PARKINSON'S DISEASE & EXERCISE

PUBLIC

WHAT IS PARKINSON'S DISEASE?

Parkinson's disease is a common, progressive and debilitating disorder affecting many areas of the nervous system. Degeneration of cells in the brain leads to movement problems including tremor, rigidity, slow movements, freezing (or absence of movement) and balance problems. The widespread changes also lead to many other problems such as anxiety, depression, impaired cognition, sleep disorders and pain. After Alzheimer's, Parkinson's disease is the second most common degenerative condition of the brain. The incidence increases with ageing, but it also affects people of working age.

WHY IS EXERCISE IMPORTANT?

People with Parkinson's disease often do not do much exercise, which can worsen the effects of the disease and lead to other health conditions. Evidence shows that exercise, when used in conjunction with medication, can reduce symptoms, improve mobility, muscle strength and balance, reduce falls and may even slow progression of the disease. Exercise may also have positive effects on mood, cognition, fatigue, pain, sleep and constipation. Exercise also provides a means by which individuals can actively participate in the management of their disease.

HOW DOES EXERCISE HELP?

People with Parkinson's disease benefit from a variety of exercise modes. For example, targeted exercise can improve aerobic fitness, muscle strength, balance, coordination and overall mobility. Additionally, direct improvements on brain function have been shown with high intensity exercise (e.g. cycling or running) and exercise which challenges thinking as well as movement. Cues and movement strategies can be taught by an Accredited Exercise Physiologist or Physiotherapist to direct a person's attention towards the important features of a task in order to overcome problems with automatic movements.

WHAT EXERCISE IS BEST?

There is no evidence that one specific type of exercise is best for people with Parkinson's disease. Programs should include a variety of types of exercise (e.g. aerobic, balance, coordination and muscle strength) and should commence as soon as possible after diagnosis – though it is never too late to start. Programs should consider the following principles:

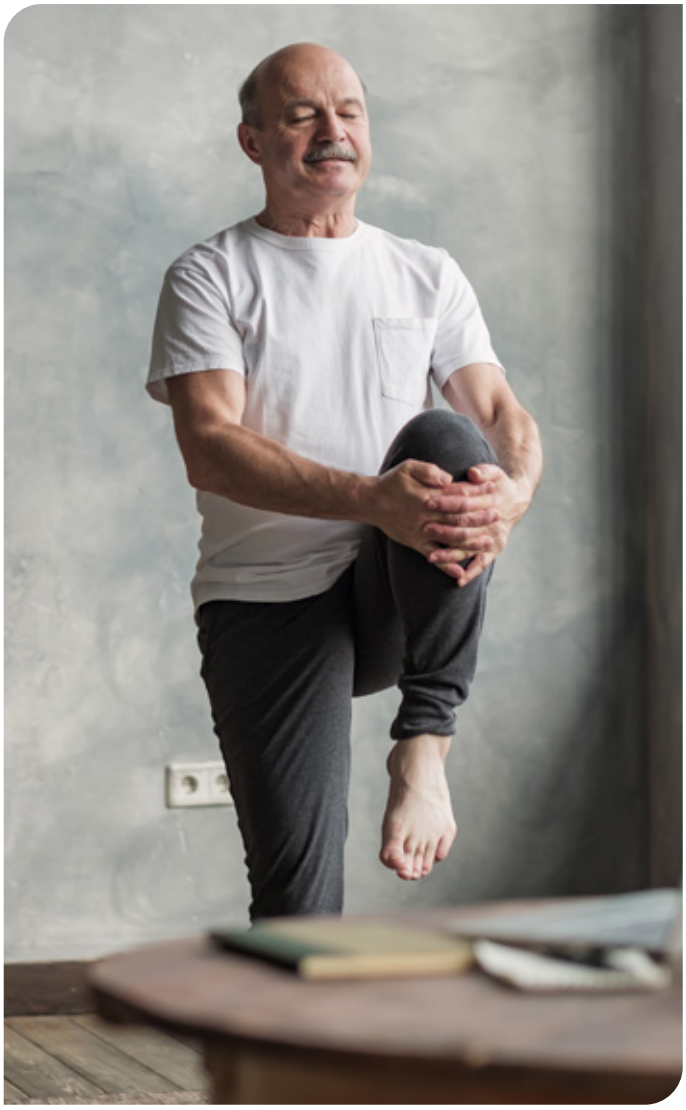
High/moderate intensity aerobic exercise, such as stationary cycling or brisk walking should be undertaken if safe and possible, aiming for at least 30 minutes on most days of the week.

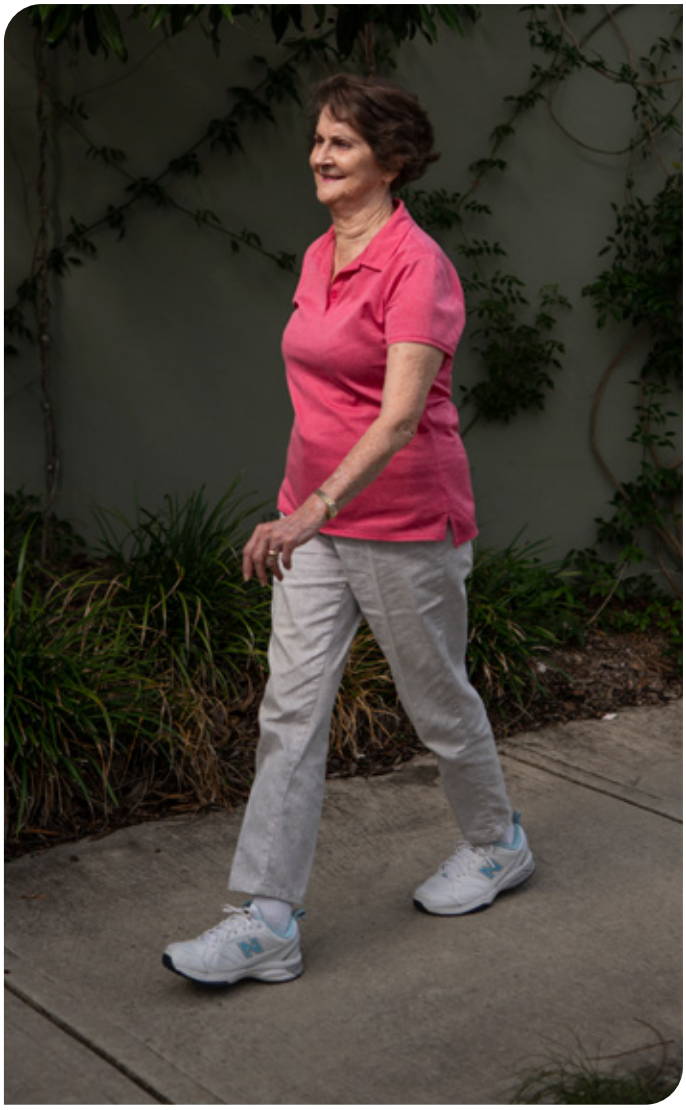
Task specificity and complexity are important as people learn what they practice. Exercise programs should address movement problems by initially practising in a simplified environment. Then (where possible), gradually introducing distractions and challenges. For example, if a person wants to improve their ability to walk in a variety of work and leisure environments, then practice can initially be performed on a flat surface with no distractions. More complex and varied movement and cognitive challenges can then be introduced as training progresses.

Exercise preferences for particular types of exercise, locations and delivery methods (e.g. group or individual sessions) need to be considered, including options for increasing balance such as dance and tai chi. Exercise that is enjoyable and meaningful is more likely to be effective, as people are more likely to do it and continue doing it for the long term.

One size does not fit all. Exercise should be carefully prescribed for each person, taking into account their symptoms, disease stage, fall risk, goals and preferences. As an individual's disease progresses over time, their exercise program will need to be reviewed and updated to meet their changing needs and ensure their safety.

An Accredited Exercise Physiologist or Physiotherapist can design individual exercise programs for people with Parkinson's disease and referral is recommended for people experiencing increasing disability and/or falls.





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RELATED INFORMATION AND REFERENCES

Exercise is Medicine Australia www.exerciseismedicine.org.au

Exercise Right www.exerciseright.com.au

Find a Physiotherapist www.choose.physio/find-a-physio (select clinical area neurology)

Find an Accredited Exercise Physiologist www.essa.org.au

Parkinson's Australia www.parkinsons.org.au

Michael J Fox Foundation www.michaeljfox.org/

Parkinson's UK www.parkinsons.org.uk/

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5. Shen X, Wong-Yu ISK, Mak MKY. Effects of exercise on falls, balance, and gait ability in Parkinson's disease: a meta-analysis. Neurorehabil Neural Repair 2016; 30(6): 512-527.
6. Ypinga JHL, de Vries NM, Boonen LHHM, Koolman X, Munneke M, Zwinderman AH, Bloem BR (2018) Effectiveness and costs of specialised physiotherapy given via ParkinsonNet: a retrospective analysis of medical claims data. Lancet Neurol 17:153-161
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