

# Strength Training

## *A guide for people with heart conditions*



**ACPICR**

Association of Chartered Physiotherapists  
In Cardiovascular Rehabilitation

Strength Training is also called resistance or weight training. It is exercise where you lift a load or use your bodyweight as resistance to improve the strength or endurance of your muscles.

Many people enjoy strength training, which includes exercise using your own bodyweight, free-weights, weight machines, medicine balls or resistance bands.

### What are the benefits of strength training?

- Improves and maintains muscle tone, strength and endurance - stronger muscles reduce the work the heart has to do during physical activity and exercise
- Makes everyday activities easier to perform
- Helps to maintain a healthy body weight and shape
- Helps to reduce the risk of falls and injuries, especially in older people
- Improves well-being and quality of life
- Improves / maintains bone density



### When is it safe to start?

It is recommended you attend a cardiovascular rehabilitation programme and inform the team of your wish to do strength training. Strength training should form part of your cardiovascular rehab programme. In fact part of everybody's regular exercise routine.

When you start will depend on your cardiovascular condition and general health. There is no minimum fitness level required. Strength training may be the best way to start exercise for people with low fitness or limited mobility.

If you have had a heart attack or stents you should be able to start strength training in the first few weeks.

People who have a permanent pacemaker or implantable cardioverter device (ICD) implanted should avoid heavy lifting or raising your arm above shoulder height for the first 6 weeks following this procedure. Therefore your strength training may be delayed or adapted.

Following heart surgery, the stage at which you start strength training can vary. This will depend on your healing and which muscle groups you are working. How long you wait will depend on your individual cardiovascular surgery centre but may be 6 to 12 weeks post op.



### How often should I do strength training?

At least twice a week, no more than four times a week. It is recommended to wait 48 hours between each strength training session.

**What about warm up and cool down?** If you are doing strength training as a 'stand-alone' exercise session you should warm up the muscles by performing the exercise 10 times without a weight. Cooling down should be done by stretching the muscles used.

*Stop exercising if you experience any chest pain, palpitations, dizziness or light-headedness. If the symptoms do not go away promptly with rest and/or GTN spray/tablets seek medical advice as soon as possible.*

If you would like to do strength training along with your aerobic exercise then make sure you perform a partial cool down (5 to 10 minutes) from your aerobic exercise before starting your strength training, remembering to stretch at the end of the workout.

### How much should I do?

Start by aiming to do 1 set of between 10 -15 repetitions (reps) for each muscle group. If you cannot perform at least 10 reps one after the other then the weight is too heavy.

To progress you could:

- Increase the number of sets up to 4 with a minute rest in between
- increase the weight (band strength if using resistance bands)
- increase the number of reps to 20.

It is recommended you start with leg training first. This is probably easier to control and less difficult for your heart.

### How should I feel?

The fatigue in your muscles should increase gradually as you increase the number of reps performed. The last 3-4 reps should feel challenging but not maximum effort. By your last repetition the muscle group you are exercising should feel tired to the point you are unable to continue.

It is normal to feel some muscle soreness up to 48 hours after performing these exercises. If muscle soreness is excessive, you have probably overdone it and should reduce either the weight or the number of sets performed at your next session.

### Technique tips.

Strength training should be performed:

- With a good posture
- In a rhythmical manner
- At a controlled slow to moderate speed
- Through a comfortable range of movement
- With alternation between lower and upper body work to allow muscles to rest between exercises.
- With avoidance of gripping the weights/bands excessively.

Avoid holding your breath by counting out loud with each rep to help you breathe naturally.

### Other considerations:

Only exercise when you are feeling generally well.

Keep hydrated when you are exercising.



**Stop exercising if you experience any chest discomfort, palpitations, dizziness or light-headedness. If the symptoms do not go away promptly with rest and/ or your GTN spray/tablets, seek medical advice as soon as possible.**

This guidance is based on available evidence and expert opinion.

Produced by the Association of Chartered Physiotherapists in Cardiovascular Rehabilitation [www.acpicr.com](http://www.acpicr.com).

This leaflet is not intended to replace the advice that your doctor or cardiovascular rehabilitation team give you based on their expert knowledge of your condition.

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