

Montefiore Pediatric Orthopedic and Scoliosis Center

Children's Hospital at Montefiore

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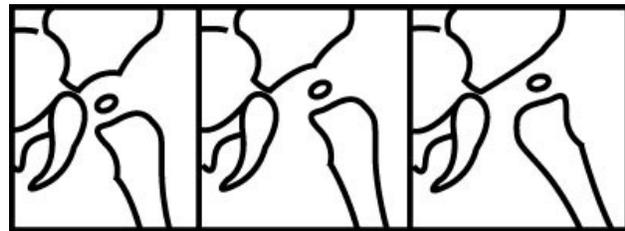
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Developmental Dysplasia of the Hip in Infancy

Introduction:

In DDH (developmental dysplasia of the hip) the ball of the hip joint is either partially or completely dislocated out of the socket. Prompt recognition and treatment in the newborn period provides the best chance for subsequent normal hip development. The hip must be perfectly normal to last a lifetime.

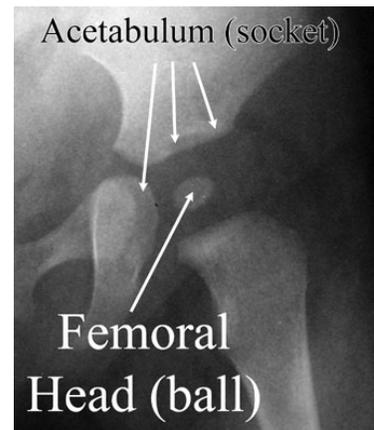


Normal Hip

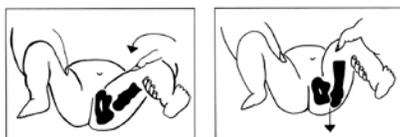
Dysplasia
(shallow socket)

Dislocated hip

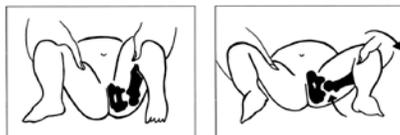
The hip joint is a ball and socket joint consisting of the femoral head (ball) and the acetabulum (socket). With dislocation of the hip, the femoral head is completely out of the socket. In hip dysplasia, the acetabulum has not formed adequately to make a deep socket for the femoral head. Generally neither of these conditions cause a child to have hip pain, however it is necessary to correct the condition early in life to prevent pain as a teenager (early arthritis), and the possible need for hip replacement surgery (artificial hip) later in life.



Examination:



Barlow test



Ortolani test

The Barlow and Ortolani tests are clinical exams that evaluate hip stability in infancy. These gentle maneuvers will not harm a child, even if the child does not have hip dysplasia.

Hip Imaging:

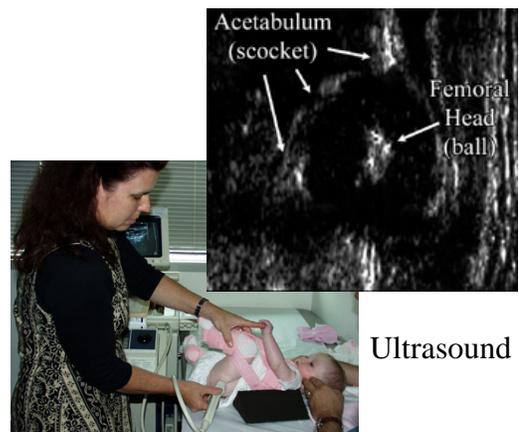
Hip ultrasound and X-ray are used to further study a hip that is suspected of being abnormal.



Normal hip

Dysplasia
(shallow socket)

Dislocated hip



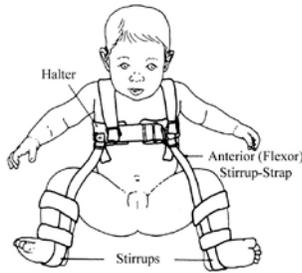
Ultrasound

Treatment:

In a newborn infant with an unstable hip, a short treatment course usually corrects the problem. In a completely dislocated hip, treatment is more prolonged. Holding the infants thighs and legs apart centers the ball into the socket and allows for gradual deepening of the socket (acetabulum). This can be accomplished with the Pavlik harness (in use for more than 50 years).

Pavlik Harness:

The Pavlik harness can be used in infants with limited hip motion (abduction) and ultrasound or X-ray abnormalities. The Pavlik harness is generally used for 2-3 months for 23 hours a day and may be followed by a short period of nap and nighttime wear.



Pavlik Harness



Place clothes over harness

Hip Abduction Brace:

In some cases the Pavlik harness is followed by a hip abduction brace. In cases diagnosed after age 6 months the abduction brace is sometimes used as a primary form of treatment (for mild dysplasia). The hip abduction brace is worn full or part time (depending on the degree of dysplasia). This brace allows a child to walk (cruise). None of these braces will slow your child's developmental milestones.



Hip Abduction Brace



Summary:

Hip dysplasia is an important childhood condition and once diagnosed, requires rigorous treatment to avoid premature hip arthritis. Although parents may be upset that their child has to wear a harness or brace, it is important to know that this method is used to avoid more vigorous treatment methods (body cast, surgery) which are required in difficult cases where non-operative methods fail. With proper parental understanding and cooperation most children with hip dysplasia can be successfully treated without casts or surgery.