

For Heel Lancing in Newborns

- Heel lancing has shown to be more painful than venipuncture (Shah and Ohlsson, 2007).
- Kangaroo care (placing the diapered newborn against the parent's bare chest in skin-to-skin contact) 10 to 15 minutes before and during heel lance reduces pain. In two studies, mothers were slightly more effective than fathers in decreasing pain (Shah and Jeffries, 2012; Johnston, Campbell-Yeo, and Fillion, 2011; Gray, Watt, and Blass, 2000).
- Breastfeeding during a neonatal heel lance is effective in reducing pain and has been found to be more effective than sucrose in some studies (Shah, Herbozo, Aliwalas, et al, 2012; Shah and Jefferies, 2012)
- If breastmilk is unavailable, administer sucrose and encourage the newborn to suck a pacifier. When commercially manufactured 24% sucrose solution is unavailable, add 1 tsp of table sugar to 4 tsp of sterile water. Use this solution to coat the pacifier or administer 2 ml to the tongue 2 minutes before the procedure. (See Translating Evidence into Practice, Reduction of Minor Procedural Pain in Infants, Chapter 5.)
- Although safe for use in preterm infants when applied correctly, EMLA has been found to be no more effective than placebo in preventing pain during heel lancing (Anand and Hall, 2006; Stevens, Johnston C, Taddio A, et al, 1999; Essink-Tebbes, Wuis, Liem, et al, 1999).

EMLA, Eutectic mixture of local anesthetics; *IV*, Intravenous; *LMX*, lidocaine; *PICC*, peripherally inserted central catheter.

Arterial blood samples are sometimes needed for blood gas measurement, although noninvasive techniques, such as transcutaneous oxygen monitoring and pulse oximetry, are used frequently. Arterial samples may be obtained by arterial puncture