

## Chronic Heart Failure and exercise

Chronic heart failure (CHF) is a life-threatening condition that occurs when the heart no longer effectively pumps blood to the lungs and the rest of the body. People with CHF are often breathless and tire easily, especially during exercise. Worsening or poorly managed heart failure may cause fluid to build up in the lungs, known as acute pulmonary oedema or 'water on the lungs' which requires urgent medical attention. CHF has many causes, the most common being myocardial infarction (heart attack), hypertension (high blood pressure) and diabetes (high blood sugar).

### How is CHF treated?

For people with CHF, a combination of medical and lifestyle management usually reduces symptoms, improves quality of life, slows the progression of the disease and prolongs life. Controlling cardiovascular risk factors is very important, including lowering cholesterol and other fats, lowering blood sugar and blood pressure, limiting alcohol intake, stopping smoking and engaging in daily physical activity.

Patients with CHF are prescribed multiple drugs to reduce the work of the heart, improve exercise tolerance, and reduce symptoms and mortality. Patients need to control their salt and fluid intakes and follow a healthy, low-fat, low-sugar diet with plenty of fresh fruit and vegetables. In addition, a properly planned exercise program is very beneficial, improving symptoms and quality of life.

How does exercise benefit people with CHF?	Important considerations for CHF and exercise
<p>Exercise acts as a 'poly-pill' that improves physical and clinical fitness and mental health. Exercise:</p> <ul style="list-style-type: none"> <li>• increases cardiovascular function (VO<sub>2</sub>peak) that is highly linked to improved clinical outcomes;</li> <li>• increases muscle strength and endurance;</li> <li>• improves ability to function and undertake activities of daily living;</li> <li>• improves quality of life and reduces anxiety and symptoms of depression;</li> <li>• improves cardiovascular risk by lowering levels of cholesterol, blood sugar and blood pressure;</li> <li>• reduces the occurrence and severity of the signs and symptoms associated with CHF; and</li> <li>• slows the rate at which the disease progresses</li> </ul>	<ul style="list-style-type: none"> <li>• CHF is a serious condition and a number of factors must be considered when designing an exercise program:</li> <li>• People with CHF must be medically stable before starting an exercise program.</li> <li>• Generally, people with CHF have more energy in the morning, particularly midmorning.</li> <li>• The exercise program should be sustained long term, and include daily activities such as walking the dog.</li> <li>• Properly supervised exercise tests are required to determine safe and effective type, amount and intensity.</li> <li>• The exercise program should include both aerobic training and resistance training (weight training).</li> <li>• Blood pressure and other vital signs and symptoms should be monitored before and after each supervised exercise session. Patients should be able to recognise the adverse signs and symptoms associated with exercise and report these promptly to their primary health professional.</li> <li>• People with CHF and diabetes should monitor and self-manage blood sugar levels before and after exercise.</li> <li>• People with CHF should adhere to their management plans.</li> </ul>

### How much exercise should people with CHF do?

No particular amount of exercise is the 'right amount' for people with CHF. Programs must always be tailored to a person's medical status, medical treatment, exercise capacity and lifestyle goals. As a guide, aerobic exercise should be performed on most days of the week for between 20 and 60 minutes, at an intensity that suits the person's condition. This exercise can be taken in one session or broken up into smaller periods throughout the day. Resistance training should be performed on 2–3 days a week, with 8–10 different exercises for the major muscle groups. Two or three sets of 8–12 repetitions, with weights that require a moderate to high effort (e.g. 50–80% of one repetition maximum), are appropriate. An alternative to a formal exercise program is to actively engage in usual daily activities that incorporate exercises for strength and endurance, mobilisation, flexibility and balance. Good examples are gardening, light housework, walking to the shops, and carrying or wheeling the shopping home.

### References and further information

Exercise is Medicine Australia [www.exerciseismedicine.org.au](http://www.exerciseismedicine.org.au)  
 Find an Accredited Exercise Physiologist [www.essa.org.au](http://www.essa.org.au)  
 Exercise Right [www.exerciseright.com.au](http://www.exerciseright.com.au)

1. ACSM's Resource Manual for Guidelines for Exercise Testing and Exercise Prescription (2013) 7th edition, American College of Sports Medicine, Baltimore: Lippincott, Williams & Wilkins.
2. ACSM's Exercise management for persons with chronic diseases and disabilities (2009) 3rd edition. American College of Sports Medicine, Champaign, IL: Human Kinetics.
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4. Pina IL, Apstein CS, Balady GJ, et al. (2003). Exercise and heart failure: a statement from the American Heart Association Committee on exercise, rehabilitation, and prevention. *Circulation* 2003;107(8):1210–25.
5. Selig S, Levinger I, Williams A, et al. Exercise and Sports Science Australia position statement on exercise training and chronic heart failure. *J Sci Med Sport* 2010; 13(3): 288–94.

For more detailed information, please read the full version of this factsheet at [www.exerciseismedicine.org.au](http://www.exerciseismedicine.org.au)

