

Table 1: Characteristics of included studies and strength of evidence

First author and date in order of relevance to this review	Study design	No. of Participants (full data)	Age Range	Diagnoses	Type of Postural Support in Lying used in study	Duration	Quality Rating of Study	Comments
Underhill 2012	RCT	11 (10)	5 – 15yrs	Cerebral palsy GMFCS III - V	5 X Chailey Lying Support 1 x Jenx Dreama 5 x Symmetrisleep	8 nights	Medium	Sample, context, outcomes closely match focus of review but small number of participants who were well established users of postural supports in lying and for fewer than recommended nights of actigraphy. Used a variety of types of SPSs. Actigraphy important method of data collection on sleep quality.
Dawson 2013	Within subject cross-over study	15 (13)	1 – 19yrs	Severe Motor Disorders (9/13 with CP)	Not stated	14 nights	Medium	Sample, context and outcomes closely match focus of review. Sample are potentially less complex medically and socially because only 59% of those eligible were approached. Context is child's own home sleeping environment
Humphreys 2012	Interviews and observational	7 families	2 – 6yrs	Cerebral palsy GMFCS levels III - V	3 x Chailey Lying Support 2 x Dreama 1 x Symmetrisleep 2 x Sleepform	4 – 6 mths	Low	Collecting views of users of postural supports in lying, family and therapists. Sample, context, outcomes, closely match focus of review. Small number of participants and limited quotes to support themes. More quantitative methods would have contributed to strength of evidence.
Hill 2009	RCT	11 (9)	5 – 16yrs	Severe cerebral palsy	Not stated	2 nights	Medium	Sample are established users of postural supports in lying. Outcome measures used were appropriate. Setting in a sleep lab does not replicate the usual sleeping environment for the child. Risk of selection bias present as potential participants excluded by therapists.
Goldsmith 2002	Interviews based on questionnaire	31 families	9mths – 19yrs	Not known	Symmetrisleep	12 mths	Low	Sample, context, outcomes relate closely to focus of study. Limited data. Questionnaire not included. Lickert scale not best for finding views. Potential for selective outcome reporting from funding.
Hankinson 2002	Pilot prospective cohort study	14 (7)	4 – 14yrs	Bilateral cerebral palsy	Jenx Dreama	18 mths	Low	Sample, context and outcomes closely match focus of review but missing data, small numbers and potential bias from funding.
Moll 2012	Cross-sectional survey	82 of which 19 using NTPME	6 – 15yrs	Cerebral palsy GMFCS I -V	Not stated	N/A	Medium	Children in Flemish schools, looking at sleep, useful in an international context. Useful in the comparison of postural support in lying compared with other orthoses used at night and none. But difficulty in separating postural supports in lying and other orthoses. Parental personality and competence related to the experience of burden is potentially new.

Aburto 2015	Pilot prospective cohort study	4	3 – 21yrs	Not known	Symmetrisleep	6 mths	Low	Insufficient information from abstract only but sample, context and outcomes closely matching focus of review.
Moens 2014	Focus groups, interviews.	20 x PT / OTs 5 x carers	N/A	N/A	N/A	N/A	Low	Design and analysis are appropriate but limited by poster presentation only. Appropriate involvement of parents of children using sleep systems
Royden 2013	Retrospective cohort study	58	0.5 – 19.25 yrs	Cerebral palsy and non-cerebral palsy	Not stated	12 mths	Low	Insufficient information from conference abstract only. Sample, context and outcomes relate closely to this review but with much missing data. Other factors (eg intervention such as botox, surgery) that could have contributed to changes in the outcome measures were not considered.
Polak 2007	Postal survey	448 PTs	N/A	N/A	N/A	N/A	Low	Postal survey not most effective for gaining views of therapists (24% response rate). Unable to substantiate parents views as they are expressed via the therapists' opinions.
Newman 2006	Postal survey	Parents of 173 ch	6- 12yrs	Cerebral palsy GMFCS I - V	N/A		Low	No data on postural supports in lying. Subjective comment on why they make no appearance in difference to sleep quality (families stop using).
Innocente 2014	Postal survey to users of night time postural support	16	Not given	Neurodisabilities	Not stated	N/A	Low	Setting in New Zealand. Very small numbers. No separate data specifically on postural supports in lying though users are included.
Lawrence 2009	Descriptive report	5	Mid 20s	Moderate & severe musculoskeletal conditions	Symmetrisleep	5 yrs	Low	Descriptive report with no data.