

SUPPLEMENTARY REFERENCES

1. Elkamil AI, Andersen GL, Skrane J, Lamvik T, Vik T. Botulinum neurotoxin treatment in children with cerebral palsy: a population-based study in Norway. *Eur J Paediatr Neurol* 2012; 16: 522–527.
2. Aisen ML, Kerkovich D, Mast J, Mulroy S, Wren TA, Kay RM, et al. Cerebral palsy: clinical care and neurological rehabilitation. *Lancet Neurol* 2011; 10: 844–852.
3. Ade-Hall RA, Moore AP. Botulinum toxin type A in the treatment of lower limb spasticity in cerebral palsy. *Cochrane Database Syst Rev* 2000; CD001408.
4. Love SC, Valentine JP, Blair EM, Price CJ, Cole JH, Chauvel PJ. The effect of botulinum toxin type A on the functional ability of the child with spastic hemiplegia a randomized controlled trial. *Eur J Neurol* 2001; 8 Suppl 5: 50–58.
5. Heinen F, Desloovere K, Schroeder AS, Berweck S, Borggraefe I, van Campenhout A, et al. The updated European Consensus 2009 on the use of Botulinum toxin for children with cerebral palsies. *Eur J Paediatr Neurol* 2010; 14: 45–66.
6. Love SC, Novak I, Kentish M, Desloovere K, Heinen F, Molenaers G, et al. Botulinum toxin assessment, intervention and after-care for lower limb spasticity in children with cerebral palsy: international consensus statement. *Eur J Neurol* 2010; 17 Suppl 2: 9–37.
7. Strobl W, Theologis T, Brunner R, Kocer S, Viehweger E, Pascual-Pascual I, et al. Best clinical practice in botulinum toxin treatment for children with cerebral palsy. *Toxins (Basel)* 2015; 7: 1629–1648.
8. Pavone V, Testa G, Restivo DA, Cannavo L, Condorelli G, Portinaro NM, et al. Botulinum toxin treatment for limb spasticity in childhood cerebral palsy. *Front Pharmacol* 2016; 7: 29.
9. Novak I, McIntyre S, Morgan C, Campbell L, Dark L, Morton N, et al. A systematic review of interventions for children with cerebral palsy: state of the evidence. *Dev Med Child Neurol* 2013; 55: 885–910.
10. Sung KH, Chung CY, Lee KM, Lee YK, Lee SY, Lee J, et al. Conflict of interest in the assessment of botulinum toxin A injections in patients with cerebral palsy: a systematic review. *J Pediatr Orthop* 2013; 33: 494–500.
11. Ryll U, Bastiaenen C, De Bie R, Staal B. Effects of leg muscle botulinum toxin A injections on walking in children with spasticity-related cerebral palsy: a systematic review. *Dev Med Child Neurol* 2011; 53: 210–216.
12. Boyd RN, Hays RM. Current evidence for the use of botulinum toxin type A in the management of children with cerebral palsy: a systematic review. *Eur J Neurol* 2001; 8 Suppl 5: 1–20.
13. Damiano DL. Meaningfulness of mean group results for determining the optimal motor rehabilitation program for an individual child with cerebral palsy. *Dev Med Child Neurol* 2014; 56: 1141–1146.
14. Molenaers G, Fagard K, Van Campenhout A, Desloovere K. Botulinum toxin A treatment of the lower extremities in children with cerebral palsy. *J Child Orthop* 2013; 7: 383–387.
15. Lannin N, Scheinberg A, Clark K. AACPDM systematic review of the effectiveness of therapy for children with cerebral palsy after botulinum toxin A injections. *Dev Med Child Neurol* 2006; 48: 533–539.
16. Koog YH, Min BI. Effects of botulinum toxin A on calf muscles in children with cerebral palsy: a systematic review. *Clin Rehabil* 2010; 24: 685–700.
17. Grigoriu AI, Dinomais M, Remy-Neris O, Brochard S. Impact of injection-guiding techniques on the effectiveness of botulinum toxin for the treatment of focal spasticity and dystonia: a systematic review. *Arch Phys Med Rehabil* 2015; 96: 2067–2078.
18. Tustin K, Patel A. A Critical Evaluation of the updated evidence for casting for equinus deformity in children with cerebral palsy. *Physiother Res Int* 2017; 22 (1).
19. Blackmore AM, Boettcher-Hunt E, Jordan M, Chan MD. A systematic review of the effects of casting on equinus in children with cerebral palsy: an evidence report of the AACPDM. *Dev Med Child Neurol* 2007; 49: 781–790.
20. Ries AJ, Novacheck TF, Schwartz MH. The efficacy of ankle-foot orthoses on improving the gait of children with diplegic cerebral palsy: a multiple outcome analysis. *PM R* 2015; 7: 922–929.
21. Danino B, Erel S, Kfir M, Khamis S, Batt R, Hemo Y, et al. Influence of orthosis on the foot progression angle in children with spastic cerebral palsy. *Gait Posture* 2015; 42: 518–522.
22. Wingstrand M, Hagglund G, Rodby-Bousquet E. Ankle-foot orthoses in children with cerebral palsy: a cross sectional population based study of 2200 children. *BMC Musculoskelet Disord* 2014; 15: 327.
23. Kahraman A, Seyhan K, Deger U, Kutluturk S, Mutlu A. Should botulinum toxin A injections be repeated in children with cerebral palsy? A systematic review. *Dev Med Child Neurol* 2016; 58: 910–917.
24. Gillett JG, Boyd RN, Carty CP, Barber LA. The impact of strength training on skeletal muscle morphology and architecture in children and adolescents with spastic cerebral palsy: a systematic review. *Res Dev Disabil* 2016; 56: 183–196.
25. Kay RM, Rethlefsen SA, Fern-Buneo A, Wren TA, Skaggs DL. Botulinum toxin as an adjunct to serial casting treatment in children with cerebral palsy. *J Bone Joint Surg Am* 2004; 86-A: 2377–2384.
26. Flett PJ, Stern LM, Waddy H, Connell TM, Seeger JD, Gibson SK. Botulinum toxin A versus fixed cast stretching for dynamic calf tightness in cerebral palsy. *J Paediatr Child Health* 1999; 35: 71–77.
27. Bottos M, Benedetti MG, Salucci P, Gasparoni V, Giannini S. Botulinum toxin with and without casting in ambulant children with spastic diplegia: a clinical and functional assessment. *Dev Med Child Neurol* 2003; 45: 758–762.
28. Pidcock FS, Fish DE, Johnson-Greene D, Borras I, McGready J, Silberstein CE. Hip migration percentage in children with cerebral palsy treated with botulinum toxin type A. *Arch Phys Med Rehabil* 2005; 86: 431–435.
29. Jianjun L, Shurong J, Weihong W, Yan Z, Fanyong Z, Nanling L. Botulinum toxin-A with and without rehabilitation for the treatment of spastic cerebral palsy. *J Int Med Res* 2013; 41: 636–641.
30. Dai AI, Demiryurek AT. Serial casting as an adjunct to botulinum toxin type A treatment in children with cerebral palsy and spastic paraparesis with scissoring of the lower extremities. *J Child Neurol* 2017; 32: 671–675.
31. Delgado MR, Tilton A, Russman B, Benavides O, Bonikowski M, Carranza J, et al. AbobotulinumtoxinA for Equinus foot deformity in cerebral palsy: a randomized controlled trial. *Pediatrics* 2016; 137: e20152830.
32. Dursun N, Gokbel T, Akarsu M, Dursun E. Randomized controlled trial on effectiveness of intermittent serial casting on spastic equinus foot in children with cerebral palsy after botulinum toxin-A treatment. *Am J Phys Med Rehabil* 2017; 96: 221–225.
33. Scholtes VA, Dallmeijer AJ, Knol DL, Speth LA, Maathuis CG, Jongerius PH, et al. The combined effect of lower-limb multilevel botulinum toxin type a and comprehensive rehabilitation on mobility in children with cerebral palsy: a randomized clinical trial. *Arch Phys Med Rehabil* 2006; 87: 1551–1558.
34. Reeuwijk A, van Schie PE, Becher JG, Kwakkel G. Effects of botulinum toxin type A on upper limb function in children with cerebral palsy: a systematic review. *Clin Rehabil* 2006; 20: 375–387.
35. Sakzewski L, Reedman S, Hoffmann T. Do we really know what they were testing? Incomplete reporting of interventions in randomised trials of upper limb therapies in unilateral cerebral palsy. *Res Dev Disabil* 2016; 59: 417–427.
36. Reedman S, Boyd RN, Sakzewski L. The efficacy of in-

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- terventions to increase physical activity participation of children with cerebral palsy: a systematic review and meta-analysis. *Dev Med Child Neurol* 2017; 59: 1011–1018.
37. Boyd RN, Dobson F, Parrott J, Love S, Oates J, Larson A, et al. The effect of botulinum toxin type A and a variable hip abduction orthosis on gross motor function: a randomized controlled trial. *Eur J Neurol* 2001; 8 Suppl 5: 109–119.
 38. Bjornson K, Hays R, Graubert C, Price R, Won F, McLaughlin JF, et al. Botulinum toxin for spasticity in children with cerebral palsy: a comprehensive evaluation. *Pediatrics* 2007; 120: 49–58.
 39. Dodd KJ, Taylor NF, Damiano DL. A systematic review of the effectiveness of strength-training programs for people with cerebral palsy. *Arch Phys Med Rehabil* 2002; 83: 1157–1164.
 40. Verschuren O, Balemans AC. Update of the core set of exercise tests for children and adolescents with cerebral palsy. *Pediatr Phys Ther* 2015; 27: 187–189.
 41. Butler JM, Scianchi A, Ada L. Effect of cardiorespiratory training on aerobic fitness and carryover to activity in children with cerebral palsy: a systematic review. *Int J Rehabil Res* 2010; 33: 97–103.
 42. Rogers A, Furler BL, Brinks S, Darrah J. A systematic review of the effectiveness of aerobic exercise interventions for children with cerebral palsy: an AACPDM evidence report. *Dev Med Child Neurol* 2008; 50: 808–814.
 43. Verschuren O, Ketelaar M, Gorter JW, Helders PJ, Uiterwaal CS, Takken T. Exercise training program in children and adolescents with cerebral palsy: a randomized controlled trial. *Arch Pediatr Adolesc Med* 2007; 161: 1075–1081.
 44. Ketelaar M, Vermeer A, Hart H, van Petegem-van Beek E, Helders PJ. Effects of a functional therapy program on motor abilities of children with cerebral palsy. *Phys Ther* 2001; 81: 1534–1545.
 45. Lowing K, Bexelius A, Brogren Carlberg E. Activity focused and goal directed therapy for children with cerebral palsy – do goals make a difference? *Disabil Rehabil* 2009; 31: 1808–1816.
 46. Faigenbaum AD, Kraemer WJ, Blimkie CJ, Jeffreys I, Micheli LJ, Nitka M, et al. Youth resistance training: updated position statement paper from the national strength and conditioning association. *J Strength Cond Res* 2009; 23 (5 Suppl): S60–S79.
 47. Anttila H, Autti-Ramo I, Suoranta J, Makela M, Malmivaara A. Effectiveness of physical therapy interventions for children with cerebral palsy: a systematic review. *BMC Pediatr* 2008; 8: 14.
 48. Mockford M, Caulton JM. Systematic review of progressive strength training in children and adolescents with cerebral palsy who are ambulatory. *Pediatr Phys Ther* 2008; 20: 318–333.
 49. Scholtes VA, Becher JG, Comuth A, Dekkers H, Van Dijk L, Dallmeijer AJ. Effectiveness of functional progressive resistance exercise strength training on muscle strength and mobility in children with cerebral palsy: a randomized controlled trial. *Dev Med Child Neurol* 2010; 52: e107–e113.
 50. Gorter JW, Becher J, Oosterom I, Pin T, Dyke P, Chan M, et al. To stretch or not to stretch in children with cerebral palsy. *Dev Med Child Neurol* 2007; 49: 797–800.
 51. Moreau NG, Bodkin AW, Bjornson K, Hobbs A, Soileau M, Lahasky K. Effectiveness of rehabilitation interventions to improve gait speed in children with cerebral palsy: systematic review and meta-analysis. *Phys Ther* 2016; 96: 1938–1954.
 52. Schasfoort F, Dallmeijer A, Pangalila R, Catsman C, Stam H, Becher J, et al. Value of botulinum toxin injections preceding a comprehensive rehabilitation period for children with spastic cerebral palsy: a cost-effectiveness study. *J Rehabil Med* 2018; 50: 22–29.
 53. WHO. International Classification of Functioning. Geneva: WHO; 2001.
 54. Schiariti V, Masse LC. Identifying relevant areas of functioning in children and youth with Cerebral Palsy using the ICF-CY coding system: from whose perspective? *Eur J Paediatr Neurol* 2014; 18: 609–617.
 55. Braendvik SM, Roeleveld K, Andersen GL, Raftemo AE, Ramstad K, Majkic-Tajsic J, et al. The WE-Study: does botulinum toxin A make walking easier in children with cerebral palsy?: Study protocol for a randomized controlled trial. *Trials* 2017; 18: 58.
 56. Verschuren O, Ada L, Maltais DB, Gorter JW, Scianchi A, Ketelaar M. Muscle strengthening in children and adolescents with spastic cerebral palsy: considerations for future resistance training protocols. *Phys Ther* 2011; 91: 1130–1139.
 57. Verschuren O, Ketelaar M, Takken T, Van Brussel M, Helders PJ, Gorter JW. Reliability of hand-held dynamometry and functional strength tests for the lower extremity in children with Cerebral Palsy. *Disabil Rehabil* 2008; 30: 1358–1366.
 58. Becher J. [Pediatric rehabilitation medicine – manual standard physical examination in children with central motor paresis.] Amsterdam: Reed Business; 2011 (in Dutch).
 59. Perry J, Burnfield J. Gait analysis: Normal and Pathological Function. (2010) 2nd edition. Thorofare, New Jersey: SLACK Inc.; 2010.
 60. Becher J. Pediatric rehabilitation in children with cerebral palsy: general management, classification of motor disorders. *J Prosthet Orthot* 2002; 14: 143–149.
 61. Steenbeek D, Meester-Delver A, Becher JG, Lankhorst GJ. The effect of botulinum toxin type A treatment of the lower extremity on the level of functional abilities in children with cerebral palsy: evaluation with goal attainment scaling. *Clin Rehabil* 2005; 19: 274–282.
 62. Lowing K, Thews K, Haglund-Akerlind Y, Gutierrez-Farewik EM. Effects of botulinum toxin-A and Goal-directed physiotherapy in children with cerebral palsy GMFCS levels I & II. *Phys Occup Ther Pediatr* 2017; 37: 268–282.
 63. Desloovere K, Schorkhuber V, Fagard K, Van Campenhout A, De Cat J, Pauwels P, et al. Botulinum toxin type A treatment in children with cerebral palsy: evaluation of treatment success or failure by means of goal attainment scaling. *Eur J Paediatr Neurol* 2012; 16: 229–236.
 64. Tilton A, Russman B, Aydin R, Dincer U, Escobar RG, Kutlay S, et al. AbobotulinumtoxinA (Dysport®) improves function according to goal attainment in children with dynamic equinus due to cerebral palsy. *J Child Neurol* 2017; 32: 482–487.
 65. Sakzewski L, Boyd R, Ziviani J. Clinimetric properties of participation measures for 5- to 13-year-old children with cerebral palsy: a systematic review. *Dev Med Child Neurol* 2007; 49: 232–240.
 66. Steenbeek D, Gorter JW, Ketelaar M, Galama K, Lindeman E. Responsiveness of goal attainment scaling in comparison to two standardized measures in outcome evaluation of children with cerebral palsy. *Clin Rehabil* 2011; 25: 1128–1139.
 67. Steenbeek D, Ketelaar M, Galama K, Gorter JW. Goal attainment scaling in paediatric rehabilitation: a critical review of the literature. *Dev Med Child Neurol* 2007; 49: 550–556.
 68. Scholtes VA, Dallmeijer AJ, Knol DL, Speth LA, Maathuis CG, Jongerius PH, et al. Effect of multilevel botulinum toxin a and comprehensive rehabilitation on gait in cerebral palsy. *Pediatr Neurol* 2007; 36: 30–39.
 69. Reddiough DS, King JA, Coleman GJ, Fosang A, McCoy AT, Thomason P, et al. Functional outcome of botulinum toxin A injections to the lower limbs in cerebral palsy. *Dev Med Child Neurol* 2002; 44: 820–827.
 70. Desloovere K, Molenaers G, Jonkers I, De Cat J, De Borre L, Nijs J, et al. A randomized study of combined botulinum toxin type A and casting in the ambulant child with cerebral palsy using objective outcome measures. *Eur J Neurol* 2001; 8 Suppl 5: 75–87.
 71. Read FA, Boyd RN, Barber LA. Longitudinal assessment of gait quality in children with bilateral cerebral palsy

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- following repeated lower limb intramuscular botulinum toxin-A injections. *Res Dev Disabil* 2017; 68: 35–41.
72. Yap R, Majnemer A, Benaroch T, Cantin MA. Determinants of responsiveness to botulinum toxin, casting, and bracing in the treatment of spastic equinus in children with cerebral palsy. *Dev Med Child Neurol* 2010; 52: 186–193.
73. Horn SD, Corrigan JD, Dijkers MP. Traumatic brain injury rehabilitation comparative effectiveness research: introduction to the traumatic brain injury-practice based evidence archives supplement. *Arch Phys Med Rehabil* 2015; 96 (8 Suppl): S173–S177.
74. van den Noort JC, Bar-On L, Aertbelien E, Bonikowski M, Braendvik SM, Brostrom EW, et al. European consensus on the concepts and measurement of the pathophysiological neuromuscular responses to passive muscle stretch. *Eur J Neurol* 2017; 24: 981–e38.
75. Horn SD, DeJong G, Deutscher D. Practice-based evidence research in rehabilitation: an alternative to randomized controlled trials and traditional observational studies. *Arch Phys Med Rehabil* 2012; 93 (8 Suppl): S127–S137.