# Protocol #11: Crying and Colic in the Breastfed Baby

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*Crying evokes distress in both parents and babies. Parents may label persistent crying as "colic". Colic is not a disease, but a syndrome characterized by periods of inconsolable crying. Being unable to soothe her baby's crying can negatively impact a mother's sense of self-efficacy.*

## Observation and Assessment

***Assess the baby for:***

- Prolonged periods of persistent, inconsolable crying, irritability, or fussiness that may be concentrated in the afternoon and evening.
- A cry characterized by a high-pitched wail or scream as if the baby were in pain (St. James-Roberts, 1999).
- Breastfeeding and gaining weight well.
- Being healthy aside from the colic.
- A tense body with fists clenched and legs pulled up.
- A hard abdomen that may be distended.
- Frequently falling into a deep sleep after a crying period.
- Breastfeeding frequently for short periods, then pulling away crying.
- Being soothed at least temporarily by prompt attention such as holding, gentle rocking, walking, or breastfeeding.
- Any other possible causes of persistent crying, e.g., illness, hunger, cold, injury, comfort, etc.

## Possible Contributing Factors or Causes

- The cause of colic is unknown. Colic or persistent crying may be associated with a feeding problem (e.g., overfeeding, underfeeding, excessive air swallowing), and rarely intolerance to a food in the mother's or baby's diet. It is reported in equal frequency in both breastfed and non-breastfed babies.
- Crying and colic in the breastfed baby may have one or more underlying factors.

***Assess the mother for:***

- Knowledge of normal baby crying and breastfeeding behaviours.
- Maternal breastfeeding self-efficacy, stress and coping challenges, including available support.
- Ineffective positioning and latching practices (*Protocol #2: Positioning and Latching*).
- Switching breasts before the baby is finished breastfeeding from the first breast, i.e., the baby is finished the first breast when he is no longer sucking and swallowing effectively, and the breast feels significantly softer *(Protocol #3: Signs of Effective Breastfeeding)*.
- An overabundant supply/forceful letdown or breast milk ejection reflex (*Protocol #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Reflex*).
- Cigarette smoking.
- Maternal medication or substance use.
- Ingestion of a food or beverage to which the baby may be sensitive (rare).

## Suggestions

1. Offer information to the mother about normal baby crying and breastfeeding behaviours.

***Encourage the mother in understanding that:***

- Babies cry to signal a need for comfort, warmth, food, mother's presence, or to be held.
- Babies cry an average of 2–2½ hours a day, peaking at around 2 months, and gradually decreasing by the fourth or fifth month (Barr, 2006).
- Babies may cry for long periods, with no obvious cause, and may be inconsolable.
- Babies may look like they are in pain even when they are not.
- Babies may cry more in the afternoons and evenings.
- Crying is a late signal of hunger.
- Breastfeedings are frequent and sometimes in clusters.

***Encourage the mother to:***

- Respond promptly to her baby's crying.
- Understand that she is not spoiling her baby when she responds promptly to crying and/or holds her baby.

2. Offer information on soothing techniques.

***Encourage the mother to try soothing techniques such as:***

- Holding the baby skin-to-skin (chest-to-chest).
- Cuddling or rocking the baby.
- Carrying the baby in a carrier.
- Wrapping the baby loosely in a blanket to reduce stimuli.
- Breastfeeding the baby.
- Burping the baby.
- Changing the baby's diaper.
- Giving the baby a bath.
- Giving the baby a massage.
- Taking the baby to a quiet room.
- Placing the baby near "white noise", e.g., vacuum cleaner, kitchen or bathroom fan, running water, clock, hairdryer, bubbling fish tank.
- Laying the alert baby in a prone position and patting the baby's back. The alert baby may lie prone in the crib, across the mother's lap or along her forearm with the baby's head and chest well supported by her hand.

**Young babies who are not able to turn over from their back to their abdomen on their own should not be left on their abdomen or side to sleep. A back sleeping position has been associated with a decreased risk for Sudden Infant Death Syndrome in young babies.** For further information see *Safe Sleep for Your Baby* (PHAC, 2010).

3. Offer information and support for the mother's breastfeeding self-efficacy, including assessment of her coping capacities and resources.

***Encourage the mother in understanding that:***

- Crying and colic are not reflective of the baby's feelings about her.
- Crying is unlikely to be related to breastfeeding when her baby is gaining weight well.

4. Assess the baby for ineffective positioning and latching practices (*Protocol #2: Positioning and Latching*).

***Encourage the mother in understanding that:***

- Ineffective positioning and latching practices increase the likelihood that the baby will swallow excessive air.

***Encourage the mother to:***

- Use effective positioning and latching practices.

5. Assess whether the mother switches breasts before her baby has finished the first side i.e., the baby is finished with the first breast when he is no longer actively sucking and swallowing and the breast feels significantly softer (*Protocol #3: Signs of Effective Breastfeeding*).

***Encourage the mother in understanding that:***

- The fat content of breast milk changes during a breastfeeding. The baby initially receives breast milk that is lower in fat and there is a disproportionate ratio of lactose (milk sugar) to fat. As the breastfeeding progresses and the breast empties, the fat content of the breast milk increases.
- If she switches breasts before the baby is finished with the first breast, then the baby may receive mostly lower fat breast milk at that breastfeeding. The lower fat content of the diet may cause rapid gastric emptying and too much lactose reaching the intestines too soon.
- If there is not enough of the enzyme lactase in the baby's digestive system to break down and absorb this rapid loading of lactose, the baby may have symptoms of lactose malabsorption that may resemble lactose intolerance, e.g., crying, gas, and explosive watery-greenish bowel movements.
- A baby who reacts to an overload of lower fat breast milk is not lactose intolerant and does not need to be switched to a lactose-free formula. The breastfeeding mother does not need a lactose-free diet.

***Encourage the mother to:***

- Allow her baby to finish breastfeeding from the first breast before offering the other side. The baby is finished with the first breast when no longer sucking and swallowing effectively and the breast feels significantly softer.

- Use breast compressions while breastfeeding to encourage the baby to suck and swallow effectively (see *Protocol #5: Engorgement* for a description of breast compressions).
- Alternate the breast she offers first at each breastfeeding.

6. Assess the mother for an overabundant breast milk supply/forceful letdown reflex (*Protocol #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Refle* ).

***If the mother has an overabundant breast milk supply/forceful letdown, inform her that:***

- A baby who receives too much breast milk too quickly may become fussy and swallow excessive air as a result of struggling with the breast milk overflow. The baby may choke, cough, or struggle at the breast shortly after beginning the feed.
- The baby may come off the breast several times during the breastfeeding and often the mother's breast milk will spray.
- The baby may partially or completely refuse the breast over time. This typically occurs at 3–6 months of age.

***Encourage the mother to:***

- Try the suggestions outlined in *Protocol #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk-Ejection Refle* .

7. Assess whether the mother smokes cigarettes.

- Smoking is not recommended in breastfeeding mothers.

***If the mother smokes cigarettes, inform her that:***

- Colic has been associated with parental smoking independent of the type of feeding (Reijneveld et al., 2000).
- Nicotine rapidly concentrates in breast milk immediately after smoking. Nicotine and major metabolites have also been found in the breast milk of mothers who are exposed to second-hand smoke.
- Excessive nicotine in breast milk may irritate the baby's gastrointestinal system and may cause vomiting, diarrhea, increased heart rate, and fussiness.
- Nicotine may also decrease breast milk supply.

**Note:** Breastfeeding is still recommended over artificial baby milk if the mother smokes.

***Encourage the mother to:***

- Try to quit smoking or decrease the number of cigarettes she smokes. Information about smoking cessation is available from the Smokers' Helpline at 1-877-5123-5333 or online at: http://www.smokershelpline.ca/.
- Try to smoke immediately after breastfeeding when the baby is sleeping for longer periods (the half-life of nicotine in breast milk is between 60–90 minutes) (AAP, 2005).
- Avoid exposing the baby to second-hand smoke from any source. Do not smoke indoors or in the car. Children exposed to second-hand smoke have an increased risk for health problems such as asthma, bronchitis, pneumonia, ear infections, and Sudden Infant Death Syndrome (*Protocol #16: Drugs and Breastfeeding*). *(Adapted from information from CAMH.)*

8. Assess for a family history of food allergies. First rule out all other possible causes of crying.

***Encourage the mother in understanding that:***

- Diet is rarely the cause of colic. There is some evidence that cow's milk proteins may play a role in infant colic (CPS, 2011), although much of the research is infant formula-based. It is possible that some foods in the mother's diet may be passed on to the breast milk and may cause the baby to be colicky, although this is unusual. This is more likely if there is a family history of allergies. The most common foods that may affect the baby are made from cow's milk, although other proteins have been implicated, e.g., beef, eggs, fish, soy, peanuts, nuts, wheat (and related glutens such as triticale, barley, and oats) and high-acid fruits or vegetables.
- A sensitivity to cow's milk proteins does not mean that the baby is lactose intolerant. A mother who is lactose intolerant herself should continue to breastfeed.
- A food and symptoms diary may help to identify any relationships between activities, times of day and/or foods eaten by the mother with the baby's crying.
- To prevent possible nutrient deficiencies it is important that any elimination of foods be done in consultation with a Registered Dietitian. For

example, calcium is a specific concern if milk products are removed from the diet. A Registered Dietitian can offer counselling and nutrition advice to ensure a healthy and balanced diet.

***Encourage the mother to:***

- Keep a food and symptom diary for a few days. Make specific note of the times of crying, associated activities, mother's diet, and the baby's stool and gastrointestinal symptoms.
- Consult a Registered Dietitian before proceeding with an elimination diet.

9. Ensure that the baby is medically assessed for possible health problems that may aggravate the crying or colic or may actually be the underlying cause of the colicky symptoms, e.g., ear infection, diaper rash, urinary tract infection.

## General Principles

Crying and colic can be a significant source of stress for a mother. She may feel guilty, believing that it is something she did or ate that is to blame for her baby's distress. She may seek to identify causes such as food sensitivities or allergies in herself or her baby, however rarely they may occur. Most significant, she may feel overwhelmed and frustrated, unable to help her baby, which undermines her self-confidence and negatively impacts her maternal self-efficacy.

It is important for parents to understand normal infant crying, as well as normal breastfeeding, so that they can develop realistic expectations for their babies' behaviours. Maternal knowledge about infant crying may increase with educational materials such as the *Purple Period of Crying* program developed by the National Centre on Shaken Baby Syndrome (Barr, 2009).

Colic is not a disease, but a syndrome whereby the baby has periods of inconsolable crying with no apparent physical cause (see the section in *Observation and Assessment* for a list of colic symptoms).

Colic usually begins about 2–3 weeks after birth, peaks in the second month, and subsides by 3–6 months. A medical condition may be present if colic continues beyond 3–4 months. The cause of colic is unknown. Colic may be defined in many ways, making it difficult to establish definitive conclusions about colic, as noted in a systematic review (Lucassen et al., 2001). It is frequently defined in the research by Wessel's "Rule of Threes": Crying for more than 3 hours a day, for more than 3 days a week and for more than 3 weeks (Wessel (1954) in Barr, 2006).

Aside from the periods of inconsolable crying, a colicky baby is otherwise healthy, breastfeeding and gaining weight well. The baby should be assessed for any breastfeeding or health problem that may aggravate the colic or actually be the underlying cause of the crying episodes, e.g., poor positioning and latching, ear infection, diaper rash, urinary tract infection.

Colic is often confused with fussiness. A fussy baby is fussy most of the time, whereas a colicky baby is usually fussy only during the colic spells; either may be normal infant crying behaviours.

Colic is reported with equal frequency in babies who are fed breast milk, infant formula, and/or mixed feeding. (Lawrence, 2011).

Colic-like behaviours have been associated with neurologic hypersensitivity. High responsiveness during a neurobehavioural assessment predicted those infants who cried frequently and met a definition of colic (St. James-Roberts et al., 2003).

Colic-like behaviours have been associated with maternal medication and substance use (Ito, 2000; Lauwers & Swisher, 2011; Leung et al., 2004).

Crying is a common reason that a new parent will seek medical attention.

"Caring for a baby who cries persistently can exhaust and undermine the confidence of any mother" (Pauli-Potti, 2000 in Riordan). It is important to assess and monitor the mother's emotional well-being and to help her identify possible sources of physical and emotional support. The significance to the mother of feeling that she has the right support cannot be underestimated.

A systematic review of treatments for colic found some treatments to be effective, but further and more rigorous scientific evaluation needs to be done to determine the efficacy of most treatments. The review found limited evidence to support the use of pharmaceuticals such as simethicone (Garrison et al., 2000).

The evidence regarding the benefits of hypoallergenic diets by breastfeeding mothers is inconclusive. There is limited evidence to support the use of soy formula for formula fed babies.

- The evidence is inconclusive regarding behavioural

interventions such as carrying, car rides, parent training, and infant stimulation.

- There are concerns regarding the use of herbal teas for babies because prolonged use may lead to decreased breast milk intake (Garrison, 2000). In addition it is always important that there is caution regarding any use of natural health products because there is not enough scientific information about the safety of various herbs and natural health products for either the mother or baby to recommend their general use in breastfeeding (see *Protocol #16: Drugs and Breastfeeding* for further information regarding natural health products).

Stress related to persistent crying and colic can negatively impact a mother's breastfeeding experience. Stress may interfere with the hormones of lactation, potentially negatively affecting breast milk letdown and production (see *How the Breast Works*). Mothers of infants diagnosed with colic were less likely to find breastfeeding to be an effective way to comfort their babies. Howard et al. found that breastfeeding to comfort a crying baby had a protective effect on the duration of partial but not exclusive or full breastfeeding (Howard et al., 2006).

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