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# Multiple Sclerosis: Improving Quality of Life with Yoga

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**Abstract:** Adaptive personal fitness and training classes are becoming more available in society. Incorporating modified classes allows for greater inclusion of individuals with disabilities. Personal fitness classes increase over health, muscle strength and decreases mental stressors. Unfortunately, personal trainers are taught modification for injuries, obesity, joint problems and not typically disabilities. Adhering toward generalized public and as inclusive towards individuals with disabilities. This leads to lack of knowledge in allowing individuals specifically with multiple sclerosis into training classes due to not knowing how to work with this specific disability. The purpose of this article is to describe what multiple sclerosis is and how yoga can be beneficial in enhancing everyday life and decreasing fatigue in individuals with Multiple Sclerosis.

Keywords: Multiple Sclerosis, Yoga, Adaptive physical activity, Inclusive sport

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## **1. Introduction**

Although the academic and practitioner-based literature is not particularly robust with studies investigating the effect of yoga on life quality in multiple sclerosis individuals with (MS), some researchers have supplied the field with high-quality research and thereby provided results from which to build upon [1]. For instance, Hassanpour-Dehkordi and Jivad (2014) note that yoga and aerobic exercises improve quality of life in individuals with (MS) as did Stroud and Minahan (2009) [2, 3]. It has also been discovered that therapeutic yoga for some individuals with (MS) were less likely to have significant secondary side effects from their condition [4]. Nevertheless, individuals with MS are far less likely to receive the appropriate amount of attention form physical educators and other health-related movement specialists, and are also far less likely to achieve the daily recommended physical activity requirements than able-bodied individuals [5).

Recent trends in literature suggests that the once small body of litter in this specific line of sports medicine is now slowly growing [6]. Drawing from scholars in the field of sports medicine [7], and physical activity promotion for individuals with disabilities [8-10], this article seeks to summarize the principles and practices behind employing therapeutic



yoga as a movement opportunity for individuals with MS.

### 2. What is Multiple Sclerosis?

Multiple sclerosis is the most common nontraumatic disabling disease in both non-developed and developed countries affecting young adults; 20-40 years old [11]. Multiple sclerosis affects the central nervous system and is believed to be an autoimmune inflammatory disease. Bodies of individuals with MS essentially are attacking its own tissue specifically the nerve insulated myelin sheath. This is disrupting communication between the brain and the body [12]. The ranging severity of MS affecting cognitive, motor and sensory functions has led to grouping of stages.

MS can be grouped into 4 stages by neurologist: (1) Relapsing-remitting MS: This affects 85%, the most common form of MS. It is categorized as flare-ups followed by remission. Symptoms of patients with MS will improve and disappear periodically. (2) Secondary progressive MS: This group can be categorized in patients with relapsing/remitting disease. To help delay progressions disease-modifying agents are used in treatments. The disease continues to worsen with or without periods of remission or plateauing of symptoms. (3) Primary progressive MS: This is the second rarest form affecting about 10% of MS patients. Symptoms continue to worsen from the beginning having an occasional plateau, with no relapses or remissions. This is also more resistant to drug relief that are typically used to help treat MS. (4) Progressive-relapsing MS: This is the rarest form of MS affecting less than 5% of individuals. This is progressive from the start with flare-ups of worse symptoms. There are no plateaus or remissions [13].

Multiple Sclerosis is most common in females more recently since the 1900s. Many symptoms include double vision, blindness in the eye, muscle weakness, coordination and balance difficulties that can become more severe [12].

# 3. Multiple Sclerosis and Physical Activity

Due to there not being a cure for MS, researchers have been focusing on therapeutic interventions for identifying and managing symptoms of Multiple Sclerosis. Anecdotal evidence from MS patients indicate that physical activity is an important factor for improving MS and managing the physical demands of MS [14]. Individuals with MS are often told

to "take it easy" which is the contraindicating towards being physically active. Studies on Quality of life (QOL) with exercise and multiple sclerosis patients have shown greater QOL among MS individuals who participate in modified exercises daily than individuals with MS who do not. Those with MS who were more physically active had greater self-efficacy and better functional capacity, which, in turn, was associated with greater quality of life [15]. Individuals with MS should avoid vigorous exercises during spells when symptoms are the most excessive. It is encouraged that patient with MS do better with exercise than those that do not and should focus on four or five aerobic exercises a week. The best exercises, especially in patients with debilitating muscle function should be coordinated with physical therapist in order to incorporate an exercise program with certified personal to fit individual needs.

### 4. What is Yoga?

Google dictionary defines Yoga as a Hindu spiritual and ascetic discipline, a part of which, include breath control, simple meditation, and the adoption of specific bodily postures, is widely practiced for health and relaxation. Research typically focuses on what benefits the body during yoga. Yoga has not only shown to improve the physical body but the mental body as well. Yoga aims to integrate the body, mind and spirit [16]. Yoga has shown to relieve anxiety and mental stressors along with improving physical conditions. To enhance calm the mind, enhance physical strength, flexibility, and breathing focused postural exercises has been shown to be the most beneficial. The benefits of yoga are presumed to be; improving general wellness, relieving back and neck pain, helping manage anxiety or depressive situations, helping in losing weight, helping people with chronic diseases manage pain, other symptoms, and improving quality of life [17]. There are low risks to people who take part in yoga. Having a certified instructor, avoiding positions you are not qualified to do, talking about risks with doctors while pregnant, older, or having health conditions are always elements that need to be accessed when doing any physical activity.

# 5. Incorporating Yoga and Multiple Sclerosis for Increased Daily Activity

The main goal of exercise and patients with multiple sclerosis is to improve the quality of life of these individuals. The first study of patients with Multiple Sclerosis using yoga to help patients was in 1997. The findings showed an astonishing amount,



nearly half of the 63% of patients using yoga to have positive outcomes in managing their symptoms [18]. Individuals with MS demonstrates that yoga compared to aerobic exercise can decrease fatigue, relieve symptoms, and improve mechanics of the body. Some components of improving quality of life include ability to work, pain, cognitive ability and mental health; these all are believed to be decreased with yoga practices. Yoga practices with MS patients need to be individualized per class/person. Each MS patient has varying symptoms, cognitive function, and muscle comparison. Specific trainers focused on incorporating and managing all individuals in the class. Yoga has shown to have physical benefits for people of MS, along with helping to manage and cope with the mental aspect of dealing with multiple sclerosis [19]. Researchers favor yoga paired with therapeutic drug intervention and other activities to help combat symptoms for the best quality of life for a disease that does not have a cure. Studies have shown that yoga helps to decrease fatigue severity of individuals with multiple sclerosis. Conscious low demand yoga has been shown to have the greatest effect on patients with MS. Conventional mind-body therapies are a safe measure in treating common MS symptoms, this yoga technique helps increase the bodies understanding and awareness abilities. These techniques are used to help self-acceptance and self-awareness techniques that improve the quality of life of individuals with multiple sclerosis [20]. In order to help teach individuals with MS is to incorporate techniques that are personalized. Minimized vigorous activities with postural control, muscle focus and minimize mental stressors in order to have the greatest success in creating a yoga regiment.

# 6. Conclusion

Yoga is a practice of the mind, body, and soul. Individuals that have multiple sclerosis often deal with anxiety and depressive episodes on top of symptoms that affect their body daily. The mind is just as great as the body in affecting health. Mental health is just as great as physical health. Not only does yoga incorporate mental health in its techniques for total body comfort but also involves physical health wellness. Yoga has multiple expertise levels from beginner to advanced that allows for people with disabilities to modify their desires out of yoga. With advanced knowledge from certified yoga instructor's yoga can be more inclusive towards individuals with multiple disabilities. Overall, yoga has reduced stressors and pain management across the field from individuals suffering many disorders. Breathing

techniques, postural correction, core stabilization, stress relief, and general strength gains at a less vigorous level can lead to improvement of life in multiple sclerosis patients. Yoga as a stress management technique should be regularly used in individuals with multiple sclerosis. Decreasing mental stressors in beneficial for overall health. Mental stressors playing a role on MS is just as demanding as physical stressors. Other advanced medical practices such as medical therapies, physicals therapies and yoga should be paired together in order to increase quality of life in multiple sclerosis patients. Overall, yoga has shown beneficial aspects in improving quality of life in individuals who suffer from MS.

## References

- [1] S. Vasudevan, S. Devulapally, K. Chirravuri, V. Elangovan, & N. Kesavan, Personalized Yoga Therapy for Multiple Sclerosis: Effect on Symptom Management and Quality of Life, International Journal of Yoga Therapy, 31 (2020) 1-9. [DOI] [PubMed]
- [2] A. Hassanpour-Dehkordi, & N. Jivad, Comparison of regular aerobic and yoga on the quality of life in patients with multiple sclerosis, Medical Journal of the Islamic Republic of Iran, 28 (2014) 141.[PubMed]
- [3] N.M. Stroud, & Minahan, C.L. The impact of regular physical activity on fatigue, depression and quality of life in persons with multiple sclerosis, Health and Quality of Life Outcomes, 7(1) (2009) 68. [DOI] [PubMed]
- [4] K.B. Alphonsus, Y. Su, & C. D'Arcy, The effect of exercise, yoga and physiotherapy on the quality of life of people with multiple sclerosis: systematic review and meta-analysis, Complementary Therapies in Medicine, 43 (2019) 188-195. [DOI] [PubMed]
- [5] R.W. Motl, D. Pekmezi, & B.C. Wingo, Promotion of physical activity and exercise in multiple sclerosis: Importance of behavioral science and theory, Multiple Sclerosis Journal–Experimental, Translational and Clinical, 4(3) (2018) 2055217318786745. [DOI] [PubMed]
- [6] R. Frank, & J. Larimore, Yoga as a method of symptom management in multiple sclerosis, Frontiers in Neuroscience, 9 (2015). [DOI] [PubMed]



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- [7] C.G. Pennington, & L.W. Pennington, A Chance to Play is a Chance to Learn: Integrating Individuals with Physical Disabilities into Physical Education, Curriculum and Teaching Methodology, 3 (2020) 81-89. [DOI]
- [8] S. Cummings, J. Ayisire, S. Pusch, & C.G. Pennington, How Can Attention Deficit Hyperactivity Disorder Affect Sport Performance?, Curriculum and Teaching Methodology, 3 (2020) 93-95. [DOI]
- [9] J. McDonald, E. Wind, & C.G. Pennington, Netball as an Activity for Individuals with Hemophilia. Journal of Physical Education, Recreation & Dance. 91(2) (2021) 46-48. [DOI]
- [10] C. Hernandez, D. Loeung, R. Washington, & C.G. Pennington, Increasing Physical Activity in Individuals with Spinal Cord Injury, Journal of Physical Fitness, Medicine & Treatment in Sports, 8(4) (2020) 37-38. [DOI]
- [11] R. Dobson, & G. Giovannoni, Multiple sclerosis a review, European Journal of Neurology, 26(1) (2018) 27-40. [DOI] [PubMed]
- [12] Multiple sclerosis information page. (n.d.). Retrieved March 18, 2021, from <u>https://www.ninds.nih.gov/Disorders/All-</u> <u>Disorders/Multiple-Sclerosis-Information-Page</u>
- [13] M.M. Goldenberg, Multiple sclerosis review. P & T: A Peer-reviewed Journal for Formulary Management, 37(3) (2012) 175–184. [PubMed]
- [14] R.W. Motl, E. McAuley, & E.M. Snook, Physical activity and multiple sclerosis: A meta-analysis, Multiple Sclerosis Journal, 11(4) (2005) 459-463. [DOI] [PubMed]
- [15] R.W. Motl, E. McAuley, & E.M. Snook, Physical activity and quality of life in multiple sclerosis: Possible roles of social support, self-efficacy, and functional limitations, Rehabilitation Psychology, 52(2) (2007) 143-151. [DOI]
- [16] E. Monk-Turner, & C. Turner, Does yoga shape body, mind and spiritual health and happiness: Differences between yoga practitioners and college students, International Journal of Yoga, 3(2) (2010) 48. [DOI] [PubMed]
- [17] Yoga: What you need to know. (2019). Retrieved March 18, 2021, from <u>https://www.nccih.nih.gov/health/yoga-what-you-need-to-know</u>

- [18] S. Mishra, P. Singh, S. Bunch, & R. Zhang, The therapeutic value of yoga in neurological disorders, Annals of Indian Academy of Neurology, 15(4) (2012) 247. [DOI]
- [19] L. Powell, & A. Cheshire, An individualized yoga programme for multiple sclerosis: A case study, International Journal of Yoga Therapy, 25(1) (2015) 127-133. [DOI] [PubMed]
- [20] S. Nejati, S. Rajezi Esfahani, S. Rahmani, G. Afrookhteh, & S. Hoveida, The effect of GROUP mindfulness-based stress reduction and ONSCIOUSNESS Yoga program on quality of life and Fatigue severity in patients with MS, Journal of Caring Sciences, 5(4) (2016) 325-335. [DOI] [PubMed]

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