Thermoregulation
The body’s ability to regulate its core body temperature, even when the temperature of the environment changes, is called thermoregulation. Regulation of body temperature is controlled by the autonomic nervous system.

Problems with thermoregulation may occur in 60 - 90% people with multiple sclerosis (MS). This means they may experience inappropriate increases or decreases in body temperature and can be very sensitive to small changes in internal and external temperature. An increase in core temperature of people with MS causes reduced nerve conduction speed. Even small temperature elevations may exacerbate existing MS symptoms temporarily until the core temperature has reduced. Symptoms may include blurred vision, change in sensory symptoms, decreased strength and fatigue.

Practical tips
Be aware that increases in temperature may occur during or after exercise, hot showers, an infection or illness causing an increase in body temperature. Driving in a warm car without air conditioning, sitting quietly in a heated room during winter and even a bath can aggravate MS symptoms in those whose body is intolerant of heat.

Strategies to minimise the impact of thermoregulation difficulties include:

1. During exercise:
   - Exercise in a cool environment - consider the time of day, temperature of the pool water.
     (27-32 degrees celsius), fan or air conditioning, home or gym.
   - Exercise regularly for short periods; change the intensity of the exercise program.
   - Maintain hydration by drinking cool water before, during and after exercise.
   - Wear a cooling neck tie, cooling vest and/or loose, light clothing.
   - Cool down with a cool shower after exercise.
   - Do not exercise if you are unwell.

2. Air conditioning:
   - Assess your air conditioning needs before summer and update your home unit if required.
     Refrigerative air conditioning is the most effective (see below for Energy Subsidy Scheme).
   - Check the air conditioning in your car before summer.
   - Park car in the shade, allowing for the shift in the sun over time.
Frequently Asked Questions

Q: My MS symptoms are much worse in summer, but I don’t have airconditioning. What can I do to keep cool?

A: The MS Society of WA is able to assist Members on low incomes with funding towards the purchase of an airconditioner for their home (through Lotterywest).

There is also a Thermoregulatory Dysfunction Energy Subsidy Scheme available from the Department of Treasury and Finance. The impact of heat must be significant and the applicant must hold a pensioner card, health care card or health care interim voucher. This subsidy contributes towards the costs associated with higher than normal power usage when running an air conditioner.

Cooling garments are another option. Neck ties and cooling vests are soaked with water and help to cool the body through the skin and blood circulation. They may be cooled in the refrigerator or simply kept moist for effective cooling. If symptoms persist for 24 hours or more, people with MS should seek medical advice if concerned.

MSWA Services

The MSWA **Occupational Therapy** department can help you with information, forms, applications and obtaining funding grants for air conditioning and the Thermoregulatory Dysfunction Energy Subsidy Scheme. For more information please contact OT on **9365 4804**.

The MSWA **Physiotherapy** team can help you tailor an exercise program to manage any thermoregulatory difficulties or other MS symptoms you may be experiencing. For more information please contact Physiotherapy on **9365 4888**.

Resources

- **Thermoregulatory Dysfunction Energy Subsidy Scheme**
  www.osr.wa.gov.au or phone (08) 9262 1373
- **Artic Heat Cooling Vest** - phone 1800 88 00 67 or visit www.articheat.com.au
- **Coolinit** - phone (08) 9248 5355 or visit www.coolinit.com.au

References

MS Practice 2009 - for health professionals. MS Australia.
Sylvester, M., Benefits and strategies of exercise prescription for PwMS. MS Society of WA 2010.