Is the Motor Relearning Programme more effective compared to the Bobath approach in improving symmetrical weight bearing during standing in patients with stroke?

**Search Terms**
- Biomedical databases searched (December 2008): PubMed, PEDro, Highwire Press, PT Journal, ProQuest

**Patients’ Key Clinical Characteristics**
**Inclusion criteria**: patients with recent stroke who consistently bore majority of weight on one side in sitting; capacity to relearn based on scores of cognitive screening
**Exclusion criteria**: pain; co-morbidities that could compromise training response; previous balance retraining

**Control Regimens and Durations**
Control group (n=10) underwent daily standardized physical and occupational therapy programs with no specific training for weight distribution.

**Experimental Regimens and Durations**
Bobath group (n=10) given a Bobath-based protocol focusing on normalization of trunk muscle tone, increasing trunk and pelvic ROM, maintenance of proper balance responses during reaching in sitting, and improving ability to move in and out of asymmetric sitting postures; intervention done 30 minutes daily for two weeks by Bobath-trained staff physical therapists.
Task-related training group (n=10) given 30 minutes of task-related reach training in sitting daily for two weeks; training conducted by staff occupational therapists.
All experimental groups also underwent daily standardized physical and occupational therapy programs.

**Key Study Features**
Random allocation using sequentially drawn random numbers. Assessors blinded but blinding of subjects and trainers not possible. Small sample size. 35% of subjects lost to follow up with their reasons for dropping out documented by authors. Assessment at baseline, after every treatment session, and two and twelve weeks after training was finished.

**Evidence Summary**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Control Group</th>
<th>Task-related Reach Group</th>
<th>Bobath Group</th>
<th>Difference Reach vs Bobath</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean change from baseline of standing force plate scores</td>
<td>Treatment: 0.91 (± 4.16)</td>
<td>Treatment: 1.55 (± 4.91)</td>
<td>Treatment: 0.08 (± 3.62)</td>
<td>Treatment: 1.47</td>
</tr>
<tr>
<td>Follow-up 2 weeks: 0.97 (± 3.94)</td>
<td>Follow-up 2 weeks: 0.47 (± 8.57)</td>
<td>Follow-up 2 weeks: 1.61 (± 5.50)</td>
<td>Follow-up 2 weeks: 2.99 (± 9.44)</td>
<td>Follow up 2 weeks: 1.14</td>
</tr>
<tr>
<td>12 weeks: −0.30 (± 8.61)</td>
<td>12 weeks: 3.43 (± 6.23)</td>
<td>12 weeks: 2.99 (± 9.44)</td>
<td>12 weeks: 0.44</td>
<td></td>
</tr>
<tr>
<td>Percentage of group achieving standing symmetry</td>
<td>Baseline: 10</td>
<td>Baseline: 10</td>
<td>Baseline: 10</td>
<td>Baseline: 0</td>
</tr>
<tr>
<td>Treatment: 0</td>
<td>Treatment: 10</td>
<td>Treatment: 0</td>
<td>Treatment: 10</td>
<td></td>
</tr>
<tr>
<td>2 week ff up: 0</td>
<td>2 week ff up: 10</td>
<td>2 week ff up: 0</td>
<td>2 week ff up: 10</td>
<td></td>
</tr>
<tr>
<td>12 week ff up: 10</td>
<td>12 week ff up: 25</td>
<td>12 week ff up: 17</td>
<td>12 week ff up: 8</td>
<td></td>
</tr>
</tbody>
</table>
Clinical Bottomline
There is no evidence that strictly proves MRP is superior to the Bobath approach in training symmetrical standing. A task-related reach protocol in sitting shows minimal short term and moderate long term improvements in standing symmetry compared to a Bobath-based protocol.

Comments
Training done in sitting. Symmetry in standing measured only as a secondary outcome. Principles of MRP not strictly followed since training was not done in standing and no feedback was given during training. The results of this study should be used with caution because of these limitations. Symmetry training in standing which uses strict MRP principle may provide different results. However, further research on this is still needed.

Key References

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