

Multiple sclerosis and exercise

What is multiple sclerosis?

Multiple Sclerosis (MS) is a chronic disease of the central nervous system (CNS: brain, spinal cord and optic nerves). In MS, the immune system mistakenly starts to attack myelin, the protective coating around the nerve cells in the CNS that assists nerve conduction. The nerve cells themselves can also be damaged. These attacks on myelin produce 'scarring' or 'plaques' in the CNS. These scars slow or interrupt the transmission of nerve impulses, resulting in the varied symptoms of MS. The progress, severity, and specific symptoms of MS are unpredictable and vary from one individual to another.

Symptoms may include:

sensory changes such as pins and needles or numbness – muscle weakness – extreme tiredness (fatigue) – sensitivity to heat – reduced balance and coordination – bladder and bowel disturbance – cognitive changes – visual problems.

How does exercise help?

Regular exercise is useful for maintaining general fitness and may also help reduce the impact of specific symptoms of MS and help maintain optimum physical function.

Reported benefits include:

- Reduced fatigue levels, improved endurance
- Improved balance and coordination
- Improved muscle strength
- Improved posture and flexibility
- Improved mood and sense of wellbeing
- Improved alertness and concentration

People with MS who exercise regularly gain the same benefits as the general population in terms of reducing the risk of secondary complications due to inactivity.

What exercise is best for people with MS?

To be effective exercise needs to be performed regularly at a suitable intensity. Despite a growth in the literature about MS and exercise there is no specific training regime that has been recommended above all others.

It is important for people with MS to choose activities that are enjoyable, match their physical needs, and can be scheduled into a weekly routine.

Strengthening Exercises

- Can be performed in a variety of settings including home, community centre or gym
- Can be performed with resistance from free or machine weights; body weight, resistance bands, or water
- Progressive resistance with high weights and low repetitions is beneficial
- Frequent rest breaks and alternating muscle groups during training helps minimise the effect of fatigue
- Strengthening programs may be tolerated better than cardiovascular (fitness) training due to a lesser heating effect on core body temperature



Cardiovascular (Fitness) Exercises

- Can be performed in a variety of settings including individual and group training sessions on land or in water
- Use of exercise bikes and elliptical trainers is preferable to the use of a treadmill when there is a risk of tripping and falls
- Start at low intensity and duration and increase the program gradually
- Small bursts of regular activity have a beneficial cumulative effect
- Should be performed in well ventilated/air-conditioned areas to minimise the effect of heat sensitivity

Stretching & Balance Exercises

- Can be helpful to improve posture and flexibility
- Can be useful to relieve muscle spasms and cramps
- Can improve relaxation and sleep patterns

Fatigue and MS

People with MS usually experience fatigue sooner and take longer to recover. If fatigue starts to cause physical problems consider ceasing the activity. If fatigue persists for more than 1 hour, consider reducing the intensity and duration of the next session.

Heat Sensitivity and MS

Physical and sensory symptoms may temporarily increase with small increases in environmental or body temperature. People with MS should be encouraged to keep cool and well hydrated during exercise sessions, for example using cool clothing.

Increased sensory symptoms may be unavoidable but exercise may continue if tolerated. If symptoms persist for more than 30 - 60 minutes after exercise, consider reducing the intensity and duration of the next session.

References and further information

Exercise is Medicine Australia www.exerciseismedicine.org.au

Multiple Sclerosis Australia www.msaustralia.org.au

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

Exercise Right www.exerciseright.com.au

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