

Exercise Physiology

Chronic Conditions

Chronic Disease:

Arthritis

Arthritis and rheumatic disease are leading causes of pain and disability.

Arthritis or osteoarthritis is a common chronic disorder of the joints and mainly affects older people. In healthy joints, cartilage covers the surface of the joint and helps to absorb shock and allows for smooth movement.

In arthritis; the cartilage breaks down, leaving the ends of the bone unprotected and the joint loses its ability to move smoothly.

The most common joints affected by arthritis are hips, knees, big toes, spine and hands.

WHY IT'S IMPORTANT TO EXERCISE

- Although pain and functional limitations present challenges to physical activity among individuals with arthritis, regular exercise is essential for managing these conditions.
- Specifically, exercise reduces pain, maintains muscle strength around affected joints, reduces joint stiffness, prevents functional decline, and improves quality of life.
- Exercise can be effective in relieving symptoms as pain medication and anti-inflammatory drugs, but has fewer side effects.

THINGS TO REMEMBER:

- Movement, other health conditions and personal preference. Focus on low-intensity and low-duration exercise when initially starting an exercise program.
- Avoid strenuous exercises during acute flares and periods of inflammation. However, it is appropriate to gently move joints through their full range of motion during these periods.
- Allow ample amount of time to warm up at a low intensity level to minimise pain.
- Progression in duration of activity should be emphasised over increased intensity.
- There maybe a little bit of soreness in the arthritic joint during exercise – this is normal and does not mean that the arthritis is getting worse. However, if there is significant pain or swelling during or after exercise then the exercise program may need to be revised.
- The benefits of exercise are lost if the exercise stops; use strategies that will help with program continuation like: keeping a log book, setting achievable goals, seeking support from a partner, family or friends, and varying the exercise program assist with patient's maintaining a consistent exercise regime.
- Joint range may be restricted due to arthritic changes in the joint and swelling, it is important those with arthritis don't push through those restrictions, over time the range of motion should gradually be increased by working to the full extent of range tolerated.

For a personalised program, talk with one of our experienced exercise physiologists. The initial consultation will outline the treatment plan and number of sessions required.

Heart Health

There are several life-threatening diseases that can affect the function of the heart. The most common of those are:

Chronic Heart Failure (CHF) – occurs when the heart no longer effectively pumps blood to the lungs and the rest of the body. The most common causes of CHF are heart attacks, high blood pressure and diabetes.

Coronary Heart Disease (CHD) – affects the blood flow of the coronary arteries around the heart which supply oxygen and nutrients to the heart muscle. CHD is typically caused by fatty deposit build up in the vessels.

WHY IT'S IMPORTANT TO EXERCISE

- Exercise can not only prevent development of cardiovascular disease, it can also help treat and alleviate symptoms of a number of cardiovascular conditions.
- Regular low to moderate-intensity exercise for people with CHD prevents the blood vessels narrowing further, prevents blood clotting, increases delivery of blood to the heart and helps maintain a normal heart rhythm.
- These changes reduce the load on the heart at rest and during exercise, which helps to lesson some of the symptoms of CHD.
- Regular exercise helps to reduce the LDL (bad cholesterol) and increase the HDL (good cholesterol)

THINGS TO REMEMBER:

- Ensure suitable/prolonged warm up and cool down.
- Carry angina medication if appropriate.
- Be sure to consider medications side effects i.e. beta blockers, and make appropriate considerations for a pacemaker or internal defibrillator.
- Adequate rest breaks between exercises will be required.

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Osteoporosis

Osteoporosis is a common condition affecting 1.2 million Australians, it's where bones become fragile and brittle leading to a higher risk of fractures than in normal bones.

Osteoporosis occurs when bones lose minerals, such as calcium, more quickly than the body can replace them, leading to a loss of bone thickness (bone density). Any bone can be affected by osteoporosis, but the most common sites are the hip, spine, wrist, upper arm, forearm or ribs. Fractures in the spine due to osteoporosis can result in changes in posture and height loss.

As bones become thinner and less dense, even a minor bump or fall can cause a serious fracture. Falls are a common cause of fractures for people with osteoporosis. Osteoporosis usually has no symptoms until a fracture occurs – this is why it is often called the ‘silent disease’.

WHY IT’S IMPORTANT TO EXERCISE

- Exercise can help bones modify their shape and size so they become stronger and this can prevent injuries. Exercise also increases muscle strength and improves balance which can help reduce the risk of falls.
- Approximately one third of people over 65 fall each year and it’s estimated that around 6% of falls result in a fracture. This makes maintaining bone density and preventing falls an important health issue.
- Physical activity plays role in primary, secondary treatment and prevention of osteoporosis.

THINGS TO REMEMBER:

- Exercises that involve explosive movements or high-impact loading should be avoided.
- Exercises involving loaded flexion and rotation should be avoided.
- Avoid non-weight bearing activities as this does not increase the strength of bones.
- Begin lightly and gradually increase the amount of weight-bearing exercises and the resistance.

For a personalised program, talk with one of our experienced exercise physiologists. The initial consultation will outline the treatment plan and number of sessions required.

Prostate Cancer

Prostate cancer is the most common form of all cancers among men, with 20,000 new cases in Australia diagnosed each, often referred to as the ‘old man’s disease’ with the median age at diagnosis being 71. Most common site of metastasis include the skeletal system of the body.

Risk Factors for Prostate Cancer may include:

- Age (>50yr)
- Family history
- Poor diet
- Sedentary exercise levels

Despite its prevalence in our society, prostate cancer is one of the most treatable forms of cancer with various forms of treatment available. Significant research has shown that exercise in conjunction with cancer specific treatments may slow the rate of progression and reduces recurrence of the cancer.

Common treatments for prostate cancer include:

- Radiation
- Chemotherapy
- Prostatectomy (if the cancer is still centrally located within prostate gland)
- Androgen Deprivation Therapy (ADT- hormone treatment)

WHY IS IT IMPORTANT TO EXERCISE?

- Exercise plays a vital role in maintain a person's health and wellbeing, and especially those men undergoing prostate cancer treatment such as Androgen Deprivation Therapy.
- Androgens are a class of male hormones that control the development and maintenance of male characteristics, such as testosterone. In the early stages, Androgens are necessary for the prostate cancer to grow and develop, which is why it's vitally important that early detection of the cancer is made.
- Androgen Deprivation Therapy (ADT) seeks to stop the production of male hormones and as a result, the male may experience the following side effects:
 - ◆ Reduced bone mineral density
 - ◆ Loss of muscle mass
 - ◆ Increased fatigue
 - ◆ Increase cholesterol levels
 - ◆ Increased depression and cognitive function

Exercise helps to offset the adverse metabolic effects of ADT to reduce the chance additional co-morbidity developing and reduce the progression of the cancer.

THINGS TO REMEMBER:

- Always seek a medical clearance from or treating oncologist / urologist and GP prior to undertaking any form of physical activity.

Stroke Recovery

Exercising following a stroke must be customised to accommodate the extent of each patient's disability.

We will work with your doctor and health team to ensure that we build a unique program that will enhance your rehabilitation efforts.

Exercise after a stroke can help you gain endurance and improve your ability to go about your daily activities. It helps with balance and walking, and to keep your body flexible. It has an emotional benefit as well, with many clients reporting an enhanced mood, and a mental response by helping to clarify your thinking and heighten your alertness.

Cancer Clients

Both before and after chemotherapy and radiation treatments, exercise can assist cancer clients in their recovery by strengthening muscles and immune function.

We will help you improve your range of motion and feel better about your body as you undergo your cancer therapy. Clients who exercise throughout their treatment report less depression and stress and fewer side-effects of the treatment such as nausea and tiredness.

Your exercise program must be tailored to your specific needs and adapted as your therapy progresses. Even if you cannot complete a full workout program, when it comes to exercise and cancer, whatever you can do

will be beneficial.

We will help you recognise the barriers to maintaining your regular exercise program through cancer therapy and find the means to overcome them. We will help you set measurable goals that you can reach.

Alzheimer's disease

People who exercise regularly are less likely to develop Alzheimer's disease.

This will help you improve functional capacity, build muscle strength, releases contracted muscles, tendons and fascia, reduce stiffness, improves circulation and accelerates healing and improves coordination and respiratory capacity. It can also improve balance.

Exercise medicine can help improve both mind and body function in an Alzheimer's client and even slow the progression of the disease. It improves a patient's mood and helps ward off depression and other behavioural problems that accompany the advanced stages of the disease.

Chronic pain

Clients who sustain chronic pain often feel they just cannot endure exercise, but if they start at a slow pace over several days and maintain a consistent program, they can often build up their strength and in some cases, lessen their pain.

There is no one-size-fits-all for exercise that is most beneficial for chronic pain sufferers, and that is why our team will work with you to devise a program that is best for your specific situation.

We will help you select the kind of exercise you enjoy most and prepare a program that is consistent and avoids prompting you to do more on good days and less on bad days. We will work one-on-one with you to ensure that you are clear on what is acceptable or non-acceptable pain as you work with different movements.

Clients tell us they experience increased pain tolerance after exercise and a better mood than when

Falls Prevention Exercise Program

Exercise that builds in a balance program is especially effective in helping clients prone to falling.

My Health Team will also include exercises to strengthen your muscles, increase your walking speed, and build confidence in your mobility.

It is important to be monitored by experienced professionals when you begin a fall prevention exercise program so that you are safe and do not overdo it as you begin your program.