

## Neonatal Infant Pain Scale (NIPS)

Overview: The Neonatal Infant Pain Scale (NIPS) is a behavioral assessment tool for measurement of pain in preterm and full-term neonates. This can be used to monitor a neonate before during and after a painful procedure such as venipuncture. It was developed at the Children's Hospital of Eastern Ontario.

- Parameters:
- (1) facial expression
  - (2) cry
  - (3) breathing patterns
  - (4) arms
  - (5) legs
  - (6) state of arousal

Parameter	Finding	Points
facial expression	relaxed	0
	grimace	1
cry	no cry	0
	whimper	1
	vigorous crying	2
breathing patterns	relaxed	0
	change in breathing	1
arms	restrained	0
	relaxed	0
	flexed	1
	extended	1
legs	restrained	0
	relaxed	0
	flexed	1
	extended	1
state of arousal	sleeping	0
	awake	0
	fussy	1

where:

- relaxed muscles (facial expression): restful face neutral expression
- grimace: tight facial muscles furrowed brow chin jaw (negative facial expression – nose mouth brow)
- no cry: quiet not crying
- whimper: mild moaning intermittent
- vigorous cry: loud scream rising shrill continuous (Note: Silent cry may be scored if baby is intubated as evidence by obvious mouth facial movements).
- relaxed: usual pattern for the baby
- change in breathing: indrawing irregular faster than usual gagging breath holding
- relaxed/restrained: no muscular rigidity occasional random movements of limb
- flexed/extended: tense straight rigid and/or rapid extension flexion
- sleeping/awake: quiet peaceful sleeping or alert and settled
- fussy: alert restless and thrashing

neonatal infant pain scale = SUM(points for the 6 parameters)

Interpretation:

- minimum score: 0
- maximum score: 7

Limitations:

- A falsely low score may be seen in an infant who is too ill to respond or who is receiving a paralyzing agent.

References:

Lawrence J Alcock D et al. The development of a tool to assess neonatal pain. Neonatal Network. 1993; 12 (6 September): 59-66.