

## **Sitting for Participation: What Does the Research Say?**

**Rifton Webinar | August 16, 2018**

Aissaoui R, Lacoste M, Dansereau J. (2001) Analysis of sliding and pressure distribution during a repositioning of persons in a simulator chair. *IEEE Trans Neural Syst Rehabil Eng.* 9(2):215-24. Abstract:  
<https://www.ncbi.nlm.nih.gov/pubmed/11474974>

Angelo J. Using single-subject design in clinical decision making: the effects of tilt-in-space on head control for a child with cerebral palsy. *Assistive Technol.* 1993;5(1):46 – 49. Abstract:  
<https://www.tandfonline.com/doi/abs/10.1080/10400435.1993.10132206> [McNamara, 2007] [Michael, 2007]

Angsupaisal M, Dijkstra LJ, la Bastide-van Gemert S, van Hoorn JF, Burger K, Maathuis CGB, Hadders-Algra M. (2017) Best seating condition in children with spastic cerebral palsy: One type does not fit all. *Res Dev Disabil.* 71:42-52. Abstract <https://www.ncbi.nlm.nih.gov/pubmed/28987971>

Angsupaisal M, Maathuis CG, Hadders-Algra M. (2015) Adaptive seating systems in children with severe cerebral palsy across International Classification of Functioning, Disability and Health for Children and Youth version domains: a systematic review. *Dev Med Child Neurol.* 57(10):919-30. Free Full Text  
<https://onlinelibrary.wiley.com/doi/full/10.1111/dmcn.12762> [Systematic Review]

Avellis M, Cazzaniga A, Cimolin V, Galli M, and Turconi AC. (2010). Dynamic seating vs. rigid seating: A quantitative comparison using 3d movement analysis in people with cerebral palsy. *Posture and Mobility* 26(1):15–16. [Citation – Google Scholar] [See also Lange, ML. (2017 May 9) below.]

Ball, M. (2017, February 16). *Tilt and Recline in Pediatric Mobility Products*, Mobility Management, <https://mobilitymgmt.com/webcasts/list/all-webinars.aspx> Retrieved February 16, 2017 from <http://w.on24.com/r.htm?e=1343272&s=1&k=C0DBD558FD07C8F4065B8896AA00DC7F>

Bay, JL. (1991) Positioning for Head Control to Access an Augmentative Communication Machine. *American Journal of Occupational Therapy.* 45(6): 544-549. Free Full Text (download PDF)  
<https://ajot.aota.org/article.aspx?articleid=1876626>

Bennett L, Kavner D, Lee BK, Trainor FA. (1979) Shear vs pressure as causative factors in skin blood flow occlusion. *Arch Phys Med Rehabil.* 60(7):309-14. Abstract: <https://www.ncbi.nlm.nih.gov/pubmed/454129>

Bidabe DL. Move Toileting Care. 2014; Bakersfield, CA. Kern County Superintendent of Schools. <http://www.move-international.org/materials/>

Bidabe DL. Mobility Opportunities Via Education/Experience Reference Manual. 2016; Rifton, NY. Community Products, LLC. <http://www.move-international.org/materials/>

Brogren E, Forssberg H, Hadders-Algra M. (2001) Influence of two different sitting positions on postural adjustments in children with spastic diplegia. *Dev Med Child Neurol.* 43(8):534-46. Free Full Text  
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1469-8749.2001.tb00757.x>

Brown JE, Thompson M, Brizzolara K. (2018) Head Control Changes After Headpod Use in Children With Poor Head Control: A Feasibility Study. *Pediatric Physical Therapy.* 30(2):142-148. Abstract  
[https://journals.lww.com/pedpt/Abstract/2018/04000/Head\\_Control\\_Changes\\_After\\_Headpod\\_Use\\_in\\_Children.19.aspx](https://journals.lww.com/pedpt/Abstract/2018/04000/Head_Control_Changes_After_Headpod_Use_in_Children.19.aspx)

Butler PB. (1998) A preliminary report on the effectiveness of trunk targeting in achieving independent sitting balance in children with cerebral palsy. *Clin Rehabil.* 12(4):281-93. Abstract:  
<http://journals.sagepub.com/doi/pdf/10.1191/026921598667577442> [Harris, 2005]

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Butler PB, Saavedra S, Sofranac M, Jarvis SE, Woollacott MH. (2010) Refinement, reliability, and validity of the segmental assessment of trunk control. *Pediatr Phys Ther* 22(3):246-57. Free Full Text  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2927393/>

Carlberg EB, Hadders-Algra M. (2005) Postural dysfunction in children with cerebral palsy: some implications for therapeutic guidance. *Neural Plast.* 12(2-3):221-8. Free Full Text  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2565463/> [Zulkapli, 2016]

Child Development and Rehabilitation. <http://www.childdevelopment.ca/Home.aspx> 2014 GMFCS Hip Health Clinical Tool [Positioning for Children GMFCS Levels IV-V: focus on hip health.]  
[http://www.childdevelopment.ca/Libraries/Hip\\_Health/sunnyhill\\_clinical\\_tool\\_Hip\\_Health\\_Full\\_FINAL.sflb.ashx](http://www.childdevelopment.ca/Libraries/Hip_Health/sunnyhill_clinical_tool_Hip_Health_Full_FINAL.sflb.ashx)

Cherng, R, Lin, H, Ju, Y, Ho, C. (2009) Effect of seat surface inclination on postural stability and forward reaching efficiency in children with spastic cerebral palsy. *Research in Developmental Disabilities.* 30(6):1420-1427. Abstract:  
<https://www.sciencedirect.com/science/article/pii/S0891422209001012?via%3Dihub>

Chung J, Evans J, Lee C, Lee J, Rabbani Y, Roxborough L, Harris SR. (2008) Effectiveness of adaptive seating on sitting posture and postural control in children with cerebral palsy. *Pediatric Physical Therapy* 20(4): 303-317. Free Full Text [https://journals.lww.com/pedpt/fulltext/2008/02040/Effectiveness\\_of\\_Adaptive\\_Seating\\_on\\_Sitting.3.aspx](https://journals.lww.com/pedpt/fulltext/2008/02040/Effectiveness_of_Adaptive_Seating_on_Sitting.3.aspx) [Systematic Review] [Ryan, 2012]

Chung J, Evans J, Lee C, Lee J, Rabbani-nejad Y, Roxborough L. (2007, July 30). Efficacy and Effectiveness of Adaptive Seating on Sitting Posture and Postural Control in Children with Cerebral Palsy. UBC Graduate Research , The University of British Columbia. Retrieved from  
<https://open.library.ubc.ca/cIRcle/collections/graduateresearch/42591/items/1.0081223> [Select Show Media team\_Adaptive\_seating.pdf]

Cimolin V, Piccinini L, Avellis M, Cazzaniga A, Turconi AC, Crivellini M, Galli M. (2009) 3D-Quantitative evaluation of a rigid seating system and dynamic seating system using 3D movement analysis in individuals with dystonic tetraparesis. *Disabil Rehabil Assist Technol.* 4(6):422-8. Abstract:  
<https://www.tandfonline.com/doi/full/10.3109/17483100903254553> [Angsupaisal, 2015]

Costigan FA, Light J.(2010) Effect of seated position on upper-extremity access to augmentative communication for children with cerebral palsy: preliminary investigation. *Am J Occup Ther.* 64(4):596-604. Free Full Text  
<https://ajot.aota.org/article.aspx?articleid=1854548>

Costigan FA, Light J.(2011) Functional seating for school-age children with cerebral palsy: an evidence-based tutorial. *Lang Speech Hear Serv Sch.* Apr;42(2):223-36. Abstract  
<https://lshss.pubs.asha.org/article.aspx?articleid=1777038> [Full Text Available on PTNow]

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Curtis DJ, Butler P, Saavedra S, Bencke J, Kallebose T, Sonne-Holm S, Woollacott M. (2015) The central role of trunk control in the gross motor function of children with cerebral palsy: a retrospective cross-sectional study. (2015) *Dev Med Child Neurol.* 2015 Apr;57(4):351-7. Free Full Text <https://onlinelibrary.wiley.com/doi/full/10.1111/dmcn.12641>

Curtis DJ, Woollacott M, Bencke J, Lauridsen HB, Saavedra S, Bandholm T, Sonne-Holm S. (2018) The functional effect of segmental trunk and head control training in moderate-to-severe cerebral palsy: A randomized controlled trial. *Dev Neurorehabil.* 21(2):91-100. Abstract:

<https://www.tandfonline.com/doi/full/10.1080/17518423.2016.1265603>

da Costa CS, Saavedra SL, Rocha NA, Woollacott MH. (2017) Effect of Biomechanical Constraints on Neural Control of Head Stability in Children with Moderate to Severe Cerebral Palsy. *Phys Ther.* 2017;97(3):374-85. Free Full Text <https://academic.oup.com/ptj/article/97/3/374/2998981>

De Graaf-Peters VB, Blauw-Hospers CH, Dirks T, Bakker H, Bos AF & Hadders-Algra M. (2007) Development of postural control in typically developing children and children with cerebral palsy: Possibilities for intervention? *Neuroscience and Biobehavioral Reviews* 31(8):1191-1200. Abstract:

<https://www.sciencedirect.com/science/article/pii/S0149763407000486?via%3Dihub>

Ekbom B, Myhr U. (2002) Effects of the hip abduction orthosis on muscle activity in children with Cerebral Palsy. *Physiotherapy Theory and Practice.* 18(2):55-63. Abstract:

<https://www.tandfonline.com/doi/abs/10.1080/09593980290058427> [Full Text Available on PTNow] [Stavness, 2006] [Angsupaisal, 2015]

Gawlitta D, Li W, Oomens CW, Baaijens FP, Bader DL, Bouter CV. (2007) The relative contributions of compression and hypoxia to development of muscle tissue damage: an in vitro study. *Ann Biomed Eng.* 35(2):273-84. Abstract: <https://link.springer.com/article/10.1007%2Fs10439-006-9222-5>

Goodworth AD, Wu YH, Felmlee D, Dunklebarger E, Saavedra S. (2017) A Trunk Support System to Identify Posture Control Mechanisms in Populations Lacking Independent Sitting. *IEEE Trans Neural Syst Rehabil Eng.* 25(1):22-30. Free Full Text <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5035563/>

Hadders-Algra M, van der Fits IB, Stremmelaar EF, Touwen BC. (1999) Development of postural adjustments during reaching in infants with CP. *Dev Med Child Neurol.* 41(11):766-76. Free Full Text <https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1469-8749.1999.tb00537.x> [McNamara, 2007]

Hadders-Algra M, van der Heide JC, Fock JM, Stremmelaar E, van Eykern LA, Otten B. (2007) Effect of seat surface inclination on postural control during reaching in preterm children with cerebral palsy. *Phys Ther.* 87(7):861-71. Abstract <https://academic.oup.com/ptj/article-abstract/87/7/861/2742167>

Hahn ME, Simkins SL, Gardner JK, Kaushik G. (2009) A dynamic seating system for children with cerebral palsy. *Journal of Musculoskeletal Research.* 12(1):21-30. Abstract:

<https://www.worldscientific.com/doi/abs/10.1142/S0218957709002158>

Hansen L, Erhardsen KT, Bencke J, Magnusson SP, Curtis DJ. (2018) The Reliability of the Segmental Assessment of Trunk Control (SATCo) in Children with Cerebral Palsy. *Phys Occup Ther Pediatr.* 38(3):291-304. Abstract

<https://www.tandfonline.com/doi/full/10.1080/01942638.2017.1337662>

Harbourne R, Kamm K. (2015). Upper extremity function: What's posture got to do with it? *Journal of Hand Therapy.* 28(2):106-12. Abstract: [https://www.jhandtherapy.org/article/S0894-1130\(15\)00026-5/fulltext](https://www.jhandtherapy.org/article/S0894-1130(15)00026-5/fulltext) [PDF available on PTNow]

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**Rifton Webinar | August 16, 2018**

Harris SR, and Roxborough L. (2005) Efficacy and Effectiveness of Physical Therapy in Enhancing Postural Control in Children With Cerebral Palsy. *Neural Plast* 12(2-3): 229–243. Free Full Text  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2565452/pdf/NP-12-229.pdf> [Systematic Review] [Ryan, 212]

Himmelmann K, Beckung E, Hagberg G, Uvebrant P. (2007) Bilateral spastic cerebral palsy: prevalence through four decades, motor function and growth. *Eur J Paediatr Neurol*; 11: 215–22. Abstract [https://www.ejpn-journal.com/article/S1090-3798\(07\)00003-7/fulltext](https://www.ejpn-journal.com/article/S1090-3798(07)00003-7/fulltext)

Holmes KJ, Michael SM, Thorpe SL, Solomonidis SE. (2003) Management of scoliosis with special seating for the non-ambulant spastic cerebral palsy population--a biomechanical study. *Clin Biomech*. 18(6):480-7. Abstract: [https://www.clinbiomech.com/article/S0268-0033\(03\)00075-5/fulltext](https://www.clinbiomech.com/article/S0268-0033(03)00075-5/fulltext) [Angsupaisal, 2015] [Stavness, 2006]

Hulme JB, Bain B, Hardin M, McKinnon A, Waldron D. (1989) The influence of adaptive seating devices on vocalization. *J Commun Disord*. 22(2):137-45. Abstract only  
<https://www.sciencedirect.com/science/article/abs/pii/0021992489900300>

Hulme JB, Gallacher K, Walsh J, Niesen S, Waldron D. (1987) Behavioral and postural changes observed with use of adaptive seating by clients with multiple handicaps. *Phys Ther*. 67(7):1060-7. Free Full Text  
<https://pdfs.semanticscholar.org/e839/a011a4d8648867f7512db30cd50bdb4da6ee.pdf> [Stavness, 2006] [Angsupaisal, 2015]

Hulme JB, Shaver J, Acher S, Mullette L, Eggert C. (1987) Effects of adaptive seating devices on the eating and drinking of children with multiple handicaps. *Am J Occup Ther*. 41(2):81-9. Free Full Text  
<https://ajot.aota.org/article.aspx?articleid=1882274> [Angsupaisal, 2015]

Jonsdottir J, Fetters, L, Kluzik, J. (1997) Effects of Physical Therapy on Postural Control in Children with Cerebral Palsy. *Pediatric Physical Therapy*. 9(2):68-75. Free Full Text (PDF)  
[https://journals.lww.com/pedpt/Abstract/1997/00920/Effects\\_of\\_Physical\\_Therapy\\_on\\_Postural\\_Control\\_in.5.aspx](https://journals.lww.com/pedpt/Abstract/1997/00920/Effects_of_Physical_Therapy_on_Postural_Control_in.5.aspx) [Harris, 2005]

Kamm K, Thelen E, Jensen JL.(1990) A dynamical systems approach to motor development. *Phys Ther*. 70(12):763-75. Abstract: <https://academic.oup.com/ptj/article-abstract/70/12/763/2728604?redirectedFrom=fulltext>

Kangas KM. (2000) The Task Performance Position: Providing Seating for Accurate Access to Assistive Technology. *Technology Special Interest Quarterly*. 10(3)1-3. Free Full Text  
<https://cindynankee.wikispaces.com/file/view/Kangas+2000+SIS.pdf>

Kurne SA, Gupta AD. (2016) Disability, Impact of Long-term Use of Adaptive Seating Device on Children with Cerebral Palsy and their Families in Mumbai, India. *CBR & Inclusive Development*, 27(3): 117-131. Free Full Text (download PDF) <http://dcidj.org/article/view/465>

Lacoste M, Therrien M, Prince F. (2009) Stability of children with cerebral palsy in their wheelchair seating: perceptions of parents and therapists. *Disabil Rehabil Assist Technol*. 4(3):143-50. Abstract:

<https://www.tandfonline.com/doi/full/10.1080/17483100802362036> [Angsupaisal, 2015]

Lange, ML. (2017 May 9). *Seating Dynamics*. Retrieved from <https://www.seatingdynamics.com/wp-content/uploads/2017/03/Literature-Review-on-Dynamic-Wheelchair-Seating.pdf> July 2018.

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Lee JM, Mahler TJ, Westling DL. (1985) Reducing occurrences of an asymmetrical tonic neck reflex. *Am J Ment Defic.* 89(6):617-21. Abstract <https://www.ncbi.nlm.nih.gov/pubmed/4003456>

Lephart K, Kaplan S. (2015) Two Seating Systems' Effects on an Adolescent With Cerebral Palsy and Severe Scoliosis. *Pediatric Physical Therapy* 27(3): 258-266. Free Full Text

[https://journals.lww.com/pedpt/fulltext/2015/27030/Two\\_Seating\\_Systems\\_Effects\\_on\\_an\\_Adolescent\\_With.12.aspx](https://journals.lww.com/pedpt/fulltext/2015/27030/Two_Seating_Systems_Effects_on_an_Adolescent_With.12.aspx)

Liao SF, Yang TF, Hsu TC, Chan RC, Wei TS. (2003) Differences in seated postural control in children with spastic cerebral palsy and children who are typically developing. (2003) *Am J Phys Med Rehabil.* 82(8):622-6. Abstract:

[https://journals.lww.com/ajpmr/Abstract/2003/08000/Differences\\_in\\_Seated\\_Postural\\_Control\\_in\\_Children.9.aspx](https://journals.lww.com/ajpmr/Abstract/2003/08000/Differences_in_Seated_Postural_Control_in_Children.9.aspx)

Mac Neela JC. (1987) An Overview of Therapeutic Positioning for Multiply-Handicapped Persons, Including Augmentative Communication Users. *Physical & Occupational Therapy In Pediatrics.* 7(2): 39-60. Abstract:  
[https://www.tandfonline.com/doi/abs/10.1080/J006v07n02\\_05](https://www.tandfonline.com/doi/abs/10.1080/J006v07n02_05)

McClennaghan BA, Thombs L, Milner M. (1992) Effects of seat-surface inclination on postural stability and function of the upper extremities of children with cerebral palsy. *Dev Med Child Neurol.* 34(1):40-8. Abstract:  
<https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-8749.1992.tb08561.x> [Chung, 2008] [Stavness, 2006]  
[McNamara, 2007] [Michael, 2007]

McDonald RL, Surtees R. (2007) Longitudinal study evaluating a seating system using a sacral pad and kneeblock for children with cerebral palsy. *Disabil Rehabil.* 29(13):1041-7. Abstract  
<https://www.tandfonline.com/doi/abs/10.1080/09638280600943087> [Chung, 2008] [Angsupaisal, 2015]

McDonald R, Surtees R. (2007) Changes in postural alignment when using kneeblocks for children with severe motor disorders. *Disabil Rehabil Assist Technol.* 2(5):287-91. Abstract:  
<https://www.tandfonline.com/doi/full/10.1080/17483100701497057?scroll=top&needAccess=true> (Full Text Available on PTNow)

McDonald R, Surtees R, & Wirz S. (2004). The International Classification of Functioning, Disability, and Health provides a model for adaptive seating interventions for children with cerebral palsy. *British Journal of Occupational Therapy,* 67(7):293–302. Abstract <http://journals.sagepub.com/doi/10.1177/030802260406700703> [Angsupaisal, 2015]

McDonald R, Surtees R, & Wirz S. (2007) A comparative exploration of the thoughts of parents and therapists regarding seating equipment for children with multiple and complex needs. *Disability and Rehabilitation: Assistive Technology,* 2(6): 319 – 325. Abstract: <https://www.ncbi.nlm.nih.gov/pubmed/19263562>

McNamara L, Casey J. (2007) Seat inclinations affect the function of children with cerebral palsy: a review of the effect of different seat inclines. *Disabil Rehabil Assist Technol.* 2(6):309-18. Abstract  
<https://www.ncbi.nlm.nih.gov/pubmed/19263561> [Systematic Review] [Ryan, 2012]

Michael SM, Porter D, Pountney TE. (2007) Tilted seat position for non-ambulant individuals with neurological and neuromuscular impairment: a systematic review. *Clin Rehabil.* 21(12):1063-74. Free Full Text  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2630001/> [Systematic Review]

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Miedaner J. (1990) The Effects of Sitting Positions on Trunk Extension for Children with Motor Impairment. *Pediatric Physical Therapy* 2(1):11-14. Free Full Text  
[https://journals.lww.com/pedpt/Abstract/1990/02010/The\\_Effects\\_of\\_Sitting\\_Positions\\_on\\_Trunk.3.aspx](https://journals.lww.com/pedpt/Abstract/1990/02010/The_Effects_of_Sitting_Positions_on_Trunk.3.aspx) [Chung, 2008] [Michael, 2007]

Miedaner J, Finuf L. (1993). Effects of Adaptive Positioning on Psychological Test Scores for Preschool Children With Cerebral Palsy. *Pediatric Physical Therapy*. 5(4):176-182  
Free Full Text:  
[https://journals.lww.com/pedpt/Abstract/1993/05040/Effects\\_of\\_Adaptive\\_Positioning\\_on\\_Psychological.3.aspx](https://journals.lww.com/pedpt/Abstract/1993/05040/Effects_of_Adaptive_Positioning_on_Psychological.3.aspx)  
[Stavness, 2006]

Myhr U; von Wendt L. (1990) Reducing spasticity and enhancing postural control for the creation of a functional sitting position in children with cerebral palsy: a pilot study. *Physiotherapy Theory & Practice* 6(2): 65-76. Abstract:  
<https://www.tandfonline.com/doi/abs/10.3109/09593989009037782> [Chung, 2006] [Stavness, 2006]

Myhr, U., & von Wendt, L. (1991). Improvement of Functional Sitting Position for children with cerebral palsy. *Developmental Medicine & Child Neurology*, 33(3): 246–256. Free Full Text <http://www.learntomove.se/wp-content/uploads/2016/08/improvement.-myhr.pdf> [Chung, 2008] [Harris, 2005] [McNamara, 2007] [Angsupaisal, 2015]

Myhr U, & von Wendt L. (1993). Influence of different sitting positions and abduction orthoses on leg muscle activity in children with cerebral palsy. *Developmental Medicine & Child Neurology*, 35(10):871–880. Abstract  
<https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1993.tb11564.x> [Stavness, 2006] [McNamara, 2007]

Myhr U, von Wendt L, Norrlin S, & Radell U. (1995). Five-year follow-up of FSP in children with cerebral palsy. *Developmental Medicine & Child Neurology*. 37(7):587–596. Abstract:  
<https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1995.tb12047.x> [Chung, 2008] [Harris, 2005]  
[Stavness, 2006] [McNamara, 2007]

Nwaobi, O. (1986). Effects of body orientation in space on tonic muscle activity of patients with cerebral palsy. *Developmental Medicine & Child Neurology*. 28(1): 41–44. Abstract:  
<https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1986.tb03828.x> [Michael, 2007]

Nwaobi, O. (1987). Seating orientations and upper extremity function in children with cerebral palsy. *Physical Therapy*. 67(8): 1209–1212. Abstract <https://academic.oup.com/ptj/article-abstract/67/8/1209/2728159?redirectedFrom=fulltext> Free Full Text  
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.888.1176&rep=rep1&type=pdf> [Stavness, 2006]  
[Michael, 2007]

Nwaobi O, Brubaker C, Cusick B, & Sussman M. (1983). Electromyographic investigation of extensor activity in cerebral palsied children in different seating positions. *Developmental Medicine & Child Neurology*. 25(2):175–183. Abstract: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1983.tb13741.x> [Chung, 2006] [Michael, 2007]

Nwaobi O, & Smith P. (1986). Effect of adaptive seating on pulmonary function of children with cerebral palsy. *Developmental Medicine & Child Neurology*. 28(3):351–354. Abstract:  
<https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1986.tb03883.x>

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Palisano et al. (2008) Content validity of the expanded and revised Gross Motor Function Classification System. *Dev Med Child Neurol.* 50(10):744-50. Free Full Text: <http://onlinelibrary.wiley.com/doi/10.1111/j.1469-8749.2008.03089.x/full>

Palisano et al.(1997) Development and reliability of a system to classify gross motor function in children with cerebral palsy. *Dev Med Child Neurol.* 39(4):214-223. Free Full Text: <http://onlinelibrary.wiley.com/doi/10.1111/j.1469-8749.1997.tb07414.x/epdf>

Paleg G. (2014, November 5). *Positioned for Learning*. Conference on Exceptional Children, Physical Therapy Institute. Retrieved from <https://ec.ncpublicschools.gov/conferences-profdev/annual-conference/2014/materials> PDF <https://ec.ncpublicschools.gov/conferences-profdev/annual-conference/2014/materials/phys-therapy.pdf> July 2018

Pope PM, Bowes CE, Booth E. (1994) Postural control in sitting the SAM system: evaluation of use over three years. *Dev Med Child Neurol.* 36(3):241-52. Abstract: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1994.tb11837.x> [Angsupaisal, 2015][Chung, 2008] [Harris, 2005] [Stavness, 2006]

Porter D, Michael S, Kirkwood C. (2008) Is there a relationship between preferred posture and positioning in early life and the direction of subsequent asymmetrical postural deformity in non ambulant people with cerebral palsy? *Child Care Health Dev.* 34(5):635-41. Abstract <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2214.2008.00852.x>

Pountney TE et al. (2009) Hip subluxation and dislocation in cerebral palsy – a prospective study on the effectiveness of postural management programmes. *Physiother Res Int.* 14(2):116-127. Abstract: <https://www.ncbi.nlm.nih.gov/pubmed/?term=19194957>

Rachwani J, Santamaria V, Saavedra SL, Woollacott MH. (2015) The development of trunk control and its relation to reaching in infancy: a longitudinal study. *Front Hum Neurosci.* Feb 24;9:94. Free Full Text <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4338766/>

Redstone, F. (2004). The effect of seating position on respiratory patterns of preschoolers with cerebral palsy. *International Journal of Rehabilitation Research.* 27(4):283–288. Abstract <https://www.ncbi.nlm.nih.gov/pubmed/15572991>

Redstone F. (2005). Seating position and length of utterance of preschoolers with cerebral palsy. *Perceptual & Motor Skills.* 101(3):961–962. Abstract <https://www.ncbi.nlm.nih.gov/pubmed/?term=16491702>

Reid B, Willoughby K, Harvey A, Graham K. CanChild [www.canchild.ca](http://www.canchild.ca) / GMFCS Descriptors and Illustrations (English). Retrieved from [https://www.canchild.ca/system/tenon/assets/attachments/000/002/114/original/GMFCS\\_English\\_Illustrations\\_V2.pdf](https://www.canchild.ca/system/tenon/assets/attachments/000/002/114/original/GMFCS_English_Illustrations_V2.pdf) Accessed August 2018.

Reid, D. (1996). The effects of the saddle seat on seated postural control and upper extremity movement in children with cerebral palsy. *Developmental Medicine & Child Neurology.* 38(9):805–815. Abstract: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1996.tb15115.x> [Chung, 2008] [Harris, 2005] [Stavness, 2006]

Reid D, Rigby P, Ryan S. (1999) Functional impact of a rigid pelvic stabilizer on children with cerebral palsy who use wheelchairs: users' and caregivers' perceptions. *Pediatr Rehabil.* 3(3):101-18. Abstract: <https://www.ncbi.nlm.nih.gov/pubmed/10797887> [Full Text Available on PTNow]

## **Sitting for Participation: What Does the Research Say?**

**Rifton Webinar | August 16, 2018**

Reid DT, Sochaniwskyj A. (1991). Effects of anterior-tipped seating on respiratory function of normal children and children with cerebral palsy. *Int J Rehabil Res* 14:203-13. Abstract:

[https://journals.lww.com/intjrehabiles/Citation/1991/09000/Effects\\_of\\_anterior\\_tipped\\_seating\\_on\\_respiratory.3.aspx](https://journals.lww.com/intjrehabiles/Citation/1991/09000/Effects_of_anterior_tipped_seating_on_respiratory.3.aspx) [Michael, 2007] [McNamara, 2007]

Reid DT, Sochaniwskyj A, Milner M. (1991) An investigation of postural sway in sitting of normal children and children with neurological disorders. *Phys Occupat Ther Pediatrics*. 11(1):19 – 35. Abstract:

[https://www.tandfonline.com/doi/abs/10.1080/J006v11n01\\_02](https://www.tandfonline.com/doi/abs/10.1080/J006v11n01_02)

Rigby P, Reid D, Schoger S, Ryan S. (2001) Effects of a wheelchair-mounted rigid pelvic stabilizer on caregiver assistance for children with cerebral palsy. *Assist Technol.* 13(1):2-11. Abstract:

<https://www.tandfonline.com/doi/abs/10.1080/10400435.2001.10132029>

Rigby PJ, Ryan SE, Campbell KA. (2009) Effect of adaptive seating devices on the activity performance of children with cerebral palsy. *Arch Phys Med Rehabil.* 90(8):1389-95. Free Full Text [https://www.archives-pmr.org/article/S0003-9993\(09\)00311-6/fulltext](https://www.archives-pmr.org/article/S0003-9993(09)00311-6/fulltext) [Angsupaisal, 2015]

Roxborough L. (1995) Review of the efficacy and effectiveness of adaptive seating for children with cerebral palsy. *Assist Technol.* 7:17–25. Abstract: <https://www.tandfonline.com/doi/abs/10.1080/10400435.1995.10132248> [Ryan, 2012]

Ryan SE. (2012) An overview of systematic reviews of adaptive seating interventions for children with cerebral palsy: where do we go from here? *Disabil Rehabil Assist Technol.* 7(2):104-11. Abstract:

<https://www.tandfonline.com/doi/full/10.3109/17483107.2011.595044>

Ryan SE, Campbell KA, Rigby PJ, Fishbein-Germon B, Hubley D, Chan B. (2009) The impact of adaptive seating devices on the lives of young children with cerebral palsy and their families. *Arch Phys Med Rehabil.* 90(1):27-33. Free Full Text [https://www.archives-pmr.org/article/S0003-9993\(08\)01541-4/fulltext](https://www.archives-pmr.org/article/S0003-9993(08)01541-4/fulltext) [Angsupaisal, 2015]

Saavedra SL, Woollacott MH. (2015) Segmental Contributions to Trunk Control in Children With Moderate-to-Severe Cerebral Palsy. *Arch Phys Med Rehabil*/96(6):1088-97. Free Full Text <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4457569/>

Saavedra S, Joshi A, Woollacott M, van Donkelaar P. (2009) Eye hand coordination in children with cerebral palsy. *Exp Brain Res.* 192(2):155-65. Free Full Text <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2800126/>

Saavedra S, Woollacott M, van Donkelaar P. (2010) Head stability during quiet sitting in children with cerebral palsy: effect of vision and trunk support. *Exp Brain Res.* 2010 Feb;201(1):13-23. Full Free Text <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2821460/>

Sackett D, Straus S, Richardson S, et al. *Evidence-based Medicine: How to Practice and Teach EBM*. 2nd ed. Edinburgh, Scotland: Churchill Livingstone; 2000.

Sahinoğlu D, Coskun G, Bek N. (2017) Effects of different seating equipment on postural control and upper extremity function in children with cerebral palsy. *Prosthet Orthot Int.* 41(1):85-94. Abstract

<http://journals.sagepub.com/doi/10.1177/0309364616637490>

Santamaria V, Rachwani J, Saavedra S, Woollacott M. (2016) Effect of Segmental Trunk Support on Posture and Reaching in Children With Cerebral Palsy. *Pediatr Phys Ther.* 28(3):285-93. Free Full Text

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4922488/>

## **Sitting for Participation: What Does the Research Say?**

**Rifton Webinar | August 16, 2018**

Seeger BR, Caudrey DJ, O'Mara NA. (1984) Hand function in cerebral palsy: the effect of hip-flexion angle. *Dev Med Child Neurol.* 26(5):601-6. Abstract: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8749.1984.tb04498.x> [Angsupaisal, 2015] [Stavness, 2006]

Shin HK, Byeon EJ, Kim SH (2015) Effects of seat surface inclination on respiration and speech production in children with spastic cerebral palsy. *J Physiol Anthropol.* 34(1):1-6. Free Full Text  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4424889/>

Smith P, Holder L, Nwaobi O. (1985) Effect of adaptive seating on speech intelligibility in children with cerebral palsy. *Dev Med Child Neurol.* 59:212.

Sochaniwskyj A, Koheil R, Bablich K, Milner M, Lotto W. (1991) Dynamic monitoring of sitting posture for children with spastic cerebral palsy. *Clin Biomech* 6(3):161-7. Abstract: [https://www.clinbiomech.com/article/0268-0033\(91\)90028-0/pdf](https://www.clinbiomech.com/article/0268-0033(91)90028-0/pdf) [Chung, 2008] [McNamara, 2007] [Michael, 2007]

Sonenblum SE, Sprigle SH. (2011) The impact of tilting on blood flow and localized tissue loading. *J Tissue Viability.* 20(1):3-13. Abstract: <https://www.sciencedirect.com/science/article/pii/S0965206X10000677?via%3Dihub>

Stavness, C. (2006). The effect of positioning for children with cerebral palsy on upper-extremity function: A review of the evidence. *Physical and Occupational Therapy in Pediatrics.* 26(3):39–53. Abstract:  
[https://www.tandfonline.com/doi/abs/10.1080/J006v26n03\\_04](https://www.tandfonline.com/doi/abs/10.1080/J006v26n03_04) [Systematic Review] [Ryan, 2012]

Stewart P, McQuilton G. (1987) Straddle seating for the cerebral palsied child. *Br J Occup Ther.* 50(4):136-138. Abstract: <http://journals.sagepub.com/doi/10.1177/030802268705000407> [Chung, 2008]

Thelen E, Spencer JP. (1998) Postural control during reaching in young infants: a dynamic systems approach. *Neurosci Biobehav Rev.* 22(4):507-14. Abstract:  
<https://www.sciencedirect.com/science/article/pii/S0149763497000377?via%3Dihub>

Trefler, E., Nickey, J., & Hobson, D. (1983). Technology in the education of multiply-handicapped children. *American Journal of Occupational Therapy,* 37(6):381–387. Free Full Text.  
<https://pdfs.semanticscholar.org/ec86/2f79bf40ccb46b91ccf6d10151f80077997b.pdf>

Uyama S, Hanaki K. (2015) Seating arrangements for children with insufficient head control: lessons from trials using the i2i head & neck positioning & support system. *J Phys Ther Sci.* 27(3):947-50. Free Full Text  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4395750/>

Vaisbuch N, Meyer S, Weiss PL. (2000) Effect of seated posture on interface pressure in children who are able-bodied and who have myelomeningocele. *Disabil Rehabil.* 22(17):749-55. Abstract:  
<https://www.ncbi.nlm.nih.gov/pubmed/11194615> [Michael, 2007]

Van der Heide JC, Fock JM, Otten B, Stremmelaar E, Hadders-Algra M. (2005) Kinematic characteristics of postural control during reaching in preterm children with cerebral palsy. *Pediatr Res.* 58(3):586-93. Free Full Text  
<http://www.nature.com/articles/pr2005707> [Zulkapli, 2016]

Van der Heide, JC & Hadders-Algra M. 2005. Postural muscle dyscoordination in children with cerebral palsy. *Neural Plasticity* 12(2-3): 197-203. Free Full Text <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2565449/> [Zulkalpi, 2016]

## **Sitting for Participation: What Does the Research Say?**

**Rifton Webinar | August 16, 2018**

Vekerdy Z. (2007) Management of seating posture of children with cerebral palsy by using thoracic–lumbar–sacral orthosis with non-rigid SIDO frame. *Disabil Rehabil*/29(18): 1434–41. Abstract:  
<https://www.tandfonline.com/doi/abs/10.1080/09638280601055691> [Angsupaisal, 2015]

Washington K, Deitz JC, White OR, et al. (2002) The effects of a contoured foam seat on postural alignment and upper-extremity function in infants with neuromotor impairments. *Phys Ther*;82:1064–1076. Free Full Text  
<https://academic.oup.com/ptj/article/82/11/1064/2857620>

Westcott SL, Burtner PA.(2004) Postural control in children: implications for pediatric practice. *Phys Occup Ther Pediatr.* 24(1-2):5-55. Abstract  
[https://www.tandfonline.com/doi/abs/10.1300/J006v24n01\\_02?journalCode=ipop20](https://www.tandfonline.com/doi/abs/10.1300/J006v24n01_02?journalCode=ipop20)

Zulkapli NZ, Saat NZM, Kamalzaman S. (2016) Postural Control Influence on Upper Extremity Function among Children with Cerebral Palsy: A Literature Review. Malaysian Journal of Health Sciences. (14)2:11-21. Abstract  
<http://ejournal.ukm.my/jskm/article/view/14613> [Systematic Review]