

Orthopaedic surgery

Consider orthopaedic surgery as an important adjunct to other interventions in the management programme for some children and young people with spasticity. Timely surgery can prevent deterioration and improve function.

An assessment should be performed by an orthopaedic surgeon within the network team if:

- based on clinical findings or radiological monitoring, there is concern that the hip may be displaced
- based on clinical or radiological findings there is concern about spinal deformity.

Consider an assessment by an orthopaedic surgeon in the network team for children and young people with:

- hip migration greater than 30% **or**
- hip migration percentage increasing by more than 10 percentage points per year.

Consider an assessment by an orthopaedic surgeon in the network team if any of the following are present:

- limb function is limited (for example, in walking or getting dressed) by unfavourable posture or pain, as a result of muscle shortening, contractures or bony deformities
- contractures of the shoulder, elbow, wrist or hand cause difficulty with skin hygiene
- the cosmetic appearance of the upper limb causes significant concern for the child or young person.

Before undertaking orthopaedic surgery, the network team should discuss and agree with the child or young person and their parents or carers:

- the possible goals of surgery and the likelihood of achieving them
- what the surgery will entail, including any specific risks
- the rehabilitation programme, including:
 - how and where it will be delivered
 - what the components will be, for example a programme of adapted physical therapy, the use of orthoses, oral drugs or botulinum toxin type A.

Orthopaedic surgery should:

- be undertaken by surgeons in the network team who are expert in the concepts and techniques involved in surgery for this group of patients and
- take place in a paediatric setting.

The decision to perform orthopaedic surgery to improve gait should be informed by a thorough pre-operative functional assessment, preferably including gait analysis.

If a child or young person will need several surgical procedures at different anatomical sites to improve their gait, perform them together if possible (single-event multilevel surgery), rather than individually over a period of time.

Assess the outcome of orthopaedic surgery undertaken to improve gait 1–2 years later. By then full recovery may be expected and the outcome of the procedure can be more accurately determined.