

# How Does Pain Affect Infants?

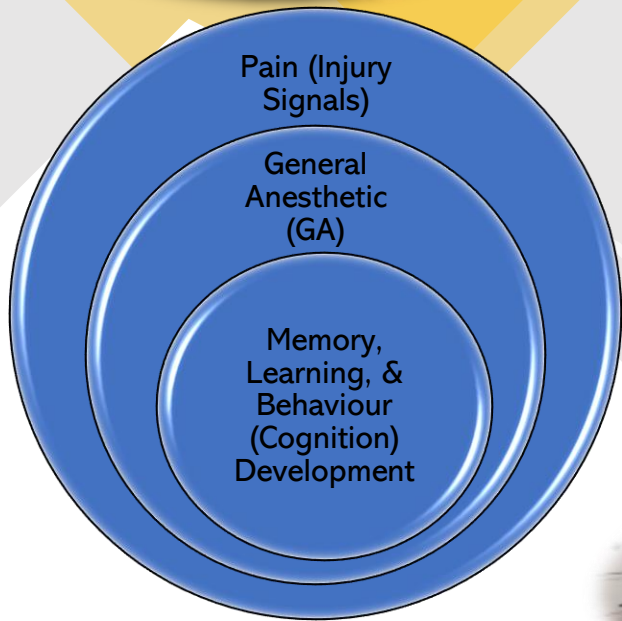


As parents/caregivers, consider what you want most for newborns: Safety? Good health? Prevent them from getting hurt? Aid them in their successful cognitive (memory, learning, and behaviour skills ) development?

Pain (our body's signals of actual or potential injury) is a natural part of life and has significant impacts on how a baby's brain (Central Nervous System) develops. Engaged and informed parenting/caregiving can reduce infant exposure to pain experiences in their early years of development.

Pain memories and experiences lead to higher risks of anxiety and ADHD in children.<sup>1,7</sup> General Anesthetic (GA) is one way that medical professionals reduce pain in infants during medical procedures, and has its own related effects on how your baby develops.

Medical professionals use GA to reduce pain in infants during medical procedures<sup>9</sup>. GA affects how proteins in our cells communicate, potentially creating imbalances and impairments. This impairment is called Post-Operative Cognitive Dysfunction (POCD)<sup>9</sup>



## Reduce GA and Pain for Infants because...

Childhood pain memories influence how we process and experience pain in the future. Pain memories affect our sensitivity and fear of pain, as well as how we associate people, places, and things with painful memories.<sup>7</sup>

Individuals that recall pain memories report future experiences as more painful.<sup>6</sup>

Repeated, brief exposures to GAs cause behavioural, learning, and memory dysfunction.<sup>8</sup>

Some medical procedures (Hepatitis vaccinations, lumbar punctures for cancers, heel lances for diabetic tests, hernia repair, dental work, ear drum surgeries, etc.) are vital; others like routine circumcision in males are not<sup>7,3</sup>. Less pain experiences an infant experiences means less risk of altering cognitive performance from pain or GA.

Up until the 1980s the medical community believed that infants could not feel pain or retrieve memories.<sup>7</sup> This suggests that many current parents may be unaware of the impact pain can have on infants.



### Did you know?

Rats are used in research because they are genetically similar to humans, and exhibit similar behaviour and cognition characteristics.<sup>2</sup>

Anesthetic has a noticeable impact on how infant brains develop and process information.<sup>5</sup>

## Pain Reduction Tips for Caregivers

**Talk about it.** How pain experiences are handled by those around them influences the memory an infant has about a procedure. Providing context and familiarity has been proven to reduce infants' perceived pain levels, and recalling provided information can make a procedure less distressing.<sup>8</sup>

**Reduce exposure to both pain experiences and GA.** Combine procedures requiring GA to reduce the effects of GA while infants are in critical stages of development.<sup>4</sup> If a procedure (e.g. routine circumcision) is not medically necessary, avoid it.<sup>1</sup>

**Inform Yourself.** While medical professionals are expected to objectively inform families on risks and benefits of surgical procedures, evidence shows that some practitioners operate with personal bias.<sup>5</sup> Circumcision, for example, remains a controversial topic, so informing yourself on its potential risks helps determine the need, if any.<sup>3</sup> Getting multiple opinions and knowing the effects of pain and GA on developing brains will help you make an informed decision with your infant's overall health a primary focus.

**Anesthetic vs Pain:** GA and pain both impact development, but research supports using GA over leaving painful procedures go unaddressed.<sup>6</sup>

