

Five Examples Of Strength Training Exercises That Runners Can Use In Their Daily Training

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Introduction

Strength training can improve running economy, force production, sprint capacity, and the ability of muscles and connective tissues to tolerate repeated loading. For runners, the purpose is not to replace running with bodybuilding or to perform a hard strength workout every day. It is to develop the strength needed to maintain posture and stride mechanics when fatigue increases, while adding a training stimulus that running alone does not provide through large ranges of motion. Five practical exercises are the Bulgarian split squat, lateral step-up, lateral lunge, plank, and push-up. Together they train single-leg force, frontal-plane control, trunk stability, and upper-body support. Their usefulness depends on appropriate loading, range of motion, and placement within the weekly running schedule. Research on endurance runners has shown that well-designed heavy and explosive strength training can improve running economy without necessarily increasing body mass substantially (Paavolainen et al., 1999; Støren et al., 2008). The objective is therefore efficient, progressive strength that supports the athlete's running rather than creating avoidable soreness or fatigue.

Single-Leg Strength for the Running Stride

The Bulgarian split squat is especially valuable because running is dominated by repeated single-leg support. The athlete stands one long step in front of a low bench, places the rear foot on the support, and lowers under control by bending the front hip and knee. A bench around knee height or lower is usually sufficient; excessive elevation can force the pelvis into an uncomfortable position and turn balance into the limiting factor. The front foot should remain fully supported, and the knee may travel naturally forward as long as the heel stays down and the movement remains controlled and pain-free. A runner can begin with body weight, then add dumbbells, a weighted vest, or external support from a rack so that strength rather than balance determines the effort. Two or three sets of six to ten repetitions per leg are a reasonable starting range. The exercise trains the quadriceps, gluteal muscles, adductors, and trunk while allowing each leg to develop force independently, which makes it

highly relevant to running mechanics.

Lateral Step-Ups and Side-to-Side Control

Lateral step-ups and lateral lunges train qualities that straight-ahead running may underemphasize. For the lateral step-up, the runner stands beside a box, places the inside foot completely on the surface, shifts body weight toward that leg, and rises without pushing aggressively from the trailing foot. A box of roughly six to twelve inches is safer and more useful for most runners than an unusually high platform because the athlete can control the full foot, pelvis, and knee during ascent and descent. The movement strengthens the quadriceps and gluteal muscles while challenging pelvic stability. The lateral lunge complements it by loading the adductors, gluteal muscles, and thigh through a wider side-to-side range. The runner steps laterally, sits the hips back over the working leg, keeps the foot flat, and returns by pushing the floor away. Beginners can use a shorter range or a stationary side squat before adding distance or external load. These exercises build controlled frontal-plane strength without requiring exaggerated depth or unstable positions simply to make the session harder.

Planks and Push-Ups for Trunk and Upper-Body Support

Running requires the trunk to transfer force between the arms, pelvis, and legs while limiting excessive motion, so planks are most useful when they teach active control rather than endurance for several minutes. In a forearm plank, the elbows remain under the shoulders, the gluteal muscles stay engaged, the ribs are controlled over the pelvis, and breathing continues normally. Short, high-quality holds of ten to thirty seconds can be progressed through longer-lever positions, shoulder taps, controlled leg lifts, side planks, or anti-rotation exercises. Push-ups add upper-body strength in the chest, shoulders, triceps, serratus anterior, and trunk. The body should remain aligned while the chest lowers between the hands and the shoulder blades move naturally around the rib cage. Runners who cannot perform controlled floor repetitions can use an elevated bench or rail, then reduce the height gradually. Two to four sets performed with one to three good repetitions still available are usually more useful than repeated failure sets that create unnecessary soreness before key runs or races.

What a Five-Exercise Routine Still Needs

These five movements create a strong general base, but they should not be treated as a complete universal program. Running places large demands on the calf complex, especially the soleus and gastrocnemius, so straight-knee and bent-knee calf raises are useful additions. Hip hinges such as Romanian deadlifts can strengthen the hamstrings through longer muscle lengths, while rows or pull-ups balance the pressing work from push-ups. Experienced runners may also benefit from carefully

introduced hops, jumps, or other plyometric drills that train elastic force production. Exercise selection should reflect the event and the athlete. A marathon runner, sprinter, trail runner, and older recreational runner do not have identical requirements, and previous injury may change priorities. The five named exercises are therefore best used as a foundation from which a coach or runner can build. Strength training should solve identifiable needs—such as poor single-leg control, limited calf capacity, or general weakness—rather than become a long list of exercises added simply because they appear athletic or difficult.

Programming Strength Around Running

Most recreational runners can begin with two nonconsecutive strength sessions per week, although one session may maintain gains during a demanding racing period and two or three may suit a development phase. The weekly schedule should protect important running sessions. Many athletes perform strength after an easy run or later on the same day as a harder session so that recovery days remain truly easy, but the best arrangement depends on training age and race priorities. Beginners should first learn movement quality with body weight or light resistance, then progress one variable at a time by adding load, repetitions, or sets. A simple session might include three sets of six split squats per leg, three sets of eight lateral step-ups, two sets of eight lateral lunges, three sets of push-ups, and three twenty-second planks. Sharp pain, swelling, progressive loss of strength, or an altered gait requires modification and, when appropriate, professional assessment. Recovery through adequate sleep, nutrition, protein intake, and lighter training before competition is part of the strength program rather than an optional extra.

Conclusion

Bulgarian split squats, lateral step-ups, lateral lunges, planks, and push-ups give runners a practical combination of single-leg strength, side-to-side control, trunk stability, and upper-body capacity. Their value comes from progressive execution and sensible programming rather than from extreme box heights, rigid movement rules, or daily exhaustion. A runner should use a range of motion that can be controlled, allow the knee to move naturally, increase resistance gradually, and schedule harder lower-body work so that it does not compromise important running sessions. The routine can then be strengthened with calf work, hip hinges, pulling exercises, and carefully introduced plyometrics when the athlete's needs justify them. Evidence from endurance training research supports the use of strength work to improve running economy and performance when it complements rather than overwhelms the running program (Paavolainen et al., 1999; Støren et al., 2008). The most effective routine is therefore not the one that causes the most soreness, but the one that steadily increases useful strength while allowing the runner to continue training consistently.

References

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