



Mobility, flexibility and stretching with MS

Hello again and welcome!

Welcome to my new subscribers...and hello again to my existing supporters. Thank you for signing up to receive my blog; I hope you find this week's content interesting and feel it was worth subscribing to.

Diana xx



On the first day of my PT training course I sat at the front (always the swot!) next to a friendly lady who turned out to be a competitive gymnast, introducing herself as 'hypermobile'; 'OK' I thought, 'she means a bit bendy'... Once we got into the gym she was certainly bendy, turning perfect cartwheels and back-flips whilst we waited for the instruction to begin. She explained that as a gymnast her main focus was on keeping her joints supple and able to move as far as possible to complete strings of specific movements; she told us that she carries out a short stretching routine each morning to allow the joints to move freely in order to make the most of her days' training and help to prevent injuries.



Why is flexibility important in MS?

Clearly we're not all gymnasts aiming to effortlessly do the splits (or perhaps you are? Jolly well done if so; I was part of a gymnastics club when I was little and *never* managed to do the splits).

Splits aside, maintaining flexibility is important in MS to help reduce the day-to-day demands placed on the body through daily activities (themselves often made more difficult whilst dealing with MS), and also to help manage symptoms like muscle stiffness, spasticity and muscle tightness and help improve posture and balance.

What do we mean by flexibility?

As we went on to understand, flexibility doesn't only mean cartwheel-spinning and back-flipping gymnasts it refers to the range of movement possible around each joint or series of joints. The level of movement ('range of motion' or ROM) is determined by the shape of surrounding bones and cartilage, the length of the muscles around the joint and the ligaments and tendons crossing over the joint to allow movement..

How/why is flexibility relevant to MS?

The nervous system plays an important role in flexibility; it is responsible for determining muscle tone (tension) which allows movement. Some of the diagnostic tests that neurologists perform look for the level of muscle tone ie level of tension or resistance specific muscles can provide when force is applied. Muscle tone is the tension which allows us to move limbs and hold a limb in position. An increase in muscle tone is responsible for symptoms of spasm and spasticity.

- **Spasticity** in MS can cause your muscles to feel stiff, heavy and difficult to move.
- **Spasm** in MS is a sudden stiffening of a muscle which can cause a limb to kick out or jerk towards your body.

Nerve pathways connecting the brain, spinal cord and muscles work together to coordinate smooth movement; if the signals are jumbled and the message is interrupted between the brain and muscle by damage caused by MS the muscle can remain in its shortened state making the affected limb feel tight and heavy. These jumbled and disrupted messages can also cause loss of coordination which can lead to spasm.

How can stretching help to improve flexibility?

- Stretching the muscles can help by increasing the range of motion possible at each joint thereby helping to improve mobility.
- Stretching can increase muscle length to reduce tightness.
- Stretching can help to improve muscle stiffness which may help with feelings of 'heavy limbs'.
- Muscle imbalance - which can develop through exercising specific muscles more than their partner (muscles exist in pairs eg biceps and triceps; quadriceps and hamstrings etc) - can also reduce flexibility and increase muscle stiffness.
- Immobility caused by remaining in a seated position for a period of time (particularly if you use a wheelchair) can cause muscles to shorten regardless of any spasticity challenges which make it difficult to carry out



daily tasks such as reaching for items on a table or moving around if you are able to spend time outside of your wheelchair.

Methods of stretching

1. Maintenance stretching

Involves short stretches in muscles which aren't particularly tight; often carried out during warm-up and cool-down phases of activity.

Muscle taken to the point of mild tension and held for 10-15 seconds to maintain flexibility.

2. Developmental stretching

Used to increase flexibility; the muscle is stretched in the normal range of motion then when it relaxes in position it is taken a little further and held near the end of the range of motion for 30-60 seconds to increase flexibility. This is not recommended during the warm-up phase as the muscle needs to be warm.

Types of stretching

A muscle is lengthening and stretching when it's opposite ends move further apart and away from each other (no anatomy lesson this week (!) but they're technically called the 'origin' and 'insertion' of the muscle). There are a few ways to achieve this lengthening:

1. Static stretching

Static stretching involves stretching a muscle and holding in a challenging but comfortable position for a period of time.

2. Dynamic stretching

Dynamic stretching involves moving a limb into position near the end of the range of motion, under control. Often used during a warm-up phase to keep heart-rate elevated. Repeated 8-10 times to improve flexibility and increase ROM.

Long-term benefits of improving flexibility

General benefits of working to improve your flexibility - outside

of specific benefits to our MS include:

- Improved physical relaxation
- More effective and efficient movements
- Improved posture
- Reduced risk of low back pain
- Decreased DOMS (Delayed Onset Muscle Soreness) after exercising
- Improved coordination
- Improved development of body awareness



A word of caution...

This wouldn't be a post from me without a few words of caution;

1. Always make sure your muscles are warmed up before stretching: stretching cold muscles can result in injury.
2. Only stretch your muscles to a point of mild tension.
3. Be careful not to jerk or force your muscles into a stretch position which can cause jarring and injury
4. Be careful not to over-stretch a muscle: working at the furthest end of a muscle's range of movement can cause injury.
5. Stop if you feel pain; I know I've said it before, but 'no pain, no gain' doesn't apply when exercising with MS.
6. Please consult a PT for clarification and example exercises if symptoms of spasticity and spasm are a challenge for you.

OK, sorry, six words of caution but it's important to stay safe when doing any form of exercise.



As always, the last word from me...

Do let me know if you have found this post helpful. Send me an [email](#); join me on Twitter (@healthylifems) or send me a message through the contact page on the website, I'd love to know what you think.

Diana xx

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Thank you for reading :)

Diana xx

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HealthyLife MS

hello@healthylifems.com

[Website](#)

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