



Empowering Children. Supporting Families. Building Brighter Futures.

Resource 088 | Other developmental health conditions

Kernicterus

What it means

Kernicterus is lasting brain injury associated with severe bilirubin toxicity, usually in the newborn period. Bilirubin causes the yellow color of jaundice, but most jaundice does not lead to kernicterus. Timely measurement, follow-up, and treatment of significant jaundice help prevent injury. Established effects require long-term individualized care. [1]

Causes and risk factors

Risk rises when bilirubin becomes dangerously elevated, particularly with prematurity, increased red-cell breakdown, or other medical factors. Inadequate milk intake can contribute to rising levels and needs supportive feeding assessment. Treatment decisions depend on age in hours and clinical risk, rather than skin color alone. [1,2]

General family education. A concern deserves assessment, but this guide does not diagnose a child or prescribe treatment.



Signs and everyday impact

A jaundiced newborn may develop poor feeding, unusual sleepiness, a high-pitched cry, or changes in muscle tone. Severe toxicity can involve arching, stiffness, or seizures. Later effects may include movement difficulties, hearing impairment, and problems with eye movement. Jaundice severity cannot be reliably judged from appearance alone. [1,2]

Assessment and diagnosis

Clinicians measure bilirubin and interpret it using newborn age and risk factors. They assess feeding, weight, hydration, and causes of jaundice. Neurological signs require urgent assessment. Children with established injury need hearing, movement, communication, vision, and developmental evaluations to guide ongoing support. [1,2]

Treatment and therapy

Significant newborn jaundice may require hospital phototherapy; very severe cases may need exchange transfusion or other treatment directed at the cause. Sunlight is not a substitute for prescribed treatment. Established kernicterus requires rehabilitation, hearing and communication support, and care for movement, feeding, and associated needs. Treatment cannot be promised to reverse existing injury. [1,2,3]

Support at home

Follow the newborn's feeding, bilirubin, and follow-up plan, including after discharge. Seek feeding support if intake is inadequate. For a child with lasting effects, use accessible communication, adapted play, and prescribed mobility or hearing supports. Ask the team how to recognize discomfort and maintain participation.

When to seek help

Jaundice in the first day of life needs prompt medical assessment. A jaundiced baby with poor feeding, unusual sleepiness, high-pitched crying, stiffness, arching, or seizures needs urgent care; severe symptoms require emergency services.

Questions for your care team

- When should bilirubin be rechecked and feeding reviewed?
- Which clinical risks affect the treatment threshold?
- What hearing, movement, and communication supports are needed?



Podcast preparation

Use this outline to develop a later podcast script.

Suggested opening

Welcome to Mariel Early Intervention. Today we discuss kernicterus. Kernicterus is lasting brain injury associated with severe bilirubin toxicity, usually in the newborn period. This is general education; each child needs individualized care.

Opening: Define the topic and its developmental context.

Understanding: Explain causes and signs without inviting self-diagnosis.

Assessment: Describe evaluation and distinguish screening from diagnosis.

Support: Discuss treatment, therapy, and practical family supports.

Closing: Explain urgent signs and one clear next step.

Misconception to address: Myth: jaundice can always be safely treated with sunlight. Bilirubin assessment and prescribed treatment are essential.

Before recording: update clinical references and local service details, arrange clinical review, and use fully consented or fictional examples.

Terms in plain language

- Bilirubin: a substance formed during red blood cell breakdown.
- Phototherapy: prescribed light treatment that lowers bilirubin.
- Exchange transfusion: a hospital procedure used in selected severe cases.

Sources and further reading

Sources accessed 3 October 2026. Numbered references support the clinical overview. Treatment availability and referral routes vary by country.

[1] What are jaundice and Kernicterus?

https://archive.cdc.gov/www_cdc_gov/ncbddd/jaundice/facts.html

[2] Jaundice and Breastfeeding

<https://www.cdc.gov/breastfeeding-special-circumstances/hcp/illnesses-conditions/jaundice.html>

[3] AAP Revises Clinical Guidelines for Hyperbilirubinemia in Newborns

<https://www.healthychildren.org/English/news/Pages/AAP-revises-clinical-guidelines-for-hyperbilirubinemia-in-newborns.aspx>