

# Hip Dysplasia

## FAST FACTS

# 1 in 1,000

The number of newborns with DDH

# 5

The number of key risk factors for DDH, also known as the “5 Fs”: first born, female, frank breech, family history and fluid (oligohydramnios)

With developmental dysplasia of the hip (DDH), the femoral head and acetabulum are not in their correct positions—and therefore do not develop properly. Adolescent hip dysplasia usually occurs when DDH is undiagnosed and/or is left untreated during infancy or childhood. However, it can also be caused by rapid growth, increased activity or the hip joint bearing greater weight as the child grows.

## ASSESSMENT

A structural hip examination—including gait analysis, visual inspection, palpation and range of motion assessment—can help diagnose hip dysplasia at a young age. To evaluate any leg-length discrepancy, be sure a child’s waist and legs are visible for a complete trunk-to-toe assessment. Roll the shirt up to the armpits and remove pants, leaving the underwear or diaper on. If necessary, loosen the underwear or diaper slightly to see hip folds fully. If there is reason to believe a child’s hip(s) may be dysplastic, order an imaging study (ultrasound, X-ray, MRI and/or CT) to confirm.

## HISTORY AND PHYSICAL EXAM RED FLAGS

- Limp or gait abnormalities
- Leg length inequality
- Limitation in hip abduction
- Decreased endurance paired with hip pain and fatigue
- Hip joint catching, clicking, locking and/or popping

## MANAGEMENT/TREATMENT

Upon suspicion of hip dysplasia and/or onset of symptoms, obtain an imaging study relevant to the patient’s age:

- **Newborn to 3 months of age:** Ultrasound
- **Over 3 months of age:** X-ray (AP/Frog, Lateral)

You may also need to obtain an MRI or CT if the above images are unclear, or if requested by an orthopaedic specialist.

In addition, order an X-ray at 6 months for breech infants with a normal ultrasound.

## WHEN TO REFER

**Patients with abnormal imaging studies should be referred to a pediatric orthopaedic surgeon as soon as possible.** Patients whose imaging study was normal but have HPE red flags should be referred to an orthopaedic surgeon for an additional examination and second opinion. For patients with images that show physiologic immaturity, repeat the exam within 4 to 6 weeks to ensure the hips are developing or maturing appropriately.

**Refer patients with HPE red flags and/or abnormal imaging studies to an orthopaedic surgeon.**

**To refer to Cincinnati Children’s, contact the Division of Pediatric Orthopaedic Surgery through the Physician Priority Link® at 1-866-636-7997.**

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children’s.

# Hip Dysplasia

**Patient Presents**

**Assessment**

Perform a structural hip examination, including gait analysis, visual inspection, palpation and range of motion assessment. If there is reason to believe a child's hip(s) may be dysplastic, order an imaging study (ultrasound, X-ray, MRI and/or CT) to confirm.

**HISTORY AND PHYSICAL EXAM RED FLAGS**

- Limp or gait abnormalities
- Leg length inequality
- Limitation in hip abduction
- Decreased endurance paired with hip pain and fatigue
- Hip joint catching, clicking, locking and/or popping

**Any Red Flags?**

**Yes**

**No**

**Obtain an imaging study relevant to the patient's age:**

- **Newborn to 3 months of age:** Ultrasound
- **Over 3 months of age:** X-ray (AP/Frog, Lateral)

You may also need to obtain an MRI or CT if the above images are unclear, or if requested by an orthopaedic specialist. In addition, order an X-ray at 6 months for breech infants with a normal ultrasound.

**Hip dysplasia unlikely.**

Assess for other medical or developmental causes of hip pain in children, such as acute injury, slipped capital femoral epiphysis (SCFE), transient synovitis or Perthes disease. If source remains unclear or pain persists, refer to a pediatric orthopaedic surgeon for additional evaluation.

**Is the imaging study normal?**

**Yes**

**If Normal Ultrasound for Breech Infant:**

**Shows Physiologic Immaturity**

**No**

Refer patient to an orthopaedic surgeon for an additional examination and second opinion.

Obtain X-ray AP/Frog at 6 months of age

Repeat study in 4 to 6 weeks to ensure hips are developing or maturing appropriately.

**Refer patient to an orthopaedic surgeon as soon as possible.**

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