What causes colic / secondary lactose intolerance in the breastfed baby?

- Feed mismanagement (e.g. limiting feed duration, insisting on two-breasts per feed)
  - Frequent, high volume (and thus high lactose), low fat feeds
  - Compromised lactase activity at the brush border of the small intestine

- Fast gastric clearance (low fat)
  - Lactose overload in infant's small intestine
  - Excess lactose fermented by bacteria in infant's large intestine

- Osmotic gradient "pulls" water into infant's large intestine

- Frequent, watery, explosive, green stools
  - Gas production, mainly methane and Carbon dioxide
  - Acid production
  - Perianal acid burns

- Infant flatulence, pain, screaming, unsettled behaviour .........“colic”

Or to put it another way...

Lactose overload - or - colic in the breastfed baby.

- Baby poorly attached - reduced fat intake
- Baby soon hungry again - gastric emptying time more rapid - (low fat feed)
- More frequent feeds - more lactose - (lactose concentration constant)
- Amount of lactose in the gut may transitorily exceed lactase production - resulting in signs of lactose intolerance/lactase deficiency
- Accumulated undigested lactose creates an osmotic gradient that draws water into the bowel.
- Bacteria in the baby’s gut are provided with more substrate than usual, which they eagerly attack as an energy source, producing large quantities of gas in the process (mostly carbon dioxide and methane).
- Dissention of the gut by both fluid and gas produces pain (cramping) and looser, green stools.