

# Inpatient Hyperbilirubinemia Care Guideline

**Inclusion Criteria:** Newborn Infant > 37 weeks gestation who is admitted for phototherapy for Total Serum Bilirubin of  $\geq 18$ mg/dL, <23 mg/dL.  
**Exclusion Criteria:** NICU status, total bili >23 mg/dL, high risk infants (hemolytic disease, prematurity, sepsis), elevation of direct bilirubin

- Assessment**
- Accurate history and physical including:
    - age in hours
    - weight and percent change from birthweight
    - adequacy of intake
    - pattern of voiding and stooling
    - presence of jaundice
  - Diagnostics:
    - serum bili T&D
    - blood type (ABO, Rh), antibody screen, Coombs & direct Coombs
    - electrolytes (if dehydration suspected)
  - Accurate I&O
  - Daily weight

Call Neonatology if Bili  $\geq 23$  mg/dL

- Interventions/Treatment**
- Intensive phototherapy
  - Breastfeed or bottle feed every 2-3 hrs
  - Breastfeeding support - Lactation Specialist referral
  - If lab results c/w or signs of dehydration, start IV fluids

- Continued Considerations**
- If TSB > 25mg/dL, repeat serum bili within 2-3 hrs
  - If TSB 20-25 mg/dL, repeat within 3-4 hrs, if TSB < 20, repeat in 4-6 hrs, if serum bili continues to fall, repeat in 8-12 hrs.
  - Discontinue phototherapy when serum bili reaches 13-14 mg/dL
  - If bilirubin does not decrease with phototherapy, evaluate for other causes of jaundice
  - In difficult isoimmune hemolytic disease, consult Neonatology

- Discharge Criteria**
- Serum bili is 13-14 or lower
  - Maintaining or gaining weight
  - Infant is taking adequate feeds
  - Follow up assessment by primary MD within 24 hours of discharge

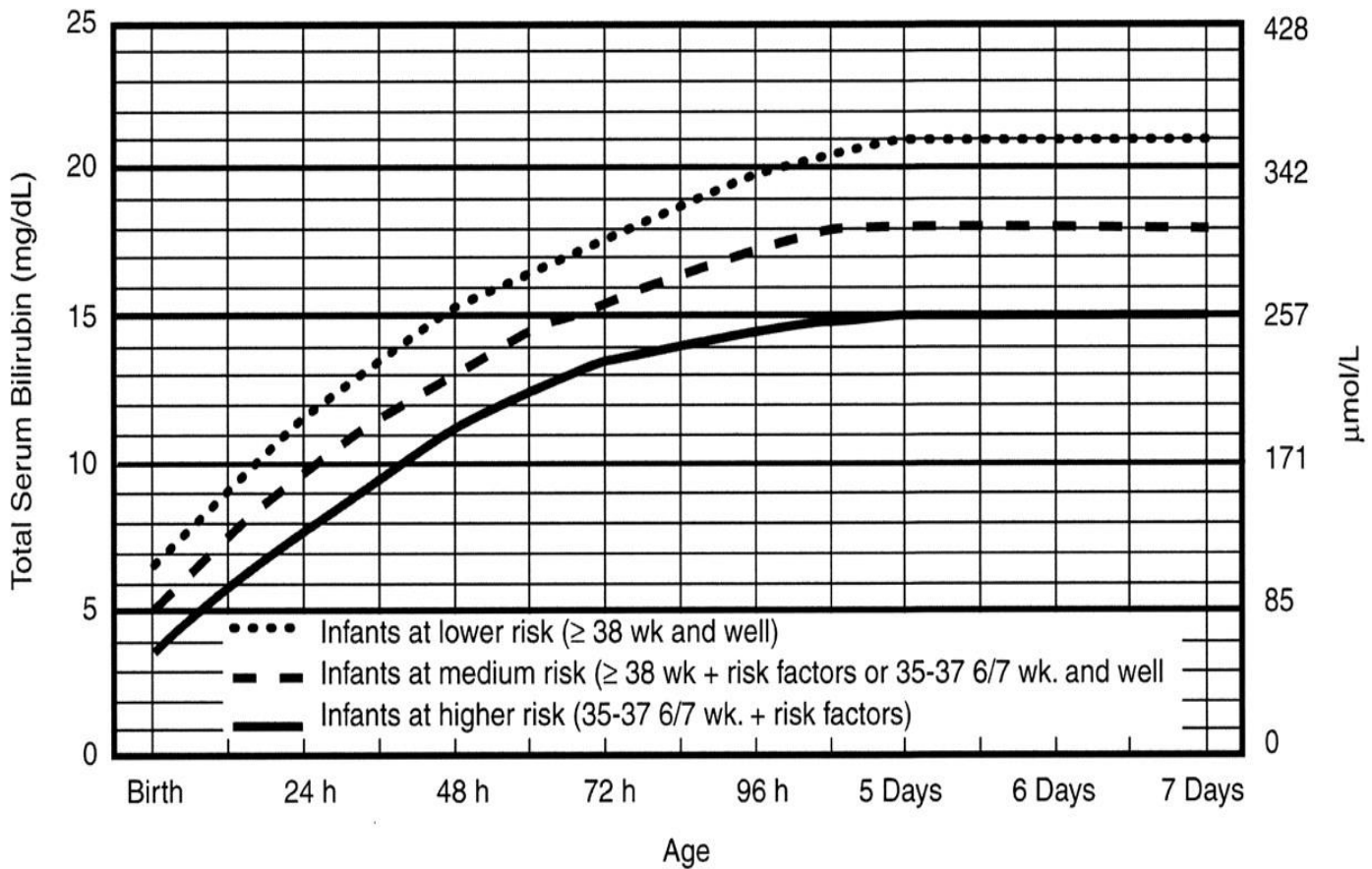
- Recommendations/ Considerations**
- **Helpful link:** [www.bilitool.org](http://www.bilitool.org) (icon on SummaryM)
  - The goals of treatment are to prevent acute bilirubin encephalopathy and to promote & support successful breastfeeding
  - Risk factors most frequently associated with severe hyperbilirubinemia are inadequate intake with breastfeeding, gestation < 38 wks, significant jaundice in a previous sibling, jaundice in the 1<sup>st</sup> 24 hrs of life, East Asian race
  - Serum albumin may be a helpful adjunct in determining need for exchange transfusion
  - CBC and reticulocyte count may be considered if hemolytic process is suspected
  - Consider G6PD deficiency in cases of severe hyperbilirubinemia in appropriate ethnic groups
  - Intensive phototherapy can decrease the initial bilirubin level 30-40% in the 1<sup>st</sup> 24 hrs with the most significant decline in the 1<sup>st</sup> 4-6 hrs
  - There is no need to observe for rebound after discontinuing phototherapy except in hemolytic jaundice

**Patient Education**  
 KidsHealth handout: Jaundice in healthy newborns (parent version)

Link to ED Guideline

Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

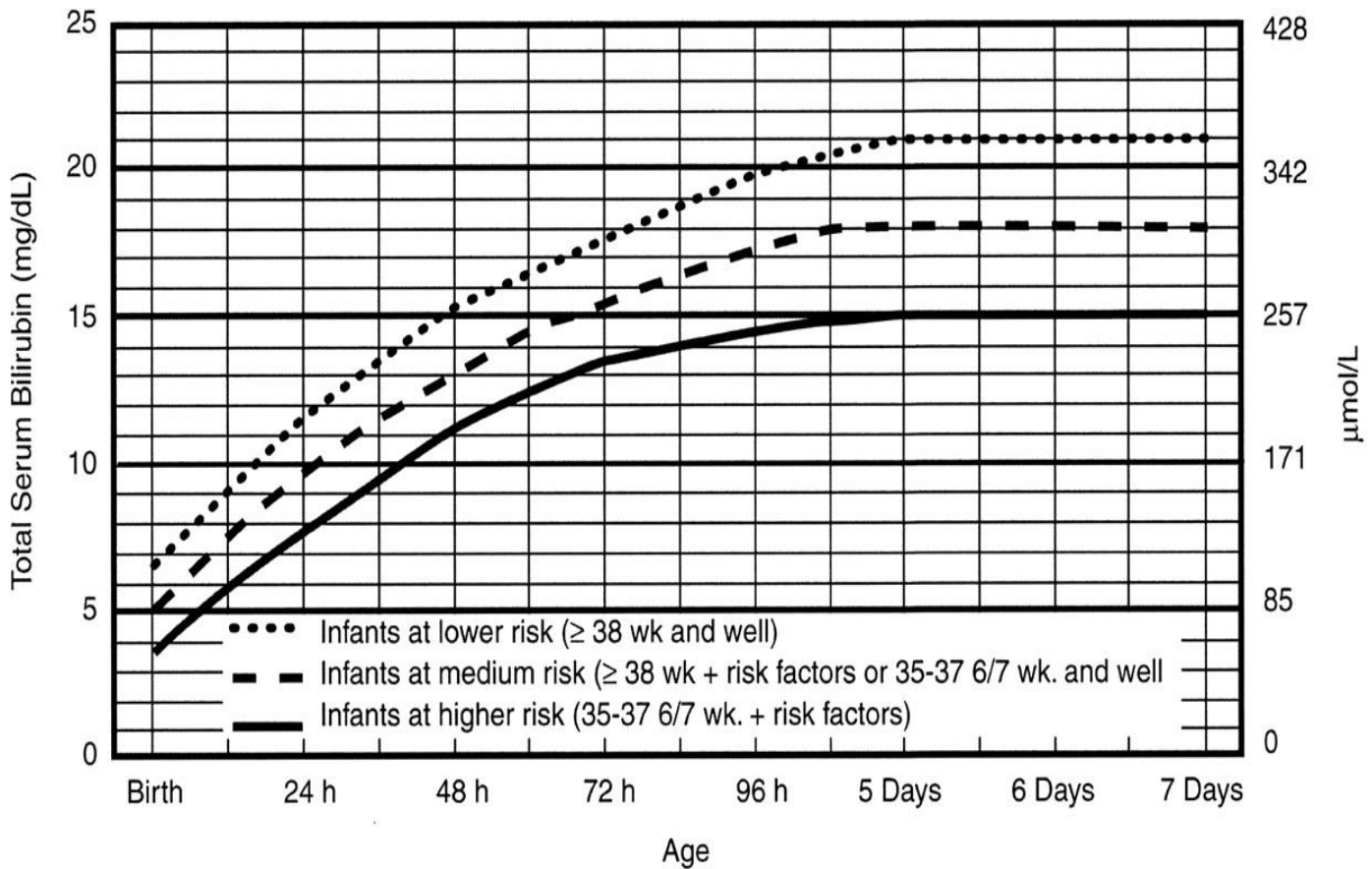
Guidelines for Phototherapy



- Use total bilirubin. Do not subtract direct reacting or conjugated bilirubin.
- Risk factors = isoimmune hemolytic disease, G6PD deficiency, asphyxia, significant lethargy, temperature instability, sepsis, acidosis, or albumin  $< 3.0\text{g/dL}$  (if measured)
- For well infants 35-37 6/7 wk can adjust TSB levels for intervention around the medium risk line. It is an option to intervene at lower TSB levels for infants closer to 35 wks and at higher TSB levels for those closer to 37 6/7 wk.
- It is an option to provide conventional phototherapy in hospital or at home at TSB levels 2-3 mg/dL (35-50mmol/L) below those shown but home phototherapy should not be used in any infant with risk factors.

**Reference:** AAP Subcommittee on Hyperbilirubinemia. Clinical Practice Guideline: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation. PEDIATRICS Vol. 114 No. 1 July 2004, pp. 297-316

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*References*  
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Lauer BJ, Spector ND. Hyperbilirubinemia in the Newborn. Pediatrics in Review, 2011; 32; 341-349. <http://pedsinreview.aappublications.org/cgi/content/extract/32/8/341>

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National Institute for Health and Clinical Excellence. Neonatal jaundice. (Clinical guideline 98.) 2010. [www.nice.org.uk/CG98](http://www.nice.org.uk/CG98)

Refer to Patient Care Policy NICU 112 Phototherapy

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