

CRIES Neonatal Postoperative Pain Measurement Tool

	0	1	2
Crying	No	High-pitched	Inconsolable
Requires O₂ for oxygen saturation > 95%	No	< 30%	> 30%
Increased vital signs	HR and BP = or < preoperative value	HR or BP ↑ < 20% of preoperative value	HR or BP ↑ > 20% of preoperative value
Expression	None	Grimace	Grimace/grunt
Sleeplessness	No	The baby wakes at frequent intervals	The baby is awake continuously

Coding Tips for CRIES

Crying	<p>The characteristic cry of pain is high-pitched</p> <p>If there is no crying or it is not high-pitched score 0</p> <p>If crying is high-pitched but the baby is easily consoled score 1</p> <p>If crying is high-pitched and the baby is inconsolable score 2</p>
<p>Requires O₂ for oxygen saturation > 95%</p> <p>(Consider other causes of changes in oxygenation: atelectasis, pneumothorax, oversedation, etc.)</p>	<p>Look for changes in oxygenation. Babies experiencing pain manifest decreases in oxygenation as measured by TCO₂ or oxygen saturation.</p> <p>If no oxygen is required score 0</p> <p>If < 30% O₂ is required score 1</p> <p>If > 30% O₂ is required score 2</p>
Increased vital signs	<p>Note: Take blood pressure last, as this may wake the baby, making other assessments difficult.</p> <p>Use baseline preoperative parameters from a period free of stress.</p> <p>Multiply baseline HR × 0.2, then add this total to the baseline value to determine whether the HR is 20% faster.</p> <p>Do likewise for BP, using the mean value.</p> <p>If HR and BP are both either unchanged or less than at baseline score 0</p> <p>If either HR or BP is increased less than 20% of baseline score 1</p> <p>If either one is increased more than 20% from baseline score 2</p>
Expression	<p>The facial expression most often associated with pain is a grimace characterized by a lowered brow, the eyes squeezed shut, a deepening of the nasolabial furrow, and open lips and mouth.</p> <p>If no grimace is present score 0</p> <p>If grimace alone is present score 1</p> <p>If grimace and a vocalization without crying (grunt) are present score 2</p>
Sleeplessness	<p>This parameter is scored according to the infant's state during the preceding hour.</p> <p>If the baby has been continuously asleep score 0</p> <p>If the baby has awoken at frequent intervals score 1</p> <p>If the baby has been awake continuously score 2</p>

HR = heart rate; BP = blood pressure; ↑ = increase; TCO₂ = transcutaneous CO₂

From Krechel, S. W., & Bildner, J. (1995). CRIES: A new neonatal postoperative pain measurement score. Initial testing of validity and reliability. *Pediatric Anesthesia*, 5(1), 53–61. This neonatal pain assessment tool was developed at the University of Missouri–Columbia. Copyright 1995 S. W. Krechel and Jo Bildner. Adapted with permission.