Multiple Sclerosis (MS) can start insidiously with no visible physical symptoms in the early stages of the disease other than a transient numbness, tingling sensation or slight weakness in a limb. MS is progressive although the rate and symptoms vary from individual-to-individual depending on which part of the nervous system is involved. Problems centre on weakness and impaired coordination with secondary symptoms like depression or fatigue adding to the difficulties that arise.

MS is the most common cause of neurological disability in younger people and it is vital that independence is maintained for as long as possible. Often there are several ways of dealing with the challenges that arise from impairments of function. It is important to explore all the options in order to find what is best suited to the individual. One must remember that there is no ideal method of coping with a problem and that we are all individuals.

Activities of daily living
Care assistants can help to maximize function and to facilitate independence in many aspects of daily living tasks: ‘Often, the simplest solution is the most effective and also the most difficult to find. Sometimes just by exercising creativity and flexibility problems can be overcome.’ (Swann 2004).

New techniques and the provision of assistive equipment (Table 1) will return a degree of independence in self-care activities and daily living.

This article focuses on assistive devices and the principles of good designs that enable people with multiple sclerosis to manage day-to-day activities.

Learning new techniques
Adoption of different techniques to manage tasks is often better than using and becoming reliant on equipment. Techniques help provide transferable skills that can be used in several situations, for example:

- Moving from sitting to standing by ‘pushing up’ on thighs rather than being reliant on the arms of a chair or a toilet frame
- Using a waterfall technique (pouring liquids from a higher surface) when there is limited strength in the arms or impaired co-ordination
- Reducing incoordination by stabilizing the elbow on the table e.g. when feeding or writing
- Sliding items along work surfaces instead of lifting.

Maintaining movement
In addition to facilitating the adoption of new techniques care home staff can help to maintain physical function by encouraging residents to join an activities programme as a means of gentle exercise. Group and individual activities can be carried out to exercise specific muscle groups, to maintain range of movement and fine finger movements.

Assistive equipment
Some equipment may be available from the local integrated community equipment services (ICES) for individual use but not equipment that is used communally e.g. in shared bathrooms. It is possible for individual assistive equipment to be obtained from ICES e.g. for feeding or in ensuites but these are subject to supply. Funding may be needed from the care home, the resident or their families but many low cost assistive devices are available from chemists or high street shops. Some homes stock general equipment like enlarged cutlery, plate guards and non-slip materials to help all residents manage feeding.

Medication can be dispensed into easier to manage packs. Rebiject II is an auto-injector making self-injection of Rebif (interferon beta-1a) less painful and less complex to administer.

Management of fatigue
One of the most debilitating symptoms, particularly in the early stages of MS, is fatigue. Minor activity can trigger an overwhelming feeling of fatigue that impacts on every aspect of daily living. Some MS sufferers wake with an overpowering feeling of tiredness and have to rest for a while before getting out of bed even after a good night’s sleep. The following points should be borne in mind:

- Plan the day to alternate a rest or passive activity with a more active one
- Too much activity causes fatigue while too little can cause diminished energy, lethargy and tiredness
Prioritize – work out which activities are important
Face tasks and perhaps do them over a few days rather than all at once
Simplify tasks by breaking activities into component parts with built in breaks
Plan and provide frequent short rests before fatigue starts
Stress can increase fatigue and relaxation techniques are useful, carried out on an individual and group basis
Look at the way a task is performed as ergonomics are important and an alteration of technique may assist e.g. stabilizing arms on a work surface to carry out an activity involving the hands.
Fatigue adds to problems with speech production
Adapt the environment to minimize problems in an unobtrusive and aesthetic manner, for example, installing a higher toilet and rails rather than using a toilet frame with an integral raised seat.

Adapting the environment
The external and internal environment can assist or hinder a person with a physical disability. Apart from the obvious access issues e.g. level access and doorways and corridors wide enough to permit passage of a wheelchair or walking aid other aspects need consideration.

Seating
A good supportive seating posture is essential particularly when feeding. If head control is poor special supportive seating may be required. Pommels may be useful positioned between the legs if there is adductor spasm causing the hips to pull inwards.

Access within bedroom, ensuite and bathrooms
The environment can be rearranged so that all essential items are within reach, e.g. in communal toilets toilet roll and towel holders should be within reach of an ambulant and a seated user. Mirrors should allow viewing from a standing and a seated position. Cupboard doors can be difficult to access and easy to operate sliding doors are easier to manage. Personal grooming and clothing items should be arranged in the order that they are to be used.

<table>
<thead>
<tr>
<th>Problem area</th>
<th>Suggested solution</th>
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<tbody>
<tr>
<td><strong>Feeding</strong></td>
<td></td>
</tr>
<tr>
<td>– Holding cutlery because of to poor grip</td>
<td>– Use padded or enlarged handles</td>
</tr>
<tr>
<td>– Holding cup</td>
<td>– Double handed cups/mugs</td>
</tr>
<tr>
<td>– Problems sucking and drinking through a straw</td>
<td>– Use a straw with a ‘one-way valve’</td>
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<tr>
<td>– One-handed use</td>
<td>– Straight sided (pasta) bowls or plate guards</td>
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<tr>
<td><strong>Combing hair</strong></td>
<td></td>
</tr>
<tr>
<td>– Difficulty with elevated movements because of weakness and fatigue</td>
<td>Long handled comb and brush</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td></td>
</tr>
<tr>
<td>– Difficulty gripping pen</td>
<td>– Try pen with larger grip</td>
</tr>
<tr>
<td>– Problems writing</td>
<td>– Try pen with non-slip gripping surface</td>
</tr>
<tr>
<td><strong>Washing self</strong></td>
<td></td>
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<tr>
<td>– Unable to reach parts of body</td>
<td>Long handled bath brush and sponge</td>
</tr>
<tr>
<td><strong>Toileting</strong></td>
<td></td>
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<tr>
<td>– Accessing toilets when out</td>
<td>Re-useable lightweight plastic urinals</td>
</tr>
<tr>
<td><strong>Propelling wheelchair</strong></td>
<td></td>
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<tr>
<td>– Sensitive hands</td>
<td>Wheelchair gloves</td>
</tr>
<tr>
<td><strong>Reaching</strong></td>
<td></td>
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<tr>
<td>– Picking up items from the floor</td>
<td>Long handled reacher</td>
</tr>
<tr>
<td>– Turning off bedside light</td>
<td>‘Sensor’ light with different light settings</td>
</tr>
<tr>
<td><strong>Walking</strong></td>
<td></td>
</tr>
<tr>
<td>– Unsteadiness</td>
<td>Walking stick, walking frame or wheeled walking frame</td>
</tr>
<tr>
<td><strong>Carrying when using walking frame</strong></td>
<td>Clip on bag for frame</td>
</tr>
</tbody>
</table>
**Lighting and emergency call systems**

Neurological problems often cause difficulties with upper limb function resulting in loss of grip and dexterity. Rocker switches on lighting will assist and should be within reach. Sensor lights with a variety of luminance settings are useful on a bedside cabinet. Alarm cords should be within reach extending to 100 mm from the floor with a ‘hangle’ place between 800–1000 mm (Office of the Deputy Prime Minister, 2004).

**Temperature control and sensory impairment**

Extremes of temperature, e.g. hot weather or baths, can increase symptoms particularly fatigue. Cooling ‘jackets or collars’ are useful in hot weather as is loose cotton clothing. Placing a bottle of frozen water in front of an electric fan so that cold air is blown is a handy tip. Diminished sensation in the hands or legs needs to be noted and care taken when using hot water. Temperature control is essential otherwise there is a risk of scalds and burns.

Standard 25.5 of the Care Homes for Older People: National Minimum Standards (2003) states:

‘Pipe work and radiators are guarded and have guaranteed low temperature surfaces.’

Standard 25.8 states:

‘Water is stored at a temperature of at least 60°C and distributed at 50°C minimum, to prevent risks from Legionella. To prevent risks from scaling, pre-set valves of a type unaffected by changes in water pressure and which have fail safe devices are fitted locally to provide water close to 43°C.’

Temperature control is essential to prevent scalds and burns and CSCI inspections require monitoring of water temperatures.

**Facilitating communication**

Impairment of hand function causes difficulties working on a computer and word-recognition packages can help. Windows package has accessibility options including changing the size or ‘blink speed’ of the cursor and the display. (Go to the control panel, accessibility options to find out how to alter the keyboard, sound, display and mouse to allow for visual, auditory and keyboard/mouse problems). Split keyboards and ones with enlarged keypads are available. AbilityNet (http://www.abilitynet.org.uk) specializes in assisting people with computer access problems and provides free advice to individuals.

Poor respiration produces low volume speech or a weak voice. Pitch control can be impaired causing an inappropriate volume of sound and speech can sound nasal. Articulation problems result in slurred, slower speech perhaps with long pauses between words or syllables of words (scanning speech). This may be mistaken for drunkenness.

Speech and language therapists provide guidance on how to strengthen ‘speech muscles’. Care staff can facilitate speech by carrying out treatment techniques and speech practice between therapists visits perhaps as part of individual ‘activity’ time. Residents should be encouraged to talk slowly and clearly with emphasis on intonation. Good sitting and lying posture helps with voice production. Reducing competing background noise enables a quiet voice to be heard.

**Visual problems**

Although loss of visual function as a result of optic neuritis is rare, control over eye movements may be poor because of nystagmus (uncontrolled eye movements). This can be exacerbated during stress and may cause problems with reading or watching television despite the provision of spectacles.

Referral to an optometrist or ophthalmology clinic or prescribed medication may help e.g. oral gabapentin. Specialized equipment can be provided to assist people with visual problems e.g. speaking or tactile clocks and watches, large print or talking books including those available from the Royal National Institute of the Blind.

**Conclusion**

It is important for those with MS to have some control over their lives. Unfortunately it is easy to gradually do more for a resident and make them dependent on help. By looking at the problem areas, simplifying tasks, altering techniques or the provision of equipment it is possible to maintain independence for a longer period of time. And it is vital to ‘do with’ not ‘for’ those living with MS.

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**Useful contacts**

- **Royal National Institute of the Blind**
  105 Judd Street
  London
  WC1H 9NE
  Tel: 020 7388 1266
  Fax: 020 7388 2034
  Abilitynet
  Tel: 0800 269545

- **AbilityNet**
  http://www.abilitynet.org.uk

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**KEY POINTS**

- **Using a different technique can make a task easier to achieve.**
- **Ensuring that the design of living and communal accommodation is accessible for wheelchair and ambulant disabled users can avoid expensive adaptations.**
- **Assistive devices can enable tasks to be carried out independently.**