

SDC1. Articles Excluded at Full Text Screening

References	Study Methodology	Reason for Exclusion
Anttila H, Autti-Rämö I, Suoranta J, Mäkelä M, Malmivaara A. Effectiveness of physical therapy interventions for children with cerebral palsy: a systematic review. <i>BMC Pediatr.</i> 2008;8(14):1-10. doi:10.1186/1471-2431-8-14.	SR	No stretch intervention studies included
Bakker JP, de Groot IJ, Beckerman H, de Jong BA, Lankhorst GJ. The effects of knee-ankle-foot orthoses in the treatment of Duchenne muscular dystrophy: review of the literature. <i>Clin Rehabil.</i> 2000;14(4):343-359.	SR	Co-intervention of surgery
Birdee GS, Yeh GY, Wayne PM, Phillips S, Davis RB, Gardiner P. Clinical applications of yoga for the pediatric population: a systematic review. <i>Acad Pediatr.</i> 2010;9(4):212-220.e1-9. doi:10.1016/j.acap.2009.04.002.	SR	No children with NMD
Bjornson, K, Schmale, G, Adamczyk-Foster, A, McLaughlin J. The effect of dynamic ankle foot orthoses on function in children with cerebral palsy. <i>J Pediatr Orthop.</i> 2006;26(6):773-776.	RCOT	No measure of flexibility
Bovend'Eerd T, Newman M, Barker K, Dawes H, Minelli C, Wade DT. The effects of stretching in spasticity: a systematic review. <i>Arch Phys Med Rehabil.</i> 2008;89(7):1395-406. doi:10.1016/j.apmr.2008.02.015.	SR	Adult population
Boyd RN, Morris ME, Graham HK. Management of upper limb dysfunction in children with cerebral palsy: a systematic review. <i>Eur J Neurol.</i> 2001;8(Suppl 5):150-166.	SR	Included studies had co-interventions of botox, NDT
Bryant E, Pountney T, Williams H, Edelman N. Can a six-week exercise intervention improve gross motor function for non-ambulant children with cerebral palsy? A pilot randomized controlled trial. <i>Clin Rehabil.</i> 2013;27(2):150-159. doi:10.1177/0269215512453061.	RCT	No stretch intervention
Buckon CE, Thomas SS, Jakobson-Huston S, Sussman M, Aiona M. Comparison of three ankle-foot orthosis configurations for children with spastic hemiplegia. <i>Dev Med Child Neurol.</i> 2001;43(6):371-8.	RCOT	Downgraded due to risk of attrition, detection, performance, selection and other biases ^a
Canavese F, Sussman M. Strategies of hip management in neuromuscular disorders: Duchenne Muscular Dystrophy, Spinal Muscular Atrophy, Charcot-Marie-Tooth Disease and Arthrogryposis Multiplex Congenita. <i>Hip Int.</i> 2009;19(Suppl 6):S46-52.	Literature Review	Appraised as literature review
Carlson WE, Vaughan CL, Damiano DL, Abel MF. Orthotic management of gait in spastic diplegia. <i>Am J Phys Med Rehabil.</i> 1997;76(3):219-225.	RCOT	Downgraded due to risk of attrition, detection, performance, selection and other biases ^a

SDC1. Articles Excluded at Full Text Screening (Continued)

References	Study Methodology	Reason for Exclusion
Cheng HY, Ju YY, Chen CL, Chang YJ, Wong AM. Managing lower extremity muscle tone and function in children with cerebral palsy via eight-week repetitive passive knee movement intervention. <i>Res Dev Disabil.</i> 2013;34(1):554-561. doi:10.1016/j.ridd.2012.09.020.	RCT	Downgraded due to risk of attrition, detection, performance, selection and other biases ^a
Cup EH, Pieterse AJ, ten Broek-Pastoor JM, et al. Exercise therapy and other types of physical therapy for patients with neuromuscular disease a systematic review. <i>Arch Phys Med Rehabil.</i> 2007;88(11):1452-1464.	SR	Adult population
Downs J, Bergman A, Carter P, et al. Guidelines for management of scoliosis in Rett syndrome patients based on expert consensus and clinical evidence. <i>Spine (Phila Pa 1976).</i> 2009;34(17):E607-E617. doi:10.1097/BRS.0b013e3181a95ca4.	Literature Review	Appraised as literature review
Elliott CM, Reid SL, Alderson JA, Elliott BC. Lycra arm splints in conjunction with goal-directed training can improve movement in children with cerebral palsy. <i>NeuroRehabilitation.</i> 2011;28(1):47-54.	RCT	Downgraded due to risk of attrition, detection, performance, selection and other biases ^a
Farley R, Clark J, Davidson C, Evans G, MacLennan K, Michael S, et al. What is the evidence for the effectiveness of postural management. <i>Int J Ther Rehabil.</i> 2003;10(10):449-455.	Literature Review	Appraised as literature review
Farmer SE, James M. Contractures in orthopaedic and neurological conditions: a review of causes and treatment. <i>Disabil Rehabil.</i> 2001;23(13):549-558.	Literature Review	Appraised as literature review
Furia JP, Willis FB, Shanmugam R, Curran SA. Systematic review of contracture reduction in the lower extremity with dynamic splinting. <i>Adv Ther.</i> 2013;30(8):763-770. doi:10.1007/s12325-013-0052-1.	SR	Adult population
Galantino ML, Galbavy R, Quinn L. Therapeutic effects of yoga for children: A systematic review of the literature. <i>Pediatr Phys Ther.</i> 2008;20(1):66-80. doi: 10.1097/PEP.0b013e31815f1208.	SR	No children with NMD
Glickman LB, Geigle PR, Paleg GS. A systematic review of supported standing programs. <i>J Pediatr Rehabil Med.</i> 2010;3(3):197-213. doi:10.3233/PRM-2010-0129.	SR	Majority of included articles had an adult population ^b
Gordon GS, Simkiss DE. A systematic review of the evidence for hip surveillance in children with cerebral palsy. <i>J Bone Joint Surg Br.</i> 2006;88(11):1492-1496. doi:10.1302/0301-620X.88B11.18114.	SR	No stretch intervention
Gormley ME. Treatment of neuromuscular and musculoskeletal problems in cerebral palsy. <i>Pediatr Rehabil.</i> 2001;4(1):5-16.	Literature Review	Appraised as literature review
Gough M. Continuous postural management and the prevention of deformity in children with cerebral palsy: an appraisal. <i>Dev Med Child Neurol.</i> 2009;51(2):105-110. doi:10.1111/j.1469-8749.2008.03160.x.	Literature Review	Appraised as literature review

SDC1. Articles Excluded at Full Text Screening (Continued)

References	Study Methodology	Reason for Exclusion
Hart, D and McDonald C. Spinal deformity in progressive neuromuscular disease. Natural history and management. <i>Phys Med Rehabil Clin N Am.</i> 1998;9(1):213-232.	Literature Review	Appraised as literature review
Hill J. The effects of casting on upper extremity motor disorders after brain injury. <i>Am J Occup Ther.</i> 1994;48(3):219-224.	RCOT	Mean age greater than 19
Jackman M, Novak I, Lannin N. Effectiveness of hand splints in children with cerebral palsy: a systematic review with meta-analysis. <i>Dev Med Child Neurol.</i> 2014;56(2):138-147. doi:10.1111/dmcn.12205.	SR	All included studies had co-interventions of botox, NDT, or NMES
Kamandulis S, Emeljanovas A, Skurvydas A. Stretching exercise volume for flexibility enhancement in secondary school children. <i>J Sports Med Phys Fitness.</i> 2013;53(6):687-692.	RCT	No children with NMD
Katalinic OM, Harvey LA, Herbert RD, Moseley AM, Lannin NA, Schurr K. Stretch for the treatment and prevention of contracture [Review]. <i>Cochrane Database Syst Rev.</i> 2010;(9):CD007455. doi:10.1002/14651858.CD007455.pub2.	SR	Majority of included articles had an adult population ^c
Katz-Leurer M, Rotem H, Keren O, Meyer S. The effects of a home-based task-oriented exercise programme on motor and balance performance in children with spastic cerebral palsy and severe traumatic brain injury. <i>Clin Rehabil.</i> 2009;23(8):714-724.	RCT	No stretch intervention
Kotwicki T, Jozwiak M. Conservative management of neuromuscular scoliosis: personal experience and review of literature. <i>Disabil Rehabil.</i> 2008;30(10):792-798. doi:10.1080/09638280801889584.	Literature Review	Appraised as literature review
Lee GP, Ng GY. Effects of stretching and heat treatment on hamstring extensibility in children with severe mental retardation and hypertonia. <i>Clin Rehabil.</i> 2008;22(9):771-779. doi:10.1177/0269215508090067.	RCOT	Co-intervention of heat
Leong B. Critical review of passive muscle stretch: implications for the treatment of children in vegetative and minimally conscious states. <i>Brain Inj.</i> 2002;16(2):169-183. doi:10.1080/02699050110103292.	Literature Review	Appraised as literature review
Leong B. The vegetative and minimally conscious states in children: spasticity, muscle contracture and issues for physiotherapy treatment. <i>Brain Inj.</i> 2002;16(3):217-230. doi:10.1080/02699050110103283.	Literature Review	Appraised as literature review
Lloyd C, Logan S, McHugh C, Humphreys G, Parker S, Beswick D, et al. Sleep positioning for children with cerebral palsy [Protocol]. <i>Cochrane Database Syst Rev.</i> 2011;(7):CD009257. doi:10.1002/14651858.CD009257.	SR	Protocol only. Study data not published.

SDC1. Articles Excluded at Full Text Screening (Continued)

References	Study Methodology	Reason for Exclusion
McDonald CM. Limb contractures in progressive neuromuscular disease and the role of stretching, orthotics, and surgery. <i>Phys Med Rehabil Clin N Am</i> . 1998;9(1):187-211.	Literature Review	Appraised as literature review
McNee AE, Will E, Lin JP, et al. The effect of serial casting on gait in children with cerebral palsy: preliminary results from a crossover trial. <i>Gait Posture</i> . 2007;25(3):463-468.	RCT	Downgraded due to risk of attrition, detection, performance, selection and other biases ^a
Maas JC, Dallmeijer AJ, Huijing PA, et al. Splint: the efficacy of orthotic management in rest to prevent equinus in children with cerebral palsy, a randomised controlled trial. <i>BMC Pediatr</i> . 2012;12:38. doi:10.1186/1471-2431-12-38.	RCT	Protocol only. Study data not published.
Martin L, Baker R, Harvey A. A systematic review of common physiotherapy interventions in school-aged children with cerebral palsy. <i>Phys Occup Ther Pediatr</i> . 2010;30(4):294-312. doi:10.3109/01942638.2010.500581.	SR	No stretch intervention
Miedaner, J, Renander J. The effectiveness of classroom passive stretching programs for increasing or maintaining passive range of motion in non-ambulatory children: an evaluation of frequency. <i>Phys Occup Ther Pediatr</i> . 1987;7(3):35-43.	Case series	Level of evidence
Morris C. A review of the efficacy of lower-limb orthoses used for cerebral palsy. <i>Dev Med Child Neurol</i> . 2002;44(3):205-211.	Literature Review	Appraised as literature review
Mugglestone MA, Eunson P, Murphy MS, Guideline Development Group. Spasticity in children and young people with non-progressive brain disorders: summary of NICE guidance. <i>BMJ</i> . 2012;345:e4845. doi:10.1136/bmj.e4845.	Practice Guideline	Full review not published in peer-review journal
Novak I, Cusick A, Lannin N. Occupational therapy home programs for cerebral palsy: double-blind, randomized, controlled trial. <i>Pediatrics</i> . 2009;124(4):e606-e614. doi:10.1542/peds.2009-0288.	RCT	No stretch intervention
O'Dwyer N, Neilson P, Nash J. Reduction of spasticity in cerebral palsy using feedback of the tonic stretch reflex: a controlled study. <i>Dev Med Child Neurol</i> . 1994;36(9):770-786.	RCT	Downgraded due to risk of attrition, detection, performance, selection and other biases ^a
O'Neil ME, Fragala-Pinkham MA, Westcott SL, et al. Physical therapy clinical management recommendations for children with cerebral palsy - spastic diplegia: achieving functional mobility outcomes. <i>Pediatr Phys Ther</i> . 2006; 18(1):49-72. doi:10.1097/01.ppt.0000202099.01653.a9.	Literature Review	Appraised as literature review
Palmer, F., Shapiro B, Wachtel R, et al. The effects of physical therapy on cerebral palsy. A controlled trial in infants with spastic diplegia. <i>N Engl J Med</i> . 1988;(13):803-808.	RCT	Co-intervention of NDT

SDC1. Articles Excluded at Full Text Screening (Continued)

References	Study Methodology	Reason for Exclusion
Papavasiliou A. Management of motor problems in cerebral palsy: a critical update for the clinician. <i>Eur J Paediatr Neurol</i> . 2009;13(5):387-396. doi:10.1016/j.ejpn.2008.07.009.	Literature Review	Appraised as literature review
Pountney TE, Mandy A, Green E, Gard PR. Hip subluxation and dislocation in cerebral palsy-a prospective study on the effectiveness of postural management programmes. <i>Physiother Res Int</i> . 2009;14(2):116-127. doi:10.1002/pri.434.	Prospective cohort	Level of evidence
Prabhu RKR, Swaminathan N, Harvey LA. Passive movements for the treatment and prevention of contractures (Review). <i>Cochrane Database Syst Rev</i> . 2013;(12):CD009331. doi:10.1002/14651858.CD009331.pub2.	SR	Adult population
Radford JA, Burns J, Buchbinder R, Landorf KB, Cook C. Does stretching increase ankle dorsiflexion range of motion? A systematic review. <i>Br J Sport Med</i> . 2006;40(10):870-875. doi:10.1136/bjism.2006.029348.	SR	Adult population
Richards CL, Malouin F, Dumas F. Effects of a single session of prolonged plantarflexor stretch on muscle activations during gait in spastic cerebral palsy. <i>Scand J Rehabil Med</i> . 1991;23(2):103-111.	RCT	No flexibility measure
Rose KJ, Burns J, Wheeler DM, North KN. Interventions for increasing range of motion in patients with neuromuscular disease. <i>Cochrane Database Syst Rev</i> . 2010;(2):CD006973. doi:10.1002/14651858.CD006973.pub2.	SR	Included studies had co-interventions of medication and surgery or were not published in a peer-reviewed journal.
Scheffers G, Hiller C, Refshauge K, Burns J. Prescription of foot and ankle orthoses for children with Charcot-Marie-Tooth disease: a review of the evidence. <i>Phys Ther Rev</i> . 2012;17(2):79-90. doi:10.1179/1743288X11Y.0000000052.	Literature Review	Appraised as literature review
Siegel I. The management of muscular dystrophy a clinical review. <i>Muscle Nerve</i> . 1978;1(6):453-460.	Literature Review	Appraised as literature review
Skalsky AJ, McDonald CM. Prevention and management of limb contractures in neuromuscular diseases. <i>Phys Med Rehabil Clin N Am</i> . 2012;23(3):675-687. doi:10.1016/j.pmr.2012.06.009.	Literature Review	Appraised as literature review
Sommerfeld D, Fraser BA, Hensinger RN, Beresford CV. Evaluation of physical therapy service for severely mentally impaired students with cerebral palsy. <i>Phys Ther</i> . 1981;61(3):338-344.	Cohort	Level of evidence
Tardieu C, Lespargot A, Tabary C, Bret MD. For how long must the soleus muscle be stretched each day to prevent contracture? <i>Dev Med Child Neurol</i> . 1988;30(1):3-10.	Case series	Level of evidence
Tardieu G, Tardieu C, Colbeau-Justom P, Lespargot A. Muscle hypoextensibility in children with cerebral palsy: II. Therapeutic implications. <i>Arch Phys Med Rehabil</i> . 1982;63(3):103-107.	Case series	Level of evidence

SDC1. Articles Excluded at Full Text Screening (Continued)

References	Study Methodology	Reason for Exclusion
Teplicky R, Law M, Russell D. The effectiveness of casts, orthoses, and splints for children with neurological disorders. <i>Inf Young Child</i> . 2002;15(1):42-50.	Literature Review	Appraised as literature review
Tilton A. Management of spasticity in children with cerebral palsy. <i>Semin Pediatr Neurol</i> . 2009;16(2):82-89. doi:10.1016/j.spen.2009.03.006.	Literature Review	Appraised as literature review
Tremblay F, Malouin F, Richards CL, Dumas F. Effects of prolonged muscle stretch on reflex and voluntary muscle activations in children with spastic cerebral palsy. <i>Scand J Rehabil Med</i> . 1990;22(4):171-80.	RCT	No flexibility measure
Verschuren O, Ketelaar M, Takken T, Helders PJ, Gorter JW. Exercise programs for children with cerebral palsy: a systematic review of the literature. <i>Am J Phys Med Rehabil</i> . 2008;87(5):404-417. doi:10.1097/PHM.0b013e31815b2675.	SR	No stretch intervention
Wynn N, Wickman J. Night time positioning for children with postural needs: what is the evidence to inform best practice? <i>British J Occup Ther</i> . 2009;72(12):534-550.	Literature Review	Appraised as literature review
Wiat L, Darrah J, Kembhavi G. Stretching with children with cerebral palsy: what do we know and where are we going? <i>Pediatr Phys Ther</i> . 2008;20(2):173-178. doi:10.1097/PEP.0b013e3181728a8c.	Literature Review	Appraised as literature review
Young P, De Jonghe P, Stogbauer F, Butterfass-Bahloul T. Treatment for Charcot-Marie-Tooth disease [Review]. <i>Cochrane Database Syst Rev</i> . 2008;(1):CD006052. doi:10.1002/14651858.CD006052.pub2.	SR	No stretch intervention
Young R, Nix S, Wholohan A, Bradhurst R, Reed L. Interventions for increasing ankle joint dorsiflexion: a systematic review and meta-analysis. <i>J Foot Ankle Res</i> . 2013;6(1):46. doi:10.1186/1757-1146-6-46.	SR	Adult population
Zhao X, Xiao N, Li H, Du S. Day vs. day-night use of ankle-foot orthoses in young children with spastic diplegia: a randomized controlled study. <i>Am J Phys Med Rehabil</i> . 2013;92(10):905-911. doi:10.1097/PHM.0b013e318296e3e8.	RCT	Co-intervention of NDT

Abbreviations: NDT, neurodevelopmental treatment; RCOT, randomized cross over trial; RCT, randomized controlled trial, SR, systematic review

^a Other biases: 1) Confounding co-interventions, 2) Poor compliance to intervention or poor reporting of compliance, 3) No statistical analyses to determine if groups were similar at baseline, 4) Sample populations may not be representative of exposed cohort.

^b Pediatric sub-analyses completed, however the majority of pediatric articles did not have a stretch intervention or flexibility measure.

^c No pediatric sub-analyses completed.