, while the hip stabilizers work to keep the knee tracking properly.

8. Step Ups

Same box. Step up driving through the top foot — don't push off the bottom foot. Stand all the way up and squeeze the glute at the top before lowering with control.

3 x 10 per side

Why: Concentric hip extension strength in a single-leg pattern. Complements step downs by training the push-off phase of gait.

9. Single Leg Glute Bridge (Isometric)

Lie on your back, one foot flat on the ground, other leg extended or held at 90°. Drive hips up until your body forms a straight line from shoulder to knee. Hold at the top.

3 x 30-45 sec per side

Why: Isolated glute max activation with a hip extension bias. The isometric hold builds endurance in the position where your glute should be firing hardest during running — late stance.

RUNNING FORM CUES

Strength gives you the capacity. Cues help you use it. Keep these simple — pick one per run to focus on.

"Push, don't pull."

Push the ground away from under your center of mass using your toes. Emphasize hip extension — driving the ground behind you — rather than pulling your knee forward. This loads the glutes and calves (which can handle it) instead of the hip flexors (which can't sustain it).

"Run on two rails, not a tightrope."

Crossover gait — where your feet land on or across your midline — is one of the biggest contributors to IT band and patellofemoral overload. Imagine you're running on two parallel rails, one for each foot. A slight widening of your base of support reduces femoral adduction and the lateral forces driving ITBS. Note that this is basically what the glute med strength work is accomplishing without needing a cue.

"Hips tall, not sitting."

When fatigued, runners tend to "sit" into their stride — hips drop, pelvis tucks under, stride shortens. Cue yourself to run tall through the hips. Think about your pelvis as a bowl of water you're trying not to spill forward or backward.

WHEN TO SEE A PROFESSIONAL

This protocol addresses the most common biomechanical root cause of running overuse injuries. But not all pain is a stability problem. See a sports medicine physician or physical therapist if:

- You have point tenderness on a bone (possible stress fracture).
- Your pain is getting worse despite 2-4 weeks of consistent hip strengthening.
- You experience sudden, sharp pain during a run (not gradual onset).
- You have numbness, tingling, or weakness that doesn't resolve.
- You have pain that wakes you at night or is present at rest.

With that said, every pain I've ever been worried about in running has had one of these solvable root causes, which requires the right kind of load rather than rest to improve.

But, this resource is educational, not medical advice. If in doubt, get assessed.

WEEKLY TRACKER

Track your consistency. Check off each session as you complete it.

Daily Prehab

Exercise	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Captain Morgan							
Hip Flexor March							
Lateral Steps							
Front/Back Kicks							
Soleus Wall Sit							

Strength Sessions

Exercise	Session 1	Session 2	Session 3	Notes
Single Leg RDL				
Step Downs				
Step Ups				
SL Glute Bridge				

Weekly Notes

How did things feel this week? Any pain patterns? Energy levels? Improvements?

"The site of pain is almost never the source. Look upstream."