

Stroke (CVA);

- The third most common cause of death in western countries and is the
- The most important single cause of severe disability in the world today (Carr & Shepherd 2010).
- Current prevalence rates equate to around 50 per 1000 for those over the age of 65 (Lindley 2008).

The physical and psychological limitations that can occur as a result of stroke include motor and sensory impairments, cognitive deficits and emotional disturbances which can cause restrictions to activities of daily living and participation after stroke.

The Clinical Guidelines for Stroke Rehabilitation developed by the Australian National Stroke Foundation (2005) recommend that stroke patients undertake early mobilisation, task training, physical activity and interventions to improve fitness and mobility as soon as practical to provide the best possible chance of recovery.

Does physiotherapy help stroke patients?

A 2014 Cochrane review by Pollock and colleagues looked at whether physical rehabilitation approaches are effective in recovery of function and mobility in people with stroke. The review included a total of 96 studies involving 10,401 participants overall. **Physical rehabilitation was found to have a beneficial effect particularly in improving motor function, balance and gait** when compared with no treatment. These improvements were noted to persist beyond the length of the intervention period.

What does physical rehabilitation involve?

Physiotherapy management focuses on maximising the return of movement, independence and to minimise unwanted secondary complications. A recent systematic review of motor recovery after stroke recommends that motor training should focus on high-intensity, repetitive, task-specific practice and feedback (Longhorne et al. 2009). This process begins in the acute stages on admission to hospital, however continues to evolve and adapt during the sub-acute and long-term stages post stroke through active participation in the relearning of mobility and independence.

The focus on high-intensity task-specific training has prompted a change in how physiotherapists deliver physiotherapy rehabilitation services. There is increased emphasis on the use of semi-supervised and independent practice (with self-monitoring of performance), circuit classes, group classes and robot-mediated therapy to increase the dosage of training received, reduce the reliance upon one-on-one time with therapists, and to increase self-efficacy (Ada et al. 2006; Wevers et al. 2009; Blennerhassett & Dite 2004).

How much, how often?

There is increasing evidence that highlights the importance of intensity of training, time spent in therapy as well as task specificity as the main determinants of functional improvement in stroke patients (Richards et al. 1993; Kwakkel et al. 2004; Van Peppen et al. 2004). **A Cochrane review by Pollock and colleagues revealed a significant difference based on dose intervention indicating at least 30 to 60 minutes per day delivered 5 to 7 days per week is most effective for stroke patients.**

Recovery after an acute brain lesion continues alongside an active life. For those who are years post stroke it is paramount that they maintain a mentally and physically active lifestyle where possible. The National Stroke Foundation in Australia (2007) stated that 'organised stroke care remains the cornerstone of effective stroke rehabilitation and must remain the priority'.

Best practice is thought to be organised programs of intensive task-oriented physical rehabilitation.

If you have Parkinson's disease (PD), exercise could be the key to managing your symptoms.

The positive effects of exercise and physical activity have been widely documented for a variety of health conditions, such as cardiovascular disease, type 2 diabetes, mental health, cancer and can affect overall mortality (1). Recently the preventative benefit of exercise has been extended to neurodegenerative diseases, such as PD (2).

The cardinal signs of Parkinson's disease; tremor, Bradykinesia, rigidity and postural instability, primarily impact motor function and walking ability (3). Physical activity can have a positive effect on your mobility, gait pattern, balance and upper and lower limb motor function, these improvements positively impact onto every day functions and activities (4).

Getting involved in exercise in all stages of PD but in particular the early stages of PD has been shown to have a neuroprotective effect. Being sedentary is one of the fastest ways to increase your symptoms. Exercise when intensive has been found to slow down the progression of motor decay, it might delay the need for increasing drug treatment (5, 6, 7).

Forms of physical activity and interventions vary, but consensus seems to be on activities working on aerobic capacity, mobility, gait pattern, balance, multi-tasking and strength. Furthermore, activities need to be intensive, and completed at a high frequency. Overall activities are best supervised by physiotherapists and trained Exercises physiologists that can assess and tailor a program to your specific needs (8, 9).

If you want to be the best you can be, now is the time to review your exercise program. Exercise should be a long-term goal for those with PD, but it often can be difficult to maintain consistency on your own. We are offering the professional assessment, creation and supervision of exercise for people with PD.