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# Cerebral Palsy Integrated Pathway (CPIPs)

## Hip surveillance

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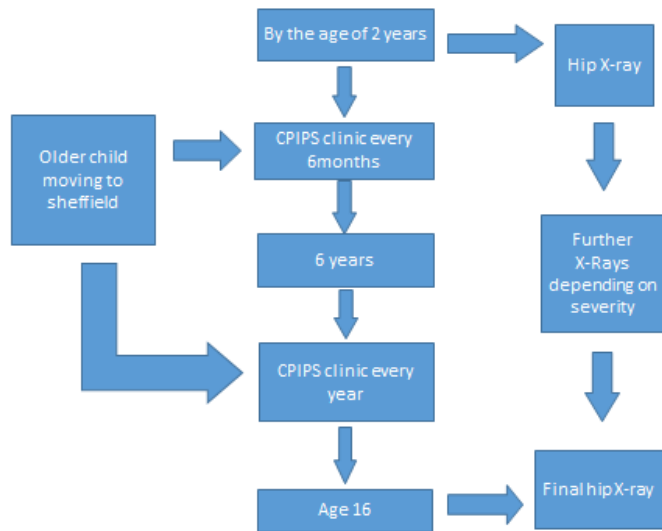
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### What happens if my child has signs of hip displacement?

- Your child will be referred to a paediatric orthopaedic surgeon who is experienced in treating hip displacement if:
- Your child's Clinical Exam finds that your child has:
- Pain when changing positions or difficulty with personal care
- Decrease in function (sitting, standing, or walking)
- Less hip movement than expected (e.g. able to bring leg out to the side less than 30 degrees).
- A decrease in the amount of movement of your child's hip(s) compared to earlier exams.
- A difference between the right and left sides in the amount of movement of your child's hips.
- Your child's x-ray shows a specific amount of hip displacement (e.g. the ball has moved outside the socket by more than 30%).

The treatment options will depend on the needs of your child. The goal of treatment will be to keep your child's hip in place, ensure the hip moves easily, and prevent pain as your child gets older. Children who have surgery to treat their hip displacement should return to Hip Surveillance after the surgery until they have stopped growing.

### What is Hip Surveillance?

Hip surveillance is a plan for regular check-ups to watch for signs that your child's hip may be moving out of joint (this is called hip displacement). Hip displacement can lead to the hip coming completely out of the joint (hip dislocation). Hip displacement and dislocation can cause pain, difficulty moving the hip, and problems with sitting, standing, and walking.

Hip Surveillance includes clinical exams by your child's physiotherapist and hip x-rays at regular scheduled times. Hip x-rays are done to view the hip joint because hip displacement can occur without any signs or symptoms. Taking part in Hip Surveillance allows your child's health care team to find hip displacement early and help your child before the hip becomes dislocated. If your child's physiotherapist finds signs of hip displacement, they can refer your child to a paediatric orthopaedic surgeon (bone doctor for children) for treatment to prevent hip dislocation. The CPIPs Hip Surveillance Program for children is supported by an orthopaedic doctor, paediatrician and physiotherapist at Sheffield Children's Hospital who work together.

### Who is Hip Surveillance important for and why does it happen?

Your child is at risk of hip displacement if your child has Cerebral Palsy or are late to attain motor milestones. 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. If you are not sure if your child is at risk for hip displacement, please consult with your child's physiotherapist, or paediatrician.

## What is hip displacement and dislocation?

The hip is a ball and socket joint. The top of the thigh bone (also called the 'head of the femur') makes up the ball and part of the pelvis makes up the 'socket' (Figure 1). In a healthy hip, the ball is completely covered by the socket.

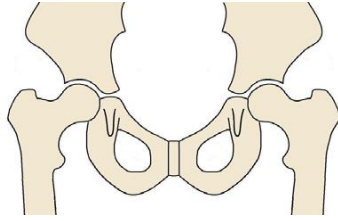


Figure 1 Normal hip

**Hip displacement**, also called subluxation, is when the ball gradually moves out from under the socket (Figure 2). About 1 in 3 children with cerebral palsy will have hip displacement.

An x-ray is needed to see this change.

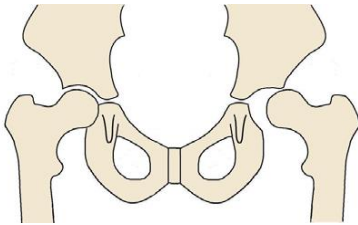


Figure 2 Hip displacement

**Hip dislocation** is when the ball is completely out from under the socket (Figure 3).

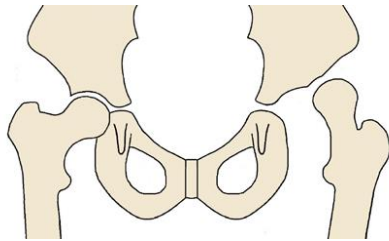


Figure 3 Hip dislocation

With increasing hip displacement and dislocation, your child may have or develop:

- Pain
- Decreased ability to move the hip joint
- Difficulty with personal care or toileting
- Difficulty sitting comfortably
- Difficulty standing or walking
- Pressure sores

Many children have none of these signs or symptoms until the hip has been dislocated for a long time.

Once dislocated, the ball may be too damaged to put back in the socket. The aim of CPIPs Hip Surveillance is to detect and treat hip displacement early when treatment is simpler and has fewer complications, however more than one surgery may be necessary.

## When does Hip Surveillance start and how often will my child need a Clinical Exam and x-ray?

Your child should join the CPIPs Hip Surveillance Program when they are diagnosed. Your child should have their first Clinical Exam before the age of 2. How often your child requires Clinical Exams and x-rays after that depends on their ability to move.

## How often should the CPIPs assessment happen?

It should be completed yearly and the frequency of the hip x-rays depends on your child's ability to move. Hip displacement can occur while children are growing so children who are at higher risk continue to complete CPIPs until Hip x-rays show they have stopped growing.

## What happens at a CPIPs Clinical Exam?

At each Clinical Exam, your child's physiotherapist (or another health care team member) will:

- Review your child's ability to move.
- Measure the movement and muscle tone in your child's hips.
- Ask you and your child questions about your child's pain when changing positions, difficulty during your child's personal care, or a decrease in your child's ability to walk, sit, or stand.
- If appropriate, watch your child's walking.

## How are the x-rays done?

- Your child will have a hip x-ray at Sheffield Children's Hospital
- The x-ray will be reviewed by the orthopaedic doctors at Sheffield Children's Hospital.
- The amount of the ball that is outside the socket will be measured on the x-ray.