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## B12: How Much Hip Abduction is Optimal in Sitting, Standing and Lying for Children with Cerebral Palsy?

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### Session description:

Recent publications specifically used 60 degrees of hip abduction in a standing device when studying the impact of standing on hip location and hip adductor extensibility (Martinsson & Himmelmann, 2011; Macias-Merlo, Bagu-Calafat, Girabent-Farrés, & Stuberg, 2015a; Macias-Merlo, Bagu-Calafat, Girabent-Farrés, & Stuberg, 2015b). When the authors were asked why they chose that amount, Martinsson stated “that’s how far the stander went” and Macias stated “that’s what the orthopedists recommend”. The manufacturers of the standing frame used in the Martinsson, et al. (2011) study were asked why the stander is able to position a child in 30 degrees of hip abduction on each side. They replied, “That’s what the therapists requested.” Piccolini, et al. (2016) published the results of a study on the benefits of sitting in hip abduction, Hankinson, et al. (2002) has advocated lying in hip abduction and Poutney, et. al. (2002 & 2008), showed that to best support hip health, a child with CP must sit, stand and lie in abduction. All of these studies are lower levels of evidence, American Academy of Cerebral Palsy and Developmental Medicine (AACPDMD) levels of evidence III-V (see Additional Resources, 1), or “yellow” light evidence” (Novak, 2012). Despite the lack of strong supporting evidence in the literature, there is a consistent trend towards positioning children with CP in hip abduction.

Every child with motor impairments or risk for deformity should be enrolled in a hip surveillance or a “whole child” (i.e. includes gross motor, fine motor, tone management, spine, and hip) surveillance program by one year of age, even before a formal diagnosis of cerebral palsy is received. Positioning in abduction should be initiated for all children with

abnormal muscle tone in the lower extremities, and for children not sitting by 9 months. It should be continued for those individuals who are at risk for hip displacement. The position (amount of abduction and rotation) must reflect the needs of each individual child, there can be no “recipe”. Clinicians must assess femoral ante/retro version/torsion as well as the head shaft angle. They must know the migration percentage and the health of the acetabulum. As the body of literature grows and the impact of positioning on hip health is better studied and understood, these recommendations will continue to evolve.

This presentation will take the form of a debate with a judge and two opposing sides. At the end of the debate the audience will be polled to get a consensus as to be what best practice should be as regards to abduction for positioning and hip health.

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