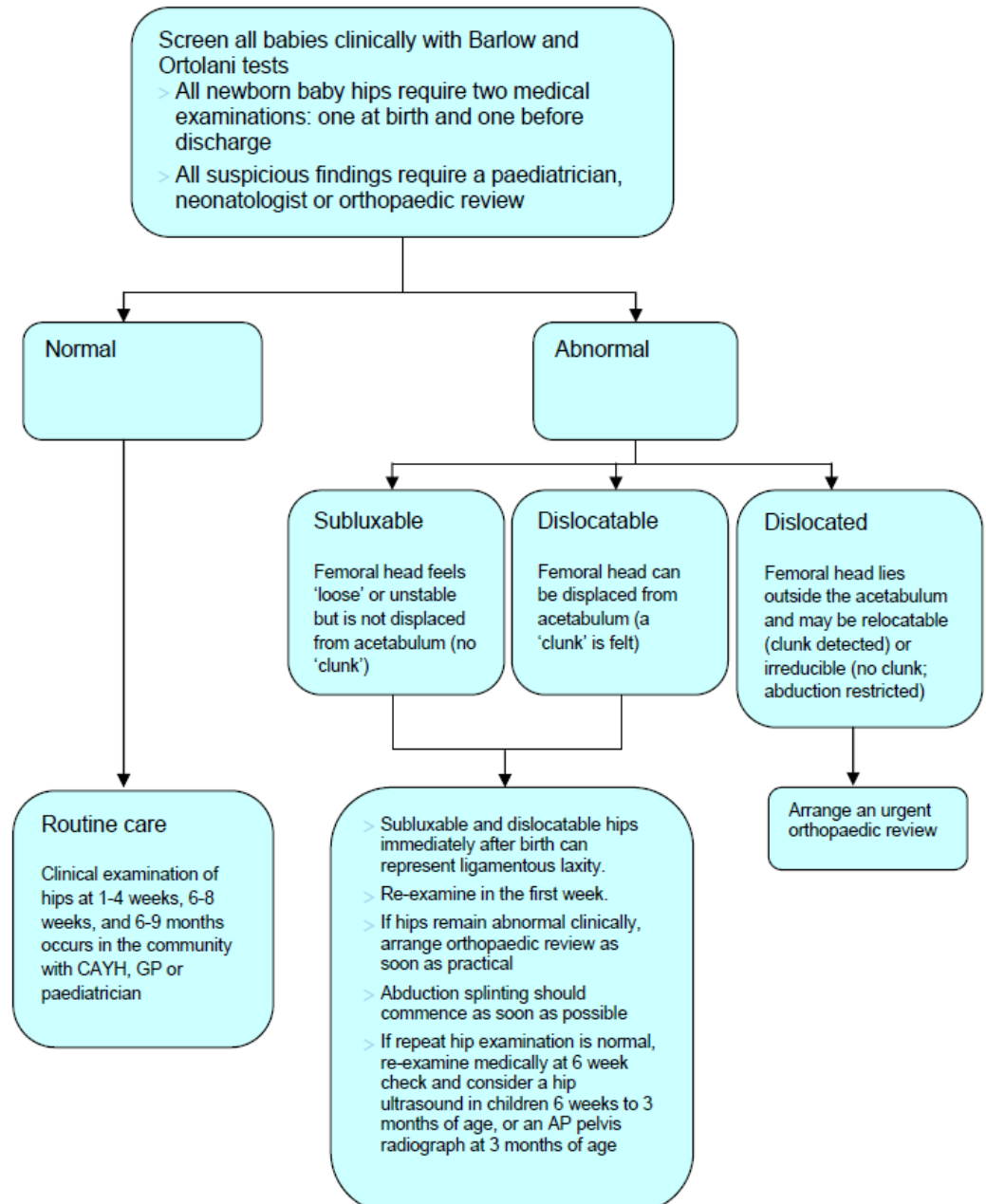


# South Australian Perinatal Practice Guidelines

## Neonatal hip screening and management of developmental dysplasia of the hip

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### Summary of screening developmental dysplasia of the hip in neonates



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## Neonatal hip screening and management of developmental dysplasia of the hip

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### Neonatal hip screening and management of developmental dysplasia of the hip

- > Developmental dysplasia of the hip (DDH) is a condition where there is inadequate formation of the acetabulum resulting in an abnormal relationship between the femoral head and acetabulum. Varying degrees of clinical instability of the hip joint result ranging from a feeling of looseness of the joint to frank dislocation. They can be classified as **subluxatable, dislocatable, dislocated and reducible or dislocated and irreducible**. DDH is also applied to a range of ultrasound and radiographic abnormalities of the acetabulum. The term *developmental* emphasises that DDH can evolve post delivery in early infancy and is not always detectable at birth.
- > The incidence of DDH is approximately 1 in 100 live births screened clinically, and up to 8 in 100 infants screened by ultrasound. DDH is more frequent in females (relative risk about 4), and with breech presentation (relative risk about 10). A first-degree relative with DDH, fixed foot deformities, first born infant, and oligohydramnios are other risk factors.
- > It is important to note that 60 % of infants with DDH have no risk factors. Ultrasound has a high false positive rate for DDH. Treatment of DDH with a Pavlik harness or Denis-Browne splint, is effective and safe but requires close supervision to ensure the hip remains enlocated and developing in a satisfactory manner. Splinting also has a defined morbidity, the main concern being avascular necrosis of the hip, which is estimated at about 2.5 / 1,000 treated infants with a splint applied before age 2 months.
- > Current recommendations based on evidence based reviews from the Canadian Medical Association and American Academy of Pediatrics and Australian publications are summarised as follows:
  - > Careful examination in the neonatal period using the Ortolani and Barlow manoeuvres followed by serial hip examinations at every well-baby check. Above 3 months of age the Ortolani and Barlow tests are less reliable however reduced hip abduction and leg length discrepancy can indicate a hip problem. Using this method, the incidence of late diagnosis of DDH has reduced from 1-2 / 1,000 to 0.2-0.7 / 1,000, with an incidence of abduction splinting of around 1 in 100 in Australia.
  - > Ultrasound has a role to confirming enlocation in an abduction splint. It is important to ensure that the femoral head is in-joint when in the splint. Ultrasound is not recommended as a screening tool because of a high false positive rate, operator dependency, high inter-observer variability, limited availability and cost.
  - > In selected cases where there is uncertainty regarding the hip, ultrasound may be useful. Ultrasound is more reliable in infants over 6 weeks of age.

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### Abbreviations

DDH	Developmental dysplasia of the hip
CAYH	Child and Youth Health
GP	General Practitioner
AP	Anterio-posterior view
CMAJ	Canadian Medical Association Journal

### Version control and change history

**PDS reference:** OCE use only

Version	Date from	Date to	Amendment
1.0	29 Mar 2010	current	Original version