

Multiple Sclerosis

Physiotherapy, delivered as part of a multidisciplinary team approach, provides a range of benefits, from improving physical health to enhancing quality of life, for people with Multiple Sclerosis (MS).

Multiple sclerosis (MS) is an inflammatory, degenerative neurological disease which is most commonly diagnosed between the ages of 20-40, affecting women more than men in a ratio of 2.5:1.⁽¹⁾ Typically MS involves a series of relapses and prognosis is unpredictable, although a small proportion of people with MS (15%) have a steady progression of disability.⁽¹⁾ Some people with MS can develop complex patterns of disability affecting physical and social function.⁽²⁾ Problems with mobility, balance, fatigue and spasticity are common.⁽³⁾

Physiotherapists provide a unique contribution to the management of people with MS through the improvement and maintenance of functional abilities and management of the long term symptoms.^(3,4) Physiotherapists provide specific rehabilitation programs, facilitate self management and coordinate care.^(1,5) For people with more complex needs physiotherapy should where possible be delivered within a multidisciplinary specialist team/service where regular evaluation and assessment can be provided.^(5,6)

There is evidence that multidisciplinary rehabilitation can improve levels of activity and participation levels of people with MS.⁽¹⁾ ▶▶

Size of the problem



- An estimated **100,000** people in the UK have been diagnosed with MS⁽⁷⁾
- MS is the 'major cause of non-traumatic disability in young adults'⁽⁷⁾
- **100-120** people per **100,000** in the UK are affected; Scotland has a much higher prevalence^(8,9)
- In 2009-10, **24,622** people were admitted to hospital in England with MS as a primary diagnosis, with associated treatment costs of **£23.5 million**.⁽¹⁰⁾

50% leave their jobs within a decade of diagnosis



Why should physiotherapists be involved in management from the start?

The greatest potential for central nervous system adaptation and recovery occurs in the early stages of the disease.⁽¹¹⁾

Physiotherapy intervention and advice early after diagnosis can reduce disability, maximise potential for independence, improve employment sustainability and reduce the impact that the disease has on health and quality of life factors.⁽¹¹⁾

Physiotherapy Intervention

There is a strong body of evidence demonstrating that exercise used as part of a rehabilitation programme can increase activity and improve the health and well-being of people with MS.⁽¹²⁾

In addition there is an emerging body of evidence to say that physiotherapists, as part of a specialist neurorehabilitative service, have a key role in managing specific symptoms of MS including pain, spasticity and the prevention of secondary complications such as contracture.⁽⁵⁾ Results from randomised controlled clinical trials of exercise programmes in MS have demonstrated benefits in muscle strength, cardiovascular fitness, aerobic thresholds and activity levels and functional improvements, such as walking ability.^(11,13,14) Exercise is generally highly valued by patients who report improvements in mood and quality of life.⁽⁴⁾

Case study

Over a six month period, the introduction of a physiotherapy led community multidisciplinary team in Newcastle resulted in a decrease in GP and hospital consultant visits and reduced the hospital bed days in the 38 people with MS. The direct cost of the multidisciplinary team was offset by this saving however the service reduced the inappropriate use of inpatient beds. No firm conclusions could be drawn about the effectiveness of the team but survey evidence showed a high degree of patient satisfaction with the team.⁽¹⁵⁾

References

1. Khan F, Turner-Stokes L, Ng L, et al. Multidisciplinary rehabilitation for adults with multiple sclerosis. Cochrane Database of Systematic Reviews. Chichester, UK: John Wiley & Sons, Ltd; 2008. URL: <http://www.mrw.interscience.wiley.com/cochrane/cdsysrev/articles/CD006036/frame.html>
2. Lynch SG, Kroencke DC, Denney DR. The relationship between disability and depression in multiple sclerosis: the role of uncertainty, coping, and hope. *Mult Scler*. 2001 Dec;7(6):411-6.
3. Compston A, Coles A. Multiple sclerosis. *The Lancet*. 2008;372(9648):1502-17. URL: <http://linkinghub.elsevier.com/retrieve/pii/S0140673608616207>
4. Heesen C, Romberg A, Gold S, et al. Physical exercise in multiple sclerosis: supportive care or a putative disease-modifying treatment. *Expert Rev Neurother*. 2006 Mar;6(3):347-55.
5. National Institute for Health and Clinical Excellence. Multiple sclerosis: management of multiple sclerosis in primary and secondary care. Clinical Guideline CG8. London: National Institute for Clinical Excellence; 2003. URL: <http://guidance.nice.org.uk/CG8>
6. Department of Health. The national service framework for long-term conditions. London: Department of Health; 2005. URL: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4105361
7. Pugliatti M, Rosati G, Carton H, et al. The epidemiology of multiple sclerosis in Europe. *European Journal of Neurology*. 2006;13:700-22. URL: <http://www.direct-ms.org/pdf/EpidemiologyMS/Epidemiology%20Europe%202006.pdf>
8. Multiple Sclerosis Society. MS Society briefing on UK prevalence study. 2009. URL: http://www.mssociety.org.uk/downloads/MS_prevalence_study_briefing_June_2009.d86edad2.pdf
9. Rothwell P, Charlton D. High incidence and prevalence of multiple sclerosis in south east Scotland: evidence of a genetic predisposition. *J Neurol Neurosurg Psychiatry* 1998;64:730-35.

- URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2170112/pdf/v064p00730.pdf>
- URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1736257/pdf/v066p00411.pdf>
10. HESonline Hospital Episode Statistics. Primary diagnosis: 3 character 2009-10. URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2808470/?tool=pubmed>
11. MS Australia. Strength and cardiorespiratory exercise for people with multiple sclerosis (MS). MS Practice - for health professionals. MS Australia; n.d. URL: <http://www.msaustralia.org.au/publications-health-professionals.asp>
12. Turner AP, Kivlahan DR, Haselkorn JK. Exercise and quality of life among people with multiple sclerosis: looking beyond physical functioning to mental health and participation in life. *Arch Phys Med Rehabil*. 2009 Mar;90(3):420-8.
13. Snook EM, Motl RW. Effect of exercise training on walking mobility in multiple sclerosis: a meta-analysis. *Neurorehabil Neural Repair*. 2009 Feb;23(2):108-16.
14. Rietberg MB, Brooks D, Uitdehaag Bernard MJ, et al. Exercise therapy for multiple sclerosis. Cochrane Database of Systematic Reviews. Chichester, UK: John Wiley & Sons, Ltd; 2004. URL: <http://www.mrw.interscience.wiley.com/cochrane/cdsysrev/articles/CD003980/frame.html>
15. Makepeace R, Barnes M, Semlyen J, et al. The establishment of a community multiple sclerosis team. *International Journal of Rehabilitation Research*. 2001;24(2):137-41.
16. Naci H, Fleurence R, Birt J, et al. Economic burden of multiple sclerosis: a systematic review of the literature. *PharmacoEconomics*. 2010;28(5):363-79.
17. McCrone P, Heslin M, Knapp M, et al. Multiple Sclerosis in the UK: Service Use, Costs, Quality of Life and Disability. *PharmacoEconomics*. 2008;26(10):847-60.

Cost of MS

- The majority of people diagnosed with MS are in employment, but **50%** leave their jobs within a decade of diagnosis⁽¹⁶⁾
- 'The societal costs associated with early retirement exceeds those of health and social care'⁽¹⁷⁾
- The health care and social services costs are about **£17,000** per person diagnosed, rising to over **£25,000** when the lost employment costs are included.⁽¹⁷⁾ This amounts to **£2.5billion** a year
- **73%** of hospital admissions for MS in 2009-10 were day cases costing a total of **£8.3m**. **27%** were in-patient stays with an average length of stay of **12.5 days** costing over **£500** per day.⁽¹⁰⁾

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