DOI: 10.21088/potj.0974.5777.19226.9

Physiotherapy and Occupational Therapy Journal
Volume 19 Number 2, April - June 2026

Review Article

Physiotherapy Management of Multiple Sclerosis: An Overview of Recent Technological Advances

Megha Masaun[1], Mansi Gupta[2]

How to cite this article:

Megha Masaun, Mansi Gupta. Physiotherapy Management of Multiple Sclerosis: An Overview of Recent Technological Advances. Therapy Jr. 2026; 19(2): 167-173.

ABSTRACT

Multiple Sclerosis (MS) is a chronic autoimmune condition characterized by complex motor and cognitive impairments that necessitate intensive, long-term Physiotherapy. Recent advances in Physiotherapy have shifted towards technology-integrated approach, leveraging Virtual Reality (VR), Robot-Assisted Gait Training (RAGT), and Transcranial Direct Current Stimulation (tDCS) to enhance neuroplasticity. VR provides immersive, biofeedback-driven environments that improve postural control and patient adherence through gamification. RAGT facilitates high-intensity, repetitive gait cycles essential for improving walking endurance in severely disabled populations. Concurrently, tDCS has emerged as a potent non-invasive neuromodulatory tool to mitigate Multiple Sclerosis related fatigue and cognitive dysfunction. This review highlights how the synergy of digital innovation and evidence-based Physiotherapy is fostering a more personalized, effective, and accessible rehabilitation model, ultimately aiming to delay disability progression and improve the quality of life for individuals living with MS.

KEYWORDS

• Multiple Sclerosis • Neurorehabilitation • Virtual Reality • Robot-Assisted Gait Training • Transcranial Direct Current Stimulation

INTRODUCTION

Multiple Sclerosis (MS) is an inflammatory immune-mediated disease characterised by demyelination of axons within the CNS that is frequent in young adults and commonly causes a lifelong disability.[1] It is one of the most common causes of non-traumatic disability in young adults, more common in women.

Author's Affiliation:

[1] Physiotherapist, Department of Physiotherapy, Dr RML Hospital, New Delhi, India.

[2] Physiotherapist, Department of Physiotherapy, Dr RML Hospital, New Delhi, India.

Corresponding Author:

Megha Masaun, Physiotherapist, Department of Physiotherapy, Dr RML Hospital, New Delhi, India.

E-mail: meghameg71@gmail.com

➢ **Received:** 02-05-2026 ➢ **Accepted:** 04-06-2026

The pathology of Multiple Sclerosis is characterised by multiple focal areas of demyelination, accompanied by various grades of inflammation and neurodegeneration within the central nervous system.[2] The development of MS results from a combination of genetic susceptibility and environmental factors. Genome-wide association studies have identified over 100 genetic variants linked to the disease.[3] Several environmental factors have also been linked to MS, including Epstein-Barr virus (EBV) infection, smoking, childhood obesity, and low vitamin D levels.[4]

The disease course is heterogeneous, encompassing relapsing–remitting MS (RRMS), primary progressive MS (PPMS), and secondary progressive MS (SPMS), each characterized by distinct patterns of inflammatory activity, neurodegeneration, and disability accumulation.[5] Clinically, MS manifests through a broad constellation of symptoms, including motor impairments (muscle weakness, spasticity, impaired coordination and balance), sensory disturbances, visual deficits, fatigue, pain, cognitive dysfunction, and affective disorders such as depression and anxiety.[5,6] Thus, it results in a variety of musculoskeletal, respiratory, neurological, cardiovascular and psychological symptoms.

Physiotherapy Management of Multiple Sclerosis

Physiotherapy for Multiple Sclerosis is a vital, evidence-based approach designed to maintain and enhance patient's functions by improving muscle strength, balance, mobility, gait while reducing fatigue and managing spasticity. It has been proved that Physiotherapy in Multiple Sclerosis reduces inflammatory cytokines in the peripheral immune system, protects the central nervous system, slows neurodegeneration, induces neuroplasticity, and ultimately slows the progression of the disease.[7]

A study by White *et al.* showed that after rehabilitation training, the levels of inflammatory mediators such as interleukin-4, interleukin-10, and C-reactive protein decreased in patients, which can reduce the inflammatory response of MS.[8] Physiotherapy treatment for Multiple Sclerosis integrates kinesiotherapy, aerobic and resistance exercise, manual techniques, hydrotherapy, task-oriented functional training etc. to address impairments from early to advanced stages of disability.[9]

Current Physical activity guidelines for MS generally recommend at least 150 minutes per week of moderate-intensity aerobic activity, complemented by resistance and balance training, with progressive implementation to accommodate symptom fluctuations, fatigue, and heat sensitivity.[10] A System-oriented approach aimed at preserving mobility, promoting participation, and mitigating secondary complications such as inactivity-related decline, falls, and social withdrawal is followed now a days.

Latest Physiotherapy management of Multiple Sclerosis has shifted from compensatory care to neurorestorative and technology-integrated rehabilitation and has evolved toward technology-assisted and neuroplasticity-based interventions.[11]

Technological Advances in Physiotherapy

The integration of Technology into Physiotherapy for Multiple Sclerosis is a clinical necessity for achieving neuro-restoration and maintaining functional independence as traditional manual therapy often lacks high intensity repetition and objective biofeedback required to drive Neuroplasticity.

The Technological systems, Transcranial Magnetic Stimulation (TMS), Virtual Reality (VR), Robot-Assisted Gait Training (RAGT), Telerehabilitation, Transcranial Direct Current Stimulation (tDCS) used in Physiotherapy are based on Motor learning principles by providing task-specific and highly repetitive activities. They provide a systemic approach as they are task specific, give visual or auditory feedback, increase the duration, intensity, and frequency of the treatments and increase motivation and enhance active participation along with compliance.[12]

Transcranial Magnetic Stimulation (TMS)

Transcranial magnetic stimulation (TMS) is a painless and non-invasive brain stimulation technique, which has been widely used in neurological diseases. TMS causes axon depolarization, increases the excitability of the corticospinal system, stimulates the plasticity of neurons, enhances the ability of synaptic transmission, and improves the responsiveness of the nervous system, to achieve the goal of targeted treatment[13]. The TMS device is composed of one or two coils, and the coil is placed on the surface of the corresponding brain region. Magnetic field induce electrical currents in the interneurons located in the corresponding area of the brain, causing the neurons to produce excitatory postsynaptic potential, which generates nerve impulses. These impulses travel down the axon to the governing organs and perform relevant physiological functions, such as improving the motor function of the controlled muscles.[14]

Improvement in spasticity has been found with TMS and in a study by Centonze, a single session of 5-Hz rTMS of the M1 region contralateral to the affected limb inhibited the H-reflex (reducing activity in the spinal cord) and increased MEP amplitude, hence reducing also the H/M amplitude ratio and indirectly increasing corticospinal excitability (by increasing MEP amplitude); 1-Hz rTMS had the opposite effect. Individual sessions did not affect spasticity. A significant improvement in lower limb spasticity was observed with daily 5-Hz rTMS over a period of 2 weeks. This improvement persisted for at least 7 days after the treatment period ended. However, no effect was achieved with sham rTMS.[15]

Another research by Petta[16] *et al.* studied its effect on lower urinary tract dysfunction and evaluated the effects of 5-Hz rTMS of the M1 region in 10 patients with RRMS (McDonald criteria) scoring 3.0-5.5 on the EDSS and presenting lower urinary tract symptoms involving either bladder filling or voiding. These findings suggest that the increase in corticospinal excitability after excitatory rTMS promotes detrusor muscle contraction and/or external urethral sphincter relaxation, rather than increasing sphincter activity. The improvement of nerve conduction function depends on the enhancement of remyelination. It has been found that the application of TMS in the lesion area can promote the remyelination of neurons with demyelinating lesions by activating axonal fibers and neurons and increasing the number of oligodendrocytes.[17]

Given the evidence from studies reporting considerable impairment of gait velocity, cadence, and step length in patients with MS, Burhan *et al.* tested the effects of high-frequency (6 Hz) rTMS of the prefrontal cortex on gait parameters in a 51-year-old white man with a 4-year history of RRMS and residual disabling symptoms consisting of upper and lower limb spastic weakness, diplopia, nystagmus, and some cognitive deficits (mainly affecting attention).

M Leon stated TMS's as a reliable, safe, and effective treatment for some symptoms of MS. Application of excitatory electromagnetic pulses to the affected hemisphere enables the possibility of optimising the brain's functional activity, including the transmission of nerve impulses through the demyelinated corticospinal tract.[18] Thus, TMS has been proven as a reliable, safe, and effective treatment for some symptoms of Multiple Sclerosis like reduction in spasticity and fatigue, improved Lower urinary tract dysfunction, manual dexterity and Gait and cognitive enhancement.

Virtual Reality

Virtual Reality (VR) is a computer-based simulation of a 3-dimensional environment in which the individual can interact with the environment by using additional electronic equipment. VR technology provides sensory stimulation and feedback, which alters brain activity and enhances neuroplasticity, as well as motor learning.[19] This occurs because of real time visual and sensory stimulation and feedback, increased exposure to different environments, heightened engagement and repetitive movement of functional task.

Virtual reality (VR), have proven effective in improving motor and cognitive impairment in neurological patients, including those with MS.[20] Virtual reality interventions use computer programs that allow users to navigate in and interact with a virtual environment. The use of virtual reality in rehabilitation offers several advantages, such as providing fully controllable, personalised environments and situations that are too dangerous, expensive or impossible in real life. Moreover, the level of difficulty and intensity can be adapted to the skills of the patient, and virtual reality has the potential to increase patients' motivation by creating more exciting training environments and providing feedback.[21]

Massetti conducted a systemic review and concluded that Virtual Reality represents a motivational and effective alternative to traditional motor rehabilitation for MS patients. The results showed that VR programs could be an effective method of patients with MS rehabilitation in multiple cognitive and/ or motor deficits.[22] Virtual reality applications for physical rehabilitation of neurological disorders are being used to improve both upper and lower limb function, cognitive function, balance and gait training.[21,22] Moreover, when virtual reality training was compared to conventional therapy, we found that virtual reality training was superior in improving balance and postural control, and participation and quality of life.[21]

Telerehabilitation

Telerehabilitation is a branch of healthcare that provides remote medical services to patients. It is defined by various modalities of remote clinical practice including, but not limited to, video consultations, audio real-time interfaces, and remote monitoring.[23] The COVID-19 pandemic accelerated the adoption of remote approaches, demonstrating the feasibility of neurological assessments, symptom tracking and treatment optimisation without in-person visits. Tele-rehabilitation delivers tailored physical and cognitive exercises directly to patients' homes, often achieving high adherence and satisfaction.[24] It has emerged as a promising avenue for monitoring and managing patients with MS. It is bbeneficial for patients with geographical remoteness, economic constraints, and physical disabilities. It solves the transportation issue and saves travel time. Moreover, the patient's environment is comfortable.

Peter etal concluded that Telemedicine provides a pathway to improve access to high-quality, cost-effective care for patients with MS and their providers. Most providers using Clinical Video Telemedicine were satisfied, and the less technically challenging options of store-and-forward telemedicine and remote patient monitoring can be better used.[25]

Robot-Assisted Gait Training (RAGT)

Mobility and gait impairments are some of the most disabling symptoms in people with multiple sclerosis, due to their impact on daily living activities and quality of life.[26] Robot-Assisted Gait Training (RAGT) in Multiple Sclerosis serves as an intensive rehabilitation tool to improve walking ability, balance, and endurance, particularly for patients with severe gait impairments. It uses robotic exoskeletons or treadmill-based robotic devices to support and guide the lower limbs through walking motions. Thus, it helps in enhancing mobility, increasing walking speed, and reducing fatigue by allowing for safe, high-repetition, and supported locomotion.

Recent systematic reviews further confirm the clinical value of robotic rehabilitation in MS. A meta-analysis by Christodoulou *et al.* highlighted significant improvements in fatigue and mental health,[27] while Facciorusso *et al.* confirmed its effectiveness in improving gait and balance.[28] The advantages of robotic devices such as walking exoskeletons include prolonged gait rehabilitation, maintaining the sensory afferents of physiological gait through robotic guidance to lower limb movement, task-specific training with proprioceptive and exteroceptive feedback[29] and the possibility of tailoring the training to the subject's characteristics. All these aspects make RAGT particularly useful in the rehabilitation of patients with Multiple Sclerosis with severe gait impairment, where multiple constraints do not allow extended and task-specific walking rehabilitation.[30]

Transcranial Direct Current Stimulation (tDCS)

Transcranial Direct Current Stimulation (tDCS) is a non-invasive, low-risk, and safe neurostimulation technique used in Multiple Sclerosis (MS) to manage symptoms by modulating brain function and neuroplasticity. Transcranial direct current stimulation (tDCS) has emerged as an appealing rehabilitative approach to improve brain function, with promising data on gait and balance in people with multiple sclerosis (MS).[31]

It is a neurorehabilitation technique able to modulate cortical excitability and cortico-spinal circuits, inducing a subthreshold modification of neuronal resting membrane potentials. Classically, anodal tDCS increases cortical excitability, whereas cathodal tDCS reduces it, both leading to long-lasting changes in neuronal activities of specific brain networks.[32] It has been reported that tDCS causes polarity-dependent shifts of the resting membrane potential and might consequently change neuronal excitability at the site of stimulation and functionally connected areas. Paltama concluded that the synergy of tDCS and exercise can not only improve motor performance, but also can positively affect postural control, balance and fall risk.[33]

tDCS stimulate synaptic plasticity which allows neurons to adjust connections based on experiences, but this is impaired in multiple sclerosis (MS). Interventions that enhance this plasticity, such as transcranial direct current stimulation (tDCS), can improve functioning and quality of life. NMDA receptor. activity is crucial for the lasting effects of tDCS, with anodal stimulation increasing cortical activity and intracellular Ca2+ levels. Modulation of Ca2+ influences synaptic plasticity, with low levels leading to long-term depression (LTD) and higher levels resulting in long-term potentiation (LTP). In MS, tDCS may help regulate overactive LTP, reducing excitotoxicity and cognitive deficits, thus enhancing quality of life.[34] Transcranial direct current stimulation (tDCS) has been shown to increase cerebral blood flow in healthy individuals, with an intensity-dependent response.

Advanced MS rehabilitation technologies like VR, RAGT, and tDCS offer powerful ways to boost neuroplasticity and functional independence, though they face hurdles in cost and accessibility. Virtual Reality excels at increasing patient engagement and improving balance through safe, simulated environments, while Robot-Assisted Gait Training provides the high intensity needed to significantly improve walking endurance in those with severe mobility issues. Meanwhile, tDCS offers a portable and affordable solution specifically targeting MS-related fatigue and cognitive fog. Despite their benefits, these tools are often limited by high equipment costs, potential side effects like cybersickness, and the need for frequent sessions to see lasting results.

CONCLUSION

The integration of recent technological advances represents a transformative shift in the management of Multiple Sclerosis. These technologies bridge the gap between traditional Physiotherapy and neuroplastic recovery, offering personalized, high-intensity interventions that address once-difficult symptoms like chronic fatigue and severe gait impairment. Ultimately, the future of Multiple Sclerosis rehabilitation lies in a hybrid approach—combining the precision of robotic and digital tools with the clinical expertise of Physiotherapists to empower patients and significantly enhance their quality of life.

REFERENCES

1. The Lancet Neurology. 2008; 7(9): 841–851. doi: 10.1016/s1474-4422(08)70191-1.
2. Yvonne C. Learmonth, Physiotherapy management of multiple sclerosis, Journal of Physiotherapy, 72, (1), 2026, 11-22.
3. Turk A., Maver A., Juvan P., Drulović J., Mesaroš Š., Novaković I., *et al.* Increased burden of rare variants in GWAS associated genes in familial multiple sclerosis. Sci Rep 2025; 15: 21200.
4. Huang J., Kockum I., Stridh P. Trends in the environmental risks associated with earlier onset in multiple sclerosis. Mult Scler Relat Disord 2022; 68: 104250.
5. Walton, C., King, R., Rechtman, L., Kaye, W., Leray, E., Marrie, R. A., Robertson, N., La Rocca, N., Uitdehaag, B., van Der Mei, I., *et al.* (2020). Rising prevalence of multiple sclerosis worldwide: Insights from the Atlas of MS. *Multiple Sclerosis Journal*, *26*(14), 1816-1821.
6. Thompson, A.J., Baranzini, S.E., Geurts, J., *et al.* (2020). Multiple sclerosis. *Lancet, 395* (10227), 1044-1058.
7. Simpson M., Macdonell R. The use of transcranial magnetic stimulation in diagnosis, prognostication and treatment evaluation in multiple sclerosis. *Mult Scler Relat Disord* (2015) 4: 430–36. doi: 10.1016/j.msard.2015.06.014).
8. White L.J., Castellano V. Exercise and brain health–implications for multiple sclerosis: Part 1–neuronal growth factors. *Sports Med* (2008) 38: 91–100.
9. Yang, F.A., Lin, C.L., Huang, W.C., Wang, H.Y., Peng, C.W., & Chen, H.C. (2023). Effect of robot-assisted gait training on multiple sclerosis: a systematic review and meta-analysis of randomized controlled trials. *Neurorehabilitation and Neural Repair*, *37*(4), 228-239.
10. Casuso-Holgado, M.J., Martín-Valero, R., Carazo, A.F., Medrano-Sánchez, E.M., Cortés-Vega, M.D., & Montero-Bancalero, F.J. (2018). Effectiveness of virtual reality training for balance and gait rehabilitation in people with multiple sclerosis: a systematic review and meta-analysis. *Clinical Rehabilitation*, *32*(9), 1220-1234.

11. Valodwala, K.C. (2026). Recent advances in physiotherapy management of multiple sclerosis: a scoping review. *International Journal of Research in Medical Sciences*, *14*(4), 1735–1737.
12. Karakaş, Hilal & Seebacher, Barbara & Kahraman, Turhan. (2021). Technology-Based Rehabilitation in People with Multiple Sclerosis: A Narrative Review. Journal of Multiple Sclerosis Research. 1. 54 - 68. 10.4274/jmsr.galenos.2021.2021-10-3.
13. Burke M.J., Fried P.J., Pascual-Leone A. Transcranial magnetic stimulation: Neurophysiological and clinical applications. *Handb Clin Neurol* (2019) 163: 73–92. doi: 10.1016/B978-0-12-804281-6.00005-7
14. Zhou X., Li K., Chen S., Zhou W., Li J., Huang Q., Xu T., Gao Z., Wang D., Zhao S., Dong H. Clinical application of transcranial magnetic stimulation in multiple sclerosis. Front Immunol. 2022 Sep 5; 13: 902658. doi: 10.3389/fimmu.2022.902658.
15. D. Centonze, G. Koch, V. Versace, F. Mori, S. Rossi, L. Brusa, *et al.* Repetitive transcranial magnetic stimulation of the motor cortex ameliorates spasticity in multiple sclerosis. Neurology, 68 (2007), pp. 1045-1050.
16. D. Centonze, F. Petta, V. Versace, S. Rossi, F. Torelli, C. Prosperetti, *et al.*
17. Effects of motor cortex rTMS on lower urinary tract dysfunction in multiple sclerosis.Mult Scler, 13 (2007), pp. 269-271.
18. Cullen C.L., Senesi M., Tang A.D., Clutterbuck M.T., Auderset L., O'Rourke M.E., *et al.* Low-intensity transcranial magnetic stimulation promotes the survival and maturation of newborn oligodendrocytes in the adult mouse brain. Glia (2019) 67(8): 1462–77.
19. Zhou X, Li K, Chen S, Zhou W, Li J, Huang Q, Xu T, Gao Z, Wang D, Zhao S, Dong H. Clinical application of transcranial magnetic stimulation in multiple sclerosis. Front Immunol. 2022 Sep 5; 13: 902658. doi: 10.3389/fimmu.2022.902658.
20. Virtual Reality Treatment for Multiple Sclerosis - Physiopedia
21. Maggio M.G., Maresca G., de Luca R., Stagnitti M.C., Porcari B., Ferrera M.C., Galletti F., Casella C., Manuli A., Calabrò R.S. The Growing Use of Virtual Reality in Cognitive Rehabilitation: Fact, Fake or Vision? A Scoping Review. J. Natl. Med. Assoc. 2019; 111: 457–463.
22. De Keersmaecker E., Guida S., Denissen S., Dewolf L., Nagels G., Jansen B., Beckwée D., Swinnen E. Virtual reality for multiple sclerosis rehabilitation. Cochrane Database Syst Rev. 2025 Jan 7;1(1): CD013834. doi: 10.1002/14651858.CD013834.pub2. PMID: 39775922; PMCID: PMC11705534.
23. Massetti T., Trevizan I.L., Arab C., Favero F.M., Ribeiro-Papa D.C., de Mello Monteiro CB. Virtual reality in multiple sclerosis - A systematic review. Mult Scler Relat Disord. 2016 Jul; 8: 107-12. doi: 10.1016/j.msard.2016.05.014. Epub 2016 May 21. PMID: 27456884.
24. Raabeah Fatma Jafri, Namra Fatma Jafri, Maryam Sayeed, Mizna Musthafa, Suhana Riyas,Telehealth in Multiple Sclerosis: Fostering Quality of Life, Multiple Sclerosis and Related Disorders, Volume 80, 2023, 105280, ISSN 2211-0348.
25. https://www.nature.com/nature-index/topics/l4/telemedicine-applications-in-multiple-sclerosis-management
26. Keszler P., Maloni H., Miles Z., Jin S., Wallin M. Telemedicine and Multiple Sclerosis: A Survey of Health Care Providers Before and During the COVID-19 Pandemic. Int J MS Care. 2022 Nov-Dec; 24(6): 266-270. doi: 10.7224/1537-2073.2021-103. Epub 2022 Sep 15. PMID: 36545646; PMCID: PMC9749831.
27. Andrea Baroni, Nicola Lamberti, Gabriele Perachiotti, Anna Crepaldi, Giovanni Piva, Fabio Manfredini, Sofia Straudi, Low intensity interval robot-assisted gait training improves mobility in people with rogressive multiple sclerosis: The PROGR-EX randomized controlled trial, Multiple Sclerosis and Related Disorders,Volume 104, 2025,106777.
28. Christodoulou *et al.*, 2025 V.N. Christodoulou, D.N. Varvarousis, G. Ntritsos, D. Dimopoulos, N. Giannakeas,G.I. Vasileiadis, A. Korompilias, A. Ploumis
29. Robotic assisted and exoskeleton gait training effect in mental health and fatigue of multiple sclerosis patients. A systematic review and a meta-analysis. Disabil. Rehabil., 47 (2) (2025), pp. 302-313,.
30. Facciorusso S., Malfitano C., Giordano M., Del Furia M.J., Mosconi B., Arienti C., Cordani C. Effectiveness of robotic rehabilitation for gait and balance in people with multiple sclerosis: a systematic review. Journal of Neurology. 2024 Nov; 271(11): 7141-55.
31. Yang F.A., Lin C.L., Huang W.C., Wang H.Y., Peng C.W., Chen H.C. Effect of robot-assisted gait training on multiple sclerosis: a systematic review and meta-analysis of randomized

controlled trials. Neurorehabilitation and Neural Repair. 2023 Apr; 37(4): 228-39.

32. Calabrò R.S., Cassio A., Mazzoli D., Andrenelli E., Bizzarini E., Campanini I., Carmignano S.M., Cerulli S., Chisari C., Colombo V., Dalise S. What does evidence tell us about the use of gait robotic devices in patients with multiple sclerosis? A comprehensive systematic review on functional outcomes and clinical recommendations. European journal of physical and rehabilitation medicine. 2021; 57(5): 841-9.

33. Marotta N., de Sire A., Marinaro C., Moggio L., Inzitari M.T., Russo I., Tasselli A., Paolucci T., Valentino P., Ammendolia A. Efficacy of Transcranial Direct Current Stimulation (tDCS) on Balance and Gait in Multiple Sclerosis Patients: A Machine Learning Approach. J Clin Med. 2022 Jun 17; 11(12): 3505. doi: 10.3390/jcm11123505. PMID: 35743575; PMCID: PMC9224780.

34. Cirillo G., Di Pino G., Capone F., Ranieri F., Florio L., Todisco V., Tedeschi G., Funke K., Di Lazzaro V. Neurobiological after-effects of non-invasive brain stimulation. Brain Stimul. 2017; 10: 1–18. doi: 10.1016/j.brs.2016.11.009.

35. Paltamaa J., Sjögren T., Peurala S.H., Heinonen A. Effects of physiotherapy interventions on balance in multiple sclerosis: A systematic review and meta-analysis of randomized controlled trials. J. Rehabil. Med. 2012; 44: 811–823. doi: 10.2340/16501977-1047.

36. Chmiel J., Kurpas D., Stępień-Słodkowska M. The Potential of Transcranial Direct Current Stimulation (tDCS) in Improving Quality of Life in Patients with Multiple Sclerosis: A Review and Discussion of Mechanisms of Action. *Journal of Clinical Medicine*. 2025; 14(2): 373. https://doi.org/10.3390/jcm14020373