

# Heart Failure Patient information exercise sheets

## Aerobic Exercise and Chronic Heart Failure

Shortness of breath and tiredness are common symptoms for people with chronic heart failure. Many people find that they are unable to do some activities that they used to enjoy. Over time, inactivity leads to a loss of fitness and strength. Regular exercise performed in the correct manner can help to reverse some of these negative changes.

Aerobic exercise uses oxygen to produce energy. For people with heart failure this form of exercise has been shown not only be safe but also:

- Improves your fitness
- Helps your muscles to work more efficiently
- Allows you to exercise for longer before you feel breathless
- Improves your quality of life
- Potentially decreases the number of times you need to be admitted to hospital and improves your life expectancy

### What sort of aerobic exercise should I do?

Your Physiotherapist or Exercise Physiologist will advise you on exercises that are best for you. The best and often easiest type of exercise is walking. Exercise bikes and treadmills may also be useful but are not recommended for everybody, so be sure to always check with your doctor or exercise specialist before using any equipment that you may have at home.

### How much should I do?

Generally speaking, people with chronic heart failure should aim to do 30 minutes of exercise at least 3-5 days per week. Exercise does not need to be continuous. You can do smaller amounts of exercise more frequently to gain similar benefits. eg 10 minutes performed 3-4 times per day, instead of 30 minutes continuously. Start with short periods of exercise with many rests and progress to longer duration exercise as you become fitter.

### How hard should I push myself?

You need to do a certain amount of activity to have a benefit; however pushing yourself too hard can be dangerous. There are 2 ways of knowing if you are doing the right amount of exercise.

#### 1) *The talk test*

You should always be able to walk and talk at the same time. If you are so breathless that you can't speak a full sentence, you are doing too much.

#### 2) *Rating your perceived exertion (RPE) or Borg Scale*

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Below is a scale used to describe how much effort you feel when exercising. Whatever the activity, you should aim to work between 9 and 13 on this scale. If the activity is "hard" then you are doing too much and should have a rest.

Rating	Perceived exertion
6	
7	very, very light
8	
9	very light
10	
11	fairly light
12	
13	somewhat hard
14	
15	hard
16	
17	very hard
18	
19	Very, very hard
20	

← Correct working zone

### Other things to remember when exercising:

- Always warm up and warm down - this allows your heart to adjust to the level of activity that you are performing and is important for safety.
- If you experience any chest pain, palpitations or dizziness, cease the activity immediately
- Wear loose comfortable clothing
- Avoid exercising in the extreme heat or extreme cool of the day
- Avoid exercising immediately after a meal
- Find activities that you enjoy and involve family or friends
- Enjoy being active!

Most importantly, if you have any concerns, always consult your Doctor, Physiotherapist or Exercise Physiologist for further advice.

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## Resistance Training and Chronic Heart Failure

Resistance exercise uses weights or machines to help strengthen your muscles. This form of exercise is safe for people with chronic heart failure provided it is performed in the correct manner.

For people with heart failure, changes in the muscles and blood vessels may make you weaker and fatigue more readily than other people of a similar age.



### Why are strengthening exercises beneficial?

Over time, strengthening exercises (when performed correctly) can improve the health of your muscles and blood vessels.

Changes in the blood vessels allow better blood flow to working muscles. Improved blood supply provides more oxygen to the muscle so that you can work for longer before fatiguing.

A period of strengthening exercises should result in:

- Being able to walk or do other activities for longer before needing to rest
- Stronger muscles
- Improved quality of life

### Understanding the terminology

Term	Meaning
Set	A group of the same exercises performed at one time
Reps	The number of times the exercise is performed in each set. For example, 3 sets of 5 reps means that the exercise is performed 5 times followed by a rest. It is then done another 5 times before a second rest, and finally 1 more set of 5 times before finishing that exercise.
Intensity	How hard the exercise is to do and usually relates to the weight or load that you are using such as a 2 kg hand weight. Your exercise specialist will work out how heavy the weight needs to be for you to have the best results.
RPE	Rating of perceived exertion. This is a rating of how much effort you are exerting when doing the exercise. We use this scale to help work out the level of activity that you should be doing.

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## What sort of strength training is best?

When performed correctly, strengthening exercises can produce benefits without placing undue stress on the heart. In order to do this though, it is very important to adhere to the following guidelines:

- ALWAYS warm up and warm down before and after exercising. This lets your heart know that you are changing your activity level and gives it time to respond appropriately. Warming up and down also helps to prevent muscle soreness.
- NEVER hold your breath when doing any exercise. This makes your blood pressure rise and places a lot more stress on your heart.
- Breathe out when you are lifting the weight (or doing the hardest part of the exercise) and breathe in as you return to the starting position. This is sometimes difficult to coordinate but places less stress on your heart.
- LISTEN to your exercise specialist. Do not make the weights any heavier unless you are advised that it is safe to do so. People with heart failure should ONLY use light weights. Lifting heavy weights can be dangerous and has no added benefit to your health.
- Do all exercises SLOWLY. Doing the exercise fast is less beneficial more likely to cause you injury. If you are unable to do the exercise slowly, it may be that the weight is too heavy.
- Allow rests between sets. The rest period allows your heart to recover between moments of activity and this is very important. Your exercise specialist will advise you how long to rest for as this will vary between individuals.
- STOP any exercise that causes pain or any other symptom such as dizziness, palpitations or excessive shortness of breath. If these symptoms do occur, notify your exercise specialist immediately.



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## Swimming & Chronic Heart Failure



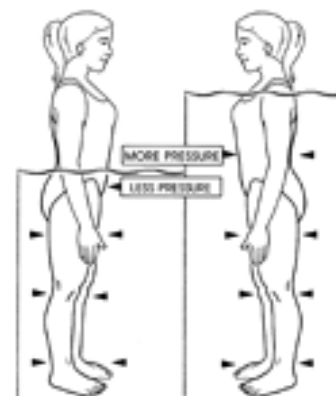
Exercising in water can offer numerous benefits including:

- Improvements in all areas of fitness, including physical endurance, muscle strength, flexibility, and posture.
- An ability to exercise whilst placing less force on bones and joints compared to exercise on land.
- The buoyancy of the water helps to improve balance and allows some exercises to be performed more easily than on land.
- Pain relief
- Reduced muscle tightness.

Despite the positive effects of exercising in water, it is not safe for everybody and care must be taken.

### Guidelines for water based activities with heart failure

1. Do **NOT** attempt any water based activities if your heart failure symptoms have recently worsened.
2. If your heart failure symptoms have been stable, submerge yourself only up to the level of your **WAIST**. When you immerse yourself in water, there is an increase in the amount of blood returning to your heart from your arms and legs. This occurs because of the force that the water exerts against your body. In a person with Heart Failure increased blood volume to the heart may make your heart work harder than it already is. **Even if you feel OK in the water, significant stress may be being placed on your heart without you realizing it.** Being in water to your waist level is much safer than being in water that is neck deep as the pressure is less (see picture).
3. **NEVER** exercise in water on your own. This is especially important if you have a defibrillator. **ALWAYS** have someone else present.
4. **AVOID** water temperatures less than 32-34°C as cool water influences your heart rate and rhythm more significantly than warmer water.
5. Remain **UPRIGHT** in the water. Doing freestyle or lap swimming increases the work your heart has to do. Even if you feel fine, potentially damaging changes in you heart and blood vessels could be occurring.
6. **ALWAYS** contact your Doctor, Physiotherapist or Exercise Physiologist before undertaking any water based activities. Water based exercise should only be done under the supervision of a trained exercise specialist.



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## Tai Chi and Chronic Heart Failure

Tai Chi originated in Asia as a form of martial arts, though has since been modified extensively to become a form of exercise for the mind and body. In recent times it has become increasingly popular in western cultures as more people have come to appreciate the potential health benefits that it can provide.

### What is Tai Chi?

Tai Chi combines deep diaphragmatic breathing and relaxation with basic postures. These postures flow smoothly from one to the next through slow graceful movements. A number of different styles of Tai Chi exist and it is important that you chose a style that is suitable for you. Some versions such as Tai Chi Chih and "Tai Chi for arthritis" can be performed in sitting or standing and require less physical exertion than some other forms. It is these styles that are recommended for people with chronic heart failure.

### Benefits of Tai Chi

Some of the benefits that people report from Tai Chi include the following:

- Improved strength
- Improved flexibility
- Improved balance and decreased fear of falling
- Improved mobility
- Improved fitness
- Improved quality of life
- Decreased stress and anxiety
- Improved sleep



### Who benefits from Tai Chi?

Tai Chi has recently become popular in a number of community health programmes. In particular, people with arthritis and heart disease have found it to be useful. Whilst there has not been a lot of scientific based research in this area, we do know is that Tai Chi is safe for people with heart failure and when performed under the supervision of a trained instructor, does no harm. People with heart failure should always consult their doctor or exercise specialist before commencing a Tai Chi programme.