

CHRONIC HEART FAILURE AND EXERCISE

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WHAT IS CHRONIC HEART FAILURE?

Chronic heart failure (CHF) is a serious and, at times, life threatening condition that occurs when the heart no longer pumps enough 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 'water on the lungs'. If this happens, then the patient requires urgent medical attention. More commonly, fluid may build up in other regions; for example, causing puffy, swollen ankles. Again medical attention is needed. CHF has many causes, with the most common being heart attack, poorly controlled high blood pressure, ageing, diabetes, and alcohol and substance abuse.



HOW IS CHF TREATED AND MANAGED?

For people with CHF, a combination of medical and lifestyle management usually improves symptoms and quality of life, slows the progression of disease and prolongs life. Exercise is a key management strategy and Accredited Exercise Physiologists (AEP) and Physiotherapists are ideally placed to help patients to exercise safely and comfortably, as well as improve their clinical and functional status and quality of life (see below). Controlling cardiovascular risk factors is very important to prevent and manage CHF. This includes lowering levels of blood cholesterol and other fats in the blood, lowering blood sugar levels, controlling blood pressure (BP) and cardiac rhythm problems, and lifestyle strategies aimed at improving nutrition, exercise, physical activity, and mental health, limiting alcohol intake and stopping smoking.

Patients with CHF are commonly prescribed several classes of drugs which together aim to reduce the work of the heart, slow the progression of disease, improve exercise tolerance, symptoms and quality of life, and reduce the risk of dying. Some patients with CHF also have disturbances to their heart rhythm and may need a treatment for this including a short term hospital stay to electrically interrupt the rhythm and/or medications and/or pacemakers. In very serious cases, some patients may undergo surgery to reduce the size of their swollen heart or to fit an extra mechanical pump to help the heart, and in extreme cases, a cardiac transplantation may be needed. Patients need to comply with advice regarding 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 to improve signs, symptoms and quality of life, and reduce the risks of dying. AEPs and Physiotherapists have an important role in not only providing safe and effective exercise interventions, but also can provide some surveillance around signs and symptoms. Cardiologists are the main medical point of call. Patients should be encouraged to attend formal group-based cardiac rehabilitation programs.

HOW DOES EXERCISE HELP WITH CHF?

Exercise has many benefits for people with CHF:

- improves aerobic fitness and this is highly linked to improved patients' clinical status;
- increases muscle strength and endurance;
- improves ability to function and undertake activities of daily living to maintain independence;
- improves quality of life and reduces anxiety and symptoms of depression;
- reduces the occurrence and severity of the signs and symptoms associated with CHF; and
- slows the rate at which the disease progresses, which reduces both the number of times patients are hospitalised and the death rate from CHF: this saves lives and is highly cost-effective.



In summary, exercise acts as a 'poly-pill' to improve physical fitness, clinical status and mental health.

IMPORTANT CONSIDERATIONS FOR CHF AND EXERCISE

CHF is a serious condition and a number of factors must be considered when designing an exercise program:

- People with CHF must be medically stable before starting an exercise program. New patients need to be checked by their doctors and ALL patients should be first referred to a properly trained exercise professional such as an Accredited Exercise Physiologist (AEP) or Physiotherapist. Patients should adhere to their management plans, including prescribed medications and fluid and salt intake. Daily weighing (after evacuating bowels and bladder) is important to detect early signs of fluid accumulation: exercise must be avoided if there is weight gain of 3kg in the preceding 72 hours and patients should consult their primary care medical practitioner if this happens as medications may need to be changed. AEPs/Physiotherapists can also survey patients for obvious signs of fluid accumulation (e.g. puffy ankles).
- The severity of CHF affects exercise tolerance and the intensity, duration and volume of exercise undertaken.
- Generally, people with CHF have more energy for exercise in the morning, especially mid-morning.
- The exercise and physical activity plan should be enjoyable and able to be sustained in the long term, and include some usual daily activities such as walking to shops and walking the dog.
- Before starting a program, properly supervised exercise tests are advisable to determine safe and effective modes, volumes and intensities of exercise. Initially, this should be conducted by a properly trained exercise professional such as an AEP or physiotherapist.
- Most patients have lower heart rates when exercising due partly to their medications. So it is inadvisable and even unsafe to engage in exercise using heart rates as a measure of intensity. "How do you feel" (i.e. ratings of perceived exertion) is a safer alternative.
- The exercise program should include both aerobic (endurance) training and strength training. Exercise at high intensities invokes more risk and discomfort (e.g. feeling faint or even fainting; also fatigue that may last for days) for little return. However, higher intensities and shorter durations of training can be used if these are properly designed and supervised by an AEP or Physiotherapist.
- Low BP is a common problem for people with CHF, during and especially after exercise. Patients can self-monitor their BP before and after exercise and keep a record of these. There are several excellent smartphone apps available now for recording and sending BP to your exercise and/or health professional. Low BP can cause symptoms of light-headedness, fainting, sweating, anxiety, distress, and disturbances in heart rhythm. Patients can be taught to recognise signs and symptoms associated with exercise and report these promptly to their primary healthcare professional.
- People with diabetes as well as CHF should monitor and self-manage their blood sugar levels before and after exercise.

IS EXERCISE SAFE FOR PEOPLE WITH CHF?

There is a wide choice of safe exercise options for people with CHF. Exercise should be tailored to a person's medical conditions, management plans, exercise capacity, and exercise 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. Exercise can be taken in one session or broken up into smaller "parcels" of exercise and physical activity throughout the day. Resistance training should be performed on 2-3 days a week, with exercises covering the major muscle groups. Keep the strength training plan simple (2-4 exercises at any one time), but the plan can be adjusted fairly frequently to prevent staleness and to work on other muscle groups. Two or three sets of 8-12 repetitions, with weights that require a moderate to high effort (e.g. 60-70% of three repetition maximum, 3RM), are appropriate. An alternative to a formal exercise program is to actively engage in activities of daily living that incorporate exercises for strength and endurance, mobilisation, flexibility, and balance. Good examples are "active travel" such as walking and cycling, gardening, light to moderate housework, walking to the shops, and carrying or wheeling the shopping home.

RESOURCES & FURTHER INFORMATION

Exercise is Medicine Australia www.exerciseismedicine.org.au
Exercise Right www.exerciseright.com.au
Find a Physiotherapist www.choose.physio
Find an Accredited Exercise Physiologist www.essa.org.au

National Heart Foundation
www.heartfoundation.org.au

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