

11. Mobilisation

11.1 Early mobilisation and optimum positioning after acute stroke

Evidence table								
MOBIL 1: Does early mobilisation versus treatment as usual reduce mortality and morbidity in patients with acute stroke?								
Reference	Study type Evidenc e level	Number of patients	Patient characteri stics	Intervention	Comparison	Length of follow- up	Outcome measures	Source of funding
Fang Y, Chen X, Li H et al. A study on additional early physiotherapy after stroke and factors affecting functional recovery. <i>Clinical Rehabilitation</i> . 2003; 17(6):608-617. Ref ID 2578	RCT single- blind single centre China 1+	N=156 (N=128 analysed)	Patients with stroke (admitted within one week of stroke onset) Patient population : mean age 64 yrs, gender M:F 77:51, infarction N=100 and haemorrhagic N=24	Additional early physiotherapy N=50 (assessed at 30 days) Physiotherapy provided by two experienced rehabilitation therapists. Therapy included Bobath techniques and passive movements training in the affected limb and was	Routine therapy N=78 (assessed at 30 days) Patients received no professional or regular physiothera py during the whole hospitalisati on period. Stroke- related symptoms and complication s in each group were	6 months	Fugl- Meyer Score Modified Barthel Index	Chinese Foundation for the Ninth Five- year Key Task Project

				<p>initiated in the first week after stroke onset.</p> <p>Passive movement training included a series of movements on the joints of completely paretic limbs to prevent contracture and malformation</p> <p>Therapy duration was 45 mins, five days a week for four weeks</p> <p>N=12 (6 months)</p>	<p>treated with MDT approaches in the stroke centre</p> <p>N=14 (6 months)</p>			
<p>Effect</p> <p>*Functional outcome</p> <p>30 days after stroke, there was a statistical difference on the modified Barthel Index when those patients in the additional early physiotherapy (AEP) group were compared with those in routine therapy (mean increase from baseline 22 vs 14; $p < 0.05$), the difference was no longer significant six months after stroke.</p>								

At 30 days or six month follow-up, there were no statistical difference between the patients in the AEP group compared with those in routine therapy on the Fugl-Meyer Score (upper or lower limb)

<p>Richards CL, Malouin F, Wood DS et al. Task-specific physical therapy for optimization of gait recovery in acute stroke patients. <i>Archives of Physical Medicine & Rehabilitation</i>. 1993; 74(6):612-620. Ref ID: 2579</p>	<p>RCT single-blind single site USA 1+</p>	<p>N=27</p>	<p>Patients with middle cerebral artery infarct (within one week of stroke onset)</p> <p>Inclusion criteria included: aged between 40 and 80 yrs and 0 to 7 days post stroke</p> <p>Patient population : Mean age 69 yrs, gender F:M 14:13, mean</p>	<p>Early, intensive therapy (EXP)</p> <p>N=10</p> <p>Included the use of a tilt table and a limb-load monitor, rested exercises with a Kinetron isokentic device and a treadmill.</p> <p>Aim was to promote gait relearning through locomotor activities that were adapted to the individual level of motor</p>	<p>Early physical therapy (ECON)</p> <p>N=8</p> <p>Total number of physical therapy treatments 42.2 sessions of mean 53.6 mins duration</p> <p>Mean daily physical therapy treatment 1.79 hrs</p> <p>Based on 'traditional' approaches</p> <p>'Later'</p>	<p>6 months</p>	<p>Motor performance Balance Functional capacity Laboratory analysis of gait movements</p>	<p>Public sector</p>
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			<p>Fugl-Meyer leg score 12.7, mean Canadian Stroke Scale 5.</p>	<p>recovery</p> <p>Total number of physical therapy treatments 46.8 sessions of mean 52.2 mins duration</p> <p>Mean daily physical therapy treatment 1.74 hrs</p>	<p>physical therapy (CON)</p> <p>N=9</p> <p>Not as intense and composed of similar techniques as with the other control group</p> <p>Total number of physical therapy treatments 19.2 sessions of mean 43.1 mins duration</p> <p>Mean daily physical therapy treatment 0.73 hrs</p>			
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Effect

*Prognostic scores

The groups were stratified according to whether the patients had a good (Barthel Index ≥ 21) or poor (≤ 20)

*Physiotherapeutic input

In the experimental group (EXP), the physical therapy started early (mean 8.3 days post stroke) and was 'intense' (mean 1.74 hrs in two sessions). This compared with 8.8 days post stroke and 1.79 hrs in two sessions for the early conventional group (ECON) and 13 days post stroke and 0.72 hrs in one session for the conventional group (CON)

*Gait velocity

There were no statistical differences between the groups

*Functional scores (Fungle-Meyer Balance, Fugl-Meyer Arm/Leg, Barthel Ambulation, Berg

There were no statistical difference between the groups

*Gait training

At six weeks, total time dedicated to gait training was correlated with gait velocity ($r_s=0.63$) but total therapy time was not correlated with gait velocity (NS). This effect disappeared at three and six months post stroke.