



H4-1 Resistive Training Program Without Equipment

Program Plan

Exercise	Muscles Trained	Sets	Repetitions
Isometric neck flexion and lateral flexion	Sternocleidomastoids, scaleni	1–3	10–20 sec
Isometric shoulder shrugs	Trapezius	1–3	10–20 sec
Push-ups/modified push-ups	Triceps, biceps, deltoids, pectoralis major	1–3	5–25
Chair dips	Triceps, deltoids, pectoralis major	1–3	3–10
Pull-ups	Latissimus dorsi, biceps	1–3	1–5
Crunches	Rectus abdominus, obliques	1–3	10–30
Sit-backs	Rectus abdominus	1–3	5–20
Spine extensions	Gluteus maximus	1–3	5–15 each side
Pelvic tilt	Gluteus maximus, rectus abdominus	1–3	5–10
Squats	Quadriceps, gluteus maximus, hamstrings	1–3	10–20
Wall squat (phantom chair)	Quadriceps, hamstrings	1–3	20–60 sec
Toe raises	Gastrocnemius, soleus	1–3	20

Exercises

Isometric neck flexion and lateral flexion Place your hand on your forehead with fingertips pointed up. Using the muscles at the back of the neck, press your head forward and resist the pressure with the palm of your hand. Hold for 10–20 seconds. Repeat.

Next place your hand on the side of your face, fingertips pointed up. Using the muscles on the opposite side of your head, press your head toward your hand, resisting the pressure with the palm of your hand. Hold for 10–20 seconds; repeat on the opposite side.

Isometric shoulder shrugs Grasp a low bar, desk, table, or doorknob for resistance. Press your shoulders upward, resisting the pressure with your hands. Hold for 10–20 seconds.

Push-ups/modified push-ups For push-ups, begin with your body supported by your hands and feet; for modified push-ups, begin with your body supported by your hands and knees. Lower your chest to the floor with your back straight and your fingers pointed forward. Return to the starting position.

Chair dips Place two sturdy chairs with the seats facing each other approximately shoulder-width apart. Stand between the chairs and place one hand on each chair seat, fingers pointing forward. Keeping your upper body perpendicular to the floor, extend your legs out in front of you. Support most of your body weight with your hands. Lower yourself between the chairs until your elbows are bent about 90°. Return to the starting position.

Pull-ups Hang from a bar or door frame, with palms facing away from you, hands slightly more than shoulder-width apart, and elbows fully extended. Pull yourself up until your chin is above the bar; then return to the starting position. Do not swing your legs, and be sure to fully extend your elbows after each repetition. (This exercise is somewhat easier to perform if you reverse your grip so that your palms face you. Doing the exercise in this way primarily works the biceps muscles.)

(over)

H4-1 (continued)

Crunches Lie on your back on the floor with your arms folded across your chest, knees bent, and feet on the floor or on a bench. Curl your trunk up and forward by raising your head and shoulders from the ground. Return to the starting position. To develop the obliques, do the exercise with a twist: After you lift your shoulder blades off the ground, twist your upper body to one side. As you twist, raise one shoulder higher than the other and reach past your knee with your upper arm.

Sit-backs Begin in a sitting position, with your knees bent and your feet flat on the floor. Your arms should be relaxed at your sides or resting lightly on the backs of your thighs. Using your abdominal muscles, slowly round your back and lower your torso until it is about halfway to the floor. Hold for 5 seconds and then return to the starting position. Keep your feet on the floor, and don't let your back arch.

Spine extensions Begin on your hands and knees. Extend your left leg to the rear, and reach forward with your left arm, balancing your body on your right hand and knee. Hold this position for 10–30 seconds. Repeat on the other side. (For variety, this exercise can also be done using alternate legs and arms—for example, by extending the left leg with the right arm, and vice versa.)

Pelvic tilt Lie on your back with knees bent and arms extended to the side. Tilt your pelvis under and try to flatten your lower back against the floor. Tighten your gluteal and abdominal muscles while you hold this position for 5–10 seconds. Don't hold your breath.

Squats Stand with feet shoulder-width apart and toes pointed slightly outward. Keeping your head up and lower back straight, squat down until your thighs are approximately parallel with the floor. Don't let your knees extend out in front of your toes. Return to the starting position.

Wall squat (phantom chair) Put your back against a wall with your heels shoulder-width apart and about 8–12 inches away from the wall. Bend your knees as if you were sitting in a chair. Support your weight with your legs; don't let your knees extend out in front of your toes. Hold for 20–60 seconds.

Toe raises Stand with feet shoulder-width apart and toes pointed slightly outward. Press down with your toes while lifting your heels. Return to the starting position, and then repeat. Don't bounce.

Use the chart in Lab 4-3 in your textbook or the Daily Fitness Log booklet to monitor the progress of your program.