

This is not an all-inclusive list; other factors are also evaluated.

Factors placing newborns at higher risk for hyperbilirubinemia include maternal race (e.g., Asian or Asian American), late preterm birth, jaundice observed in the first 24 hours of life, significant bruising, cephalhematoma, exclusive breastfeeding, blood group incompatibility or hemolytic disease (such as, G6PD), and history of sibling with hyperbilirubinemia ([Muchowski, 2014](#)).

Noninvasive monitoring of bilirubin via cutaneous reflectance measurements (**transcutaneous bilirubinometry [TcB]**) allows for repetitive estimations of bilirubin and, when used correctly, may decrease the need for invasive monitoring. The new TcB monitors provide accurate measurements within 2 mg/dl in most neonatal populations at serum levels below 15 mg/dl ([Schmidt, Wheeler, Jackson, et al, 2009](#)). TcB monitors must be used according to published guidelines as a screening tool, not as a predictor of need for therapy; multiple readings over time at a consistent site (e.g., sternum or forehead) are of more value than a single reading. After phototherapy has been initiated, TcB is no longer useful as a screening tool.

The use of hour-specific serum bilirubin levels to predict newborns at risk for rapidly rising levels has now become the standard of care as well as an official recommendation by the [American Academy of Pediatrics, Subcommittee on Hyperbilirubinemia \(2004\)](#) for the monitoring of healthy neonates of 35 weeks of gestation or older. The use of a nomogram with three levels (high, intermediate, or low risk) of rising total serum bilirubin values assists in the determination of which newborns might need further evaluation after discharge ([Romagnoli, Tiberi, Barone, et al, 2012](#)) (see [Fig. 8-16, A](#)). The hour-specific bilirubin risk nomogram is used to determine the infant's risk for developing hyperbilirubinemia requiring medical treatment or more frequent screening. Risk factors recognized to place infants in the high-risk category include gestational age of younger than 38 weeks, breastfeeding, a sibling who had significant jaundice, and jaundice appearing before discharge ([Kamath, Thilo, and Hernandez, 2011](#)).

It is also recommended that healthy term infants receive follow-up care and bilirubin risk assessment with TcB or the hour-specific