

Pain Control in Newborn Infants

Skin-to-skin contact plus 25% oral dextrose is the most effective procedural pain control in newborns.

Studies have shown that skin-to-skin contact and oral dextrose are effective approaches to pain control in newborn infants. In a randomized clinical trial, 640 healthy full-term newborn infants in Brazil who were to receive an intramuscular injection of hepatitis B vaccine were randomly assigned to oral placebo alone, skin-to-skin contact with their mother plus oral placebo, skin-to-skin contact with their mother plus 25% oral dextrose solution, or 25% dextrose solution alone. Skin-to-skin contact was started 2 minutes before the injection and at the same time as dextrose was given.

Compared with oral placebo alone, skin-to-skin contact plus dextrose was associated with significantly reduced mean facial pain expression scores (7.2 vs. 6.2, on a 9-point scale with higher numbers indicating worse pain) at the time of injection. Skin-to-skin contact plus placebo and dextrose alone did not reduce pain scores compared with placebo. Two minutes after needle withdrawal, all treatments significantly reduced pain scores compared with placebo (mean score, 4.0), with skin-to-skin contact plus dextrose being the most effective (0.6), followed by skin-to-skin contact plus placebo (1.8) and dextrose alone (2.1). Another validated scale for pain assessment yielded roughly similar results.

Comment: We have made great strides in controlling procedural pain in infants and children. Although pain evaluators were not blinded to the groups that had skin-to-skin contact, these results corroborate those from other studies that skin-to-skin contact plus oral dextrose is the most effective approach to pain control in newborn infants.

— [Howard Bauchner, MD](#)

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