



The W-Sitting Controversy: Evidence and Science



Beverly (Billi) Cusick, PT, MS, NDT, COF/BOC

Course Description

Beverly (Billi) Cusick begins this program with an explanation of the controversy over the issue of W-sitting and the related state of evidence to support both sides of the issue. Bringing the sciences of full-term neonatal posture and bone geometry to the discussion, she relates the typical hip neonatal and knee joint alignments to typical strategies used to acquire the ring-sitting position.

Billi will then discuss the pathomechanics and pathokinesiology inherent in habitual and prolonged W-Sitting with legs and feet in lateral rotation, i.e. W-Sit-LR. She will discuss the physiologic adaptation of soft tissues, bones, and joints to routine use, and the condition known as “miserable malalignment syndrome.” The presentation targets children with potential orthopedic issues and ligament laxity although the principles pertain to children with cerebral palsy. Billi concludes with an extensive list of ideas for researchers.

Course Objectives

By the end of the webinar, the participant will be able to:

- Explain the biomechanical benefit that typical full-term newborn alignment of the leg and foot brings to the independent acquisition of the ring-sitting position.
- Name three of the hip muscles used by typical infants to drive and decelerate the transitions between ring-sitting and quadruped positions.
- Compare the triplane alignment of the femoral head and neck axis (HNA) in ring sitting and in W-sitting positions.
- Discuss the influence of W-sitting-LR on the incidence of lateral weight shifts of the torso in play.
- Describe the rotary forces applied to the femur during transitions between W-Sitting-LR and kneel-standing positions.
- Discuss the status of evidence regarding the contributions of habitual W-Sit-LR to musculoskeletal problems after childhood.
- Describe the condition of the long bones and knee joints in “miserable malalignment syndrome.”
- Explain the science that associates habitual, prolonged W-sitting-LR with miserable malalignment syndrome.
- Distinguish between common advice and kinesiology healthy alternatives to W-Sitting.

Program Topic Outline

- Opening Remarks & Introduction
- Biomechanical Contributions to Typical Early Sitting Acquisition
 - Typical Features of Newborn Lower Extremity Alignment
 - Musculoskeletal Components of Ring-Sitting Acquisition and Position Transitions
- Biomechanical Factors in W-Sitting and Its Acquisition
- Physiologic Adaptation of Muscle & Fascia Applied to W-Sitting-LR
- Physiologic Adaptation of Bones & Joints Applied to W-Sitting-LR
- Should W-Sitting-LR be Discouraged or Ignored?
- Examining Common Interventions
- Strategies for Indoor Play
- Summary of Contributions to the W-Sitting Narrative
- Ideas for Researchers
- Closing remarks

Instructor

Beverly (Billi) Cusick PT, MS, NDT, COF/BOC is an internationally known pediatric physical therapist whose specialty is the orthopedic development and orthotic management of children with cerebral palsy and other neuromotor deficits. She has been teaching these and related topics since 1978 - including presentations by invitation for the APTA, AACPD, AOPA, and AAOP and more than 460 full programs and workshops worldwide. Billi has consistently received continuing education approval her courses.

Ms. Cusick received her BS in PT from Bouve College at Northeastern University in Boston, MA in 1972, and her MS in Clinical and College Teaching for Allied Health Professionals from the University of Kentucky in Lexington in 1988. She is an Associate Professor for the Rocky Mountain University of Health Professions – Pediatrics Program – Provo, Utah (2006-present) and is NDT basic- and baby-trained.