



What is the preparation required before bringing a neonate home?

Infants require a lot of care and attention especially in the first few years of life. The first few hours after birth is a very sensitive time when the parent makes a deep connection with the infant. Physical closeness can promote an emotional connection. A lack of connect and tenderness can have a long term impact on the infant. Attachment contributes to their emotional growth, which in turn affects development in other areas, such as the physical and social growth. Children thrive when caregivers love them unconditionally.

Newborn babies are completely dependent on adults for their sustenance. The physical needs of a newborn are obvious. It needs to be fed, bathed, clothed and protected from harm.

Care of the neonate :

As the newborn baby is completely dependent for fulfilment of its needs, the caregiver has to be very cautious, prompt and vigilant while caring for the neonate. Since the neonate was in the amniotic fluid for many months, the mouth, nose and ears need to be cleaned of the fluid after birth. Secretion from nose and ears should be cleaned carefully with soft cotton cloth. The navel of the newborn should be kept dry and clean, any discharge surrounding the eyes should be gently cleaned with lukewarm water. Mouth also needs to be cleaned with a soft cloth.

Feeding

From the beginning of human history, babies are breast fed. Breast milk is known to be the best food for infants. Breast Milk is produced in small sac-like glands (alveoli) in the breast. The milk is squeezed out of the milk gland into the milk ducts and then into

the nipple. Regardless of size of the breasts, lactating mothers produce enough milk for their new born baby. Milk is the main food for infant for the first six months of life.

Feeding can be of two types :

- Breast feeding
- Bottle feeding
- **Breast Feeding**

The first nutrition that any child is exposed to comes from the breast milk. There is no substitute for mother's milk even though several other market products may claim to match the nutrition in breast milk. Breast milk has all the necessary ingredients in the right proportion. It is well balanced in fat, carbohydrates and proteins, Formula milk or other food supplements are no match to this. Babies who are exclusively breastfed gain weight better, have higher IQ, better immunity and are less prone to allergies and infection.



Did you know ?

The WBW-World Breast Feeding Week is celebrated from 1st August to 7th August every year.

• **Benefits of Breast Feeding**

- Mother's milk is easily digestible and contains all the nutrients which are required for the growth of the baby.
- It is uncontaminated since the baby directly drinks from mother's breast, free from any kind of infection and has an appropriate temperature.
- After child birth for the first few days mother's breasts produces the first milk called as Colostrum which is thick, sticky and yellowish in colour. Colostrum is higher in protein, minerals, salt, Vitamin A and E, low in fat and carbohydrates.
- Colostrum is also full of unique disease-fighting antibodies called immunoglobulin
- that strengthen the baby's immune system. When neonates are fed colostrum, it acts as their first natural vaccination.
- Mother's milk contains lactose sugar and therefore is naturally sweet
- Breast fed babies show signs of better growth and development
- It creates a bond of warmth, comfort, security between the mother and the baby
- It helps the uterus of the mother to contract and return to its original size and shape
- Breast feeding delays monthly period of the mother and helps in family planning
- Studies show that mothers who breast feed are less prone to breast cancer

Did you know ?

- In India, less than 50% of children are breastfed within an hour of birth
- The rate of exclusive breastfeeding in the first six months stands at 55%.
- Breastfeeding immediately after birth and exclusive breastfeeding can prevent nearly 99,499 deaths of children every year due to diarrhoea and pneumonia.
- Globally, only 38 percent of infants aged 0 to 6 months are exclusively breastfed.

• **Bottle Feeding**

If the mother is unable to produce adequate quantity of milk or is suffering from any illness/diseases and cannot breastfeed her baby then in such circumstances infants are fed with bottles.

Powdered/formula milk or diluted cow's milk can be fed as per the suitability of the baby. Formula/cow's milk can be fed to the baby by using a feeding bottle or a spoon and bowl. The bottle, nipple or spoon and bowl that are used for feeding the infant have to be sterilized properly every time before feeding to avoid infections.

Activity :

Try to recap ?

1. The two types of feeding
2. Benefits of breast feeding
3. The antibody present in breast milk

Weaning and Supplementary feeding

- Till what age or month does a baby feed on breast milk?
- What is the first food introduced to an infant?
- What considerations do caregivers keep in mind when introducing foods for infants?

You would have seen certain practices in your family about how infant moves from breast milk to other source of nourishment so let us now see how this process is introduced and understand why it is important.

Weaning - Weaning is a process of shifting an infant's diet from breast milk to other fluids and foods. It is systematic, scientific and gradual process.

The gut of an infant develops slowly and therefore acceptability to new foods is slow. Lactation reduces after six months and breast milk is insufficient to fulfill the nutritive needs of the baby. To support the rapid growth requirement of the infant, other foods have to be introduced.

Supplementary Feeding: Any nutritive food given in addition to breast milk is supplementary feeding.

Let us now understand and remember the guidelines to be kept in mind when weaning the infant and giving him / her supplementary food.

When to feed :

- The first new feed should preferably be given in the morning. This is to ensure that the baby gets time to digest the food. One could also check whether it is creating any allergic reaction in the infant.
- The subsequent new feed can be introduced after a week or two. This can be initiated in the early part of the evening. Gradually number of new feeds can be increased.

- The supplementary feeds will be increased gradually, limiting breast feed only to the night feed.

How much to feed :

Start with one or two teaspoon of supplementary feed and slowly increase the quantity after ensuring that the child is able to digest the supplementary food.

What to Feed :

- When we wean the baby, we start with liquid foods such as rice water, dal water and vegetable clear soup.
- We can then move to semi solid foods such as steamed apple, ripe banana, boiled potato, soft khichdi, porridge and thick soup.
- Once the infant's teeth start erupting and he / she is able to chew well, other solid foods can be introduced. Finally, by the age of one year or later the infant should be able to eat foods that are consumed by adults. Care should be taken to prepare foods that are not very oily, spicy and should consist of food items from all five-food groups namely proteins, carbohydrates, vegetables, sugars and fats.

Precautions and Guidelines while Weaning

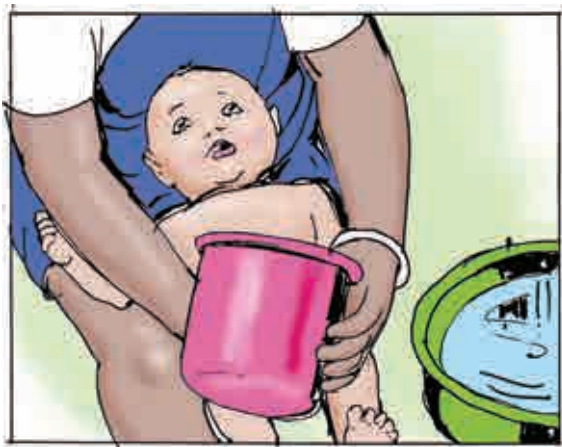
- Since the infant is being weaned off the breast of the mother, the baby may express distress. Therefore, the mother has to comfort and cuddle the infant to calm him /her.
- Cleanliness and hygiene has to be maintained by the caregiver while feeding the infant.
- Clean and sterilized utensils should be used while cooking and feeding the infant.
- The caregiver has to be patient and not to force feed the infant.

Activity :

- Find out how many teeth do six to eight month old infants have? What kind of foods can infants eat?
- Observe a one year old infant and find out what foods can he / she eat.
- Can you now differentiate between breast feeding and bottle feeding?

Bathing

Infants should not be given a bath in a tub until the umbilical cord dries and falls off. Till then the babies are given a sponge bath. The idea of a bath is to keep the baby clean. A newborn's skin is soft and delicate. Proper skin care and bathing can help maintain the health and texture of the baby's skin while providing him/her with a pleasant experience. Traditionally, babies have always been massaged with oil before a bath, which is still popular today. It helps in improving blood circulation, digestion bowel movements, soothes and relaxes the infant, improves and regulates the infant's sleeping pattern. Traditionally, a paste made with turmeric powder, gram flour and milk is used instead of baby soap to bathe the infant. After bath, a soft cotton towel is used to dry the infant.



Making bathing enjoyable and fun for the baby

Float a toy, croon to the baby, pat the water gently to make a splash, blow bubbles (take care that it doesn't hurt the baby's eye.)

For a toddler, sponge could be given to wet and squeeze. Use old bottles as water squirters to play

Points to be kept in mind while massaging and bathing an infant :

1. If you have heated the oil for massaging the infant, make sure it is not too hot.
2. The baby's comfort is of prime importance, so at any point while giving a massage if the baby seems uncomfortable or cries and seems fussy, you need to stop the massage.
3. Do not allow even a drop of oil to go into the nose and ears of the infant, as it may lead to a fungal infection.
4. Ensure safety in handling and cleanliness while massaging and bathing an infant.

Clothing

According to the temperature of the environment, comfortable clothes need to be used for the infant. Warm clothes can be used for the babies during winter, monsoon, early mornings or late evenings and nights depending upon the outside temperature. If the weather is very cold then the baby's head and ears should be covered with a warm cap and feet with socks. Clothes of infant should not be fancy.

During summer, soft cotton clothes should be used. Do not overdress the baby. Diapers are an important item of clothing for infants, they should be soft, of good quality and easy to change. Cotton diapers should be washed disinfected and dried in the sun before every use.

Sleep :

Sleep conserves the energy that is required for growth and development of the infant. The amount and timing of sleep varies with age.

Did you know?

Babies have shorter sleep cycles

They move from light sleep to deep sleep every 50-60 min

It takes up to 20 minutes for babies to reach a deep sleep.

Important Points about sleep pattern of Neonates :

- a. Newborn baby sleeps on and off through the day and night.
- b. On an average a neonate sleeps for around 18-20 hours in a day.
- c. Neonates sleep only in short stretches throughout the day and night since they require to be fed and changed regularly.
- d. Babies need a cozy, comfortable, clean and safe place for sleeping.
- e. Things required for sound sleep of infants are comfortable mattress, easily changeable and clean bed cover of cotton/linen, mosquito net.
- f. Babies should be made to sleep on the sides alternately or on the back to maintain the round shape of their head.
- g. Babies can be made to sleep on their stomach also which will help them to relieve them of colic, if any.

WHO and UNICEF recommendations for exclusive breast feeding of infants for first six months for their healthy growth and development

- Initiation of breast feeding within the first hour of life.

- Exclusive breast feeding- infant must be given only breast milk without any additional food or drink/water.
- Breast feeding on demand- as often as the infant wants.
- Continue Breast feeding to the infant up to two years of age with introduction of semisolid and solid foods from six months of age onwards.

Toilet training

Toilet training - the process of training a child to control bladder and bowel movements and to use the toilet.

- Bladder and bowel control usually develops in the following sequence. **First bowel movements become more regular** and less frequent. Next, bowel control develops. Then day-time bladder control emerges. Finally, children gain full night time bladder control (Largo and Stutzle 1977). Bladder training and control takes more time. The timing of these milestones varies from individual to another.

Learning to use the toilet is an important milestone. Most children start working on this skill between **8** months and **3** years of age. The average age of potty training falls somewhere around **2** months.

Activity : Fill up the table below. (Hints are given to complete the same)

	Bladder	Bowel
Gains control		
Age		
Time taken		

(First, later, 18 months, 3 yrs, more less)

How do parents know when their babies need to go?

Infant toilet training is the practice of introducing the baby to the toilet or potty.

- In India, when babies have to eliminate, parents hold them up right in a toilet or an outdoor latrine, or in an open area until it is done. By paying close attention, parents learn to read their babies' cues, and eventually babies learn to hold back until their parents give them the signal—usually a special vocalization, like “sheee-sheee” or “shuuuus” (meaning to urinate or defecate).
- Observe the baby's body signals before he/she passes urine or stool voids. For example, a baby may squirm, shudder, make faces or change his/her breathing patterns.

Even though child development experts do not agree on the best technique to use for toilet training, they do agree that it is extremely important that the toilet training phase should not be rushed. Just because children are physically ready to toilet train does not mean that they are mentally or emotionally ready to do so. Successful toilet training depends on having all three factors physical, cognitive and emotional readiness.

The best way to tell that a young child is ready to start toilet training is to watch for signs of readiness. Children show signs of being ready if:

- They indicate that they are ready to use the toilet on their own. For example, the child may want to watch Mom or Dad use the toilet. The child may also sit on the “potty” without prompting comes to the caregiver and tugs the diaper signaling that it is wet or soiled.
- Use words or gestures before they urinate or defecate.
- Can follow simple instructions.

Depending the child's readiness parents could decide whether they want to train the child to use a potty seat or the toilet.

The advantage of using Potty seat is :

Children find a potty seat less scary than a toilet. If a child is using a western toilet he / she needs a smaller seat that is securely attached inside the existing toilet seat. Hence the need to choose the right equipment.

It is best to plan toilet training for a time when there are not major changes coming up in the family life. Changes might include going on holiday, starting day care, arrival of a sibling or shifting house.

Toilet training might take days, weeks or months. The key is not to pressurize the child, and let them learn at their own pace. Encourage and remind the child to use the toilet or potty. Praise even if progress is slow. In case child loses control, avoid getting frustrated. Also help the child to clean themselves until they learn to do so. Remember to wipe from the front to the back, particularly with girls. Teach the child how to wash hands after using the toilet.

Autonomy or Shame

Children could be ready for toilet training as early as age 2, because most babies of this age recognize the urge to urinate or defecate and can

control the sphincter muscles that facilitate waste elimination. Between the ages of 18 months and 3 years, children learn to master skills and make decisions, such as picking out what they will wear each day, putting on their own clothes, and deciding what they will eat. They begin to express a sense of independence and want to feel in control. While this can often be frustrating for parents and caregivers, it is an important part of developing a sense of self-control and personal autonomy. How the caregiver reacts to these decisions can either encourage autonomy or foster an environment of shame and doubt.

Reflection / Darpan



- What are the things that you need to take care of as a young adolescent to keep yourself safe?
- How would you keep yourself safe?
- Whom would you depend upon / whose support would you need to help you be safe?

Just like you need the support of your parents or your friends, so do young children, especially infants. Infants and young children are completely dependent on their caregiver to ensure a safe environment. Let us now see how we should equip ourselves for the same.

Preventive Care And Safety

In the first few years of life, babies are developing physically, mentally, emotionally and socially by exploring and experimenting with the things in the environment around them. Caregivers can help babies and young children to safely explore their world by attending to and fixing aspects of the environment that may prove dangerous for them. Caregivers need to baby-proof the home as it is the primary environment.

IMPORTANT PRECAUTIONS TO BE OBSERVED

A) Bathroom Safety :

To keep babies and young children safe from bathroom hazards :



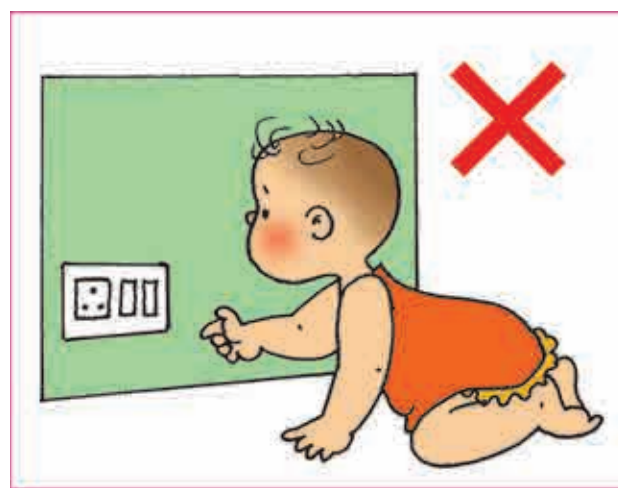
- Keep them out of the bathroom when they are not accompanied by an adult.
- Substances such as shampoo, perfumes, cosmetics, sharp and dangerous objects such as fingernail clippers and razors should be kept out of the reach of children.
- Caregivers should never leave a child under the age of five alone in the bathtub or in the bathroom. If the doorbell or telephone rings, parents should either ignore the signal or take the child with them (wrapped in a towel) while responding to it. Bathtubs / buckets should be drained immediately after each use. Any standing water left in a bathtub or bucket creates an unnecessary drowning hazard.
- Caregivers should always test the water temperature before bath.
- Install non-slip mats in the bathroom to prevent slips and falls for older toddlers.
- The bathroom door latch should be strictly out of reach of the child.
- Parents should store all knives and other sharp food preparation tools as well as detergents and other potentially hazardous things out of the reach of toddlers.
- Cabinets and drawers should be kept latched.
- When feeding babies and toddlers, most caregivers find it useful to use a high chair. Caregivers should inspect for loose or broken parts or other defects in the chair. During feeding time, babies should be securely fastened into the high chair using safety harnesses. The feeding tray should also be securely fastened to the chair so that it cannot be pushed away onto the floor spilling its contents.
- Caregivers should avoid leaving an infant or toddler alone in a room strapped into the high chair, as the child will eventually try to get out and harm themselves in the process.
- During feeding, parents should position the high chair far enough from the table or other feeding surface to prevent baby from grabbing or touching objects on the table that could be dangerous such as hot cookware, glass or sharp cutlery.
- Avoid taking children near the gas stove when cooking.

B) Kitchen Safety

- Countertops and floors should be kept neat and clean to prevent babies from choking on small objects or slipping on it .



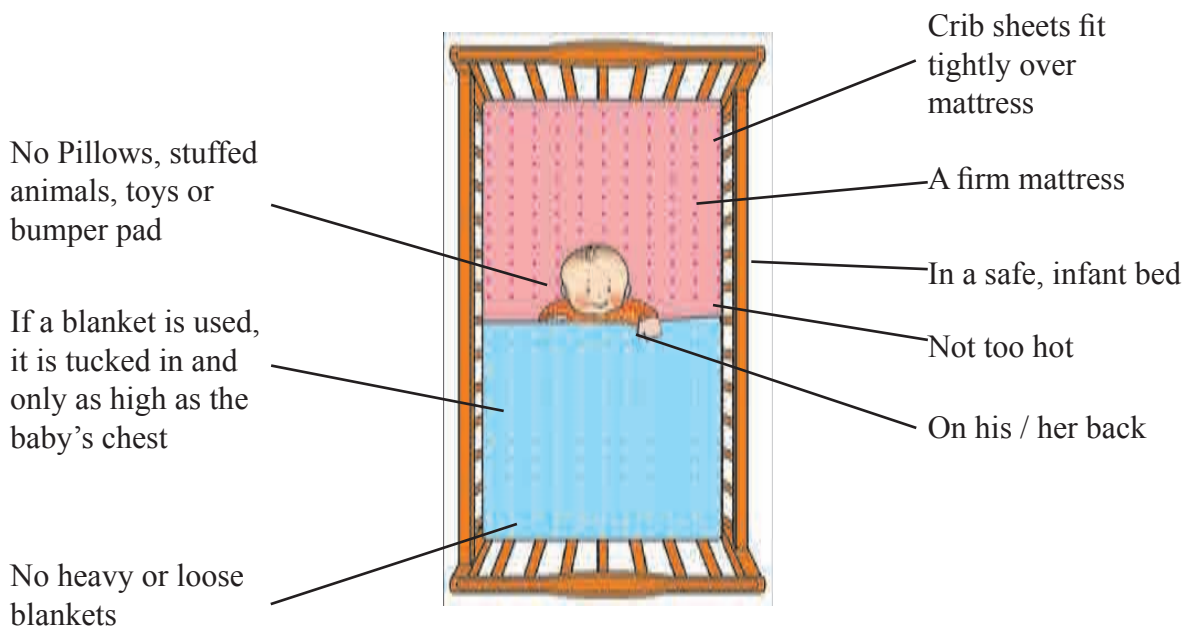
C) Electric safety



- Adults should make sure that no wires are frayed or cut, no outlets have loose screws and no outlets have become unseated from their proper snug position inside the wall.
- Child outlet covers should be plugged into any unused outlets to prevent little fingers from injury or death by electric shock.

D) A Safe Sleep~~S~~ pace for Infants and Toddlers.

What does a safe sleep environment look like?



- Many parents often choose to use a traditional baby hammock (jhoola) or rocking cradle (palna) instead of a cot. The traditional jhoola is essentially a cloth hammock made from cotton fabric, sarees, rope or cane attached to a spring and strung up on ceiling beams or the bars of the staircase or window in the room.
- A cloth hammock (jhoola) holds the baby snugly, as though the baby has been swaddled. This can help to make the baby feel secure.
- Babies may associate the gentle rocking motion of a jhoola with the movements they felt while nestled in the safety and security of the womb. The rocking movement can feel reassuring and soothing.
- There are claims that sleeping in a jhoola will help the baby's head develop a nice, rounded shape.
- The safety of the traditional baby hammock has become an issue in recent years. There may be risks such as:
 - The face may get pressed against the material leading to suffocation.
 - When babies are old enough to roll over, they can fall out of the jhoola and injure themselves.



- Walkers are discouraged today.
- Causes accidents.
- Child may fall down or across thresholds.
- Developmentally harmful.
- Prevent muscles from developing in a normal manner.



- Baby swings can be used safely in the presence of the caregiver.

E) Toy safety

- Parents must inspect labels for age recommendations. If a toy is recommended for children under 3 years old, caregivers should still inspect toys regularly to make sure that there are no loose or damaged pieces that could create a choking hazard.
- While shopping, caregivers can also look for other toy safety features such as construction, using non-toxic, or machine washable materials.
- Ensure that babies and toddlers are never allowed to play with plastic bags or packing materials as these can easily lead to suffocation.



F) Outdoor Safety

- Selecting an appropriate and safe area.
- Safe playground equipment to be provided.
- Teach rules for playing safely on playground equipment and with other children.
- Adult vigilance and supervision to enforce playground rules is also required for overall safety.

Activity :

Recall and write two points of each.

- Bathroom safety.
- Kitchen safety
- Crib safety
- Electric Safety

G Immunization

Immunization is a simple and effective way to protect the child from serious diseases. Immunizing a child, will give them the best start to a healthy future and help in minimizing the spread of diseases. An immunization programme is one of the key interventions for protection of children from life threatening conditions, which are preventable.

Importance of immunisation

- It saves lives from potentially fatal illnesses.
- It protects against diseases.
- The risk of certain diseases affecting the future generation could be ruled out.
- It helps in staying healthy.
- It is a cost effective intervention for global welfare.

Table 1 National Immunization Schedule (NIS) for Infants, Children and Pregnant Women

Vaccine	When to give	Dose	Protection from infection
For Pregnant Women			
TT-1	Early in pregnancy	0.5 ml	Tetanus
TT-2	4 weeks after TT-1*	0.5 ml	
TT-Booster	If received 2 TT dose in a pregnancy within the last 3 years	0.5 ml	
(Tetanus Toxoid)			
For Infants			
BCG (Bacille Calmette Guérin)	At birth or as early as possible	0.1 ml (0.05 ml unit 1 month age)	Tuberculosis
Hepatitis B - Birth Dose	At birth or as early as possible within 24 hours	0.5 ml	Jaundice - B
OPV-0 (Oral Polio vaccine)	At birth or as early as possible within the first 15 days	2 drops	Poliomyelitis
OPV 1, 2, 3	At 6 weeks, 10 weeks & 14 weeks (OPV be given till 5 year of age)	2 drops	Poliomyelitis
Pentavalent 1, 2, 3	At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)	0.5 ml	DPT - Diphtheria, Pertussis (Whooping cough), Tetanus, Hepatitis -B, Haemophilus Influenza
Rotavirus (Optional)	At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)	5 drops	Diarrhoea
IPV (Inactivated Polio Virus)	Two fractional dose at 6 and 14 weeks of age	0.1 ml	Poliomyelitis
Measles / MR 1 st	9 completed months-12 months (Can be given till 5 years of age)	0.5 ml	Measles, Mumps Rubella

Vitamin A (1st dose)	At 9 completed months with measles-Rubella	1 ml (1 lakh IU)	Vitamin A Deficiency
For Children			
DPT booster-1	16-24 months	0.5 ml	(Diphtheria, Pertussis Tuberculosis)
Measles/MR 2 nd dose	16-24 months	0.5 ml	
OPV booster	16-24 months	2 drops	Poliomyelitis
Vitamin A (2 nd to 9 th dose)	every 6 months up to the age of 5 years.	(2 lakh IU)	
DPT booster-2	5-6 years	0.5 ml	Diphtheria, Pertussis
TT	10 years & 16 years	0.5 ml	Tetanus

Do you know ?

- Immunization Programme in India was introduced in 1978 as Expanded Programme of Immunization (EPI)
- The programme gained momentum in 1985 and was expanded as Universal Immunization Programme (UIP) to be implemented in a phased manner to cover all districts in the country by 1989-90.
- UIP is a part of Child Survival and Safe Motherhood Programme since 1992. Since 1997, immunization activities have been an important component of National Reproductive and Child Health Programme and is currently one of the key areas under National Rural Health Mission (NRHM) since 2005.
- Under the Universal Immunization Programme, Government of India is providing vaccination for preventable diseases. such as Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B, Haemophilus influenza type b (Hib) and Diarrhoea.

Care during infancy

Feeding	Bathing	Clothing	Sleep	Toilet training	Preventive care and safety
<ul style="list-style-type: none"> • Breast feeding • Bottle feeding • Weaning • Supplementary feeding 	<ul style="list-style-type: none"> • To maintain good health and cleanliness • Oil massage for improved circulation • Soothing and relaxing • Ensure safety when massage is given 	<ul style="list-style-type: none"> • According to temperature, climate • Soft, cotton clothes • Cotton diapers should be dried in the sun. 	<ul style="list-style-type: none"> • Comfortable mattress • Clean bed cover • Cotton / linen material • Mosquito net cover 	<p>Bowel control comes earlier than bladder control.</p>	<ul style="list-style-type: none"> • Bathroom safety • Kitchen safety • Electric safety • Safe sleep space • Toy safety • Outdoor safety • Immunization

Revise the points

Reflection / Darpan



- Do you have any favourite thing (a blanket, plate, toy) as an infant that you still possess?
- Can you recollect any hazardous incident experienced by you as an infant, that has been related to you?
- Do you know which immunization you have received ? Write it down if you know or find out from your parents.



Exercises

Q. 1. Select and write the most appropriate word from the given alternatives.

1. After child birth for the first few days mother's breasts produce the first milk called as which is thick, sticky and yellowish in colour.
a) iron b) calcium c) colostrum
2. Mother's milk is naturally sweet as it contains sugar.
a) fructose b) glucose c) lactose
3. A newborn sleeps for number of hours
a) 2-3 b) 8-10 c) 7-8
4. Average age for potty training is
a) 2 months b) 9 months c) 3 months
5. UNICEF recommends exclusive breastfeeding for the first months.
a) 8 b) 3 c) 6

Q. 2. Write whether the following statement is True or False.

- a. Cotton diapers of babies should be washed and dried in the sun before every use.
- b. A neonate sleeps for around 10 hours in a day.
- c. Bladder control comes before bowel control.
- d. During summer, silk clothes should be used.
- e. Child outlet covers should be plugged.

Q. 3 List the precautions or safety measures taken with reference to :

1. Kitchen
2. Bathroom
3. Toys
4. Sleep area
5. Outdoor area
6. Electrical

Q. 4 Write in brief

1. Differentiate between breast feeding and bottle feeding
2. Advantages of breast feeding
3. Bathing
4. Importance of immunization
5. Immunization schedule

Q. 5 Find out the breast feeding and sleeping pattern of a neonate and prepare a report on it.

Q. 6 What points should be kept in mind while bathing an infant?

Project / Self Study

Street Play

- Collect / prepare material required.
- Write proper script with attractive slogans.
- Along with your friends perform a street play to create awareness about safety during infancy and immunization.
- Collect authentic and detailed information regarding immunization.

