

Indian Academy of Pediatrics (IAP)



GUIDELINES FOR PARENTS

Care of the Low Birthweight Newborn

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10 FAQs on CARE OF THE LOW BIRTHWEIGHT NEWBORN

WARMTH

1. How should I keep my baby warm at home?
2. Advise me about bathing, massaging, and exposing to sunlight.

KANGAROO CARE

3. What is Kangaroo mother care (KMC)? How do I practice it?
4. When to start and stop KMC?

FEEDING

5. What is the best way to feed my baby?
6. Should I give formula feeding?
7. How long and how often should I feed my baby?
8. My baby does not suck at breast. How should I feed my baby?

INFECTION PREVENTION

9. What steps should I take to prevent infection in my baby?
10. Advise me on periodic checkups of my baby.

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Care of the Low Birthweight Newborn

WARMTH

Q1

How should I keep my baby warm at home?

Please make sure that the room is neither unduly cold nor warm. You know the room temperature is OK for your baby if you feel comfortable. To keep the room warm, keep the windows and doors shut. This avoids draught of air. You may use room heater or 200 Watt bulb, especially during winters, to provide additional warmth. However, you must ensure that the baby is placed not too close to the heater or bulb. Kangaroo care is a simple and effective method to keep your baby warm (**Fig. 1**).

Does my baby need additional clothing?

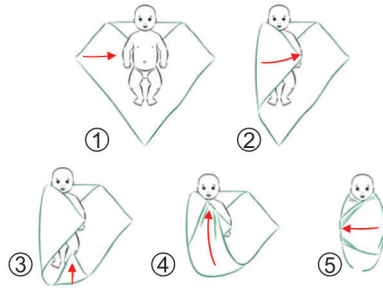
Babies <2.5 kg need to be kept warm. The general rule is to add an extra layer of clothing to the baby than what the adults are wearing. The head should always be kept covered. In winter, one may add gloves, sweater, and socks.

How do I know my baby's temperature is normal?

The best way to know that all is well with the baby is to look at the color of the soles/feet. Normally, the soles/feet should be pink. If they have shades of blue or appear off white, it tells us something is wrong.



Cover the head



Swaddle the baby



Keep baby with mother



Avoid bath till 2.5 kg



Sponge the baby daily



Keep doors and windows closed



Room heater, if required



Do not expose to direct sunlight

Fig. 1: Keeping baby warm at home.

You can assess the baby's temperature by touching the tummy and soles/feet. With the dorsum of your hand, touch the abdomen (tummy) of the baby and then touch the baby's feet and hands. If both are equally warm, then your baby is OK. If hands and feet are cold to touch, while abdomen is warm, then your baby is getting cold, and you must confirm using a thermometer.

If you are in doubt, use a thermometer to record the temperature (**Fig. 2**). Normal temperature is 36.5–37.5°C.

- Clean the tip with soap and water.
- Turn the thermometer on.
- Put the tip under the axilla/armpit.
- Close the hand around the thermometer.
- Wait until it beeps or flashes.
- Check the temperature on the display.
- Fahrenheit = (1.8 × Celsius) + 32



Digital thermometer



Fig. 2: Using digital thermometer.

Q2

Advise me about bathing, massaging, and exposing to sunlight.

It is a safe practice to postpone bathing till your baby has attained a weight of 2.5 kg. During this period, the emphasis is on wiping or sponging the baby. This needs to be done daily. Also remember to use lukewarm water. It should be checked by dipping your finger ensuring that it is neither unduly warm nor cold. Sponge the baby from head to toe. This should be immediately followed by drying with clean towel and putting clothes on the baby.

Is massage good for my baby?

Oil massage is good for your baby. It should be done gently. Avoid vigorous rubbing, turning the baby upside down or putting oil into ears, nose, or any openings. Remember any maneuver which upsets the baby is not OK. One may use coconut oil or olive oil. It is better to avoid irritant oils such as mustard oil.

Can I use fan and/or AC?

One can use fan or AC, especially during summer. Ensure that the baby is kept away from the blast of air. Ensure the temperature of AC is not <26°C.

What about exposing to sunlight?

Sunlight coming inside the room is encouraged but keeping the baby exposed to sun is not. Direct exposure to sunlight is avoided as it may lead to temperature fluctuations and may mask jaundice.

KEYPOINTS

1. A preterm/low birthweight is at risk for temperature fluctuation and needs additional support.
2. Good practices include avoiding bath till weight of 2.5 kg, keeping baby and mother together, providing Kangaroo mother care (KMC), additional clothings during winter, and keeping the head of the baby covered always.
3. A normal baby has a temperature between 36.5 and 37.5°C.

Kangaroo Care

Q3

What is Kangaroo mother care (KMC)? How do I practice it?

If your baby is low birth weight (<2.5 kg) or born preterm, KMC is the best method of caring for the baby. KMC means keeping the baby continuously between the mother's breasts, in skin-to-skin contact for prolonged period and feeding with only mother's milk.

Benefits to Mom	Kangaroo mother care (KMC)	Benefits to baby
<ul style="list-style-type: none"> Improves bonding Improves breastfeeding Reduces stress Reduces anxiety 		<ul style="list-style-type: none"> Provides warmth Reduced infection rates Promotes breastfeeding Improves breathing Improves growth Enhances brain development Enhanced survival Early hospital discharge

The baby with a diaper, cap, and socks is placed in skin-to-skin contact between the mother's breasts. The baby's head should be partially extended and turned to the side so that the baby can breathe well. The baby must be flexed (hips and arms bent) and well supported. The baby may be held in this position with a binder.

The mother with her baby in KMC can either sit in a chair or lie down on a bed with many pillows to maintain a semi-reclining position of about 30–40°. The mother should wear clean clothes and wash hands well for KMC (**Fig. 3**).

KMC position

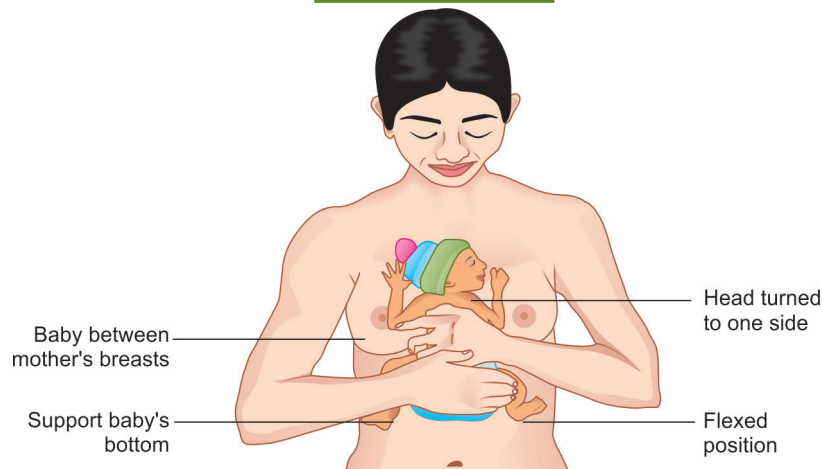


Fig. 3: Kangaroo mother care position.

Q4

When to start and stop KMC?

Kangaroo mother care is started as soon as your baby is stable. Your doctor will let you know when to start. Once the baby is placed in KMC position, the baby should remain so for as long as possible and at least for 1 hour. Ideally, a baby should receive KMC for 24 hours/day. This may not be possible for only the mother and other family members can also provide KMC.

When do I stop KMC?

Generally, as the baby grows and gains weight (usually around 2.5 kg), he/she starts wriggling out every time KMC is given. This is an indication that baby no longer needs KMC. It can, however, be continued during night and also if the baby is sick.

KEYPOINTS

1. Kangaroo mother care is simple, safe, and an effective way to care for low birthweight babies.
2. Kangaroo mother care saves lives, prevents complications in newborns, and also has benefits for mother.
3. Kangaroo mother care is keeping the baby in continuous skin-to-skin contact on the mother's chest for prolonged period with exclusive breastfeeding.
4. Any family member can provide KMC when mother is unable to do so.

FEEDING

Q5

What is the best way to feed my baby?

The best way to feed your baby is breast milk. It is the birthright of every newborn baby. For you, it is a wonderful experience and a miracle of nature. Breast milk provides ideal nourishment and a special bonding experience that many mothers cherish.

Breastfeeding

Benefits

- Protects against infection. Breastfed babies have fewer infections and hospitalization. During breastfeeding antibodies and other germ fighting factors pass from mother to her baby and strengthen the immune system. It protects against ear infection, diarrhea, respiratory infections, and meningitis.
- It also protects your baby against allergies, asthma, diabetes, obesity, and sudden infant death syndrome.
- Breast milk is more easily digested and contains vitamins and minerals that a baby needs.
- It is free and on demand.
- Different taste each day as the milk flavor depends on what their mother has eaten.
- Convenience. No special preparations required.
- Smarter babies as breastfed babies have higher intelligent quotients (IQs).
- Stimulates emotional bonding.
- Beneficial for mom too—less postpartum bleeding, help regain weight, lesser chances of breast and cervical cancer.

Challenges

- **Personal comfort:** Mother may feel uncomfortable with breastfeeding, especially in public places, if working or traveling.
- A big time societal support for mothers at work and home.
- Mother needs healthy and well-balanced diet.

Q6

Should I give formula feeding?

There is no role of giving formula feeding routinely for any baby. Commercially prepared infant formulas are alternatives to breast milk. They are to be used if the mother has no milk, or inadequate milk or has a medical illness or drug treatment which makes mothers milk not a choice for feeding. **Use of formula milk should be only on advice of the doctor.** With support and counseling almost all moms are able to exclusively breastfeed their baby.

Formula Milk Feeding

Pros

- Caregiver feeding possible.
- Not affected by maternal food, medications or illness.

Drawbacks

- Lack of antibodies which leaves the baby vulnerable to infection.
- Need planning, storage, and preparation.
- Need clean water for preparation and clean area for storage.
- Need parental understanding and access to resources for safe-feeding practices.
- Once prepared, must be used within 1 hour.
- Risk of contamination.
- Risk of under- or overdilution feeding.
- Scoop size, mixing instructions, and calorie density vary among manufacturers.
- Clean hands, clean containers, and clean feeding devices are must.
- Does not contain antibodies which are present in human milk.
- Does not match the complexity of breast milk.
- Expensive.

What about Donor Human Milk?

World Health Organization recommends that all babies must be fed mothers' own milk. When mothers milk is not available, then the alternatives are either expressed breast milk from a donor mother or formula milk. Available evidence shows that compared with formula, donor human milk is a safer alternative.

Q7

How long and how often should I feed my baby?

How long?

Breastfeeding is the best feeding for your baby. Each baby is unique. Some feed fast within 5–10 minutes, others may take their own time of about 15–20 minutes. It is not the time that matters but whether the baby has fed enough or not. You should feed only breastmilk to the baby till first 6 months of age.

If your baby is unable to breastfeed and on cup/spoon feeding, it may take up to 20–30 minutes to complete feeding. If the baby takes longer than 30 minutes to feed, it will tire out the baby or it means the baby is not ready for oral feeds.

How often should I feed my baby?

Feeding pattern differs between babies and varies from day to day. You should feed the baby on demand and not by clock. Your baby usually needs to be fed every 3–4 hours. Look for cues that your baby is hungry. Premature/low birthweight babies do not always cry, but may move around and become restless, if they are hungry. At times, you may need to tickle and awaken the baby, if the baby does not demand feeds by 4 hours.

How do I know if my baby has fed adequately?

A good way to know, if your baby is feeding enough is to observe how many wet diapers he/she has in a 24-hour period. Your baby should have at least 6–8 wet diapers everyday, if feeding is adequate. Note the color of the urine. Normally, it should be clear like water. If it has shades of yellow, it means the baby is not had enough milk. The general well-being, regular bowel movements, sleeps following feeds, and being alert when awake are signs of getting adequate feeds. A weight gain is another marker for adequacy of feeding.

Should I feed my baby on demand or by scheduled time?

Breastfeeding should be on demand (when your baby is hungry), which is generally every 2–4 hours in the initial days. A feeding schedule is not necessary, and soon you and your baby will eventually establish your routine. As babies grow, they begin to feed more at each feeding and the interval gets longer between feedings.

When will my baby gain weight and how much weight gain is expected?

Almost all babies lose weight immediately after birth. The weight loss typically is 5–10% of the baby's birthweight. Your baby will regain birthweight and start gaining weight steadily by about 2 weeks after birth. Babies usually gain weight of 15–20 g/kg/day. The weight is plotted on growth chart by your doctor.

Q8

My baby does not suck at breast. How should I feed my baby?

Babies start feeding at breast by 34 weeks of gestation. For babies born early, suck and swallow co-ordination is weak and, hence, mother's milk needs to be expressed and fed orally.

The alternative way of feeding orally are shown in **Figures 4A to D**. The baby is held in semi-sitting position and the feed is gradually introduced into the mouth of the baby. As the baby grows and gains strength, alternate expressed feeds with breastfeeding may be tried. The point to remember is baby should not get tired during feeding.

To stimulate sucking in the baby, it is a good practice to allow the baby to suckle onto breast after oral feed. It also helps mother to continue producing milk.



A Cup feeding



B Syringe feeding



C Paladai feeding



D Spoon feeding

Figs. 4A to D: Feeding options when baby cannot be fed on breast.

INFECTION PREVENTION

Q9

What steps should I take to prevent infection in my baby?

A newborn baby is at high risk to get infected with germs, as his/her immune system is not fully developed. The six important things you can do to prevent infection (**Fig. 5**) in the baby includes:

1. *Handwash/hygiene:* Always handle the baby with clean hands. Washing your hands with soap and water or using a sanitizer prior to handling is must. All family members also should ensure good hand hygiene.
2. *Exclusive breastfeeding:* Mother's milk is very rich in immune power and protects the baby against a host of infections. Ensure your baby gets only mother's milk.
3. *Keep environment clean:* The home environment should be clean and dust free.
4. *Minimal handling:* Keep visitors to bare minimum. Avoid all people who are unwell. It is best to avoid kissing the baby on the face as this may bring the baby in very close contact with people who may be carrying a bug.
5. *Avoid outings:* For the first 3 months, it is best to avoid outings to crowded places and functions, unless absolutely essential.
6. *Vaccinations:* Vaccinating your baby with age appropriately will protect your baby from several infections.

Any home remedies or traditional therapies to improve my baby's health

Home remedies or traditional practices such as *janamghutti/vasambu*, honey, gripe water, etc. are *not* recommended for the newborn baby. They may cause harm to the baby in the form of serious illnesses. Mother's milk provides all the factors necessary for the optimal growth of the baby. Similarly, traditional practices such as branding, blowing in the nose and mouth, oil instillation, etc. can also result in illnesses and are strongly discouraged. Avoid any applications to the umbilical stump.

My elder child has a cold. Can my little one catch the infection?

The newborn is likely to catch an infection from a family member especially an older sibling. Maintain adequate separation from those who have symptoms of an infection. Emphasis on handwashing, masks, and distancing are important. Strict isolation of family members who have symptoms should be practiced.

If the mother has signs of infection, the baby should continue to breastfeed, as the breast milk would give protective antibodies to the baby.

Only mothers milk

Avoid outings

Wash hands

Minimize visitors

Keep follow-up

No bottle-feeding

Keep clean, neat

Vaccinate on time

No pacifiers

Fig. 5: Keeping infections away.

How should I clean the baby's clothes to prevent infection?
 Wash all new clothes before first use. Baby's clothes should be washed with a detergent, and dried well in the sun. Diapers are best washed with warm water. Disinfectants, if used, should be rinsed away thoroughly.

KEYPOINTS	
Do's	Don'ts
<ul style="list-style-type: none"> • Exclusive breastfeeding • Hand wash • Vaccinations • Minimal handling • Kangaroo mother care 	<ul style="list-style-type: none"> • Home remedies • Bottle-feeding • Pacifiers • Oil instillation in nose, ears, ghutti, gripe water, honey, etc. • Visiting public places

Q10

Advise me on periodic checkups of my baby.

Why does my baby need tests on follow-up even if she is well?

Babies born small or who are sick are at risk for hearing, vision, growth, and developmental delay. The emphasis is on picking the problems early so that they can be better managed and complications must be prevented. All small babies are advised routine monitoring in high-risk OPD for in early identification of problems and early rehabilitation services.

What eye and hearing tests are required?

All LBW babies are advised to be screened for an eye problem, retinopathy of prematurity (ROP) at the age of 30 days. Hearing test, otoacoustic emission (OAE) is done at hospital discharge and brainstem-evoked response audiometry (BERA) test is done at 3 months, if required.

How do I know my baby is not well?

It is said that babies do not come with instruction manual, but most parents certainly wish they did, especially when they are sick. As babies cannot vocalize their feelings, we must stay alert for warning signs of illness. A change in behavior may be one of the first signs that your baby is not feeling well.

Remember if you are worried, there is probably a good reason even if you do not recognize it, so do not hesitate to get your baby checked.

- | SUSPECTING A SICK BABY |
|---|
| <ul style="list-style-type: none"> • Inability to feed or decreased feeding • Incessant crying • Fever • Drowsy or moves only when stimulated • Breathing difficulty or noisy breathing • Persistent vomiting • Abdominal distention • Abnormal body or eye movements |

When should I vaccinate my newborn baby?

A well newborn baby should be vaccinated on the day of birth with three vaccines—colostrum, Bacillus Calmette–Guérin (BCG), oral polio vaccine (OPV)—zero dose, and hepatitis B.

My baby is <2 kg. When should my baby receive vaccines?

Small and preterm vaccines must receive the birth vaccines. Generally, hepatitis B vaccine is given to a baby once it crosses 2 kg. However, if the mother has hepatitis B infection, even babies with weight <2 kg are given the hepatitis B vaccine (along with the hepatitis B immunoglobulin) at birth.

KEYPOINTS

- Vaccination is safe and effective way to prevent life-threatening infections.
- Colostrum is the first vaccine.
- Maintain a vaccination card.
- Do not miss your follow-up visit with your doctor.