Neonatal jaundice is caused by accumulation of bilirubin in an infant’s blood. Bilirubin may be elevated for many reasons. Many infants develop normal physiologic jaundice >24 hours after birth, usually peaking when the infant is 4–5 days old, but may peak later in late pre-term infants born 35–37 weeks gestation. Physiologic jaundice can be caused by a number of factors, but it typically resolves by two weeks of age.

**ASSESSMENT**

Assess for degree of jaundice in skin and eyes—jaundice starts in the face and progresses caudally. Assess voiding/stooling patterns and expected number of wet/dirty diapers to evaluate appropriate intake (especially in breast-fed babies) and transition of stools to yellow-seedy appearance. Plot transcutaneous or total serum bilirubin levels (TSBs) using American Academy of Pediatrics (AAP) nomogram or BiliTool™ to determine risk of significant hyperbilirubinemia and guide treatment planning.

The etiology of hyperbilirubinemia is usually based on the onset of jaundice. Hyperbilirubinemia that appears in the first 24 hours is pathologic and most commonly is due to a positive Coombs test. The onset of hyperbilirubinemia on the second day to the first week of life has been termed “breastfeeding jaundice” but may be better termed “suboptimal intake jaundice.” This hyperbilirubinemia is due to a low milk supply or inefficient breastfeeding. Improving intake volumes by lactation support, hand expression by lactation support, hand expression, pumping or, in some cases, supplementation needs to occur for improvement. Hyperbilirubinemia in weeks two to three has been termed breastmilk jaundice and its etiology is unknown but thought to be multifactorial. Cessation of breastfeeding has not been shown to be necessary to prevent high levels of hyperbilirubinemia secondary to breastmilk jaundice.

**MANAGEMENT/TREATMENT**

- The TcB or TSB should be measured between 24 and 48 hours after birth or before discharge if that occurs earlier.
- TSB should be measured if the TcB exceeds or is within 3 mg/dL of the phototherapy treatment threshold or if the TcB is ≥15 mg/dL.

Hour-specific thresholds are based on gestational age and risk factors as stated in the updated AAP Clinical Practice Guidelines in 2022.

For clinical questions about this topic, contact Neonatology at 513-803-2681.
Neonatal Jaundice

Inclusion Criteria
Late preterm and term infants (>35 weeks gestation)

Patient Presents

Standard Workup

- History of Present Illness
- Family History
- Physical Exam

HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS

- Visible jaundice in first 24 hours of life
- A rapid rate of increase of ≥0.3 mg/dL per hour in the first 24 hours or ≥0.2 mg/dL per hour afterwards
- Pallor suggestive of hemolysis
- Ill appearance—concerning for infection/sepsis

Infant well appearing? Infant less than 14 days old?

Yes

- Infant <24 hrs old?
  - Significant or worsening jaundice by visual assessment?
    - TcB exceeds or is within 3 mg/dL of the phototherapy treatment threshold or ≥15 mg/dL?
      - Yes
        - Infant ill-appearing/septic? Infant with signs of acute encephalopathy?
          - Lethargy
          - Poor feeding
          - Hypotonia
          - Irritability
          - Seizures
        - No
          - Infant >2 weeks old?
            - Immediate referral to hospital for admission

- No
  - Infant well appearing?
  - Infant <14 days old?
    - TSB below phototherapy level
      - Yes
        - Infant early discharged from birth hospital (when <48 hrs old)?
          - Infant discharged early from birth hospital (when <48 hrs old)?
            - Infant ≥4–5 days old?
              - Send fractionated bilirubin level
            - Routine follow up.
              - Timing is based on treatment levels specific to gestational age, hour of testing and risk factors.

- No
  - Infant ≥2 weeks old?
    - Immediate referral to hospital for admission

Infant well appearing? Infant less than 14 days old?

No

- Infant early discharged from birth hospital (when <48 hrs old)?
  - Infant discharged early from birth hospital (when <48 hrs old)?
    - Infant ≥4–5 days old?
      - Send fractionated bilirubin level
    - Routine follow up.
      - Timing is based on treatment levels specific to gestational age, hour of testing and risk factors.

- Yes
  - Infant >2 weeks old?
    - Immediate referral to hospital for admission

Infant ≥4–5 days old?

- Infant discharged early from birth hospital (when <48 hrs old)?
  - Infant ≥4–5 days old?
    - Send fractionated bilirubin level
  - Infant ≤4–5 days old?
    - Routine follow up.
      - Timing is based on treatment levels specific to gestational age, hour of testing and risk factors.

Infant discharged early from birth hospital (when <48 hrs old)?

- Infant ≥4–5 days old?
  - Send fractionated bilirubin level
- Infant ≤4–5 days old?
  - Routine follow up.
    - Timing is based on treatment levels specific to gestational age, hour of testing and risk factors.

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.

COMMUNITY PRACTICE SUPPORT TOOL / August 2023