

Prevent Injuries With a Stronger Back

By Laurel Leicht, Runner's World

A healthy back is as important to your running as fit legs. "If your back muscles aren't strong, they'll tend to fatigue faster, taking energy away from other muscles, and change your stride, which can [lead](#) to injury," says Lynn Millar, Ph.D., professor of [physical therapy](#) at Andrews University in Berrien Springs, Michigan. Here's a look at how each of your posterior muscles impacts your performance, and a few quick fixes that will help you run your best.

Lower Back



Key function These muscles keep the body erect and help you rotate slightly with each running step, giving your hips and thighs more energy to push you forward. A weak lower back can put extra strain on the hamstrings, which can throw off your stride and cause [injuries from the ankle](#) to the hips, says Robert Gotlin, D.O., director of orthopedic and sports rehabilitation at Beth Israel Medical Center in New York.

Quick fix Back extensions: Lie down, press your pelvis into the floor and lift your head, chest, shoulders, and arms. Hold for five seconds, repeat 10 times.

[How to avoid \(and recover from\) the most common running injuries.](#)

Shoulders/Upper Back



Key function Strong shoulders keep your upper body relaxed, work with the arms to propel you forward, and help you breathe efficiently.

"Proper spinal alignment optimizes the function of the lungs and diaphragm," says Pilates instructor Rebekah Rotstein.

Quick fix A Planks: Rest on elbows and hold for 20 to 60 seconds, five to 10 times. **B** Side Planks: Balance on forearm, hold 20 to 60 seconds, five times each side.

Hips



Key function The hips help **drive** us forward and stabilize our landing while preventing excess side-to-side motion that could **strain the back** and cause leg injuries.

Quick fix A Leg lifts: Lift your top leg up, lower, repeat 12 to 15 times each leg.

B Kneeling hip-flexor stretch: Lunge, keep upper body straight, front knee behind toes, and push hips forward. Hold 30 seconds each side.