

Aquatic exercise and multiple sclerosis

The benefits of aquatic (water) exercise

Many people with multiple sclerosis (MS) enjoy participating in aquatic exercise. An aquatic exercise program is suitable for people of all abilities, can be adapted to your needs, and has a range of health benefits.

You don't need to be a strong swimmer to participate in aquatic exercise. The warmth of the water can make exercising easier for people who experience symptoms of muscle tightness or weakness. Some people feel more confident exercising in water than on land because the water helps them to balance.

Other benefits of aquatic exercise:

- improves strength and flexibility
- improves fitness and energy levels
- reduces pain
- reduces swelling in arms or legs
- relaxation, socialisation and fun

Why exercising in water can be easier than on land

Water holds special properties making exercise seem easier and more achievable than on land.

- **Buoyancy.** When standing on land, gravity pulls your body towards the ground. By contrast, water helps push the body up, making you feel lighter and making it easier for you to move your arms and legs. This is known as buoyancy. It helps reduce the force and impact on your joints and can relieve aches and pains. Buoyancy can also help you keep your balance while exercising.
- **Hydrostatic pressure.** The deeper you are in the water, the more pressure the surrounding water exerts on your body. This pressure can be helpful for reducing swelling in the arms and legs, which can sometimes be a problem for people who spend a large part of their day in a wheelchair.
- **Turbulence** refers to the irregular motion or swirling movement of water. By varying turbulence, the level of challenge can be increased or decreased. For example, performing faster or larger movements in water increases the intensity, whereas using a floatation aid (e.g. a pool noodle) helps decrease it. Turbulence can be useful for practising exercises designed to improve your balance, as it is easier to 'catch yourself' from falling in water than it is on land.
- **Resistance.** Water is denser than air and provides greater resistance to movement. Moving your arms and legs against resistance is similar to lifting weights. For example, exercises can be made more challenging by holding paddles or other water devices to increase the level of resistance.

Guidelines for joining an aquatic exercise program

- **Always get medical clearance** from your doctor to ensure that it is safe for you to exercise in a pool. Inform your physiotherapist or water instructor about any medical and physical conditions you have that could be affected by the heat or pressure of the water.
- **Find an aquatic exercise class or program that suits your current ability.** A private or hospital-based physiotherapist can assess your current fitness and level of ability and refer you to a suitable aquatic exercise program.
- **Choose a pool that is heated between 25 and 35 degrees Celsius.** Cooler pools are best for people who are heat-sensitive or for fairly intense exercise, such as swimming laps or running in the water. A warm pool is good for low-intensity or passive exercise (e.g. walking and assisted movements) and spasticity (muscle stiffness), which worsens in cooler water.
- **Limit your time in the water to 20 to 30 minutes**, initially, to avoid becoming fatigued or overheated. It is easy to over-exert yourself when exercising in water. Often, you cannot accurately feel how tired your body is until you step out of the pool. If you have difficulty with fatigue or heat sensitivity, start with an easier program and gradually build it up each week.
- **Monitor your body temperature.** Core body temperature can rise slightly in warm water, causing new symptoms to appear or old symptoms to worsen temporarily (e.g. blurring of vision or weakening of legs). Temporary changes usually resolve within 24 hours. Let your instructor know if symptom changes persist.
- **Ensure you drink before, during and after exercising in the pool** to avoid becoming dehydrated. Avoid long sessions in the pool. Always empty your bladder and bowel before starting your pool program so you don't need to stop for a toilet break.
- **Have at least one other person with you, who is a good swimmer**, as a general safety precaution. You may need assistance from another person when you are in the water, depending on your level of ability.
- **Avoid strenuous exercise during a relapse (exacerbation) or period of illness.** Consider taking a break from your aquatic exercise program or talk to your instructor about how you can make it easier until you recover. Your aquatic exercise program may need to be adapted following a relapse (MS exacerbation) or illness.
- **Consider a spigot (small plug), if using a catheter.** A spigot temporarily seals off the catheter and can be helpful when participating in aquatic exercise. A nurse specialising in continence issues can provide information.
- **Assess your level of water confidence.** You don't need to be a swimmer to participate in aquatic exercise; however, it is important that you have some level of water confidence. Wear floatation aids or have someone assist or supervise you until you are confident in the water.

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