

Yoga for Multiple Sclerosis (Neurological Disorder)

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What is MS? Multiple sclerosis is believed to be an autoimmune disease in which the body creates antibodies that attack the central nervous system and spinal cord. Over time, this attack can break down the coating (myelin) around the nerves, which interferes with or blocks the transmission of communication from the brain to the rest of the body. As such it causes a slowing of nerve impulses. According to Jill Conway, the director of the Multiple Sclerosis (MS) Center at Carolinas Medical Center in Charlotte, NC, “It makes things that we otherwise take for granted, like walking, swallowing, going to the bathroom much more difficult.”⁴ And these difficulties can cause significant fatigue in patients.

What is the progression of the disease? The clinical course of the disease is highly variable. According to Timothy McCall, MD the, “most common form is what is known as relapsing-remitting MS. In this type, attacks result in discrete losses of nerve function, different from one attack to the next, which fully or partially disappear between attacks.”² Less commonly, the disease may progress steadily without remission; alternatively it may also go into permanent remission. The disease can cause the loss of functional abilities, which may then be regained partially or completely, or remain lost completely.

What are the Symptoms of Multiple Sclerosis?

- Clumsiness or Loss of Feeling in the Arms or Legs
- Difficulty with Balance and / or Walking
- Reduction in Bowel or Bladder Control
- Visual Impairment or Double Vision
- Spasticity or rigidity
- Overwhelming Fatigue
- Emotional Problems
- Difficulty with Thinking and Memory
- Symptoms May Worsen with Heat and/or Humidity

Why Yoga?

The practice of yoga directly addresses many of the common symptoms with MS, significantly improving quality of life. Dr. Elliot Frohman, professor of Neurology and Ophthalmology and Director of the MS Program at the University of Texas South Western Medical Center at Dallas, has also been a long time student of Yoga. Dr. Frohman partnered with Baron Baptiste to create a DVD about the benefits of Yoga for people with Multiple Sclerosis. “Patients with MS ask me all of the time ‘What is it that I can personally do that will optimize my chance of doing well over time?’” Dr. Frohman typically replies “Once we have the diagnosis and you’re on treatment, I think the two most important elements are your thinking, your attitude, but also exercise, intellectual exercise, and also physical exercise.”

A balanced practice of physical asana, on the days the client has the strength, restorative yoga, pranayama and meditation will address many of the symptom associated with MS. These practices will help to maintain and rebuild physical strength, calm the nervous system, reduce stress, improve balance and

physical function, and create a sense of calm and acceptance. According to Dr. Frohman, “The pathway to progress on the (yoga) mat is then later completely translated into more progress in patient’s activities in daily living, and that is what’s really most important to them and their families.³”

The Affects of Stress on MS - How Yoga Helps

Stress is not only a significant factor for those living with MS, but studies also suggest that stress may be a contributing factor to developing the disease in the first place. It’s also a contributing factor to flare ups after the initial onset of the disease. According to Timothy McCall how this occurs is not known, however, “it is hypothesized that elevated levels of the stress hormone cortisol increase levels of proinflammatory cytokines, internal messengers of the body’s immune system, which fuel inflammation and contribute to the destruction of the myelin lining of the nerve fibers.²” Yoga has a significant and immediate impact in reducing stress. Multiple scientific studies have shown that yoga asana, pranayama (breathing techniques), and meditation stimulate the parasympathetic nervous system (the calming influence), making it an effective tool in reducing stress. According to Jill Conway, the director of the Multiple Sclerosis (MS) Center at Carolinas Medical Center in Charlotte, NC the goal of any MS treatment is “to tone down the immune system so that you stop attacking yourself.⁴”

Below are summaries from a few studies on the affects of yoga on stress:

1. A 2004 study published in the Journal of Psychosomatic Research found that mindfulness meditation is useful “as an intervention for a broad range of chronic disorders and problems...mindfulness training might enhance general features of coping with distress and disability in everyday life, as well as under more extraordinary conditions of serious disorder or stress.⁶”
2. According to a study published in Psychosomatic Medicine a Journal of Biobehavioral Medicine in 2000, “mindfulness meditation–based stress reduction effectively reduced Total Mood Disturbance and specific symptoms of Anxiety, Depression, Anger, and Confusion.⁷”
3. A follow up to the above, six months after the original study, found that “these benefits persisted over the 6-month follow-up period....It also enhanced feelings of vigor in this population, and decreased a wide variety of symptoms of stress, particularly depression and anger.⁸”
4. According to an NPR report, “deep breathing is not only relaxing, it’s been scientifically proven to affect the heart, the brain, digestion, the immune system — and maybe even the expression of genes.⁹” Pranayama techniques “can be used as a method to train the body’s reaction to stressful situations and dampen the production of harmful stress hormones.⁹” According to Esther Sternberg, a physician, author of many books on stress and healing, and research analyst at the National Institute of Mental Health, “deep breathing actually stimulates the... parasympathetic reaction — the one that calms us down. The relaxation response is controlled by (a) set of nerves — the main nerve being the Vagus nerve,⁹” which is activated by slow deep breathing.

Yoga Can Help Improve Balance, Made More Difficult by MS

MS can have a negative impact on the ability to balance, maintain proper postural control, transfer weight, and walk safely with control on a regular basis. As such the chance of falling during normal daily activities is increased. Yoga asana, with and without the support of props, can help the practitioner to refine their

balancing skills, improve muscle coordination, and strengthen muscles, making the MS patient safer during daily activities.

Yoga Helps With “Spasticity” and Muscle Stiffness Caused by MS

MS can cause jerks, spasms, pain, “spasticity,” and muscle stiffness, otherwise known as resistance to movement. MS can also cause contractures, or areas where the connective tissue surrounding the joints tighten, leading to loss of mobility and movement. Yoga asana directly addresses muscle lengthening and tendon lengthening which can help reduce spasticity, release contractures and reduce muscle stiffness. According to Dr. Frohman, stretching is very important in reducing this stiffness, pain, and spasticity in MS clients.

Why “OM” in Yoga? The Therapeutic Benefits

Om is a mantra, or vibration, that is typically chanted at the beginning and end of yoga class. It is believed to represent the sound of the universe. When speaking of the chanting of “OM,” Timothy McCall MD says, “the vibrational component of the sound waves has therapeutic value, particularly with a neural disorder.”² Why is the vibration of “OM” therapeutic? When we make deep sounds the vibration of the sounds travels through the vagus nerve, which is connected to all of our major energy centers. The vagus nerve relays sensory information about the health of the body's organs to the central nervous system. Gentle stimulation of the vagus nerve immediately elicits the body's natural relaxation response, reducing stress and the release of stress related hormones.^{10, 11}

Putting This Into Practice

According to Timothy McCall, M.D., a 2002 survey completed by Oregon Health Sciences University suggested that of those practicing yoga “57% reported that yoga was ‘very beneficial,’ a better result than any MS drug elicited.” So, now that we have demonstrated that yoga can be an effective and complimentary treatment for MS, how do we implement a practice proper for the student with MS?

Adapt the Yoga Practice To Fit The Client

Given the variable course of MS, individual student's physical abilities may vary greatly. However, the practice of yoga is adaptive to every level of ability. Yoga poses should be carefully chosen and adapted to support the client. Blocks, bolsters, chairs, support posts, doorways, and walls can make great props, such that otherwise difficult poses become more accessible. Making postures accessible is important not only for the physical benefits of the poses, but also to help create a sense of accomplishment and cultivate a more positive “Yes I Can” attitude. Remember, MS makes regular daily tasks more difficult, which can lead to a defeatist “I Can't” attitude and depression. Helping the client to take control of their disease management in a successful way is very important.

Meet The Student Where They Are

The most common form of MS is relapsing-remitting. This means that from day to day the client may be feeling stronger or weaker. Different nerves and related function may be affected on different days. While it's important in any yoga class to meet the student where they are, and encourage them to listen to and

respect their bodies, it is even more important to emphasize this when working with MS clients. They will have good days and bad days, and the practice should be adapted each day to meet their needs. Students should be encouraged to let go of frustration and provide their body what it needs on that particular day, whether a more physical practice or a more restorative practice. And of course pranayama and meditation can be incorporated into any practice.

Build The Practice Slowly

Many students may be introduced to yoga for the first time as a complimentary treatment for MS. For new students, the intensity of the practice should be lessened greatly and props should be available. The practice of yoga asana can be energy restoring. To be sure that you provide an energy restoring practice, it may be best to slowly build from a less intense practice to a more balanced intensity practice. Students may be suffering from de-conditioning and fatigue. Be sure to present them with an achievable practice that leaves them with a feeling of accomplishment. If a student pushes themselves too hard, that may take a toll on an already strained nervous system. It is generally recommended that poses not be held long, with resting postures taken in between more intense postures if there are any signs of fatigue. Emphasize a sense of effort, but not strain.

Other Considerations in Yoga Asana

- Consider using wider straps as “the more contact you have on the body, the more peripheral nerve response you receive” and according to Eric Small, “that’s very important.”²
- Consider avoiding heated yoga classes as heat tends to slow nerve conduction, which is already an issue with MS.
- Consider having clients keep their head in a neutral position (nose pointing same direction as chest) in twists. Not twisting in the upper neck may help to not further compromise limited nerve conduction and also allows for easier deep breathing.
- Consider avoiding poses that require a sudden increase in energy and heart rate such as full backbends, full bow, and handstands. Find alternatives such as half bow, gentle backbends and more gentle inversions such that the heart rate does not increase too fast, the practitioner does not build too much heat, and the breath is able to remain steady and strong.

Yoga – A Tool of Empowerment to Take Control Of Your Health

Dr. Frohman explains “It’s essential that you are proactive in your own disease management and in figuring out what works best for you. Yoga is great for choice for maintaining and building strength and conditioning.”³ He frequently asks his patients to journal about three things they love to do, tracking whether or not they can do these things as easily, or if they enjoy them as much. He notes that “with MS it’s really important to be open and honest about the impact of the disease and to take steps to optimize disease management.”³ Journaling may be a great way to help the student monitor the effects of the yoga practice off the mat. It could also serve as great feedback as to how the practice might be adjusted to improve the quality of life for the client. The goal of yoga practice should be to not only build strength, but also to help the student to leave with a sense of inner peace, mental clarity, and a vision of possibility in

life. To arm the client with the ability to be less reactive to stressors, and approach life with a great sense of ease will be invaluable.

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