Aquatic Physical Therapy for Stroke, Multiple Sclerosis & Parkinson's Disease

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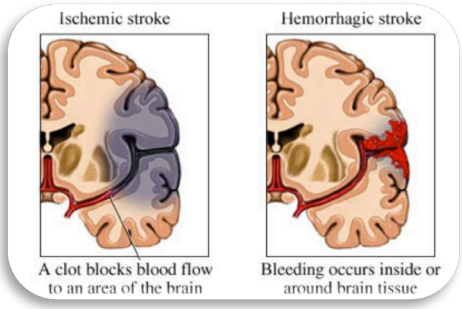
Stroke:
Stroke is one of the leading causes of long-term disability, with the CDC reporting that strokes reduce mobility in over half of the survivors over 65 years of age.

Multiple Sclerosis:
Did you know that ***fatigue*** is the most common symptom of MS?

Parkinson's Disease:
According to the Parkinson's Disease Foundation, about 1 million Americans & 7-10 million people worldwide are affected by PD. In the US, there are about 60,000 new cases diagnosed each year.

Stroke:

A stroke occurs when there is lack of blood flow to the brain for a period of time. Each stroke is different and impairments depend on the location of the stroke. Common impairments include reduced strength, endurance, balance, walking, coordination and language processing.



Multiple Sclerosis (MS):

MS is a neurological condition that results in lesions in the white matter of the brain, resulting in weakness, fatigue and impaired coordination in upper and lower extremities, especially while walking.

Parkinson's Disease (PD):

PD is a chronic and progressive neurological condition that affects movement and coordination. Symptoms include tremors, stiffness, smaller movements, impaired balance, shuffled gait and quieter voice.

AQUATIC SOLUTIONS Physical Therapy

Why Choose Aquatic Solutions Physical Therapy?

Our clinic offers both land and water based therapy, which has shown greater improvements in function, strength, balance and quality of life than compared to participating in land therapy alone.

Based on prior experience, we know that individuals with neurological conditions can range from level of assistance required to perform tasks and increased instability; therefore, our Hydroworx tank has built in railings, a seat and the ability to control the height of the water allowing for a more personalized aquatic exercise program.

Research Behind Physical Therapy for Stroke, Multiple Sclerosis & Parkinson's Disease

Physical Therapy & Stroke:

Research indicates that an aquatic exercise program has shown to increase walking speed, improve balance during walking, improve symmetry with muscle activity on both sides of body, and improve trunk control in individuals suffering from strokes (Byoung-Sun Park et. al, 2015). Another study showed greater improvements in balance with individuals who participated in water therapy when compared to land therapy after suffering from a stroke (Noh et al, 2008).

Physical Therapy & Multiple Sclerosis (MS):

Research indicates that an aquatic exercise program can significantly increase peak muscle function in both upper and lower extremities, increase overall endurance and reduce long-term fatigue in individuals with MS (Gehlsen, 1984). In another research study, it was found that individuals who participated in land and aquatic therapy showed improvements in functional mobility including ambulation, performing transfers and regaining range of motion in joints (Peterson, 2001).

Physical Therapy & Parkinson's Disease (PD):

According to Hydroworx, aquatic therapy can help maintain or improve strength, build balance, enhance posture, improve flexibility, improve body/posture control and improve walking patterns in individual's with PD. Warm water allows reduced rigidity, stiffness and pain. Buoyancy of water provides support for balance and posture that may more difficult to perform on land. The turbulence of water allows for increases challenges to an individual's balance and coordination, which can improve overall stability long-term.

Colleen Peterson, Exercise in 94°F Water for a Patient With Multiple Sclerosis, *Physical Therapy*, Volume 81, Issue 4, 1 April 2001, Pages 1049–1058, https://doi.org/10.1093/ptj/81.4.1049

Gehlsen et al. Effects of an Aquatic Fitness Program on the Muscular Strength and Endurance of Patients with Multiple Sclerosis, *Physical Therapy*, Volume 64, Issue 5, 1 May 1984, Pages 653–657, https://doi.org/10.1093/ptj/64.5.653

Hydroworx on Parkinson's Disease: https://www.hydroworx.com/blog/aquatic-exercise-benefits-people-with-parkinsons-disease-free-webinar/

Hydroworx on Stroke: https://www.hydroworx.com/research-education/additional-resources/stroke-aquatic-therapy/

Noh et al.(2008). The effect of aquatic therapy on postural balance and muscle strength in stroke survivors – A randomized controlled pilot trial. Clinical Rehabilitation, 22, 966-976. doi: 10.1177/0269215508091434

Park et al. The effects of aquatic trunk exercise on gait and muscle activity in stroke patients: a randomized controlled pilot study. *J Phys Ther Sci*. 2015;27(11):3549–3553. doi:10.1589/jpts.27.3549