



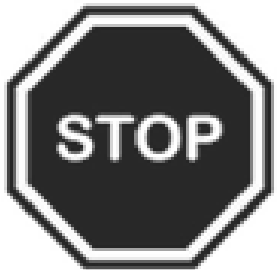
# A Guide to Strength and Resistance Training

 TotalCardiology | Rehabilitation

# GETTING STARTED WITH STRENGTH TRAINING

## IMPORTANT SAFETY INFORMATION:

- Always speak with your clinical exercise physiologist before starting strength training or if you have safety concerns.
- You may be asked to **avoid** strength training if you have:
  - Muscle or bone issues
  - Hernia
  - Unrepaired aortic aneurysm
  - Uncontrolled high blood pressure
  - Or any other safety concern identified to you
- Please **STOP** strength training exercises if you experience:
  - Angina symptoms such as pain, pressure or burning in your chest, neck, jaw, throat, upper back, shoulder blades or arms;
  - Nausea, dizziness, lightheadedness, extreme shortness of breath;
  - Muscle or joint pain;
  - If your rating of perceived exertion (RPE) is **greater than moderate/somewhat hard** **OR** if your heart rate **exceeds the lower limit** of your target heart rate zone.



# IMPORTANT TRAINING GUIDELINES

<b>WARM-UP</b>	Always warm-up for 5 to 10 minutes (e.g. walking) before strength training or do resistance training after an aerobic exercise session.	
<b>BREATHE</b>	Do not hold your breath. Breathe out during the more difficult part of the exercise and breathe in during the easy part of the exercise.	
<b>JOINTS</b>	Do not “lock” joints during any of the exercises. Keep slightly bent.	
<b>POSTURE</b>	Good posture is key!	<b>TIP:</b> Keep your back straight, shoulders pulled back, chest up and engage your core (i.e. tighten/pull in).



**Caution:** Choose exercises that do not position your head below your heart (e.g. downward dog is an example of positioning head below heart) or exercise that have you hold one position (e.g. wall sit or plank).

# IMPORTANT TRAINING GUIDELINES

Frequency	→	How often	→	<ul style="list-style-type: none"><li>• 2 – 3 time per week with a minimum of 2 days (48 hours) rest in between.</li></ul>
Intensity	→	How hard	→	<ul style="list-style-type: none"><li>• Choose a weight that allows you to do 1-2 sets of 10-15 repetitions of each exercise.</li><li>• Perform these exercises <b>below</b> your target heart rate or moderate/somewhat hard intensity.</li></ul>
Time	→	How long	→	<ul style="list-style-type: none"><li>• Perform repetitions with slow and controlled motion and speed.</li><li>• Ensure at least 1 minute of rest between each set or exercise.</li></ul>
Type	→	What are you doing	→	<ul style="list-style-type: none"><li>• There are different types of resistance training including tubing, free weights, machines, and body weight.</li><li>• The exercises included in this resource focus on tubing and body weight exercises.</li></ul>

## PROGRESSION:

- Start your resistance training program with 1 set of each exercise, once per week in addition to one aerobic exercise session.
- When it becomes easy to perform 15 repetitions of one exercise, you may increase the weight or add a second set.
- It is important to increase your weight gradually so that you are still able to perform a minimum of 10 repetitions comfortably.

# IMPORTANT GUIDELINES FOR CHOOSING WEIGHT

- All tubing or elastic bands will vary depending on the brand or manufacturer.
- Use your manufacturer's guide to determine the weight/resistance of your tubing/bands.
- When starting out, use lighter weights or resistance and slowly progress
- Please refer to the 'intensity' section above to choose the right weight for you.



Tubing and/or elastic bands can be purchased from a variety of sport and recreation stores both online, or in-person.

If you have any questions or are unsure of which tubing is right for you, speak with your clinical exercise physiologist.

# SEATED ROW ON CHAIR

Back(rhomboids, latissimus dorsi, mid trapezius), Biceps



- Sit on edge of chair, legs straightened with knees slightly bent, toes pointed up.
- Wrap tubing around bottom of your feet.
- Grab the tubing at knee height and adjust tubing so arms are extended.
- Maintain upright posture with chest up.



- Pull tube towards the top of hips and squeeze shoulder blades together (2 seconds).
- Arms should brush against your sides.
- Breathe out while doing this and slowly return to starting position while breathing in.

# CHEST PRESS

Chest (Pectoralis), Front of Shoulder (Anterior deltoid), Triceps



Place tubing behind your back and **under** armpits

- Stand with feet hip-width apart.
- Place tubing behind your back and under armpits.
- Grasp tubing with your hands while fingers and thumbs point up.
- Elbows are bent with hands at chest level.



- Push both hands forward squeezing your chest and breathe out (2 seconds).
- Slowly return tubing back to starting position while breathing in (2 seconds).
- Grab tubing closer to your body to make it harder.

# CHAIR/COUCH SQUAT

Front thighs (quadriceps), back thighs (hamstrings, gluteus maximus)



To make this easier, try only lowering your body a quarter of the way down. Then progress to halfway down when you're ready

- Stand with feet hip width apart, knees slightly bent with toes pointed straight forward.
- Upright posture with chest up.
- Distribute weight evenly on both feet. Keep heels on the ground. Place feet wider apart if you need more balance.
- Push your hips back and lower your body to hover over chair (2 seconds).
- Keep chest and head up – focus on something straight ahead. Bring arms up for balance.
- Make sure knees do not pass your toes.
- Slowly rise to standing position while breathing out (2 seconds).



# LATERAL RAISE

Shoulders (deltoids), upper back (trapezius)



- Stand with upright posture, chest up, tubing under your feet.
- Grab one end of the tube with your hand – knuckles pointing down.
- Keep slight bend in your elbow and constant tension on the tubing.
- Slowly raise your arm straight out to one side, not higher than your shoulder while breathing out (2 seconds). Palms should be facing the floor.
- Slowly lower hand down to starting position (2 seconds).
- Repeat with other arm.

To make this easier, make the tubing longer. To make it more challenging, make the tubing shorter. This can be completed by altering where you place your foot on the tubing.

# BICEP CURL

Front of upper arm (biceps brachii, brachioradialis, anterior deltoid)

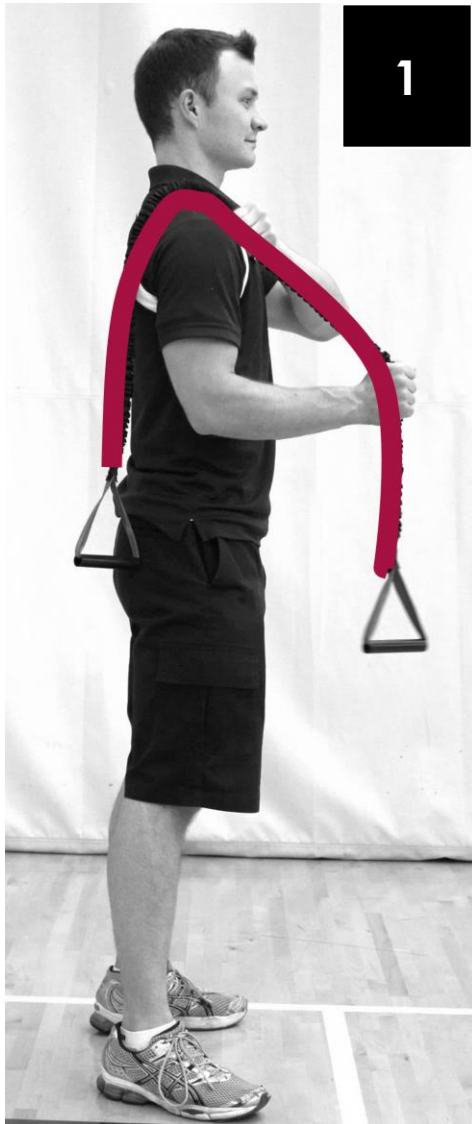


- Stand with tubing under 1 foot with feet hip width apart.
- Hold handles evenly, elbows at your side and palms facing forward.
- Keep your arms “glued” to your side and bend your elbows, bringing your hands to your arm.
- Keep wrists in a neutral position throughout the movement.
- Slowly return back to starting position (2 seconds).

To make this easier, stand with only one foot on the tubing.

# TRICEP EXTENSION

Back of upper arm (triceps brachii)



- Stand with feet hip width apart in upright posture with chest up.
- Fold tubing in your left hand and place onto your right chest.
- Grab the tubing with your right hand at chest level with a fist on your chest.
- Keep your upper arm “glued” to your side.
- Straighten your arm and bring your hand down towards the ground while breathing out (2 seconds).
- Slowly return to starting position (2 seconds).
- Repeat the same movement on opposite side by placing tubing in right hand onto left chest.

To adapt this exercise, you can grab one half of the tubing to make it easier or both halves to make it harder.

# CALF RAISE

Calf (gastrocnemius, soleus)



- Stand behind a chair/table/counter with feet hip width apart.
- Evenly distribute weight over both feet.
- For extra support, hold onto stable surface or stagger feet one slightly in front of the other.
- Move up on to the balls of your feet, lifting heels up and breathe out (2 seconds).
- Lower heels back down to the floor (2 seconds).

# HIP EXTENSION

Hamstrings (gluteus)



- Stand behind a stable surface (chair or counter) with feet hip width apart.
- Shift weight onto one foot while keeping hips level.
- Slowly extend unweighted leg behind you by squeezing bum muscles. Your leg should be 1 foot above the floor.
- Hold this at full extension for 1 or 2 seconds.
- Return to starting position.
- Keep upright posture and hips level (e.g. do not slouch to one side).
- Repeat on other leg.