

Indian Academy of Pediatrics (IAP)



GUIDELINES FOR PARENTS

Identifying a Sick Newborn

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10 FAQs on IDENTIFYING A SICK NEWBORN

1. What are the red flag signs I should look for when I take my newborn home following discharge from the hospital?
2. My baby has bluish discoloration of hands and legs, what should I do?
3. My baby is not feeding, appears dull, lethargic, and unresponsive, what should I do now?
4. My baby has not passed urine over the last 6–8 hours, what do I do next?
5. My baby is vomiting two to three times everyday after taking feeds. Should I be worried?
6. My baby has not passed stool in the past 5 days. What should I do?
7. My baby is passing foul-smelling stools more than 10–12 times/day. Should I bring her to the hospital?
8. My baby sometimes feels very warm to touch. What should I do?
9. My baby appears to have rapid breathing, what should I do?
10. My baby is constantly irritable and crying, doctor, what should I do?

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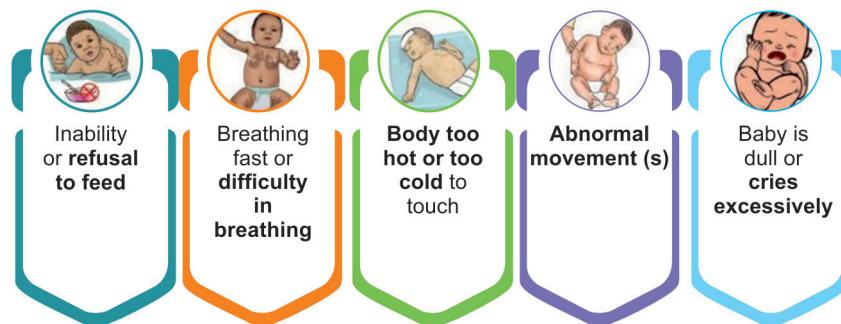
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Identifying a Sick Newborn

Danger Signs

Recognize the danger signs early and reach promptly to the nearest health facility:



Source: Government of Karnataka, Ministry of Health and Family Welfare (MOHFW), India.

Q1

What are the red flag signs I should look for when I take my newborn home following discharge from the hospital?

Seek urgent care if your baby has any of below shown in **(Fig. 1)**:

- *Decreased activity, lethargy*—See if the baby is very sleepy or sleeping longer than usual or difficult to arouse from sleep. Sleeping after a feed for 60–90 minutes is normal.
- *Decreased urine output*—if your baby is passing urine <6 times per day (24 hours).

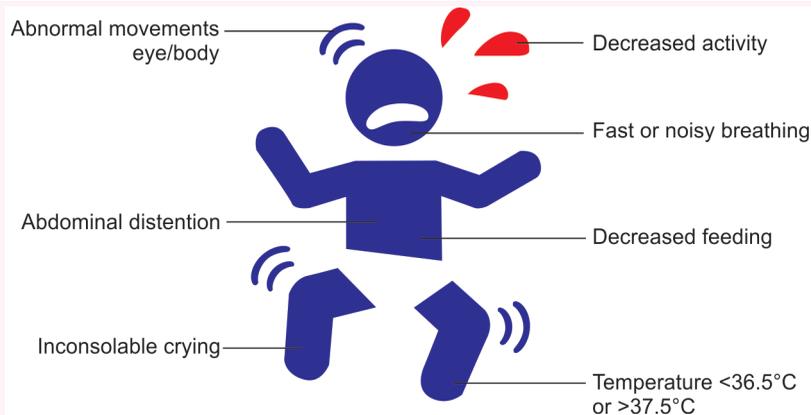


Fig. 1: Seek urgent care if your baby has any of above.

- *Fast breathing/difficulty in breathing/bluish discoloration of the body*—if your child is breathing at more rate than usual or has difficulty in breathing or noisy take your child immediately to a doctor. It can be due to respiratory infections or congenital anomalies of the lung.
- *Refusal to feed* can be due to infections or metabolic disturbances.
- *Green-colored vomitus* can be due to some obstruction in the gastrointestinal tract or metabolic abnormality or abdominal infection.
- *Yellowish discoloration of eyes and body* is seen in neonatal jaundice (**Fig. 2**).
- *Periumbilical redness, swelling, or discharge* from the umbilical cord can be a sign of infection (local or generalized).
- *Temperature*—either increase or decrease can be a sign of infection. The normal temperature of a newborn is 36.5–37.5°C or 97.7–99.5°F.
- *Distention of abdomen, vomiting, blood in stools, pale-colored stools, or black-colored stools* can indicate abdominal infection.
- *Convulsions* in a newborn can have varied presentations such as jerky limb movements, staring of eyes, uprolling of eyes, a child being unresponsive, and cycle pedaling movements.
- In male children, any *redness or swelling in the inguinal region or scrotum and/or penis* must warrant urgent medical care.
- *Coughing or choking during feeding* could be a symptom of a airway obstruction needing urgent medical attention.



Fig. 2: Jaundice.

Q2

My baby has bluish discoloration of hands and legs, what should I do?

Please be calm and note the following things. What time did you first notice it? Site from where it started? Was your baby feeding well before this episode? Does the bluish discoloration increase during crying? Bluish discoloration of hands and legs is called acrocyanosis (**Fig. 3**). Always simultaneously check the color of the lips/tongue. If that is also bluish, then it is central cyanosis. Cyanosis is caused by the presence of deoxygenated hemoglobin in the blood vessels that is most visible on the surface of skin and mucosa. Common causes of cyanosis are:

- Acrocyanosis—seen due to exposure to cold.
- Problems or malformation of airways can cause decreased oxygen and cyanosis.
- Breathing difficulties due to lung involvement.
- Congenital heart diseases.

What you can do?

- Try to calm the child and observe.
- Warm the child.
- Try to assess if your child had any breathing problems or lethargy.

Abnormalities of the airway will generally be seen immediately after birth like choanal atresia. Severe cyanosis is a prominent feature of heart diseases. If cyanosis decreases after warming and calming the child, there is no need to be alarmed, but better to take a doctor's appointment. If cyanosis persists or increases, then immediately take the child to the nearest emergency room as a decrease in oxygen in the body can cause long-term problems for the child.



Fig. 3: Acrocyanosis. Note bluish discoloration of palms and soles. Lips are pink.

Q3
My baby is not feeding, appears dull, lethargic, and unresponsive, what should I do now?

- You must consult your doctor immediately and rush the baby to a nearby hospital at the earliest.
- As babies cannot store calories at such a young age, they need frequent feeding to maintain their sugars (**Fig. 4**). The most serious problem which the baby could suffer is a drop in blood sugar levels which can be detrimental to the baby's developing brain and the damage may continue to have future sequelae. The other possibilities would be a serious infection or a neurological problem like a "fit", for which the baby would definitely need hospitalization and further testing.


Fig. 4: Lethargy.

Q4
My baby has not passed urine over the last 6–8 hours, what do I do next?

As breast milk contains a lot of water (almost 90%), and adequately breastfed babies should pass urine more frequently (every 3–4 hours). If your baby has not passed urine for 6–8 hours, few things must be cross-checked first—Is your baby feeding well? Sleeping well? Responding well? Crying while passing urine? Passing motions or gases regularly? Also need to see if the baby has fever, vomiting, and examine the genitals for any local problem like a tight foreskin over the penis in boys or local infection around the genitals in girls! But, your baby should be seen by the doctor at the earliest to rule out any serious problem and to decide about hospitalization for further management.

Q5

My baby is vomiting two to three times everyday after taking feeds. Should I be worried?

It is common for babies to vomit often in the early weeks. It is probably caused by mild feeding problems, such as reflux or ingestion of air while feeding or his tummy being too full. Usually vomiting a small amount of undigested or curdled milk is nothing to worry about, and soon gets better.

Here is what you can do to help your baby recover:

- *Keep baby hydrated:* Monitor how many times the baby is passing urine. Usually, passing urine six times or more in 24 hours is sufficient.
- *Apply a warm compress:* You can place a warm cloth on your baby's tummy or gently rub his/her tummy using it. This provides relief from gas.
- *Remember to burp* for a few minutes after every feed
- *Help the baby rest:* Sleep may also help to settle your baby. The stomach often empties into the intestines during sleep, relieving the need to vomit.
- Do not bounce the baby on your knee, in a bouncy chair, or let baby get too active right after he eats. The food needs time to settle in the tummy.
- *Avoid using anti-nausea medicines* (prescription or over-the-counter), unless your doctor has prescribed them.
- *Janam ghutti* or other herbal treatments may be recommended by family and friends. But, many of these treatments may not be suitable for young babies, and can even be harmful—so be cautious.

So as long as your baby seems otherwise healthy and continues to gain weight, there is no need to worry.

Please be alert for the following “trouble signs” and consult your doctor, if they appear:

- Severe abdominal pain
- Greenish or blood-stained vomit
- Strenuous, repeated vomiting
- Swollen or enlarged abdomen
- Sleepiness or severe irritability
- Convulsions
- Shortness of breath
- Refusal to breastfeed
- Signs of dehydration, including a dry mouth, lack of tears, and fewer wet nappies than usual
- Weight loss or poor weight gain

Q6

**My baby has not passed stool in the past 5 days.
What should I do?**

- Breastfed babies can easily go up to 7–10 days without passing stools. It does not mean that they are constipated, or there is some problem with their digestion. Understand that as breast milk is exactly what your baby needs, so only little waste product is produced.
- Therefore, exclusively breastfed babies can go a long time without passing stool but their tummy is not full of stool. Moreover, breast milk is itself a natural laxative.
- Formula-fed babies and babies who have been started on solid foods often become constipated, but it is easily treated. If your baby seems uncomfortable, is straining to have a bowel movement, or is having hard, solid stools, they are probably constipated.
- If you feel that your baby is constipated, try massaging your baby’s belly, giving him or her a warm bath.
- It is important to remember that Infants are still developing strength in their abdominal muscles, and hence they have to work a little bit to pass stool. So, it can be normal for babies to push or strain a little to pass a stool even if it is soft—this is a form of their exercise for building abdominal muscles.
- If your baby is still constipated, you may consider using an infant glycerin rectal suppository based on your doctor’s advice.

You should consult your pediatrician, if along with signs of constipation any of the following is present.

- Your baby is passing blood mixed stool.
- Persistent crying/irritability
- Fever
- Your baby is not feeding normally.
- Your baby is having yellow or green vomits.
- The abdomen appears swollen or distended (**Fig. 5**).



Fig. 5: Abdominal distention.

Q7

My baby is passing foul-smelling stools more than 10–12 times/day. Should I bring her to the hospital?

Keep breastfeeding your baby, it will help the baby to recover quickly if your baby has diarrhea. Continue to give as much as feeds as possible. Usually, babies pass stool anything between 10 and 12 times per day to once in 3–4 days. Babies who are exclusively breastfed have nonfoul-smelling stools with semisolid consistency. Persistent foul-smelling stool with a watery consistency, explosive stool with excessive gases, decrease in weight, or failure to gain weight are signs to worry and need immediate attention of the pediatrician. Lactose intolerance, pancreatic insufficiency due to cystic fibrosis, or stomach flu which are commonly seen needs to be ruled out, if the loose stools are persistent or the child has a decrease in or fails to gain weight.

Tips for Parents

- Do not stop breastfeeding.
- Monitor urine, if <4–6 times in 24 hours.
- Watch for irritability, decreased activity, and sunken eyes.
- Watch for diaper rashes.
- If symptoms continue, the child looks dehydrated or lethargic, there is a decrease in activity immediately consult a pediatrician.

Q8

**My baby sometimes feels very warm to touch.
What should I do?**

- Generally, fever means a temperature $>99.5^{\circ}\text{F}$ ($>37.5^{\circ}\text{C}$) (**Fig. 6**).
- Medically, a child is not considered to have significant fever until the temperature is $>100.4^{\circ}\text{F}$ ($>38.0^{\circ}\text{C}$).
- Fever can be caused by infections and inflammation (**Fig. 7**). Some childhood immunizations can also cause fever. Bundling a child who is <3 months old in too many clothes or blankets can increase the child's temperature slightly.

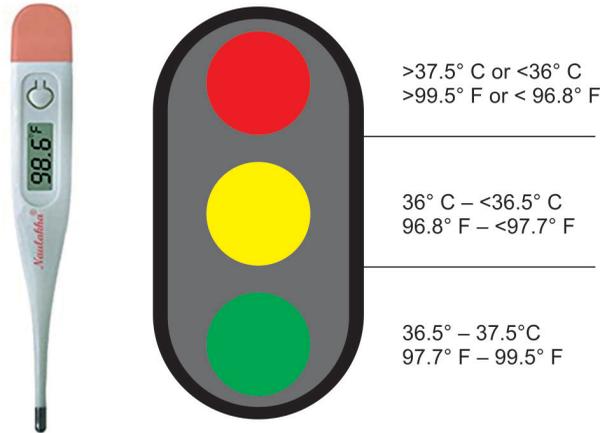


Fig. 6: Interpreting temperature.



Fig. 7: Pustules can cause fever.

- Digital thermometers are inexpensive, widely available, and the most accurate way to measure temperature. For newborns, temperature can be measured in the armpit.
- It is not accurate to estimate a child's temperature by feeling the child's skin. This is called a tactile temperature, and it is highly dependent upon the temperature of the person who is feeling the child's skin. Forehead and feet of babies are usually warm to touch as it has better blood flow.
- Occasionally, sponging with lukewarm water can be done to reduce the temperature after the medication is administered. The use of cold water for sponging is not recommended in fever.
- Medications (paracetamol) can be used in doses recommended by a doctor.
- Fluids such as breastmilk should be offered frequently.
- *Warning signs of fever:*
 - Extreme lethargy, drowsiness, excessive cry, or irritability
 - Vomiting and refusal to feeds
 - Breathing difficulty
 - Abnormal body movements or abnormal behavior

Q9

My baby appears to have rapid breathing, what should I do?

Newborns generally have an irregular breathing pattern. They breathe a lot faster than older infants, kids, and adults. On average, newborns can take about 40–50 breaths/min. That may look fast. Newborns can also take rapid breaths and then pause for up to 10 seconds at a time. Sometimes, they can make unusual noises.

This difference in breathing pattern is mainly attributed to their smaller airways and immaturity of respiration controlling the center in the brain. Also, the babies breathe more through their nostrils than their mouth (**Fig. 8**).

If you are concerned about your baby's breathing:

- First, familiarize yourself with the baby's normal breathing pattern while he/she is relaxed. This will help you to notice if there is any change in the pattern.
- Observe your baby to see if he/she appears to be in distress or is comfortable.



Fig. 8: Chest indrawing.

- You can also make a video of your baby's breathing to show it to a doctor. Many medical professionals now offer online appointments or communication by email.
- Preferably, have your baby sleep on their back.
- Saline drops, sold over-the-counter at drug stores, can help with noisy respiration.
- Sometimes, babies breathe fast when they are overheated or upset. Use breathable fabrics.

See your doctor immediately if your child:

- Is grunting or moaning at the end of each breath.
- Has nostrils flaring, which means they are working harder to get oxygen into their lungs.
- Has muscles pulling in on the neck, around collar bones, or ribs.
- Has difficulty in feeding in addition to breathing issues.
- Is dull in addition to breathing issues.
- Has a fever as well as breathing issues.
- Develops blue color in lips, tongue, fingernails, and toenails.

Q10

My baby is constantly irritable and crying, doctor, what should I do?

Common Causes (Fig. 9)

- Excessive tiredness/lack of sleep
- Hunger
- Soiled nappy or a diaper rash
- Pain
- Feeling too hot or cold
- Need for attention
- Infantile colic



Fig. 9: Excessive crying.

Pathological Causes

- Urinary tract infection
- Ear infection
- Oral thrush
- Brain infection
- Convulsion
- Obstructed hernia
- Gastroesophageal reflux, etc.

What can you do if your baby is irritable?

- Infants usually have different types of cries. If you pay attention, you will soon be able to tell when the infant needs to be picked up, fed, tended to, or left alone.

- Maintain a diary—to see when your baby is awake, asleep, feeding, and crying.
- Recognize signs of tiredness—frowning, clenched hands, jerking arms or legs, crying, and grizzling.
- Establish a settling routine such as—quiet play, moving to the bedroom, wrapping/swaddling the baby, dimming the lights, and settling in the cot.
- If the baby is crying for attention, then it may be helpful to touch, hold, and talk to your baby.
- The sucking reflex is often calming. Allow the baby to breastfeed or give a pacifier.
- Rocking—either in a rocking chair or in your arms as you sway from side to side.
- Gently stroking or patting the baby.
- Holding the baby in kangaroo mother care position and providing skin-to-skin contact.
- Playing gentle music or singing lullabies.
- Respond to the baby before the baby gets too worked up.
- Take rest! Allow someone else to care for the baby for a brief period everyday. Do not take the crying personally. She is not crying because you are a bad parent. Newborns routinely cry for a few hours everyday.

When should you be worried?

- Baby appears unwell or lethargic, turns blue, and has a fever.
- Not able to console, crying more on being touched/handled, abdominal distention.