



Patient information: Colic (excessive crying) in infants

INTRODUCTION — Colic is one of the most distressing problems of infancy. It is distressing for the infant, the parents, and for the healthcare provider. The cause of colic is not well understood, but it resolves in most infants by 3 to 4 months of age. Nonetheless, many parents need reassurance and support to get through this difficult stage of an infant's life.

DEFINITIONS — The most widely accepted definition of colic follows the "rule of three": crying lasts for more than three hours per day, occurs on more than three days per week, and persists for more than three weeks. Colic occurs in 8 to 40 percent of all infants. It occurs with equal frequency in the following groups:

- Males and females
- Breast- and bottle-fed infants
- Full-term and preterm infants
- The first and second child (and other siblings as well)

Normal crying patterns — All infants cry more during the first three months of life than during any other time. There is no standard definition for "excessive" crying; the average duration of crying during this period varies from 42 minutes to two hours per day. Infants without colic cry, although generally less frequently and for a shorter duration than infants with colic.

Colic — Colic may encompass more than excessive crying. The diagnosis of colic requires three of four criteria:

- Onset — Each episode of colic has a clear beginning and end, and the onset is unrelated to what was happening before the episode started; the infant may have been happy, fussy, feeding, or even sleeping. The crying episode begins suddenly and often occurs in the evening hours.
- Differs from normal crying - Colic episodes are more intense, louder, and higher pitched than "normal" crying. Infants with colic may sound as if they are in pain or are screaming.
- Increased muscle tone - Infants with colic may have physical symptoms. Difficult to soothe - Infants with colic are difficult or impossible to soothe, no matter what the parents do. There may be periods of quiet, but infants often remain fussy. Crying may end after the infant passes gas or a bowel movement.

Colic is a temporary problem. It resolves by three months in 60 % of infants and by nine months in 90% of infants.

CAUSES — There are many theories about the causes of colic. Most of the time no medical cause is not found.

OTHER CAUSES OF EXCESSIVE CRYING — There are a number of reasons, other than colic, that an infant may cry excessively; these can range from simple problems such as hunger to more serious problems such as infection.

- Hunger — Try feeding the baby to see whether hunger is the problem. Although most young infants (younger than 3 months) feed every two to four hours, all babies go through periods when they will want to feed more frequently (usually during growth spurts).
- Pain — Check to see if the baby is uncomfortable because of illness or physical injury. Feel the skin to determine if the baby is overheated or too cold. Finally, check to see if the clothing or diaper is too tight or if a hair is wrapped around a finger, toe, or the penis (called a hair tourniquet).
- Fatigue or overstimulation — Babies often cry when they become tired or overstimulated from playing or being handled. Swaddling the baby snugly ([show figure 1](#)), offering a pacifier, or a change of scene (such as a stroller or car ride) may help the baby to fall asleep.
- Food sensitivities — Infants can have an allergy or sensitivity to foods in their mother's diet or a component of their formula. Foods such as milk, eggs, nuts, and wheat in a mother's diet have a direct effect on the composition of her milk; these foods can occasionally cause adverse food reactions and subsequent gastrointestinal reactions such as abdominal pain, cramping, and diarrhea. Formula-fed infants can be sensitive or allergic to a protein in cow's milk-based formulas. Lactose (a type of sugar found in cow's milk) intolerance has little to no effect on the development of colic.

Food sensitivities may be suspected if an infant cries or spits up a large amount within an hour of feeding or if a baby has constipation or diarrhea. Symptoms of cow's milk allergy include eczema, wheezing, diarrhea, or vomiting.

If these causes have been eliminated and the baby continues to cry excessively, parents should speak with their healthcare provider. Most infants who cry excessively do not have a serious underlying medical problem; a healthcare provider can help to make this determination. ().

DIAGNOSIS — The diagnosis of colic is often made after it has run its typical three- to four-month course. The provider may perform a physical examination, including measurement of the infant's height and weight. These measurements are used to monitor an infant's growth pattern, and may show abnormal changes if there is an underlying medical problem.

Home monitoring — Parents can monitor the characteristics of their infant's crying; it may be helpful to keep a written record of the following information.

- When does crying occur and how long does it last?
- Does the crying begin at the same time every day? Does the infant cry at other times of the day?
- What seems to trigger an episode of crying? What helps to stop crying?
- What do you do when the baby cries? Yelling, shaking, or hitting can prolong crying and potentially harm an infant.
- What does the cry sound like? Infants with colic often have a higher pitched, louder, and more intense sounding cry.
- How and what do you feed the baby? Overfeeding, underfeeding, and feeding inappropriate foods can be a cause

- Is the crying getting better, worse, or is it about the same?

COLIC MYTHS AND FACTS —

- It is not possible to spoil a baby by holding or comforting them.
- Rice cereal does not improve colic. Infants should be given only breast milk or formula until they are 4 to 6 months
- Studies show that simethicone (Mylicon®) and lactase are of no benefit.
- Antihistamines are not safe or effective. Dicyclomine can temporarily stop breathing or cause seizures or coma.

MANAGEMENT —

Parental support — Parents of infants with colic often feel frustrated, angry, exhausted, guilty, and helpless

Take a break — It is normal for parents to need a break from a child who cries excessively. A parent who is alone and needs a break may leave the infant in a safe place; the infant should be placed on his or her back in a crib or bassinet with side rails.

Dietary and feeding technique changes

Bottle-fed infants — A number of devices (nipples, bottles) have been designed to decrease the amount of air swallowed during feeding. Parents may try positioning the infant in a vertical position while feeding. A curved bottle or collapsible bag, in combination with frequent burping, also may be tried. Some studies suggest that infants with colic improve when their formula is switched to a soy-based or hypoallergenic formula. However, the results are inconclusive.

Breast-fed infants — Mothers who breastfeed may try a hypoallergenic diet, eliminating aggravating foods, including milk, eggs, nuts, and wheat. To try a hypoallergenic diet, a single food group is eliminated during a one-week trial period while the infant's crying patterns are monitored. The food may be reintroduced if no improvement is observed. Hypoallergenic maternal diets appear to be more effective for infants whose mothers have eczema, asthma, or allergic rhinitis, or if the infant has symptoms of cow's milk allergy. There is some evidence that having an infant empty one breast completely before switching sides may reduce colic. There is no evidence that stopping breastfeeding and starting formula is of any benefit in babies who have colic. **Breastmilk is the absolute best food for your baby.**

Carrying — Carrying your infant in their arms, a sling, or a front carrier can decrease the infant's and parents' anxiety.

Change in environmental stimuli — Infants also may benefit from decreased stimuli; swaddling or placing the infant near a white noise machine or clothes drier may soothe an infant who is hypersensitive to noise.

Herbal remedies — Herbs such as chamomile, fennel seed, and balm-mint are thought to have anti-spasmodic properties and have been used in infants with colic. Gripe water is a mixture of herbs, primarily dill, and water that has been promoted for its ability to cure colic. However, various types of gripe water have been found to contain dangerous ingredients, including glass particles and alcohol. A homeopathic remedy, colocythis (Hyland colic tablets), is unlikely to cause harm, but has not been proven to be effective for treatment of colic.

Infant massage — Infant massage has been recommended to parents of infants with colic, although no studies have proven it to be of clear benefit. A full description of infant massage can be found at the La Leche League Web site, www.lalecheleague.org

WHEN TO SEEK HELP —

Parents should call their child's healthcare provider during the day or night if any of the following occur:

- The baby has cried for more than two hours
- The parent is afraid he or she may hurt the baby, or if the parent has shaken the baby
- If crying could be the result of an injury or fall
- The baby has a fever greater than 100.4°F (38°C). The infant refuses to eat or drink anything for more than a few hours, vomits excessively, has bloody stools, or has a change in behavior, including lethargy or decreased responsiveness

A parent should call their child's healthcare provider's office during normal office hours if any of the following occur:

- Parents cannot soothe their baby's crying or has questions or concerns about how to manage their crying baby
- Excessive crying continues after the infant is older than 4 months
- The infant fails to gain weight

LONG-TERM OUTCOMES — Colic can take a toll on families. Some researchers have suggested that colic interferes with child-parent interactions and can have a long-term effect on the family and child. Long-term studies have examined the possible relationships between colic and features of later childhood, including temperament, sleep patterns, family functioning, asthma, and cognitive development. However, no significant relationship between colic and these features of later childhood have been proven.

SUMMARY

- There is no standard definition of colic, though the term is used to describe infants who cry excessively for no apparent reason during the first three months of life. Most healthcare providers define colic as crying that lasts more than three hours per day on more than three days per week. All infants cry more during the first three months of life.
- Colic is a temporary. It resolves by three months in 60 percent of infants and by nine months in 90 percent of infants.
- Most infants with colic do not have an underlying medical condition. Colic probably results from a number of different factors, including gastrointestinal, biologic, and psychosocial factors. However, other causes of prolonged crying must be considered.
- Parents can monitor the characteristics of their infant's crying; it may be helpful to keep a written record. This information can be shared with a healthcare provider and may help to determine the cause of an infant's crying as well as the best ways to manage it.
- Colic affects the whole family, and treatment is individualized based upon an infant's symptoms and the family's response. No single management strategy has proven to be successful for all infants, thus many providers recommend trying several strategies at once.
- Long-term studies have examined the possible relationships between colic and features of later childhood, including temperament, sleep patterns, family functioning, asthma, and cognitive development. However, no significant relationship has been proven.