The aim of rehabilitation is to improve quality of life, maintain or increase functional independence, prolong life by preventing complications and to return the patient to the community wherever possible.

Key points:
- Referral should be made to the Physiotherapy Department within 24 hours of admission and to the Occupational Therapy (OT) Department within 48 hours.
- Initial physiotherapy and occupational therapy assessments and management should be performed following discussion with the medical team regarding spinal stability.
- Rehabilitation should be patient-centred with short-term, realistic goals, which focus on functional outcomes in order to achieve the best quality of life for each individual patient.
- All patients with MS CC should have daily re-assessment for changes in their condition and the treatment plan revised accordingly.
- Even if functional outcome is limited; quality of life may be achieved by providing patients with physical, social and emotional support and a sense of control.
  (Adapted from WoSCAN MSCC Guidelines, 2013)

Admission:
- Patient on flat bed rest and log rolled, nursed on profiling bed – assume spine unstable until radiological evidence/clinical findings suggest otherwise.
- If cervical lesion suspected fit with Aspen Vista or Miami J collar/sand bags to support the spine.
- **NB:** Aspen Vista collars supports the spine from C1-C7, and Miami J collars from C2–C5. However, C1 lesions may require Halo fixation and C6 to T2 lesions may require Aspen Vista CTO extension (see cervical collar protocol). CTO braces require bespoke order and are not kept in stock in the hospital.
  - Assessment of muscle power and sensation – record on chart.
  - Assessment of respiratory function – repeat daily if Cervical/Thoracic lesion.
  - Advice/reassurance and ensure patient information sheet given.
  - Teach passive/active leg exercises, calf massage (if not on anticoagulants), thoracic breathing exercises, assisted cough (if applicable).
Day 1: Discuss MRI results and treatment with medical team and take into account radiology report. Document stability decision prior to remobilisation. This should be done as soon as the MRI scan has been reported to prevent unnecessary flat bed rest. If spine and neurology stable and pain permit:
- Re-assess muscle power and sensation – record on chart.
- Once spinal shock has settled gradual sitting to 60° over a period of 3-4 hours as clinically indicated/tolerated. Re-assess at intervals.
- Passive/active leg exercises, calf massage, breathing exercises.
- If pain is problematic refer to supportive / palliative care team for pain control.

Day 2: If clinical findings stable and pain permits commence gentle mobilisation (if able) by:
- Sitting edge of bed/in chair
- Transfers/standing/walking (mobility aids as required)
- Speed of progression through mobilisation is determined by patient’s clinical symptoms and stability
N.B. Monitor any changes. If increased pain or deterioration in neurology, return to flat bed rest and report to medical team.

Day 3: Continue to set appropriate and realistic goals with patient
- Identify rehabilitation needs
- Continue all above + progress mobility, as able
- Patients with incomplete/complete paraplegia:
  - sitting balance
  - supply wheelchair for loan in hospital
  - assess functional grip

Day 4: Patients with incomplete/complete paraplegia, progress to:
- rolling supine → side
- lying → sitting
- improved sitting balance
- sliding board transfers (alternative methods as indicated)
- wheelchair assessment
- pressure lifts / pressure care
- wheelchair skills
- advanced transfers
- assessment and practice of personal and domestic activities of daily living
- provide appropriate aids

- If pain persists, consider use of external support (collar and braces)
- If patient has not achieved sitting balance within 1 week, consider hoisting for transfers
- Unwell and bedbound patients:
  Prophylactic care: Passive leg exercises, teach relatives calf massage and TA stretch
  Refer to complementary therapy team

Options to consider with patient and carers:
- Home with input from community services
- Intermediate care for rehabilitation (short-stay, defined goals, showing progress with rehabilitation, prognosis >3 months
Hospice for respite, symptom control or terminal care
Nursing home (palliative, intermediate, long-term care, no prospect of rehabilitation)
Spinal unit/rehabilitation unit (good general condition/long-term prognosis, i.e. months to years)
If rehabilitation not appropriate, screen for CHC (NHS Continuing Health Care)

For further advice regarding rehabilitation, contact the local named lead AHP Network Directory on the MSCC page on The Christie website.

References:


For more information and protocols on management of MSCC see: http://www.christie.nhs.uk/MSCC

CONSULTATION, APPROVAL & RATIFICATION PROCESS
All documents must be involved in a consultation process either locally within a department or division or throughout the trust at relevant board/committee meetings before being submitted for approval.

VERSION CONTROL SHEET

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>Aug 2007</td>
<td>Lena Richards</td>
<td>Creation</td>
<td></td>
</tr>
<tr>
<td>V2</td>
<td>Dec 2010</td>
<td>Lena Richards</td>
<td>Update</td>
<td>Updated document</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kristina Coe</td>
<td>Review</td>
<td>Reviewed content</td>
</tr>
<tr>
<td>V3</td>
<td>Nov 2013</td>
<td>Lena Richards</td>
<td>Update</td>
<td>Updated document</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kristina Coe</td>
<td>Review</td>
<td>Reviewed content</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vivek Misra</td>
<td>Update</td>
<td>Reviewed content</td>
</tr>
<tr>
<td>V4</td>
<td>Jan 2016</td>
<td>Lena Richards</td>
<td>Review</td>
<td>Updated document</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kristina Coe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5</td>
<td>Jan 2018</td>
<td>Kristina Coe</td>
<td>Updated</td>
<td>Updated document</td>
</tr>
</tbody>
</table>