

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

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Introduction

Strength training can improve a runner's force production, running economy, sprint capacity, and tolerance for training. It should complement running rather than imitate it. Runners already perform thousands of repeated steps, so a useful strength program adds controlled resistance, single-leg stability, calf capacity, trunk control, and upper-body support without creating unnecessary fatigue. The goal is not to become as muscular as possible. It is to produce force efficiently, maintain form when tired, and build tissues that can tolerate the demands of the chosen distance (Paavolainen et al., 1999; Støren et al., 2008).

The five exercises in the original essay—Bulgarian split squats, planks, lateral step-ups, push-ups, and lateral lunges—can form a practical whole-body session. Several details need correction. A step two or three feet high is unsafe for most runners, a forward knee does not automatically become dangerous when it passes the toes, and strength work should not necessarily be performed every day. Exercise selection, load, range of motion, and frequency must match the runner's experience, injury history, and training phase.

How Strength Supports Running

Running economy describes the oxygen or energy cost of maintaining a given speed. Stronger muscles and tendons can help a runner produce the required force with less relative effort. Heavy resistance and explosive training have improved running economy and performance in several studies, especially when added to endurance training without excessive weight gain (Paavolainen et al., 1999; Støren et al., 2008).

Strength does not guarantee injury prevention because running injuries have multiple causes, including rapid training changes, previous injury, sleep, recovery, biomechanics, and tissue capacity. However, resistance training can increase the capacity of muscles, tendons, and bones. It also gives the coach a controlled way to strengthen movements that running alone may not train through a large range (World Athletics).

Programming Before Exercise Selection

Most recreational runners can begin with two nonconsecutive strength sessions per week. One session may be sufficient during a demanding racing period, while a development phase may use two or three. The hardest lower-body session should be placed where it does not compromise a key interval workout or long run. Many runners lift after an easy run or later on the same day as a hard session so that recovery days remain genuinely easy.

Beginners should learn movement quality with body weight or light resistance. A common starting range is two or three sets of six to twelve controlled repetitions for dynamic exercises and shorter high-quality holds for isometric work. As technique improves, the runner can increase load, add a set, or use a more difficult variation. Increasing every variable at once creates soreness without proving that the program is better.

Exercise One: Bulgarian Split Squat

The Bulgarian split squat is a rear-foot-elevated single-leg squat. It trains the quadriceps, gluteal muscles, adductors, and trunk while requiring each leg to control force independently. This is relevant to running because only one foot supports the body during most of the stride.

Set-Up

Stand about one long step in front of a low bench or padded support. Place the top of the rear foot on the support. The bench should normally be around knee height or lower, not so high that the pelvis twists. Keep the front foot fully in contact with the floor and adopt a stance wide enough for balance.

Execution

Lower by bending the front hip and knee while allowing the rear knee to move toward the floor. The torso can remain upright for greater quadriceps emphasis or lean slightly forward to increase hip contribution. The front knee may move beyond the toes if the heel stays down and the movement is comfortable; the important points are control, alignment, and an appropriate range. Drive through the front foot to stand.

Common Errors

Common mistakes include using a support that is too high, placing the feet on one narrow line, pushing primarily from the rear leg, collapsing the front knee inward, and loading heavily before balance is established. A runner can hold a rack for support and use the free hand for a dumbbell.

External support often improves the strength stimulus because balance is no longer the limiting factor.

Programming

Begin with two or three sets of six to ten repetitions per leg. When ten repetitions are easy and technically consistent, add dumbbells or a weighted vest. A heavier phase may use four to six repetitions. The exercise should create muscular effort without sharp pain in the knee, hip, or back.

Exercise Two: Plank and Anti-Extension Control

The plank trains the trunk to resist excessive extension. Running does not require the torso to remain rigid, but it does require the pelvis and rib cage to stay controlled while the arms and legs move. A plank can teach bracing and body awareness when it is performed actively rather than endured for several minutes.

Basic Technique

Place the forearms on the floor with elbows under the shoulders. Extend the legs, tighten the glutes, and bring the ribs toward the pelvis without holding the breath. The body should form a straight line from head to heels. Stop when the lower back sags, the hips rise, or breathing becomes strained.

Progressions

A beginner can use a high plank against a bench. Progressions include a long-lever plank, shoulder taps, controlled leg lifts, or a body saw. Alternating leg lifts should be small enough that the pelvis does not rotate. Quality is more useful than lifting the foot six inches simply to make the exercise look difficult.

Programming

Use three to five holds of ten to thirty seconds with strong tension, or perform six to ten slow repetitions of a moving variation. Runners also benefit from side planks and anti-rotation exercises because frontal and transverse control matter when one leg is on the ground.

Exercise Three: Lateral Step-Up

The lateral step-up strengthens the quadriceps and gluteal muscles while challenging frontal-plane control. It can help a runner learn to keep the pelvis level and the stance knee aligned during single-

leg loading.

Safe Box Height

The original recommendation of a two- or three-foot box is excessive for most people. Start with a step between six and twelve inches, depending on leg length, strength, and mobility. At the starting position, the working knee should be flexed but not forced into an extreme angle. A lower box allows better control and reduces the temptation to jump from the trailing leg.

Execution

Stand sideways next to the box and place the inside foot fully on top. Shift the torso slightly toward the working leg and press through that foot until the body rises. The outside leg can hover or lightly touch the box. Lower slowly by bending the working leg and reaching the free foot toward the floor. Keep the pelvis from dropping or twisting.

Load and Variation

Hold one dumbbell on the opposite side to increase hip stabilization or two dumbbells for a greater total load. A slow lowering phase can make a light weight demanding. The runner should not choose a height based on spectacle; the best height is the one that permits full-foot pressure and controlled descent.

Exercise Four: Push-Up

Push-ups strengthen the chest, triceps, shoulders, serratus anterior, and trunk. Upper-body strength supports arm action, posture, and general athletic capacity. Distance runners do not need excessive pressing volume, but balanced whole-body training reduces the narrowness that can develop when every session focuses only on the legs.

Execution

Place the hands slightly wider than shoulder width and keep the fingers spread. Form a straight line from head to heels. Lower the chest between the hands while allowing the shoulder blades to move naturally around the rib cage. The elbows can track at an angle rather than flare directly sideways. Press the floor away and finish with the shoulder blades protracted without rounding the entire spine.

Regressions and Progressions

Use an elevated surface if a floor push-up cannot be performed through a controlled range. Progress by lowering the support, adding repetitions, elevating the feet, using a weighted vest, or moving to dumbbell or barbell pressing. Knee push-ups are another option, though an incline often preserves a more similar full-body position.

Programming

Perform two to four sets that finish with one to three technically sound repetitions remaining. Training to complete failure can create unnecessary soreness and shoulder fatigue, especially before a race or demanding running workout.

Exercise Five: Lateral Lunge

The lateral lunge develops hip and thigh strength in a direction undertrained by straight-ahead running. It loads the adductors, gluteal muscles, quadriceps, and trunk and can improve confidence when controlling side-to-side movement.

Execution

Stand tall and step to the side. Sit the hips back over the stepping leg while keeping the other leg long. The working foot stays flat and the knee follows the direction of the toes. Reach only as low as mobility and control permit. Push the floor away to return to the starting position.

Mobility and Progression

A short range is appropriate for runners with limited adductor mobility. The exercise can be performed as a stationary side squat before adding the step. Goblet loading helps balance and keeps resistance close to the body. More advanced runners may use a Cossack squat, but the deeper range is optional rather than a required sign of athletic ability.

Building a Complete Session

A simple session can begin with a warm-up of easy cycling or jogging, body-weight squats, calf raises, and controlled lunges. The runner might then perform Bulgarian split squats, lateral step-ups, lateral lunges, push-ups, and planks. Because the first three exercises all load the legs, volume should be modest. Two exercises can be emphasized while the third is performed lightly or alternated across

sessions.

An example is 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. The exact numbers are not universal. A beginner may use fewer sets; a trained runner may lift heavier and perform fewer repetitions.

What the Five Exercises Do Not Cover

These movements create a strong base but do not directly emphasize the calf and soleus as much as running demands. Calf raises with a straight and bent knee are valuable additions. Hip hinges such as Romanian deadlifts train the hamstrings at longer muscle lengths. Rows or pull-ups balance pressing. Hops and jumps can prepare elastic qualities when introduced gradually.

The five-exercise list should therefore be treated as a practical example, not a complete universal prescription. Training should reflect the runner's weak points and event. A sprinter, trail runner, marathoner, and older recreational runner have different priorities.

Safety, Pain, and Recovery

Normal training discomfort includes muscular effort and temporary soreness. Sharp pain, swelling, loss of strength, altered gait, or pain that worsens from session to session requires modification and, when appropriate, professional assessment. A runner returning from injury should not assume that the exercise that feels hardest is the most therapeutic (World Athletics).

Strength gains depend on recovery. Adequate food, protein, sleep, and easy training days matter. Runners should reduce lifting volume before important competitions and avoid introducing unfamiliar heavy exercises in race week.

Conclusion

Bulgarian split squats, planks, lateral step-ups, push-ups, and lateral lunges give runners a useful combination of single-leg strength, trunk control, lateral stability, and upper-body capacity. Their value depends on correct scaling. The support and box heights should fit the athlete, the knee should move naturally rather than obey a rigid "never past the toes" rule, and sessions should normally be separated by recovery. Strength training works best when it is progressive, technically controlled, and coordinated with the running plan. The objective is not daily exhaustion but a stronger athlete who can run efficiently and tolerate consistent training (Paavolainen et al., 1999; Støren et al., 2008).

References

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