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# Hip dysplasia in newborns

FROM THE SPECIALTIES

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**A new evidence-based interdisciplinary clinical guideline on the screening, treatment and follow-up of hips in newborns has been published.**

Hip dysplasia is characterised by a shallow or dysplastic acetabulum (hip socket), which increases the risk of hip dislocation, early osteoarthritis and significant functional impairment. The severity varies from a stable, well-formed joint with minor morphological changes to complete dislocation. The condition affects 2–3 % of all newborns (1). Approximately one-quarter of patients under the age of 40 who receive a total hip replacement have underlying hip dysplasia (2).

Early detection and treatment of newborns with severe hip dysplasia are crucial for a good long-term outcome. The benefit of early treatment in children with mildly dysplastic and stable hips is more contested. However, recent research indicates that the potential for normalisation appears to be greatest in the first few months of life (3–5), and that there may be two distinct types of hip dysplasia: one where the acetabulum normalises quickly, often after wearing a brace for three months, and one where normalisation is slower (6, 7). Depending on the radiographic criteria used, as many as 3–19 % of all 18-year-olds exhibit some degree of hip dysplasia (8).

The goal of the clinical examination of the hips in all newborns is to identify infants with unstable hips. However, this examination detects only 50 % of newborns with dysplasia requiring treatment (9). Consequently, selective ultrasound screening has gradually been introduced for the approximately 15 % of newborns with known risk factors for hip dysplasia. Until now, there has been no multidisciplinary consensus on the ultrasound method, timing of the examination or indications for treatment and follow-up (10). This has caused concern and anxiety among both healthcare personnel and parents of newborns.

To address this, a multidisciplinary expert panel was established in autumn 2023, consisting of paediatric orthopaedic surgeons, paediatricians and paediatric radiologists from all university hospitals in Norway, as well as representatives from medium-sized hospitals and patient organisations. The work is partly funded by the Norwegian Medical Association and has been conducted in accordance with NEATS (National Guideline Clearinghouse Extent Adherence to Trustworthy Standards) (11). The focus in these standards is on multidisciplinary collaboration, methodological expertise (7, 12), patient and service user perspectives, systematic literature reviews (9, 13), assessing the strength of recommendations, external reviews and a plan for revisions.

The new clinical guideline has been published in the Norwegian Paediatric Association's Neonatal Guidelines (14) and on the websites of the Norwegian Society of Paediatric Radiology and the Norwegian Paediatric Orthopaedic Society.

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*On behalf of the Norwegian Society of Paediatric Radiology, the Norwegian Paediatric Association and the Norwegian Paediatric Orthopaedic Society.*

## REFERENCES

1. Rosendahl K, Markestad T, Lie RT. Developmental dysplasia of the hip: prevalence based on ultrasound diagnosis. Pediatr Radiol 1996; 26: 635–9.

[PubMed][CrossRef]

2. Engesæter IO, Lehmann T, Laborie LB et al. Total hip replacement in young adults with hip dysplasia: age at diagnosis, previous treatment, quality of life, and validation of diagnoses reported to the Norwegian Arthroplasty Register between 1987 and 2007. Acta Orthop 2011; 82: 149–54. [PubMed] [CrossRef]

3. Rosendahl K, Dezateux C, Fosse KR et al. Immediate treatment versus sonographic surveillance for mild hip dysplasia in newborns. Pediatrics 2010; 125: e9–16. [PubMed][CrossRef]

4. Sadeghian SM, Arthurs OJ, Li X et al. Neonatal Hip Loading in Developmental Dysplasia: Finite Element Simulation of Proximal Femur Growth and Treatment. HSS J 2023; 19: 418–27. [PubMed][CrossRef]

5. Wood MK, Conboy V, Benson MK. Does early treatment by abduction splintage improve the development of dysplastic but stable neonatal hips? J Pediatr Orthop 2000; 20: 302–5. [PubMed][CrossRef]

6. HUNT All-In Pain. COL11A1 is associated with developmental dysplasia of the hip and secondary osteoarthritis in the HUNT study. Osteoarthr Cartil Open 2023; 6. doi: 10.1016/j.ocarto.2023.100424. [PubMed][CrossRef]

7. Laborie LB, Lie SA, Rosendahl K. Radiographic markers of hip dysplasia in young adults: predictive effect of factors in early life. BMC Musculoskelet Disord 2023; 24: 119. [PubMed][CrossRef]

8. Engesæter IO, Laborie LB, Lehmann TG et al. Prevalence of radiographic findings associated with hip dysplasia in a population-based cohort of 2081 19-year-old Norwegians. Bone Joint J 2013; 95-B: 279–85. [PubMed] [CrossRef]

9. Singh A, Wade RG, Metcalfe D et al. Does This Infant Have a Dislocated Hip?: The Rational Clinical Examination Systematic Review. JAMA 2024; 331: 1576–85. [PubMed][CrossRef]

10. Laborie LB, Klingenberg C, Rasmussen H et al. Hofteleddsdysplasi hos spedbarn – screening, behandling og oppfølging. Tidsskr Nor Legeforen 2023; 143. doi: 10.4045/tidsskr.22.0542. [PubMed][CrossRef]

11. Langeland EA, Pisani SER, Kalager M et al. Følger Helsedirektoratets retningslinjer internasjonale standarder for troverdighet? Tidsskr Nor Legeforen 2023; 143. doi: 10.4045/tidsskr.23.0110. [PubMed][CrossRef]

12. Rosendahl K, Aslaksen A, Lie RT et al. Reliability of ultrasound in the early diagnosis of developmental dysplasia of the hip. Pediatr Radiol 1995; 25: 219–24. [PubMed][CrossRef]

13. Laborie LB, Rosendahl K, Dhouib A et al. The effect of selective ultrasound screening on the incidence of late presentation of developmental hip

dysplasia-a meta-analysis. Pediatr Radiol 2023; 53: 1977–88. [PubMed] [CrossRef]

14. Helsebiblioteket. Nyfødtveileder. 17 Ortopedi, plastisk kirurgi, ØNH og hud. 17.1 Hofteleddsdysplasi. https://www.helsebiblioteket.no/innhold/retningslinjer/pediatri/nyfodtmedisin-veiledende-prosedyrer-fra-norsk-barnelegeforening/17-ortopedi-plastisk-kirurgi-onh-og-hud Accessed 13.2.2025.

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