

Conditioning Your Core and More -- Strengthening and Balance Exercises

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While hiking seems mostly about legs and feet, your arms, shoulders, neck, back and abs are also in use on the trail. Conditioning exercises that build strength and improve balance will increase endurance, making hiking easier and more enjoyable.

Here are some simple **Core and Balance** and **Strength and Balance** exercises. Doing at least a few of these a 2-3 times a week is helpful. Consider using these exercises, with their modifications, for the strengthening part of your hike training program.

Always start with larger muscles (back and legs) first. Increase the number of repetitions, or the length of time to hold each move, as you gain strength.

Core Strengthening and Balance Exercises

Your core is your torso or trunk--**back, abs and pelvic area**. Strength in your stabilizing muscles improves your alignment, hiking form and efficiency, and helps reduce injuries.

These exercises build your abs (transverse abdominis, external and internal obliques, and rectus abdominis), **back, glutes, chest,** and upper **arms**.

1. **Back Extension** (Do not complete if lower back is tight or sore, or if you have back problems.)
On hands and knees on floor, **lift right arm and left leg simultaneously**, until level with back. Hold 15-30 seconds. Lower slowly. Repeat with left arm and right leg.

Easier: Lift and lower right arm, then lift and lower left leg. Repeat with other side.

Harder: Lift right arm and right leg at same time. Repeat with left arm and left leg.

2. **Push-up**

On hands and knees on floor, start with knees bent, lower legs elevated with ankles crossed, hands flat and slightly out to side and in front of shoulders, with weight balanced between palms and thighs just above knees. Tuck chin slightly. Hold abs in. Bend elbows and **lower body in one plane**, until upper arms parallel to floor. Push back to starting position. Complete 8-16.

Easier: On hands and knees, leave lower legs on floor. Lower chest and head to floor until upper arms parallel to floor.

Harder: Extend legs straight out and balance on toes. Lower body until upper arms parallel to floor.

3. **Plank**

Lie face down with elbows resting on floor next to chest, hands under shoulders. Push body up off floor in one piece until body rests on elbows or hands, and toes. Contract abs and keep body in straight line from head to toe. Hold 30-60 seconds.

Easier: Keep knees on floor.

Harder: Push up until elbows off floor, without straightening arms fully.

4. Bridge

Lie on back with knees bent, feet flat on floor with knees directly over ankles, and arms at sides. Tuck chin slightly. Raise hips off floor to form straight line from knees to top of shoulders. Hold 15-30 seconds. Lower body from upper back to lower lumbar.

Easier: Raise hips to form straight line from knees to shoulder blades.

Harder: Bring hands together underneath body, reach towards feet. -OR- Hold ankles.

5. Basic abdominal crunch

Lie on floor with knees bent, feet flat and hip width apart, fingers and thumbs behind ears, elbows out to sides. Tilt chin slightly toward chest. Curl up and forward to bring head, neck and shoulder blades off floor. Hold briefly at top of movement then lower to starting position. Complete 15-20 straight up and down, and 15-20 each toward right side and left side.

Easier: Keep head and shoulders on floor. Squeeze rear and tilt hips up until rear curls a couple inches off floor. Hold before slowly lowering body.

Harder: Place legs farther apart and extend further from body, reducing amount of bend in knees. -OR- Sit on exercise ball with feet flat on floor. Let ball roll back slowly and lie back until thighs and torso parallel to floor. Complete crunches while on ball.

6. Bicycle maneuver (Rated top ab exercise by Biomechanics Lab at San Diego State University)

Lie flat on floor with lower back pressed down. Place fingers and thumbs behind ears, elbows out to sides. Bend knees and raise legs to about 45-60 degree angle. Lift shoulders and head. Using bicycle motion, touch right elbow to left knee, then left elbow to right knee.

Easier: Place hands at tailbone for lower back support. Leave head and torso on floor while performing bicycle motion with legs.

Harder: Keep knees at 45-degree angle.

Leg and Arm Strengthening and Balance exercises

These exercises build your **glutes, thighs, calves, ankles,** and **upper arms**. Rest a day between strength training workouts. Realize that it's normal to feel some soreness 24-48 hours afterwards.

1. One-legged squat

Stand on floor with arms at sides and chest lifted. Lift right knee slightly in front of body, raising foot several inches off floor. Balancing on left leg, bend left knee and lower body 2-3 inches, as if sitting down. Keep left knee pointing forward and left toes in view--do not bring knee forward beyond toes--by sitting further back. Slowly return to starting position, with foot lifted. Repeat 5-10 times. Switch legs.

Easier: Do two-legged squat, with both feet on floor.

Harder: Squat lower, holding 1-2 seconds. -OR- Hold 5-8 lb. dumbbell in each hand.

2. Wall sit

Stand with heels about a foot away from a wall or door, arms at sides. Bend knees, keeping knees in line with ankles and behind toes, as if sitting into a chair, sliding back down wall until thighs are parallel to floor. Hold for 10-15 seconds. Slowly raise up.

Easier: Bend a few inches, without bringing thighs parallel to floor.

Harder: Hold sitting position for 15-30 seconds.

3. Walking lunge

Stand straight with feet together. Take a long step forward, lowering back knee and torso toward the floor, until front knee is directly over ankle. Rise, bringing feet together, and lunge forward with opposite leg. Continue alternating legs for 15-20 paces.

Easier: Do 10-15 paces without lowering body as far.

Harder: Hold a 5-8 lb. dumbbell in each hand, keeping arms down at side.

4. Hop and stick

Stand with feet hip distance apart, with arms relaxed and elbows tucked at side. Jump to right as far as possible, landing on right foot and hold for two seconds. Jump to left, landing on left foot, and hold. Focus on 'sticking the landing' and quickly stabilizing body.

Easier: Land on both feet.

Harder: Hop from side to side on one foot, holding each landing for two seconds.

5. Step down To build descent-specific strength

Stand on step or platform 6-10 inches high, facing out. Lower left leg so heel only touches ground, then return to standing position. Do 8-10 heel touches before repeating action with right heel touch.

Easier: Place entire foot on ground.

Harder Do two sets of 8-10 heel touches with each foot.

6. Calf raises

Stand with toes on step or curb, heels off edge and hand on wall or rail for balance. Slowly dip heels down past edge for a full stretch, then raise up on toes. Begin with 2-3 sets of 8-12 raises. (Calves tire quickly; don't overdo.)

Easier: Stand on floor rather than edge of step, raising on toes only. Do 1-2 sets of 8-12 raises.

Harder: Hold a 5-8 lb. dumbbell in each hand, keeping arms down at side.

7. **Triceps Dip** (Be careful if you have wrist, elbow or shoulder problems.)

Sit on floor with legs parallel and slightly apart, knees bent, feet flat. Place hands flat on floor, just behind rear, with fingers pointing forward. Lean back slightly.

Straighten arms to lift body off floor. Bend elbows to lower rear towards floor, without touching down, then straighten arms to lift again. Be sure to keep motion in arms, rather than thrusting hips up. Repeat 8-16 times.

Easier: Stay seated, keeping rear on floor and elbows bent. Lean back, deepening bend in elbows, then push back to starting position.

Harder: Sit on edge of bench with legs together, knees bent. Keeping elbows relaxed, straighten arms, firmly gripping front edge of bench. Slide rear just off front of bench so upper body points straight down. Keep abs pulled in and head centered between shoulders. Bend elbows and lower body in straight line. When upper arms are parallel to floor, push back to starting position. (Even harder: Extend legs straight out in front.)

Everyday Balance

The **key to good balance is good alignment**--head centered over neck, chest open and lifted, ribs over hips, pelvis in neutral position, feet hip distance apart, weight evenly centered on feet, toes relaxed--with ears in line with ankle bones.

In addition to the exercises above, you can **work on your balance a few minutes a day** by doing a variety of activities, such as:

- Get **in and out of chairs without using your hands** to push yourself up.
 - Perform **basic tasks**--brushing your teeth, talking on the phone, drinking coffee--while standing **on one leg** (remember to alternate legs).
 - Do bicep curls, or other simple upper body weight work, **one arm at a time** or while sitting on a fitness ball.
 - Stand on **one leg, close eyes** and raise arms to shoulder height or above head.
 - **Walk heel-to-toe** along a line, on a 2x4, or on a curb.
 - Climb **over or under obstacles** on the trail, rather than going around them.
 - Play **hopscotch**--including bending forward to pick up your marker--with your kids.
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