

Multiple Sclerosis

Multiple Sclerosis (MS) is a chronic autoimmune inflammatory disease. It is a neurological progressive demyelinating condition that affects the Central Nervous System.

Types of MS

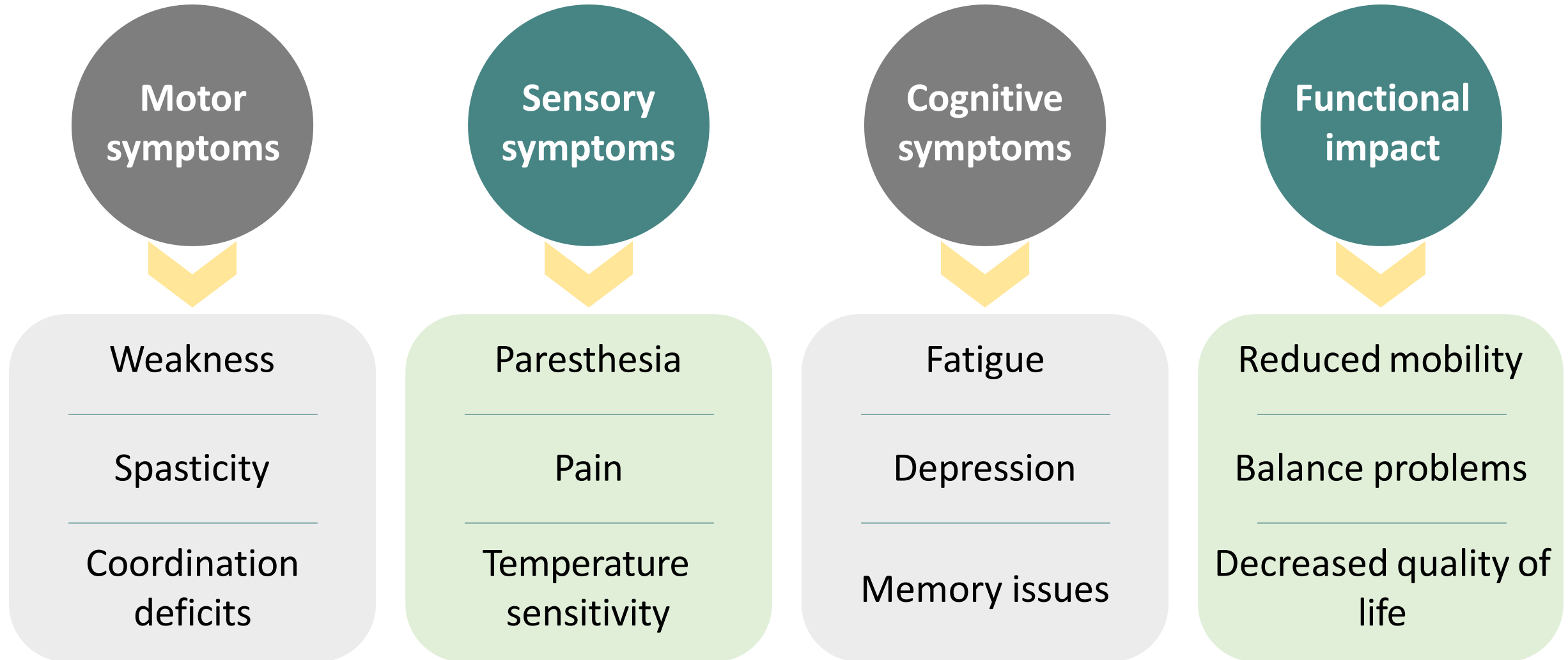
**Relapsing-
Remitting MS
(RRMS)**

**Primary
Progressive MS
(PPMS)**

**Secondary
Progressive MS
(SPMS)**

*Some may also be
given a diagnosis of
**Clinically Isolated
Syndrome (CIS)***

Multiple Sclerosis...Clinical Presentation



Aquatic therapy...What is that?



- **Aquatic therapy** also known as **Hydrotherapy** is a specialized type of physical therapy that is conducted in a water medium, typically in a temperature controlled setting.
- Aquatic therapy uses the unique properties of water like buoyancy, fluidity, resistance and hydrostatic pressure.
- It is led by a licensed and certified physical therapists and/or rehabilitation specialists trained for the same.

How does Aquatic therapy help?

Therapeutic Foundation

Buoyancy

Reduces body weight bearing by upto **90%**, depending on the levels of immersion, lowering stress on joints and bones

Viscosity/ Resistance

Water provides natural resistance, improving muscle strength and movement control

Hydrostatic pressure

Supports circulation and reduces swelling

Thermal benefits

Warm water relaxes muscles, influences muscle tone, improves blood flow and thermoregulation benefits

Physical Benefits: Research Evidence



Mobility & Function

- ✓ Improved walking ability
- ✓ Enhanced balance control
- ✓ Increased function capacity (6-meter walk test)
- ✓ Better coordination



Strength & Endurance

- ✓ Muscle strength improvements
- ✓ Enhanced cardiovascular function
- ✓ Increased exercise tolerance
- ✓ Reduced muscle atrophy



Symptom Management

- ✓ Improved thermoregulation
- ✓ Reduced spasticity
- ✓ Decreased paresthesias
- ✓ Pain reduction

Evidence-Based Dosage Recommendations

- ✓ **Frequency:** 3 times per week
- ✓ **Duration:** 45-minute sessions
- ✓ **Intensity:** Light to moderate
- ✓ **Program Length:** Minimum 8 weeks for significant benefits
- ✓ **Water Temperature:** 26-31°C based on ambient temperatures (optimal for heat-sensitive patients)

Psychological and Quality of Life Benefits



Reduced Fatigue



Decreased Depression



Improved QOL



Psychological Benefits

- **Mood Enhancement:** Significant reduction in depressive symptoms
- **Stress Reduction:** Calming effect of water environment
- **Self-Efficacy:** Improved confidence in physical abilities
- **Social Connection:** Group exercise opportunities



Fatigue Management

Mechanisms of Fatigue Reduction

- Reduced energy expenditure due to buoyancy
- Improved thermoregulation prevents heat-induced fatigue
- Enhanced cardiovascular efficiency
- Better sleep quality post exercise



Quality of Life Improvements

- Enhanced functional independence
- Increased participation in daily activities
- Improved overall life satisfaction
- Better coping with MS symptoms

THANK YOU



MULTIPLE SCLEROSIS SOCIETY OF INDIA

Dr. Anusha (Aqua Therapist)
&
Dimple K (PwMS since 2010)