

WHY

WHO

HOW

Why are **Hip Surveillance** programs being implemented?

One in three children with Cerebral Palsy (CP) will develop progressive hip dysplasia, which can affect their ability to sit, stand or ambulate, as well as cause pain. Early detection and intervention can minimize the need for later procedures or surgeries and improve quality of life. Children with GMFCS levels III-V appear at greatest risk.

Why do we want to do **Hip Surveillance**?

- Children with cerebral palsy are more likely to have a hip problem called “hip dysplasia.”
- Hip dysplasia is when the thigh bone (femur) and the hip bone (pelvis) don’t grow into the right shape for the hip joint to work well.
- Hip dysplasia can lead to “hip dislocation” (where the thigh bone doesn’t stay tight against the bone of the pelvis anymore).

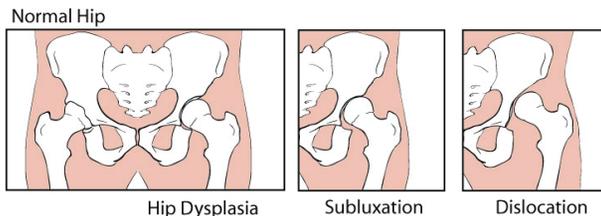


Image source: <http://whenthurtstomove.org/about-orthopaedics/joint-anatomy/hip/hip-dysplasia/> Accessed 11/7/2019.

- Hip dislocation may be painful and may lead to problems with sitting, standing and changing clothes or diapers.
- Research has shown that children are more likely to get hip dysplasia if they are unable to move or stand.
- Researchers in Australia and Sweden have found that we can prevent hip dislocation by doing regular x-rays and hip exams and implementing other treatment accordingly.

Who is **implementing** these programs?



Some of the largest school districts in the United States, along with several international organizations that pioneered such programs, have established and implemented large-scale Hip Surveillance programs to screen young children with cerebral palsy on a regular basis and detect early-stage problems, with the goal of improving treatment strategies and outcomes.

A child is at risk for hip displacement if he/she has cerebral palsy. Cerebral palsy affects a child’s ability to move. When children are late to stand and walk or can only do so with help, the hip joint may not develop as expected. In addition, the muscles that pull the legs together and up are often tight or stiff and can pull the hip out of place.



How does **standing in abduction** in Zing products fit into **Hip Surveillance** programs?

Multiple hip surveillance program guidelines outline early evaluation for a standing system/program, especially those at greatest risk for hip dislocation (GMFCS levels III-V), as one of the tenets that should be included in a hip surveillance plan. One of the early indicators commonly related to hip dysplasia is a reduction in hip abduction/extension ranges, especially hip abduction decreasing below 30 degrees.



As a result, standing in abduction in the Zing line of standing products can provide up to 60 degrees of bi-lateral abduction (30 degrees independently on each leg). Zing standers feature anatomically correct hip abduction pivot points located directly behind and in-line with the pelvis. Proper offset on the leg supports allow for the entire leg to abduct with out the need to adjust knee or foot supports, use wedges or other position modification, and abduction can be used throughout the standers positioning range.

While standing can be a positive intervention for those at risk of hip dysplasia, it is only one part of a larger intervention plan.

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WHERE

Where are **Hip Surveillance** programs being implemented?

Australia:

<https://ausacpdm.org.au/professionals/hip-surveillance/australian-hip-surveillance-guidelines/>

Sweden: <http://cpup.se/in-english/>

British Columbia-Canada: <http://childhealthbc.ca/hips>

United Kingdom:

- Spasticity in children and young people-Support for education and learning: practice-based implementation advice: NHS

- National Institute for Health and Clinical Excellence, September 2012: <https://www.nice.org.uk/guidance/CG145>

- Surveillance of Cerebral Palsy in Europe: <http://www.scpnetwork.eu/en/about-scp/>

California Center for Public Health Advocacy:

- Surveillance to Salvage Seminar: <http://shrinerschildrens.org/cphip/>

Shriner Hospital for Children- N. California: www.hipscreen.org

Boston Children's Hospital Orthopedic Center: bostonchildrens.org/cp



REFERENCES

Elkamil A, Andersen G, Hagglund G, et al. Prevalence of hip dislocation among children with cerebral palsy in regions with and without a surveillance programme: a cross sectional study in Sweden and Norway. *Musculoskeletal Disorders* 2011, 12:284.

Gordon GS, Simkiss DE. A systematic review of the evidence for hip surveillance in children with cerebral palsy. *J Bone Joint. Surg Br.* 2006 Nov; 88(11):1492-6.

Hägglund G, Aliksson-Schmidt A, Lauge-Pedersen H, et al. Prevention of dislocation of the hip in children with cerebral palsy: 20-year results of a population-based prevention programme. *Bone Joint J.* 2014 Nov; 96-B (11):1546-52.

Hermanson M, Hagglund G, Riad J and Wagner P. Head-shaft angle is a risk factor for hip displacement in children with cerebral palsy. *Acta Orthopaedica* 2015, 86 (2): 229-232.

Kentish M, Wynter M, Snape N, Boyd R. Five-year outcome of state-wide hip surveillance of children and adolescents with cerebral palsy. *J Pediatr Rehabil Med.* 2011; 4(3):205-17.

Larnert P, Risto O, Hagglund G, Wagner P. Hip displacement in relation to age and gross motor function in children with cerebral palsy. *J Child Orthop* 2013, 8:129-134.

Murnaghan ML, Simpson P, Robin JG, et al. The cerebral palsy hip classification is reliable: an inter- and intra-observer reliability study. *J Bone Joint Surg (Br)* 2010, 92-B 436-41.

Robb JE, Hagglund G. Hip surveillance and management of the displaced hip in cerebral palsy. *J Child Orthop* 2013, 7:407-4138.

Shore B, Spence D, Graham H. The role for hip surveillance in children with cerebral palsy. *Curr Rev Musculoskelet Med.* 2012 Jun; 5(2):126-34.

Soo B, Howard JJ, Boyd RN, et al. Hip displacement in cerebral palsy. *J Bone Joint Surg Am.* 2006 Jan; 88(1):121-9.

Wynter M, Gibson N, Kentish M, et al. The Consensus Statement on Hip Surveillance for Children with Cerebral Palsy: Australian Standards of Care. *J Pediatr Rehabil Med.* 2011; 4(3):183-95.

Wynter M, Gibson N, Willoughby KL, et al. National Hip Surveillance Working Group. Australian hip surveillance guidelines for children with cerebral palsy: 5-year review. *Dev Med Child Neurol.* 2015 Sep;57(9):808-20.

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QUICK GUIDE

to **Hip Surveillance** programs

