

## *Resistance Exercises*

To get started on your resistance workouts, you can purchase inexpensive resistance training bands, such as Dyna-Bands or other rubber tubing, from almost any sporting-goods store, certain superstores, and online. Many progress your training with bands of varying resistance (usually color-coded so that you can tell the resistance). Some bands are like wide strips of a flexible, rubbery substance that you can grip with your hands or tie using a simple bow or square knot. Other bands look like thin rubber tubing and may come with attached handles, and some are like big rubber bands or figure eights. Any of these bands can work for you.

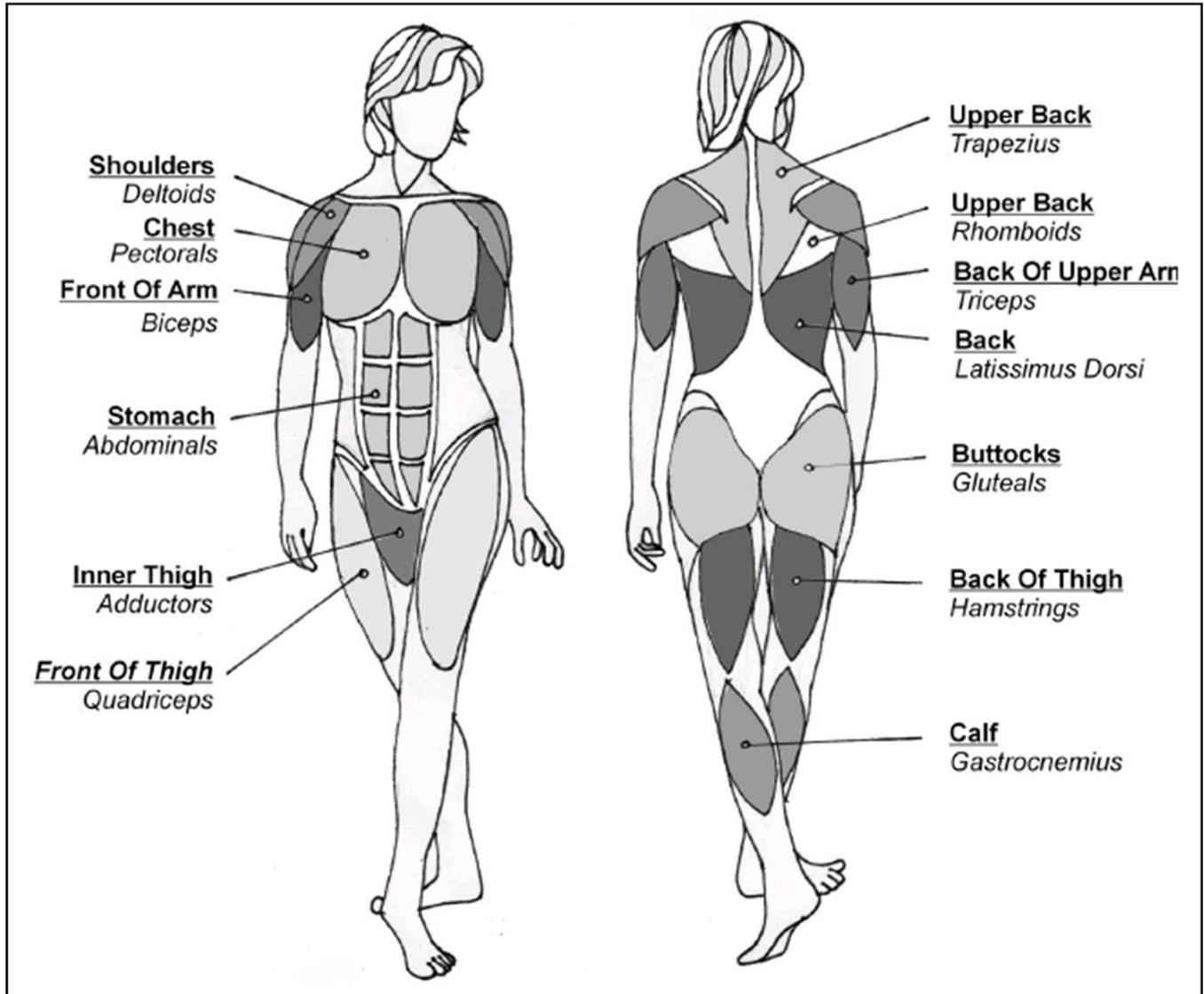
If you would prefer to use more traditional dumbbells during exercises, pick up an inexpensive set of small ones. If you're just starting out, get a set that ranges in weight from one to ten pounds, or at least 1, 3, and 5 pound weights to start. If small weights are extremely easy for you, consider either investing in a costlier set of heavier weights or joining the nearest gym or workout facility to have access to heavier loads and resistance machines. If you would rather not invest in any weights, you can get creative using household items of varying weights that you can easily grasp in your hands, such as water bottles, soup cans, and bags of flour.

It helps to have a basic understanding of which muscle(s) are being used for each activity, including the muscle names and their general location (i.e., shoulder, upper arm, thigh, etc.). In the upper body, you have muscles that include the shoulder deltoids (front, medial, and back portions), pectoralis major and minor (the pectorals, or "pecs") on the front of your chest, upper back and neck muscles (latissimus dorsi or "lats," trapezius, and rhomboids), and biceps (front) and triceps (back) of your upper arm. Your main lower-body muscles include the quadriceps ("quads") and hamstrings on the front and back of your thighs, respectively, adductors (inner thigh), gluteus muscles ("gluts" or buttocks), and calf muscles (gastrocnemius and soleus). Finally, your main abdominal muscle directly in front and down the center is the rectus abdominus, but all the stomach muscles together (including the internal and external obliques on your sides) are collectively called abdominal muscles, or "abs."

Refer to the attached muscle chart to learn the muscles and muscle groups you'll be targeting with your training. The resistance exercises that follow list the main muscle groups involved in each one, thus enabling you to work on different muscles or muscle groups and include all of the main ones in the exercises that you choose to do. Having a basic understanding of your own musculature also allows you to choose exercises that emphasize working multiple muscles or muscle groups first, followed by isolated muscles (for example, doing chest-press exercises first before isolating the front of the arm with biceps curls), which is the recommended progression of exercises to maximize your gains and avoid injuries.

Some basic resistance training exercises that you can do using hand weights and/or resistance bands are illustrated and described in the following section. Try include all of them in your workouts, doing the number of repetitions and sets recommended in your exercise program.

## *Muscle Identification Guide*



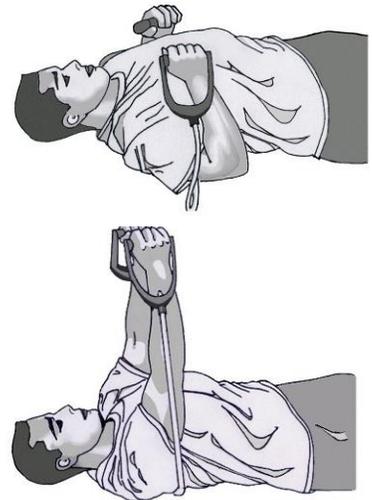
## *Upper-Body Exercises*

### **#1: Chest press**

Main muscles worked: deltoid (front section), pecs, triceps

Directions:

- Lie down on your back holding a dumbbell in each hand right above your chest with your elbows bent; if you're using a resistance band, position the band underneath your shoulders and grab onto it with your hands.
- Push both arms up in the air until they are almost straight, shoulder-width apart, and hold this position for several seconds.
- Bring your arms back down to your sides until your elbows touch the mat, allowing the dumbbells (or resistance band) to come back to the starting position.



### **#2: Shoulder press**

Main muscles worked: deltoids (anterior and middle portion), trapezius, triceps

Directions:

- In a sitting position, hold the dumbbells right above your shoulders with bent elbows, or, if using a resistance band, sit on it and hold the band on either side at shoulder height.
- Keep your abdominal muscles tight and your torso straight.
- Push up until your arms are almost straight and the dumbbells or your hands come close to meeting in the middle above your head.
- Slowly return to the starting position.



### #3: Lateral arm raise

Main muscles worked: deltoid (middle and back sections), trapezius

Directions:

- Sit with your back straight and the dumbbells in your hands at your sides or the resistance band underneath your bottom.
- If using the resistance band, grasp one end of it in each hand and clench your fists with your knuckles facing upward.
- Lift the dumbbells (or pull the resistance band up and straight out to the side) until both arms are level with your shoulders, keeping your elbows slightly bent.
- Hold this position for a few seconds before slowly returning to the starting position.
- During this exercise, relax your neck and try not to hunch your shoulders to ensure that your shoulder and neck muscles are doing the work (and not your arms).



### #4: Modified push-ups

Main muscles worked: pecs, deltoids (anterior portion), triceps

Directions:

- Get on your hands and knees on the floor or mat.
- If using a band for extra resistance, position it across your back and hold one end of it in each hand so that it is somewhat tight when your elbows are straight.
- Place your hands shoulder-width apart on the mat.
- Tighten your abdominal muscles to straighten your lower back and lower yourself (from your knees, not your feet) down toward the mat as far as you can without touching it.
- Push yourself back up until your arms are extended, but without locking your elbows.
- If this exercise is too hard, stand facing a wall and place your arms on it at shoulder height and your feet about a foot away; then, do your push-ups off the wall (with or without a resistance band).



## #5: Double-arm row

Main muscles worked: deltoids (back portion), lats, rhomboids, biceps

Directions:

- Stand with your feet in line with your hips with a dumbbell in each hand.
- If using a resistance band, position it underneath your feet and hold the band with both hands at your sides.
- With your knees slightly bent, bend your upper body forward from the hips about 70 degrees.
- Straighten your arms so that your palms face each other.
- Pull the dumbbells or resistance band in toward your waist so that your elbows move up past your hips, but with your upper arms staying close to your sides.
- Alternately, sit with your legs out in front of you (knees slightly bent) and the resistance band wrapped around the soles of both feet; then, keeping your torso straight, pull your arms straight back, keeping your arms by your sides during the movement.



## #6: Lat pull-down

Main muscles worked: lats, biceps

Directions:

- Sit with your back straight and hold both ends of the resistance band, one in each hand.
- Still grasping the band, fully extend your arms above your head.
- With your arms still extended, stretch the band so that both hands go out to the sides slightly wider than your shoulders, and hold this position for a few seconds.
- Pull the stretched band down toward your chin, pulling out on the band by bending at the elbow to stretch it more.
- Squeeze your shoulder blades together and feel the muscles in your back, shoulders, and arms contract.
- Hold this position for a few seconds and then extend your arms back up above your head, allowing the band to relax.



## #7: Biceps curls

Main muscles worked: biceps

Directions:

- Sit down holding the dumbbells, and drop both arms to your sides so that your elbows are in line with your hips with your palms facing forward.
- Bring your knees and feet together, keeping your stomach muscles tight to support your lower back.
- Lift the dumbbells, bending your elbows while keeping your upper arms stationary at your sides until the dumbbells almost touch your chest.
- Slowly return the dumbbells to the starting position.
- Alternately, do one arm at a time by supporting the elbow of the arm holding the dumbbell against the inside of your knee on the same side.
- With resistance bands, secure one end of the band under your right foot and grasp the other end in your right hand, palm face up, and complete the same movement, keeping your upper arm close to your torso at all times; switch sides to work the left arm.

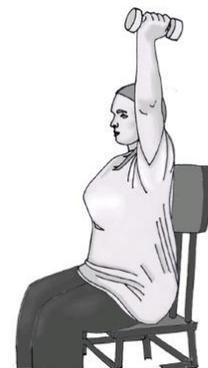


## #8: Triceps curls

Main muscles worked: triceps

Directions:

- Sit on the bench or chair holding one dumbbell in your lap with both hands.
- Lift the dumbbell straight up until your arms are straight and the dumbbell is directly overhead.
- Bend your arms at the elbows only and lower the dumbbell behind your head.
- Keep your stomach muscles tight throughout the movement to support your lower back and keep it straight.
- Lift the dumbbell straight overhead again by straightening your arms at the elbow to return to the starting position.
- If using a resistance band, hold it in your right hand while you raise your right arm with bent elbow, and drop the band straight down behind your back on the right side; then grab the other end in your left hand by reaching behind across the small of your back. Alternately straighten and bend at the elbow (with your upper arm still raised at the shoulder), and then switch the positioning of your arms to work the left side.

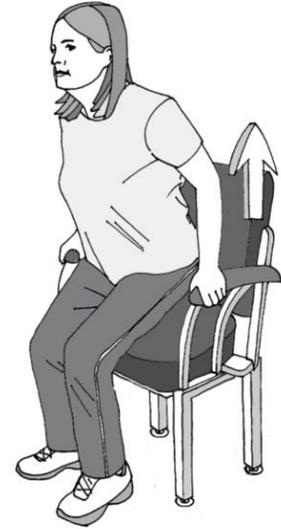


## #9: Chair push-ups

Main muscles worked: deltoids, triceps

Directions:

- Using your arms (not your legs), grasp the arms of a sturdy chair.
- Slowly push your body as far as you can up off the chair, hold your weight, and slowly lower yourself back down.
- Alternately, lean slightly forward while doing the push-up, or you can start by sitting on a phone book or cushion.



## *Lower-Body Exercises*

### **#1: One-leg press**

Main muscles worked: quads, gluts, calves

Directions:

- Sit on the floor with your legs out in front of you, knees slightly bent.
- Hold one end of the resistance band in each hand and place it around the sole of your right foot with your right knee fully bent.
- Straighten your right leg (without locking your knee) while pulling on both sides of the resistance band.
- Continue to pull against the resistance band as you return your knee to the bent position.
- Repeat the exercise with your left leg.
- Alternately, tie the resistance band in a circle around the leg of a chair, then sit on the chair, place the sole of your foot inside the other end of the band, and straighten your leg almost fully out.



### **#2: Squats**

Main muscles worked: quads, hamstrings, gluts, calves

Directions:

- Stand with a dumbbell in each hand and your feet shoulder-width apart, with your toes pointing slightly out to the side.
- If you're using a resistance band, tie both ends of your band onto a straight bar or broom handle, which is placed squarely across your shoulders with the loop of the tied band placed under your feet.
- Keep your body weight over the back portion of your foot rather than your toes; if needed, lift your arms out in front of you to shoulder height to balance yourself.
- Begin squatting down but stop before your thighs are parallel to the floor (at about a 70-degree bend), keeping your back flat and your abdominal muscles firm at all times.
- Hold that position for a few seconds before pushing up from your legs until your body is upright in the starting position.
- Do squats with your back against a smooth wall if needed to maintain your balance.

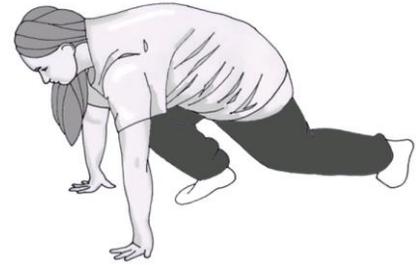


### #3: Knee dips

Main muscles worked: quads, hamstrings, gluts, calves

Directions:

- Get into a sprinter's position facing forward as though you were at the starting line of a race, with one leg forward and one behind and your hands on the floor in front of you.
- Bend both legs as much as is comfortable, bringing your knees as close to the floor as possible without touching.
- Push your body upward until your legs are almost straight without locking your knees.
- Switch the position of your legs and repeat.

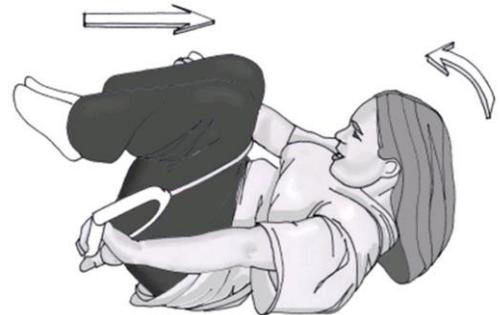


### #4: Knee lift

Main muscles worked: quads, hip flexors, abdominals

Directions:

- Lie on your back with your knees bent.
- Bend at your hip until your bent knees are positioned straight up over your hips at a 90° angle.
- Tighten your abdominals to hold your lower back flat against the floor.
- Lift your head slightly off the floor and position the resistance band across the front of your thighs, just above the knees.
- Holding the band in your hands, stretch it by pulling your hands out more to the sides.
- Pull your knees in toward your chest against the band to increase the resistance against your lower abs and the front of your thighs.
- Slowly return to the starting position.
- If holding your head slightly off the floor is too hard, relax your neck muscles and rest your head on the floor.



## #5: Seated leg extensions

Main muscles worked: quads

Directions:

- Sit on the chair with your back straight and your feet and knees shoulder-width apart.
- If using additional resistance, place the band around the bottom of your right foot with your knee bent (or put the ankle weight on), and then put your foot back on the floor.
- Holding both ends of the band in your right hand or without any extra resistance, slowly straighten your right knee and lift your foot (without moving at your hip) until your leg is straight out in front of you (at a 90-degree angle to your torso).
- Slowly bend your right knee and return to the starting position.
- Repeat with the left leg.



## #6: Standing leg curls

Main muscles worked: hamstrings

Directions:

- Stand next to a wall or other support with your hands on it more than shoulder-width apart, and then bend your right knee.
- Keeping your knees close together, smoothly lift your right heel up toward your bottom.
- Hold your heel as close to your bottom as you can lift it for several seconds before returning your foot slowly to the floor.
- To increase the intensity of the curl, place a resistance band around your right ankle with your knee bent, and hold both ends of it with your right hand during the movement.
- Repeat with the left leg.



## #7: Standing side leg raises

Main muscles worked: gluts, outer thigh

Directions:

- Stand behind a chair and hold on to the back or place your hands shoulder-width apart on the wall.
- Lift your right leg straight out to the side until your foot is about 6 to 12 inches off the floor, and hold for several seconds.
- Keep your torso erect throughout the movement, and slightly bend the leg that is supporting your weight.
- Return your leg to the starting position.
- For added resistance, tie your resistance band into a circle and place it around both of your ankles before lifting one leg at a time out as far as you can against the band.
- Repeat with your left leg.



## #8: Calf raises

Main muscles worked: calves

Directions:

- Stand erect with the balls of your feet on a stable elevated surface (stair or ledge).
- If using dumbbells, hold a dumbbell in one or both hands.
- Keeping your body straight, balance on the ball of your foot and lift your heels as high as possible for several seconds.
- Slowly lower your heels down as far as possible (even past being level with the stair or ledge, if possible).
- Alternately, work one calf at a time, with or without holding a dumbbell.



## #9: Sit-to-Stand

Main muscles worked: abdomen, thighs

Directions:

- Sit toward the front of a sturdy chair and fold your arms across your chest.
- Keep your back and shoulders straight while you lean forward slightly and practice using only your legs to stand up slowly and to sit back down.
- To assist you initially, place pillows on the chair behind your low back.



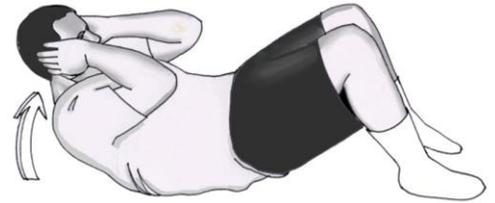
## *Lower Back and Abdominal Exercises*

### **#1: Crunches**

Main muscles worked: abdominals

Directions:

- Lie down on your back with your knees bent.
- Place your hands on your head right behind your ears.
- While breathing out, contract your abdominal muscles to lift your head, neck, and shoulders off the floor and curl forward no more than 45 degrees.
- Hold for a moment before returning to the starting position, then repeat.



### **#2: Waist worker**

Main muscles worked: abdominals (obliques)

Directions:

- Lie on your back on the mat with your legs bent, your feet flat on the floor, and your left hand behind your head.
- Stretch your right hand across your body toward your opposite (left) knee and circle your hand three times around your knee in a counterclockwise direction; your right shoulder blade will lift off the mat.
- Repeat the circular movement around the right knee using your left arm, but in a clockwise motion.
- Keep your head in a neutral position and relax your neck to ensure that the contraction is in your abdomen area only.

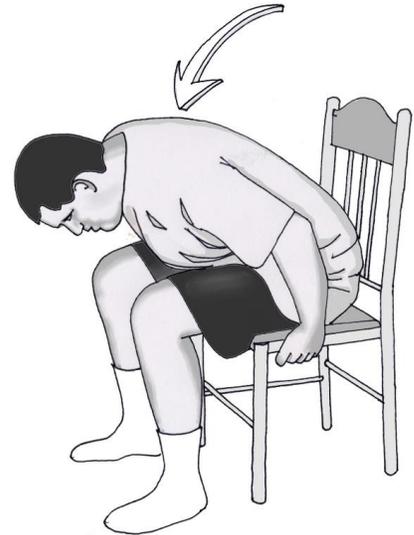


### #3: Chair sit-ups

Main muscles worked: lower back

Directions:

- Sit up straight in a chair with your feet on the floor, hands to your sides for support.
- Bend forward, keeping your lower back as straight as possible, moving your chest down toward your thighs.
- Slowly straighten back up, using your lower back muscles to raise your torso.
- For added resistance, put a resistance band under both feet before you start and hold one end in each hand during the movement.



### #4: Lower back strengthener

Main muscles worked: lower back, gluts

Directions:

- Lie on your stomach with your arms straight over your head, your chin resting on the floor between your arms.
- Keeping your arms and legs straight, simultaneously lift your feet and your hands as high off the floor as you can (aim for at least three inches off the floor).
- Hold that position (sort of a Superman flying position) for 10 seconds if possible, and then relax your arms and legs back onto the floor.
- If this exercise is too difficult to start, try lifting just your legs or arms off the floor separately--or even just one limb at a time.

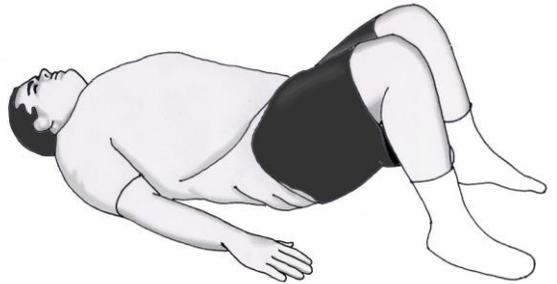


## #5: Pelvic tilt

Main muscles worked: lower back, lower abdominals

Directions:

- Lie on your back on the floor with your knees bent, feet flat on the floor, and hands either by your sides or supporting your head.
- Firmly tighten your bottom, forcing your lower back flat against the floor.
- Relax and repeat.



## #6: Suitcase lift (or, the proper way to lift items from the floor)

Main muscles worked: lower back, lower body (muscles involved in squats)

Directions:

- After placing the dumbbells or household items slightly forward and between your feet on the floor, stand in an upright position with your back straight.
- Keep your arms straight, with your hands in front of your abdomen.
- With your back straight, bend only your knees and reach down to pick up the dumbbells.
- Pick up the dumbbells or items in both hands, then push up with your legs and stand upright, keeping your back straight.

