Get Active with MS
How do I improve my balance?

Acknowledgement
We acknowledge and pay respect to the traditional custodians past and present on whose lands we meet today.
We acknowledge the deep feelings of attachment and the relationship of Aboriginal people to country and respect the cultural authority of the elders in each community.

Goals for Today's session?
Program Outline
How MS can impact balance
Why is good balance important?
Guidelines to exercises that improve balance
Where to access further information

MS symptoms
What is Balance?
Balance is a dynamic skill that is often divided into 3 components or stages.
1. Sensory – Visual, vestibular, and proprioceptive systems
2. Central Integration – The brain analyses the incoming sensory information and determines the appropriate motor response.
3. Motor response – The brain sends signals to the muscles causing the weight to shift or body to move in the required direction.
What is Balance?

How does MS impact balance?

MS can affect all 3 parts of the balance system – input, processing and output.

Input

• Visual problems – Blurring or double vision
• Inner ear – One cause of vertigo
• Sensory – Numbness or tingling

Processing

• The way that the brain processes balance information is complex, so the effects that MS can have on these processes are also complex.
• MS nerve damage in the cerebellum or brain stem can also cause problems with vertigo and sometimes with nausea.

Output

MS can cause a wide range of symptoms that can have an effect

• Difficulties with coordination
• Tremor
• Muscle weakness
• Stiffness
• Spasms

Other causes of balance problems –

• Fatigue
• Relapses
• Rise in body temperature (infection)

It may not be your MS

Your balance could be affected by other non-MS related causes

• Inner ear infection – vertigo or nausea
• Positional vertigo
• Side-effects of medication

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Can I improve my balance?

1. Balance assessment by a physiotherapist
2. Determine if balance deficits are MS-related
3. If deficits are due to an infection/vestibular dysfunction - consult a GP
4. Balance re-training if there is capacity to improve
5. Walking aids for stability if required
6. Symptom management - spasticity or fatigue (Fampyra, Baclofen, Botox)

Balance Retraining

Challenges to the ability to remain upright

In order to improve your balance, you may have to lose your balance!

Guidelines for Balance Training

Practice balance exercises in a 'safe spot' to prevent falls and injury
Start with exercises that are difficult but just possible, then progress to harder exercises as you improve

Types of Physical Activity

Fitness
Strength
Stretching
Balance
Relaxation

Balance Retraining

Examples: Tai Chi, core strengthening, vestibular therapy, balance retraining, gait and posture re-education, Nordic walking, Wii fit, Pilates

Balance Retraining

STANDING DYNAMIC - 2
Weight shift - Lower limbs instability
Move shift weight to left as far as possible without taking a step. Return to starting position.
Hold each position 15 seconds Repeat 10 times per session.
Do ___ sessions per day

ONE-LEG STAND - 8 Hip Flexion / Hip Abduction
Standing on one leg, other knee bent and foot flat on floor. Lean trunk forward.
Hold each position 15 seconds Repeat on other leg.
Do ___ repetitions.
Compensatory Techniques

- Using a stick or walking frame.
- Functional electrical stimulation – walk aide.
- Ankle-foot orthotic.
- Knee-ankle foot orthotic.
- Adaptations at home through an OT assessment (rails, shower, bathroom).

Water Based Exercise

Benefits of the water environment:
- Buoyancy
- Weightlessness
- Hydrostatic pressure
- Resistance

Precautions
- Water Temperature depends on activity level - Ideally 26-28 C

Exercise Myths

There is no evidence that exercise
- Reverses demyelination caused by MS
- Prevents demyelination caused by MS
- Brings on a relapse in MS

Getting Started

What physical activities do you like doing?
What are your goals?
How much time are you likely to be able to exercise in an average week?
Fit exercise into your weekly routine and set aside time

Types of Activities

- Yoga
- Swimming
- Horse riding
- Cycling
- Netball
- Tennis
- Lawn Bowls
- Surfing
- Jogging
- Sailing
- Gym
- Dancing
- Athletics
- Feldenkrais
- Cricket
- Squash
- Pilates
- Walking
- Rowing
- Golf
- Hiking
- Skiing
- Basketball
- Chair based

Guidelines for Getting Active

- Individualised program
- Quality not quantity
- Start small
- Consider the environment
- Reduce or stop if unwell
Getting help with balance exercises

MS physiotherapist
Private physio with neurological or rehabilitation experience
Hospital outpatient or neurological physio
Fitness instructor or exercise physiologist

You may need to see your GP for medical clearance prior to starting an exercise program.

MS Group Programs

- Maximising your Strength (Gym based)
- Absolutely Aqua/SWEAT aqua (Water exercise)
- Tai Chi
- Yoga
- Myotherapy/Massage
- And more...

Community Resources

Local Council
SportRec Access Line: 1800 BE IN IT (1800 234 648)
Access for all Abilities Officers: (03) 9935 8031
Local Sporting Groups
Neighbourhood Houses
Community Health Centres

Factors that affect ability to Exercise

Temperature Sensitivity
Fatigue
Cognition

Temperature Sensitivity

Up to 80% of pwMS are heat sensitive
Proportion are cold sensitive
Nerve conduction is impeded by increased temperatures
Causes
- Environmental, Infection, Exercise
Exercise can cause a temporary increase in symptoms

Managing Heat Sensitivity

Exercise in a cool environment
Maintain hydration
Wear cool, loose clothing
Wear cooling vests, neck ties, wrist bands etc
Avoid or stop exercising when unwell or feverish
Stopping or decreasing activity should reduce the temporary increase in sensory symptoms
Fatigue

- Lifestyle (Work, family, social)
- Lack of quality sleep
- Decreased Activity
- Depression
- Other health issues
- MS specific fatigue
- (Neuromuscular & Lassitude)
- Excessive/ too much activity

Managing Fatigue

- Quality not Quantity
- Start small & increase slowly
- Alternating Exercises (upper/lower body)
- Knowing Limitations
- Pacing & Rest Breaks
- Adequate Recovery
- Balancing Physical Activity & life activities

Cognitive Changes

- Memory
- New learning
- Concentration

Managing Cognitive Changes

- Attending supervised session
- Using diagrams/pictures/program cards
- Diarising activities
- Incorporating into weekly routine
- Following structured program

What if I have an exacerbation?

- Take a break
- Reduce intensity
- Restart at a reduced intensity and gradually build up.
- Review appropriateness of current program

Remember

- Physical activity is beneficial for PwMS
- Physical activity is well tolerated by PwMS
- Start slowly and gradually increase activity
- Choose enjoyable/motivating activities
- Modify activity levels if unwell
- If it takes longer than 1 hour to recover you have done too much
Contacts

MS Connect
1800 042 138 (Freecall)
www.ms.org.au
msconnect@ms.org.au
General Safety Tips

- The purpose of these exercises is to improve the ability to maintain balance during sitting, standing, or walking activities; and to increase one's general activity level and safety in a variety of home and community situations.

- For safety, all exercises must be performed close to a support surface (wall, countertop) or next to someone.

- Only perform those exercises as instructed by the therapist. If instructions are not clearly understood, wait for clarification by therapist before attempting to perform.

EYE EXERCISES - 14
Gaze Stabilization: Standing Feet Apart (Compliant Surface)

On pillow with feet apart, keep eyes still on single stationary target held in hand or placed on wall ___ feet away. Tilt head down 15-30 degrees and move head side to side for ___ seconds. Repeat while moving head up and down for ___ seconds.
Repeat sequence ___ times. Do ___ sessions per day.
___ Repeat using full field stimulus ___.

EYE EXERCISES - 1
Movements: Eyes Only (Pictorial Reference)

STANDING DYNAMIC - 1
Weight Shift: Anterior / Posterior (Limits of Stability)

Slowly shift weight backward until toes begin to rise off floor. Return to starting position. Shift weight forward until heels begin to rise off floor.

Hold each position ___1-3___ seconds. Repeat ___10___ times per session.
Do ___1___ sessions per day.
___Repeat on compliant surface ___.

STANDING DYNAMIC - 2
Weight Shift: Lateral (Limits of Stability)

Slowly shift weight to right as far as possible, without taking a step. Return to starting position.

Hold each position ___1-3___ seconds. Repeat ___10___ times per session.
Do ___1___ sessions per day.
___Repeat on compliant surface ___.

POSTURE AWARENESS - 1 Horse Stance
With Alignment Awareness

Stand with feet flat, parallel, hip-width apart. Knees slightly bent, weight evenly distributed over feet. Low back relaxed, chin tucked, head lifted from above, arms relaxed. Bring attention to the present moment, pausing to make subtle adjustments. Notice breathing...then hands...and feet. Return focus to breathing.

Practice for ___1-2___ minutes.
GENERAL GUIDELINES

- When performing a stretch, move the designated body part to a position of mild stretch.

- If possible, increase your stretch to a position of mild discomfort but NOT pain.

- Maintain a normal, relaxed breathing pattern throughout the stretch. Do not hold your breath.

- If you feel unbalanced while doing a standing stretch, brace yourself with one hand, using a firm support such as a counter top, wall, or heavy piece of furniture.

HIP - 54 Iliotibial Band Stretch, Standing

Stand, one hand on wall, same-side leg behind other leg. Lean hips toward wall, bending front knee, keeping back knee straight. Hold 30-60 seconds. Change foot position and lean to same-side. Hold 30-60 seconds. Repeat 2 times per session. Do 1 sessions per day.

CALVES / HEELS / FEET - 27 Achilles / Soleus, Standing

Stand, right foot behind, heel on floor and turned slightly out. Lower hips and bend knees. Hold 30 seconds.

Repeat 2 times per session.
Do 1 sessions per day.

CALVES / HEELS / FEET - 12 Ankle Plantar Flexion / Dorsiflexion, Standing

Stand while holding a stable object. Rise up on toes. Then rock back on heels. Hold each position 1-3 seconds. Repeat 5-6 times per session. Do 1 sessions per day.

LOWER EXTREMITY - 82 Squat: Arm Support

Stand, feet shoulder width, 12-24 inches from doorjamb, arms holding on to doorjamb. Squat.

Repeat 5-6 times per set.
Do 1-2 sets per session.
Do 7 sessions per week.

ONE-LEG STAND - 8 Hip Flexion / Hip Abduction

Standing on one leg, other knee flexed, move bent leg out to side and bring it back slowly, keeping it flexed. Hold each position 1-3 seconds.

Repeat on other leg.

Do 5-6 repetitions, 2 sets.
Multiple sclerosis (MS) is a chronic, progressive disease that randomly attacks the central nervous system (brain and spinal cord).

Symptoms of MS are unpredictable and vary greatly from person to person and from time to time in the same person.

Common symptoms include:
- Extreme Tiredness (Fatigue)
- Impaired Vision
- Loss of Balance
- Muscle Stiffness and Uncoordination
- Sensory symptoms such as Tingling and Numbness.
- There may also be Slurred Speech, and Cognitive changes such as Short-term Memory Loss and Mood Swings.

The majority of people with MS do not become severely disabled. Longitudinal studies have shown that 50% of people diagnosed with MS continue to be independently mobile after 15 years.

**BENEFITS OF EXERCISE**
Physical activity is important for everybody and should be performed regularly to improve fitness. Exercise has the same benefits for people with MS as it does for the general population;

- Maintenance of range of movement
- Stronger muscles
- Improved posture and movement control
- Improved cardiovascular fitness
- Improved feeling of wellbeing

**GUIDELINES FOR EXERCISING FOR MULTIPLE SCLEROSIS**

1. **Strengthening Activities**
   People with MS may have problems with fatigue; therefore low repetition exercises with frequent rest breaks are more beneficial. QUALITY NOT QUANTITY!

   Typical muscle groups that benefit from strengthening are the abdominals, gluteals and quadriceps muscles. Particularly important for standing and walking in everyday life.

   *For safety—use of exercise equipment is preferred over the use of free weights that may cause injury when fatigue occurs.*

2. **General fitness/endurance**
   Improved endurance and aerobic ability may be difficult for many people with MS to achieve due to limited energy and fatigue, as well as impact of heat intolerance.

   It is important to encourage individuals to pace themselves and take regular rest breaks.

   Suitable activities include the use of exercise bikes, general exercise classes and water aerobics.

   *To minimise raised core body temperature, and the effects of heat intolerance normal swimming pools are preferable to hydrotherapy pools. Encourage clients to avoid overheating and take regular cold drinks.*
3 Stretching and Flexibility
Increased muscle tone (stiffness) is common in MS and may restrict joint movement and stop other muscles working effectively for balance and function. Typical muscle groups that require stretching are the calf muscles, hamstrings and hip flexors and adductors. When sitting for long periods these muscles are in a shortened position therefore prone to contracture (chronic shortened muscle length).

Yoga and Tai Chi are particularly beneficial activities due to the balance component.

If a client has significant balance problems a referral to a physiotherapist is indicated.

CONSIDERATIONS

• PEOPLE WITH MS BENEFIT FROM EXERCISE IN THE SAME MANNER AS THE GENERAL POPULATION

• EXERCISE DOES NOT CAUSE AN EXACERBATION OF MS OR ALTER THE COURSE OF THE DISEASE, SPECIFIC PROGRAMS WILL ASSIST MANAGEMENT OF MS

• EXERCISE MAY CAUSE A TEMPORARY INCREASE IN MS SYMPTOMS WHICH SHOULD RESOLVE AFTER THIRTY MINUTES REST

• PEOPLE WITH MS SHOULD NOT EXERCISE DURING AN ACUTE EXACERBATION

For more information on MS call MS Society of Victoria on
1800 287 367

For more information or referral to Exercise Groups call Physical Activity Infoline
1800 638 594
Exercise and multiple sclerosis

The benefits of exercise

Regular recreation, active living and a personalised exercise program can help you to live well with MS. Exercise does not trigger a relapse (exacerbation) of MS or adversely affect the disease process. Regular exercise can help manage some of the symptoms of MS and decrease the effects of physical inactivity.

Regular physical activity can benefit everyone – not just people living with MS. Benefits include:

- reduces fatigue and increases stamina and fitness levels
- improves flexibility of joints
- improves coordination and balance
- improves and maintains muscle strength and tone
- helps in the management of mild spasticity (muscle stiffness)
- improves posture and reduces back and neck pain
- maintains blood pressure at normal levels and decreases the risk of heart disease
- reduces the risk of obesity, diabetes and osteoporosis
- elevates mood and reduces stress and depression
- builds self confidence and sense of wellbeing
- increases alertness and concentration
- provides opportunity for social interaction and support

Special exercise considerations in MS

- **Fatigue and MS.** People with MS usually experience fatigue sooner and take longer to recover than people who do not have MS. Fatigue may occur and continue for several hours or even into the next day. Start with low intensity exercise and duration and build up slowly. If fatigue lasts longer than 30 to 60 minutes, modify your exercise session by reducing the intensity and duration.

- **Temperature.** Small increases in environmental or body temperature can temporarily increase physical and sensory symptoms. Try to keep cool while exercising by wearing loose clothing, drinking water before and during exercise, exercising in an air-conditioned or well ventilated area, and wearing a wet cloth or cool band around your neck.

- **Sensory symptoms.** Sometimes the intensity of or number of sensory symptoms (e.g. numbness, tingling, pins and needles or blurred vision) can increase during exercise. These changes can be unavoidable but, if tolerable, you can continue exercising. An increase in symptoms usually resolves within a short time after the exercise session. You may need to decrease the level of exercise intensity if temporary worsening of symptoms does not resolve within 30 minutes after exercising.
Starting an exercise program

Consult your doctor, a physiotherapist or trained fitness instructor before commencing a new exercise regime. Ask your doctor what form of exercise is best for you and if there are any health risks which may affect your ability to exercise safely.

A physiotherapist or trained fitness instructor can help you manage the physical symptoms of MS (e.g. muscle weakness, spasm, fatigue, pain, altered balance, or tremor) and can design an exercise program suited to your individual needs and preferences. Exercises and equipment may need to be adapted to ensure your safety.

Precautions may need to be taken to minimise any health risks or temporary worsening of symptoms. For example, avoid strenuous exercise during a relapse (exacerbation) of MS, an infection or fever, or if you are feeling generally unwell. You may need to reduce or stop exercising at these times, which can be discouraging. However, you can restart your exercise program at a lower intensity and duration and gradually build up your levels of fitness, flexibility and strength again.

Tips for staying motivated

- **Choose an activity you enjoy**, that is convenient and meets your budget.
- **Set small and realistic exercise goals**, beginning slowly and doing more as you become fitter and stronger.
- **Establish a ‘contract’** with someone you know and who will encourage you to stick to your agreed exercise plan and goals.
- **Plan ahead** and schedule time for exercise in your diary.
- **Find a variety of ways to exercise**, so that you continue to find exercising fun and enjoyable.
- **Don’t overdo it.** When you feel fatigued, stop, rest or change exercises.
- **Avoid overheating** by wearing light clothing and exercising during the cooler parts of the day or in a cool environment.
- **Use a buddy system.** Arrange to exercise with your family, a friend or as part of a group.
- **Record your progress** and achievement of your short-term exercise goals.
- **Reward your efforts**, particularly in the first 6 to 12 weeks, which can often be the most difficult when starting a new exercise program.

For information about MS and MS Australia – ACT/NSW/Vic services:

**MS Connect™: 1800 042 138**

Email: msconnect@msaustralia.org.au

Web: www.msaustralia.org.au/actnswvic

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Top ten ways to beat the summer heat

Summer time in Australia is usually a time for outdoor activities, BBQs, relaxing on the beach and Christmas frivolities. However, for people with MS, the summer heat and humidity can be uncomfortable and unwelcome for those who are heat sensitive.

Many people with MS experience a temporary worsening of symptoms when they have an increase in body temperature, even by as little as 0.5°C. This can happen when the weather is very hot or humid, during exercise, sunbathing or whilst having a hot bath or shower. This worsening of symptoms, however, generally disappears when body temperature returns to normal.

These temporary changes occur because an elevated temperature further impairs the ability of demyelinated nerves to conduct electrical impulses. Myelin is the protective sheath that surrounds and protects nerve fibers. The destruction of myelin causes the formation of plaques on the nerves that slow nerve impulses and produce the symptoms of MS. This worsening of conduction compromises the body’s thermoregulatory system, which is responsible for dissipating accumulated heat.

Following is a list of cooling strategies that may assist you in keeping cooler and reducing MS related fatigue that is more prevalent in hot weather.

1. Stay hydrated
   • Drink plenty of fluids to replace those lost through perspiration and evaporation.
   • Make sure you get plenty of water during the day, no matter what else you drink.
   • Drinks can include milk, tea, sports drinks, diluted fruit juices or vegetable juices.
   • Limit caffeine, which can interfere with sleep and consequently add to feelings of fatigue.

2. Plan your day
   • Listen to the weather report and plan your day or week.
   • If venturing outside choose to go out in the cooler part of the day.
   • Rest through the warmer part of the day, anywhere between 11am and 3pm.
   • Do strenuous activities in the cooler part of the day.
   • Have a full water bottle handy so it’s ready to take on outings.
   • Enquire beforehand whether or not locations are air conditioned.

3. Find the right time and place for exercise
   • Exercise in a cool environment – if you are exercising outside, pick the cooler times of the day, usually early morning or evening. Also look for some shade.
   • If exercising indoors use air conditioning or a fan to help keep body temperature down.
   • Exercise gently and stop and rest if you start to feel overheated.
   • Lap swimming is generally more vigorous than water exercise and may best be undertaken in a cooler pool.
   • If exercising in a pool consider the surrounding environment. Indoor pools may have humid surroundings that could contribute to feeling over heated and fatigued.

4. Plan your shopping
   • Shop in the cooler part of the day.
   • Park the car undercover if possible.
   • If parking outside use a sun shield on the windscreen to keep the heat out.
   • Have groceries delivered.
   • Consider shopping online.

5. Choose the right clothing
   • Wear lightweight, loose, ‘breathable’ clothing.
   • Choose light-coloured clothing rather than black, dark green or dark blue.
   • Wear a wide brimmed hat in the sun.
   • Wear clothing that is loose and open around the neck.

6. Cool your body from the outside
   • Use a spray bottle to lightly spray water over the face or body.
   • Choose clothes and bed linen made from natural fibres.
• Use a small personal fan to cool face and body.
• Wet flannels/scarves can be worn around the head and neck for some cooling relief.
• Take a cool bath or head for the pool.
• Wear cooling products such as cooling neckties or cooling vests."

Check out the following websites for more information on vests, bandanas, neckties etc.
www.fabriccell.com
www.ferno.com.au
www.coolvest.com.au
www.phpa.biz
www.safetyquip.com.au
www.necktiecoolers.com
www.polarproducts.com.au
www.kooltubes.com.au

7. Cool your insides
• Drink cool or iced drinks from the fridge and include some ice in fruit smoothies.
• Leave hot drinks/meals to cool before consuming.
• Eat an icy pole, a ‘slurpee’ or suck on ice cubes.

8. Keep your home cool
• Close the curtains before the summer sun has a chance to heat your room/s.
• Invest in air conditioning if you can.
• If you don’t have air conditioning, keep the air moving with an oscillating fan.
• Avoid using the oven and cooktop to cook meals and eat refrigerated or microwaved meals instead.
• Open the windows to capture a cool breeze.

9. Jump in the pool or go to the beach
• Keep cool in the pool, preferably indoors.
• Use a beach umbrella or sun shelter.
• Avoid the beach when the wind is hot and dry.
• Sit closer to the shore when at the beach – the sand is cooler and the breeze is fresher to help with evaporation.

10. Stay connected
• Staying inside during the summer heat may contribute to feelings of isolation and loneliness. Try to stay in contact with friends and family or connect with one of the MS NSW/VIC Peer Support Workers.

Cold can also be a problem
Some people with MS notice that their symptoms, particularly spasticity, become worse in cold weather. For those who are sensitive to temperature try to avoid extremes of either hot or cold. If you are considering a move to a different climate, try to visit first before making the final decision.

Further information
If you have any questions about the management of heat related symptoms or if you would like to discuss personalised cooling strategies, please contact the MS Society in your state.

* For a detailed information handout on cooling garments such as vests, neckties, bandanas etc. contact MS Connect on 1800 042 138 (NSW).

References


Appliances for cooling the home

Fans range in size from small personal models to large pedestal models.
- They cool the person by speeding evaporation of moisture from the skin surface.
- They make the room feel cooler by moving the air and creating a ‘breeze’.
- Some fan heaters may have an option to run the fan for cooling without the heater.

Evaporative coolers are available as free-standing models on castors, fixed in a wall or window, or ducted throughout the home.
- They are most suitable for hot, dry climates.
- They reduce the temperature by drawing water through wet filters and fanning moist air into the room.

Refrigerative air conditioners include portable, fixed room, split system and ducted systems.
- Portable or mobile models are suitable for rooms up to 20 square metres.
- Fixed room models in a wall or window are suitable for single rooms or areas up to 60 square metres.
- Split systems may be used where no suitable window exists to fit a fixed model and they suit one or more rooms up to 75 square metres.
- Ducted systems have the motor outdoors or in the roof connected by ducting to any area of the home.

For more information on appliances for cooling the home contact the Independent Living Centres in NSW and VIC on 1300 885 886 or visit www.ilcaustralia.org.au
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.

For information about MS and MS Australia – ACT/NSW/Vic services:

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Web: www.msaustralia.org.au/actnswvic

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