



#### How to Use [PediTool Calculator](#) (Note: Website may not work in Firefox.)

1. Enter infant's gestational age, age in hours, and total bilirubin level.
2. Note if infant has any neurotoxicity risk factors. (See box.)
3. Click "submit."
4. The next page will plot the level on a graph. You will see if the infant meets criteria for phototherapy and/or exchange transfusion.
5. If not starting phototherapy, scroll down to the table labelled, "Post-birth hospitalization discharge follow-up for infants who have NOT received phototherapy." Follow these recommendations for repeat levels.

#### Neurotoxicity Risk Factors Use this list to answer question on [PediTool calculator](#).

- Isoimmune hemolytic disease (positive DAT, etc.), G6PD deficiency, or other hemolytic condition
- Sepsis
- Clinical instability in past 24 hours

#### Phototherapy

1. Order using one of the following:
  - PED Pediatric Admission Power Plan → PED Phototherapy sub-phase
  - OB/Newborn orders folder → OB Newborn Phototherapy Power Plan
2. **Check hemoglobin and hematocrit on all patients receiving phototherapy. May obtain via heel stick when checking bilirubin.**
3. Check serum total bilirubin level Q12h (or more frequently if neurotoxicity risk factors or concern for ongoing hemolysis). If level is trending up, consult pediatrician and consider broadening differential and work-up. Note: Transcutaneous bilirubin is not reliable until 24 hours after phototherapy has been stopped.
4. Encourage frequent feeding, but try to limit time out of phototherapy to no more than 20 minutes Q3h.
5. IV fluids are unnecessary unless infant has signs of dehydration.
6. Keep infant supine with eye protection while under phototherapy.
7. Stop phototherapy when serum total bilirubin level is  $\geq 2$  mg/dL below the phototherapy initiation level, using the hour of life at which phototherapy was initiated.
8. Obtain rebound bilirubin level 6-12 hours after stopping phototherapy if patient required phototherapy in first 48 hours of life, if concern for hemolysis, or if DAT positive.

#### Direct Antibody Test (DAT)

- Order a DAT if:
  - Mother has positive or unknown antibody screen.
  - Mother is type O or Rh negative and did not receive Rhlg during pregnancy.
  - The infant's total bilirubin level has a high rate of rise (0.3 mg/dL/hour in first 24 hours or 0.2 mg/dL/hour after first 24 hours).
- If infant has a positive DAT, check transcutaneous bilirubin immediately and then retest Q4h x2 then Q12h x3.

#### Labs for Expanded Work-up Consider in infants with jaundice at <24 hours of life, rising levels despite phototherapy, or recurrent jaundice.

- Blood type, DAT (Direct Antibody Test, or Coombs)
- CBC with manual differential and reticulocyte count
- CMP
- Thyroid studies (if prolonged or recurrent)
- GGT
- G6PD

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.  
Approved by Clinical Guideline Committee 10/21/22.

Click [here](#) to see the supplemental resources for this guideline.

If comments about this guideline, please contact [Justin\\_Willis@ykhc.org](mailto:Justin_Willis@ykhc.org) or [Mien\\_Chyi@ykhc.org](mailto:Mien_Chyi@ykhc.org).