

Neuromuscular diseases



What are neuromuscular diseases?

Neuromuscular disabilities (NMD) include multiple sclerosis, postpolio syndrome, and Parkinson's disease.

Neuromuscular diseases can be broken down into six general types depending how they affect the body, these are:

- muscular dystrophies (MD)
- metabolic muscle conditions
- neuromuscular junction conditions
- motor neuron conditions
- peripheral nerve conditions
- neuromuscular myopathies

Most NMD's are incurable, however exercise in neuromuscular diseases is known to improve:

- quality of life.
- improve symptoms or co morbidities of the disease.
- reduce risk of falls and injury and can prevent or limit disability.
- reduce degradation rate of muscle.
- prolong independence.
- improve movement.

Exercise not only improves movement and muscle control but also physiology including improved cardiovascular and respiratory function, (often the last phase of the condition) leading to increased longevity.

How does exercise help neuromuscular diseases?

Exercise Right recommends resistance training modifications to improve motor function in persons with cerebral palsy, muscular dystrophy, spinal cord injury, and stroke.

- [Resistance and aerobic training](#) improves physical fitness, strength and functional performance and capacity. Those with MS have shown to have increased walking mobility with combined resistance and aerobic training.
- [Regular flexibility training](#) assists with preventing contractures in people with muscular dystrophy, spinal cord injury and stroke.

Things to remember

- Avoid exercising alone or in abnormal conditions. With movement disorders the risk of falls is increased.
- Conditions affecting the peripheral nerves can reduce pain symptoms, where pushing an exercise program too hard can result in an injury without receiving the neural feedback i.e. pain.
- Allow 48 hours to recover from resistance training prior to the next session.
- Foot and hand straps may be needed on bicycle and arm ergo machines to allow for adequate movement and control.

What type of exercise is best for patients with neuromuscular diseases?

If starting an exercise regime, Exercise Right recommends starting slowly. NMDs may be aggravated by fatigue so even a 2 minute seated exercise session is of greater benefit than exercising to fatigue.

- Start with a low intensity exercise first. The intensity can always increase if things are too easy, but if exercise is begun with too much too soon, people with NMDs may experience multiple bad days in a row.
- Always incorporate resistance training combined with flexibility training. The resistance training should target all the major muscle groups with low weight and high repetitions to begin with. Weight intensity should gradually be increased as fatigue and muscular endurance allows.

Always seek professional advice from an Accredited Exercise Physiologist. Find one here: www.essa.org.au/find-aep