

# Parkinson's disease and exercise

## What is Parkinson's disease?

Parkinson's disease is a common and debilitating disorder. Nerve cells in a part of the brain that produce dopamine are affected. The nerve damage affects the brain's control of the muscles, which causes shaking, increased muscle tone (stiffness), slowed movements and balance problems. Parkinson's disease also affects some thinking abilities, especially the ability to control and regulate behaviour, and may cause anxiety and depression. After dementia, Parkinson's disease is the second most common degenerative condition of the brain. The incidence increases with ageing.

## Why is exercise important?

People with Parkinson's disease often do not do much exercise, which can worsen the effects of the disease and any other conditions they may have. Loss of fitness also increases the risk of falls, especially in people with Parkinson's disease, who are already much more likely to fall than healthy people.

Exercise potentially benefits the health and wellbeing of people with Parkinson's disease in many ways. By increasing fitness, exercise protects against many complications of the disease. For example, better mobility may improve quality of life and prolong independent living. Exercise may also have positive effects on mood and improve their brain function and make drug therapy more effective. It also provides a means by which individuals can actively participate in the management of their disease.

## How does exercise help?

General physical activity and specific exercises are widely used to treat people with Parkinson's disease. Exercise provides many benefits including improving nerve and physical function, reducing psychological symptoms, and helping people socialise more easily. Some studies have shown that increased exercise reduces the death rate in people with Parkinson's disease.

## What exercise is best?

**Resistance training** increases strength in older people and people with Parkinson's disease. Recent research indicates that high resistance progressive exercise is effective. However, the best program for these exercises has yet to be determined. It is also important to be mindful that people with Parkinson's disease tire easily, and that it may be best to use an individually tailored approach that accounts for these limitations.

**Treadmill walking** is frequently used for people with Parkinson's disease. You can either walk slowly or use a training program that gradually increases your walking speed. Although the optimal program has yet to be determined recent research indicates that longer duration low intensity walking is more effective than high intensity short duration walking. If you have difficulty walking, body weight supports can be used.

**Stationary cycling** is ideal if you have trouble walking or 'freeze' when trying to move. Pacing yourself or deliberately increasing the cycling rate can improve your heart and lung function and your walking ability.

**'Cueing exercises'** involve walking while listening or seeing cues that mimic the rhythm of walking. These exercises can help improve your walking movements and overcome difficulty with gait initiation and freezing.

**'Dance'** provides exercise to music that can facilitate functional and expressive movement.

**'Dual tasking'** exercises, involve doing a secondary task (e.g. forming words or counting backwards) while walking. These exercises usually try to improve one aspect of walking at a time (e.g. step length).

An Accredited Exercise Physiologist can assist in designing individual exercise programs for people with Parkinson's disease.

## 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)

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

