**DEFINITION**

- The skin and whites of the eyes have turned a yellow color

**TRIAGE ASSESSMENT QUESTIONS FOR JAUNDICED NEWBORN**

**Call EMS 911 Now**

Unresponsive and can't be awakened  
*R/O: sepsis*

Signs of shock (very weak, limp, not moving, gray skin, etc.)

Sounds like a life-threatening emergency to the triager

**Go to ED Now**

Newborn < 4 weeks with fever 100.4° F (38.0° C) or higher rectally  
*R/O: sepsis, UTI*

**Go to ED Now (or to Office with PCP Approval)**

Age 4 - 12 weeks with fever 100.4° F (38.0° C) or higher rectally  
*R/O: sepsis, UTI*

Low temperature < 96.8° F (36.0° C) rectally that doesn't respond to warming  
*R/O: sepsis*

Newborn < 4 weeks starts to act sick or abnormal in any way (e.g., decrease in activity)  
*R/O: sepsis*

Baby sounds very sick or weak to triager  
*R/O: sepsis*

**Go to Office Now**

Feeding poorly (e.g., little interest, poor suck, doesn't finish)

Signs of dehydration (very dry mouth, sunken fontanelle, no urine in 8 hours)

Skin looks deep yellow or orange or legs are jaundiced  
*R/O: high bilirubin level*

Jaundice worse than when last seen

**See Today in Office**

HIGH-RISK baby for severe jaundice (preterm < 37 weeks or ABO or Rh problem or cephalohematoma or sib needed bili-lights or Asian race, etc.)

Began during the first 24 hours of life  
*R/O: hemolytic jaundice*
Mother concerned the baby is not getting enough breastmilk

*R/O: elevated bilirubin due to poor milk intake*

Good-sized yellow, seedy stools per day are < 3 (R/O: elevated bilirubin due to poor milk intake)

*EXCEPTION: breastfed and before 5 days of life*

Day 2 to 4 of life and no stool in over 24 hours and breastfed

Wet diapers per day are < 6 (R/O: elevated bilirubin due to poor milk intake)

*EXCEPTION: 3 wet diapers/day can be normal before 5 days of life if breastfed*

Day 2 to 4 of life and no urine in over 8 hours

Discharged before 48 hours of life and 4 or more days old and hasn't been examined since discharge

*Reason: AAP recommends re-check*

Caller is concerned about the degree of jaundice (Exception: sclera only)

Caller wants child seen

**See Within 3 Days in Office**

Jaundice begins or reappears after 7 days old

*Reason: not physiological jaundice*

Stools (BMs) are white, pale yellow or light gray

*R/O: neonatal hepatitis, biliary atresia*

Jaundice is not gone after 14 days old

*R/O: breastmilk jaundice, liver disease, UTI*

**Home Care**

Mild jaundice of newborn

**HOME CARE ADVICE FOR MILD JAUNDICE**

1.] **Reassurance:**
- Some jaundice is present in 50% of newborns.
- It is usually temporary and harmless.
- The first place for jaundice to appear is in the whites of the eyes (sclera).
- Jaundice that only involves the face and eyes is always harmless.

2.] **Bottlefed:**
- If bottle fed, increase the frequency of feedings.
- Try for an interval of every 2 to 3 hours during the day.

3.] **Breastfed:**
- If breastfed, increase the frequency of feedings.
- Nurse your baby every 1½ to 2 hours during the day.
- Don't let your baby sleep more than 4 hours at night without a feeding.
- Goal: at least 10 feedings every 24 hours.
Recognizing Jaundice

Sometimes callers aren’t certain if the newborn’s skin is jaundiced. Have them look at the sclera. If the sclera is white, the child is NOT jaundiced. The sclera always turns yellow at a lower bilirubin level than the skin. The color of the sclera is essential in assessing children with darkly pigmented skin.

Bilirubin Level Severity By Parent’s Report of Location

- MILD jaundice: Face or sclera only. Don’t need to be seen.
- MODERATE jaundice: Trunk involved (chest and/or abdomen). If the caller thinks the jaundice is worse than when last checked, these newborns need to be brought in for a level.
- SEVERE jaundice: Legs involved or entire body surface. Newborns with SEVERE jaundice all need to be referred in for a bilirubin level NOW.

Causes of Jaundice

Physiological Jaundice (50% of newborns)

- Onset 2 to 3 days of age
- Peaks day 4 to 5, then improves
- Disappears 1 to 2 weeks of age
Breastfeeding or Malnutrition Jaundice (5 to 10% of newborns)
- Due to inadequate intake of breastmilk
- Pattern similar to physiological type
- Also causes poor weight gain

Breastmilk Jaundice (10% of newborns)
- Due to substance in breastmilk which blocks destruction of bilirubin
- Onset 4 to 7 days of age
- Lasts 3 to 12 weeks
- Not harmful

Rh and ABO Blood Group Incompatibility
- Onset during first 24 hours of life
- Can reach harmful levels

Liver Disease (rare)
- White or pale stools suggest biliary atresia or other obstructive liver disease as the cause of the jaundice.

Risk Factors for Severe Jaundice
- Onset within first 24 hours of life
- Blood type incompatibility (Mother is type O or Rh negative)
- Preterm: Gestational age less than 37 weeks (Preterms are 5 times more likely to have bilirubin levels over 12 than 40 week newborns)
- Sibling required phototherapy
- Bruising from birth trauma (e.g., cephalohematoma)
- Breastfeeding, especially if firstborn and feeding not going well. Newborns discharged on Thursday or Friday are at highest risk, because they need to be seen on the weekend for a recheck of their jaundice (and sometimes that is overlooked).
- Asian race: Bilirubin levels over 12 occur in 23% of Asian babies, 12% of whites and 4% of African-Americans
- Caller mentions last bilirubin level was in “high-risk” zone

Kernicterus Prevention
- Kernicterus (bilirubin encephalopathy) is the most serious complication of high bilirubin levels
- Early symptoms are lethargy, hypotonia, poor suck and high-pitched cry
- The US kernicterus registry reported 61 cases in term and near-term healthy newborns in 8 years (Johnson 2002). Currently over 120 cases (2007).
- Bilirubin levels 22-48; 31% idiopathic, 31% G6PD, 10% hematomas
- Breastfed: 59 of 61 (increased risk for dehydration and malnutrition) (97%)
- Sequelae over 90% at 18 mo (cerebral palsy, developmental delays, hearing loss)
- Lapses in follow-up care: Only 28% were given an early follow-up appointment within 2-3 days of discharge. (AAP Practice Parameter 1994 and 2004 recommends any newborn discharged before 48 hours needs a check-up within 2-3 days of discharge for jaundice, feeding behavior, weight, hydration, etc.)
- Errors in telephone care: Mothers who phoned their doctor’s office for jaundice, drowsiness, poor feeding, etc. received repeated reassurance rather than being seen
REFERENCES


