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## UNIT 11 HEALTH CARE DURING INTRANATAL AND POSTNATAL PERIODS

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### 11.1 INTRODUCTION

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In Unit 10 you have learnt the aims and the components of antenatal care from the period of conception till the time of the beginning of labour. In this Unit you will learn the care of the mother during the process of childbirth, the care required by the mother and her baby immediately after delivery and the subsequent care.

#### Objectives

After studying this Unit, you should be able to:

- enumerate the risk factors in pregnancy
- describe the preparations required for a home delivery
- describe the care required during the process of delivery
- describe the immediate care of the mother and baby after delivery
- discuss the later care of the mother and baby during postnatal period including lactation
- recognize the minor disorders of the mother and their management
- recognize the minor disorder of the newborn baby and their management

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### 11.2 CARE DURING INTRANATAL PERIOD

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Intranatal care begins with the onset of labour and ends after the woman is delivered. In the last few weeks before delivery, the health worker assists the woman and her family to decide the place of delivery and make the necessary preparations for safe delivery. In case the woman is 'high risk', the family is advised to have the woman delivered at the primary health centre or at the hospital, since the kind of expertise and equipment that may be required in her case is not likely to be available at home. Home delivery may not be right for everyone. The list below contains the *warning signals* or risk factors,

the presence of which leads to the pregnant woman being declared as 'high risk', since these are life-endangering. You would recall reading about most of these in the previous two Units of this Block. A health worker takes these factors into consideration to refer the woman to a high level of care:

- i) Age less than 18 years or more than 35 years for first pregnancy
- ii) Height less than 145 cms.
- iii) Weight less than 40 kg. or more than 70 kg.
- iv) Has already delivered more than 4 children
- v) History of severe bleeding in the last pregnancy, labour or postnatal period
- vi) History of repeated abortions
- vii) History of twin pregnancy i.e. the woman has delivered twins in the past
- viii) Last baby weight 2.5 kg. or less or above 3.5 kg.
- ix) History of pre-term delivery
- x) History of previous operative delivery
- xi) History of high blood pressure, albumen in urine, swelling of the feet and legs, complaints of headache and giddiness (pre-eclampsia) in the previous pregnancy or present pregnancy
- xii) Mother looks pale and gets breathless and tired, has anaemia
- xiii) Bleeding per vagina any time during pregnancy
- xiv) Excessive vomiting in first half of pregnancy
- xv) Passing less amount of urine
- xvi) Foetus is not in normal (head low) position or presentation in the uterus
- xvii) Foetal movements are less or absent

It has been seen that sometimes pregnancy starts without any abnormal signs and symptoms, but as it advances, some of the warning signals start appearing. The health worker should immediately report them to the doctor. The woman and the family should not be alarmed but they should be informed to prevent any neglect.

### 11.2.1 Preparations for Delivery at Home

If the health of the pregnant woman is normal and there are no complications or warning signals, the delivery may be conducted at home.

Once the family has decided to have the woman delivered at home, the preparations for providing care to have a safe delivery should be made. These preparations are as follows:

- i) As far as possible a well lighted and ventilated room should be selected for use during labour and delivery. The room should not be occupied/shared with any person suffering from an infectious disease.
- ii) The room should be cleaned, if possible white-washed.
- iii) The walls should be plastered with mud (not cowdung).
- iv) Ask the family to put the charpoy or mat, to be used for delivery, in the sun for 2-3 days. Bedsheets or any other cloth to be used should be washed with soap and water, dried in the sun and stored in a clean box or wrapped in clean newspaper. Blankets to be used should be aired in the hot sun and kept in a clean box.
- v) Ask the family/woman to wash pieces of absorbent material i.e. from an old sari, dhoti or sheet with soap and water, boil the pieces, dry them in the sun and keep them stored in a clean box or wrapped up in clean newspaper.
- vi) The woman should be explained the signs and symptoms of the start of labour, so that the *dai*/health worker may be called in time. The family should not delay in calling the health worker. Prior arrangements should be made for her to be fetched at night by a male member of the household, in case of need.

vii) Woman/family should keep the following supplies ready:

- a) Clean banana leaves or newspaper
- b) Stove for boiling water and other articles
- c) One large container for boiling the articles
- d) Shallow mud pots
- e) Supply of clean soft pieces of cloth
- f) Oil for cleaning the baby
- g) Soap
- h) Clean clothes for the mother and baby
- i) Lantern with sufficient kerosene oil (even if electricity is available)

The health worker is expected to have in her kit, when she comes to help in the delivery, medical items like sterile cotton swabs and gauze dressings, pads, sterile cord ties, sterile scissors or blade, foetoscope, thermometer, antiseptic lotions and necessary drugs.

### 11.2.2 Warning Signs that Labour is Near

- A few days before labour begins, the baby (foetus) moves lower in the womb. This is called *lightening*. As a result the mother is able to breathe more easily, but she may urinate more often.

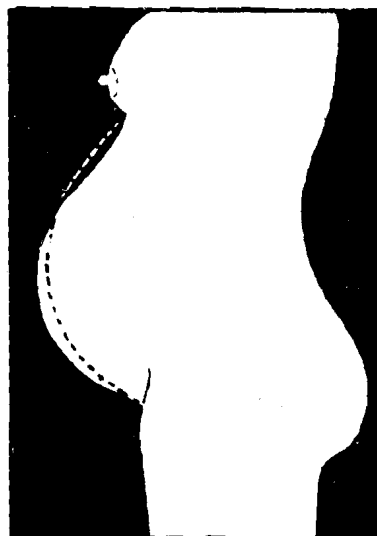


Fig. 11.1: Lightening. The dotted line indicates the shape prior to lightening.

- A short time (a few hours) before labour starts, a small plug of mucous (jelly like substance) may come out from the vagina, which may be tinged with blood. This is normal.
- The labour pains known as *contractions* (sudden tightening of the uterus) may start days before the day of childbirth or only on that day. At first a long time passes between contractions i.e. several minutes or even hours, but as the time for childbirth comes closer, these contractions become more painful, frequent and regular. In between these contractions the uterus is relaxed, which is nature's way to help in providing regular supply of blood for nutrition and oxygen to the foetus, which is temporarily cut off during contractions.
- The bag of water (amniotic sac) that holds the baby in the womb usually breaks with a flood of liquid after labour has begun. But sometimes it may break before the contractions have started. This too indicates the beginning of labour. The woman should be kept very clean after the water bag breaks, and medical help should be sought immediately.
- Occasionally the labour may be preceded by involuntary shivering or trembling. This is the body's way of releasing tension and not due to feeling of cold. This lasts only for a few minutes. The woman should not get alarmed but should take deep breaths. A massage down the back also helps.

### 11.2.3 Stages of Labour

**Labour** consists of regular uterine contractions which eventually cause the expulsion of the foetus and the placenta. This process can be divided into four distinct stages:

- **First stage** lasts from the beginning of the strong contractions until the opening of the birth passage i.e. dilatation of cervix.
- **Second stage** starts from the dilatation of cervix and ends with the delivery of the baby.
- **Third stage** lasts from the delivery of the baby till the delivery of the placenta.
- **Fourth stage** consists of one hour after delivery, which, as you would read later, is a critical period for the care of the mother and the baby.

Normally the first stage in a woman delivering should not last more than 12-14 hours, the second stage 4-6 hours and the third stage 30 to 45 minutes.

**ANY DELAY FROM THE NORMAL DURATION SHOULD BE CAREFULLY WATCHED, AS IT COULD BE A SIGN OF DEVELOPING COMPLICATIONS.**

The duration of these stages is usually longer in the case of the first child, compared to the subsequent ones.

Intensive care of the mother is required during this period. If the delivery is conducted at home, the presence of a skilled *dai*/TBA/health worker is a must who should also be aware of the referral system in case of any complications.

### 11.2.4 Care during Labour : The Birth Process

#### The First Stage

- The bed should be in a clean place with enough light to see clearly. A clean sheet, towels or newspaper should be spread on the bed and changed whenever they get wet or dirty.
- The midwife should clean the mother with soap and water.
- She should keep a sterile blade or pair of scissors ready for cutting the umbilical cord. The new blade or a pair of scissors should be boiled for 15 minutes and kept in the boiled, covered bowl until needed.
- She should watch the mother and check foetal heart sounds frequently.
- She should not push the belly of the mother or massage it and the mother should not be asked to use force to expel the baby at this stage.
- The mother should be given fluids and light food to maintain her share of energy which she will need during the second stage.

#### The Second Stage

The second stage or stage of expulsion of the baby sometimes begins with breaking of the bag of waters. At this stage, the mother should be asked to push the baby down as and when she gets the contraction and relax in between the contractions. Sometime she may fall asleep in between due to exhaustion, which is normal.

- Continuous encouragement should be given to the mother.
- Sips of water to prevent dry lips and mouth should be provided to the mother.
- To bear, instruct the woman to take a deep breath and push hard with her stomach muscles (as if she was passing stools). The woman can double her knees to exert pressure. When the opening stretches further, the baby's head begins to show. The midwife should now have everything ready for the birth of the baby. At this time the mother should not push hard. Rather, she should allow the head to come out slowly. This will help in preventing the tearing of the opening of the birth passage called perineum.

**Nutrition and Health Care  
During Pregnancy and  
Lactation**

- To prevent infection, the midwife should avoid putting her hand or fingers inside the vagina. This is a very common cause of infection during delivery.
- When the head comes out, the midwife should never pull it but support it. The mother should be asked to push so that the shoulders and the rest of the body of the baby come out.
- No medicine should normally be given to the mother to accelerate the birth process.

**The Third Stage: The Delivery of the Placenta (After-birth)**

Normally the placenta should come out within 5-15 minutes or a maximum of half-an-hour after the birth of the baby. The midwife should examine the placenta to see that it is complete and bury it.

**IF IT IS MORE THAN HALF-AN-HOUR OF THE BIRTH OF THE BABY AND THE PLACENTA DOES NOT COME OUT AND BLEEDING CONTINUES, MEDICAL HELP SHOULD BE SOUGHT AS SOON AS POSSIBLE.**

**SOMETIMES A WOMAN MAY BE BLEEDING VERY SEVERELY WITH NO BLEEDING SEEN OUTSIDE. HER UTERUS WILL BE VERY SOFT AND GET BIGGER AND BIGGER FILLING WITH BLOOD — GET MEDICAL HELP FAST.**

**The Fourth Stage**

The period of one hour after birth is called the fourth stage of labour, which is crucial.

In the next Section, we shall read about the care that the newborn and the mother must be provided with during this period i.e. immediately after delivery.

**Check Your Progress Exercise 1**

- 1) i) List any five risk factors in pregnancy.

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- ii) What is the implication of the presence of risk factors with regard to decision regarding place of delivery?

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- 2) In the following statements, fill in the blanks with appropriate terms:

i) ..... comprises regular ..... contractions which result in the birth of the child and the expulsion of the placenta.

ii) The mother should not be asked to use force to expel the baby in the ..... stage of labour, that is, until the dilatation of cervix or opening of birth passage.

iii) When the baby's head comes out during delivery, it should be ..... but not .....

iv) The placenta should normally get expelled within ..... after the birth of the baby.

## 11.3 IMMEDIATE CARE AFTER DELIVERY

The newborn child needs to be attended to as soon as she emerges from the mother's body. The following care must be provided to the newborn right away, even as the mother is waiting for the placenta to be expelled.

### 11.3.1 Immediate Care of the Newborn

- As soon as the baby comes out of the mother's body, her head should be kept lower than the body so that the mucous comes out of her mouth and throat. It should be kept this way till the baby cries and is breathing properly.
- The baby should be kept below the level of the mother until the cord is cut and tied.
- If the baby does not breathe, immediately rub the back.
- If she still does not breathe, the mucous out of her nose and mouth should be cleaned with suction bulb or cloth wrapped around the finger very gently and carefully — sometimes mouth to mouth breathing may have to be given.
- The baby should be kept warm and be wrapped in clean cloth to prevent chill.
- The baby should be put to breast as soon as possible after birth. It helps in maintaining warmth and emotional bonding.
- The baby may be cleaned free from mucous and blood with the help of oil. The bath should be given with warm water and mild soap only after 12-24 hours.

### Cutting of the cord and its care

After the cord becomes white due to stopping of pulsation, it should be tied in two places with sterile ties (kept ready beforehand by boiling) and cut in between the ties with a clean freshly boiled razor blade or scissors. This helps in preventing tetanus of the newborn. The cord should be cut only about 2 cms. above the umbilicus of the baby. Subsequently, the cord should be touched with spirit to clean it and kept dry. In order to help it dry out, it should be kept uncovered but protected from flies. If there are dust and flies, the cord should be covered lightly with sterile gauze or a very clean freshly washed and sun dried cloth. The baby's nappy should not touch the cord.

#### TO PREVENT INFECTION

- i) **CUTTING THE CORD WITH STERILE BLADE OR SCISSORS AND APPLICATION OF ANTISEPTICS IS ABSOLUTELY ESSENTIAL.**
- ii) **THE CORD SHOULD NEVER BE CUT ON THE FLOOR.**
- iii) **MUD/ASH OR OIL SHOULD NOT BE APPLIED ON THE CORD.**

### Maintaining Warmth

Maintaining warmth is very important as the newborn baby cannot regulate her own body heat until she is about one month old. In case of home delivery the most efficient source of heat is the mother's body. A newborn needs more warmth than an adult and needs to be wrapped up to retain the body heat. If a newborn is uncomfortable, due to being either very hot or cold, she will cry. She must be made comfortable.

#### IMMEDIATE MEASURES TO MAINTAIN WARMTH

- DRY THE BABY AS SOON AS POSSIBLE AFTER DELIVERY — BEFORE CUTTING THE CORD.
- WRAP IN A TOWEL (DRY) AND BLANKET AFTER CUTTING THE CORD.
- PLACE NEXT TO MOTHER.
- DELAY BATH FOR 12-24 HOURS.
- DRESS THE BABY AS PER THE CLIMATE.
- BABIES WITH LOW BIRTH WEIGHT NEED EXTRA WARMTH.

### 11.3.2 Immediate Care of the Mother

The first hour after delivery is critical. It should be one of close observation — the mother should not be left alone. The midwife who has conducted the delivery should observe her to detect excessive bleeding, shock or sudden collapse. Blood pressure, pulse and respiration must be recorded. If there is excessive bleeding, the blood pressure may fall resulting in sudden collapse or it may rise in case of a woman who may be having toxemia. The midwife may need to call the doctor or refer the mother to a hospital.

- The mother should be cleaned thoroughly, swabbed with an antiseptic lotion and dried. Clothes should be changed. A warm comfortable bed should be provided. The mother can be given a hot drink. She must be allowed to rest.
- Uterus should be checked every few minutes to feel that it remains hard.
- The mother should be able to pass urine within one hour after the birth.
- The perineal pad should be checked often to observe the amount of bleeding
- Instructions should be provided to the family for observation of:
  - bleeding per vagina
  - softening of the uterus
  - cord for any oozing of blood
  - whether the baby is sucking well
  - whether the mother is clean and comfortable

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## 11.4 DELIVERY IN THE HOSPITAL OR PRIMARY HEALTH CENTRE

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You would notice that our discussion largely presumes the delivery as being conducted at home. This is because with regard to a vast majority of our population, it continues to be the case. However, in urban areas and in the case of high risk pregnancies, the hospital/primary health centre is usually preferred because of the availability of better infrastructural facilities, equipment and trained professionals, and therefore a better quality of medical care.

In case of high risk cases particularly, it is strongly advised that the delivery take place at the hospital/ primary health centre. In such cases it is important to keep the following points in mind:

- i) The family should be explained in advance, the need for going to PHC/hospital for the delivery.
- ii) The pregnant woman should be booked at the PHC/hospital well in advance.
- iii) The arrangement for transportation to PHC/hospital should be confirmed with the family.
- iv) The clothes and other necessary articles for the woman and her child should be kept ready to be taken to the PHC/hospital.
- v) The woman should go to PHC/hospital early in labour so that medical care is available.

Once the woman is admitted in the PHC/hospital for delivery, a skilled midwife/doctor should attend to her immediately till her baby is delivered safely. The medical person should:

- Assess the stage of labour.
- Give reassurance and encouragement to the woman to go through the labour.
- Help to relieve pain and discomfort, conserve strength and energy by providing fluids and a light diet, as need be.
- Maintain cleanliness and asepsis throughout while conducting the delivery.
- Refrain from unnecessary interference by doing repeated vaginal examinations.
- Recognize any complications and seek the advice of the doctor immediately (in case it is a midwife who is attending to the woman).
- Avoid giving any kind of medications as far as possible. The reason is that the medication the woman receives may pass through the placenta to the baby and interfere with the baby's adjustment to life after birth. It may also affect lactation.

**General Hygiene and Care of the Environment in the PHC/Hospital**

PHC/hospital is a notorious source of infection. To reduce the chances of infection, the following are essential:

- There should be easy and effective cleaning.
- Visitors should be restricted.
- Toilets and bathrooms should be scrupulously cleaned and disinfected between users.
- Beds and rooms also should be cleaned thoroughly after use.
- Personal hygiene must be maintained by the mother and her attendants.
- The woman should be encouraged to bathe and wash as necessary to maintain personal freshness.
- The midwife must wash her hands before and after examining the mother or handling used sanitary pads.
- The midwife should pay particular attention to her own personal hygiene as she is working very closely with the mother.
- Asepsis and antisepsis must be maintained. To prevent contamination and infection, attempts must be made to make procedures such as vaginal examination and delivery as sterile as possible.

**Check Your Progress Exercise 2**

1) Mention three do's and don'ts with regard to each of the following :

i) Preventing infection when cutting the umbilical cord

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ii) Keeping the newborn warm

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iii) Reducing the chances of infection in the PHC/hospital

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## **11.5 CARE DURING POSTNATAL PERIOD**

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Postnatal period begins after the third stage of labour (after delivery of the baby and the placenta) and lasts upto 6 weeks. We have already talked about the care that the baby as well as the mother must be provided with immediately after delivery. Let us now come to later care.

During the postnatal period, a number of physiological and psychological changes take place in the mother's body:

- The reproductive and other organs return to non-pregnant state.
- Lactation is established.
- The bonding between the newborn and the family is laid.
- The mother recovers from the stresses of pregnancy and delivery and assumes responsibility for the care and nurture of her baby.

Both mother and her newborn require consistent and adequate care during this period. This care should be planned based on three principles:

- Promoting the physical well-being of the mother and the baby.
- Encouraging sound methods of infant feeding and promoting a good mother and child relationship.
- Supporting and strengthening the mother's confidence in herself, and helping her to take care of the newborn.

During the postnatal period the health worker should

- i) Assess the condition of the mother and the baby and detect abnormalities, if any. Refer the mother/baby with any serious medical problem to the doctor/hospital.
- ii) Ensure that lactation is established and the baby is receiving sufficient nutrition.
- iii) Ensure that adequate postnatal care is provided including treatment of minor ailments and postnatal health problems of the mother and the baby.
- iv) Educate the mother on how to take care of herself and her baby, integrating education for nutrition, family planning, immunization and health care.

### **11.5.1 Health Assessment and Care during Visits**

The health worker should make a minimum of four home visits to make a periodic assessment of the health status of the mother and the baby. Subsequently the mother should be encouraged to attend the maternal and child health clinic at the health centre at least once after six to eight weeks of delivery for postnatal examination and health advice for herself and the child.

The home visits should be made within certain periods following delivery, so that the specific problems which commonly occur during these periods can be dealt with. Some of the important activities which a health worker should perform with regard to the newly delivered mother, during the visits are summarized in Table 11.1.

Table 11.1: Health Assessment of the Mother and Advice

Day of Visit	Health Assessment	Health Care and Advice	Referral
First visit; 1st - 2nd day after delivery	<p>The health worker should</p> <ul style="list-style-type: none"> <li>● Observe for bleeding, fever, pain, discomfort, appetite, movements of the bowels and bladder, sleep.</li> <li>● Check size and height of the uterus, pad for type of bleeding, condition of breasts and secretion of milk, mother's acceptance of baby.</li> </ul>	<p>The health worker should</p> <ul style="list-style-type: none"> <li>● Take care of minor ailments.</li> <li>● Advise the family/ woman to report to her if she develops fever, congestion of breasts, foul smelling bleeding per vagina, pain in the legs or chest, difficulty in passing urine.</li> <li>● Talk about and demonstrate care of the breasts and perineum.</li> <li>● Teach about diet, breast feeding, care of the newborn, need for physical activity. After normal delivery, a woman should be able to look after her own needs with some assistance.</li> </ul>	<p>The health worker should refer the woman to the doctor in case of</p> <ul style="list-style-type: none"> <li>● Fever above 39°C</li> <li>● Excessive bleeding</li> <li>● Difficulty in passing urine</li> </ul>
Second visit; 5th - 6th day after delivery	<p>Health worker should proceed and do the health assessment in the same way as on the first visit, but pay special attention to:</p> <ul style="list-style-type: none"> <li>● Breasts for congestion</li> <li>● Uterus to see that it is reducing in size</li> <li>● Haemoglobin estimation</li> <li>● Baby's sucking behaviour</li> </ul>	<p>In addition to reinforcing the advice given on the previous visit, the health worker should focus on:</p> <ul style="list-style-type: none"> <li>● Care of the congested breasts</li> <li>● Advice to the woman to continue with iron-folic acid tablets</li> <li>● Family planning advice</li> </ul>	<p>If the woman has breast abscess or any other complaint(s) which needs to be referred to the doctor.</p>
Third visit; 9th-10th day after delivery	<p>Same as for the earlier two visits.</p>	<p>The health worker should reinforce the advice given on the earlier two visits, and additionally emphasize:</p> <ul style="list-style-type: none"> <li>● The need to attend MCH (Maternal and Child Health) Clinic at 6-8 weeks</li> <li>● The need to attend family planning clinic at 6-8 weeks</li> </ul>	<ul style="list-style-type: none"> <li>● Same as for first and second visits</li> <li>● If the uterus is not reducing in size and is still felt per abdomen</li> </ul>

(Cont.)

Fourth visit; 2-4 weeks after delivery	<p>The health worker should check to ensure the following:</p> <ul style="list-style-type: none"> <li>● Uterus is no longer felt per abdomen.</li> <li>● Bleeding per vagina is reduced to a minimum.</li> <li>● Breast feeding is well-established and there is no breast congestion or cracked nipples.</li> <li>● The mother is able to take care of the baby.</li> </ul>	<p>The health worker should advise as per the health assessment and also focus on:</p> <ul style="list-style-type: none"> <li>● Special motivation to accept a family planning method</li> <li>● Postnatal exercises</li> <li>● Adequacy of diet</li> <li>● Sufficient rest and sleep</li> </ul>	<p>In case of</p> <ul style="list-style-type: none"> <li>● Persistent foul smelling bleeding</li> <li>● Fever</li> <li>● Uterus still felt per abdomen</li> <li>● Woman having sad and dejected look</li> </ul>
Fifth visit; 6-8 weeks after delivery (clinic visit)	<p>Involves</p> <ul style="list-style-type: none"> <li>● Detailed history taking</li> <li>● Physical examination</li> <li>● Vaginal examination by the doctor</li> <li>● Examination of the breasts</li> </ul>	<p>Advice focusses on maintenance of</p> <ul style="list-style-type: none"> <li>● Personal cleanliness</li> <li>● Diet</li> <li>● Rest and sleep</li> <li>● Activity</li> <li>● Family planning</li> <li>● Care of the baby</li> </ul>	<p>If the woman looks depressed, lethargic and cries easily — it could be postpartum depression. Referral is also in case of complications.</p>

During the visits, the health worker is expected to enquire about the mother's and the newborn's well-being and attend to any complaints particularly if mother complains of being very tired, excessive bleeding, loss of sleep, headache, child not sleeping or feeding, etc. Observation of temperature, pulse, respiration should be recorded and reported or referred to the doctor if any deviations from normal limits is noted. Regarding the mother, the following must be monitored:

- **Uterus:** Uterus must be checked. The height of the uterus should decrease (every day) till the pre-pregnancy status is reached.

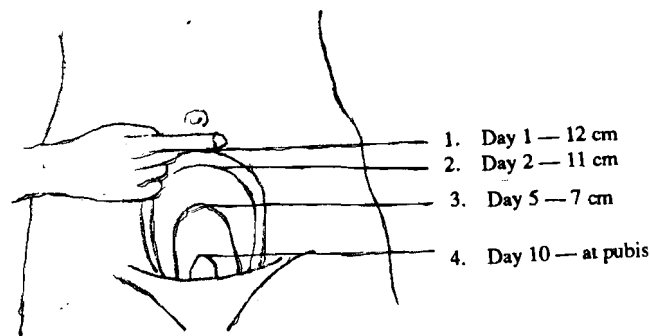


Fig. 11.2: After delivery, the uterus reduces in size to return to its non-pregnant state

- **Genital discharge:** The discharge from the genital tract after delivery is called lochia. It is important to assess the amount and colour of lochia. This assessment may be made by checking the perineal pad or by asking questions.

There should be a gradual change in the colour of lochia. During the first two days the colour of this discharge is red, then it becomes pink and after about nine days, it becomes pale. The amount of this discharge varies in different women, but whatever the variations, the amount should decrease daily and should, by and large, dry up within a month after delivery. Persistence of red or brown colour of lochia with bulky uterus is not normal and should be reported to the doctor. If it is associated with fever, it is a sign of infection, which needs immediate attention.

With regard to the newborn, the health worker should perform the following activities during these visits (Table 11.2).

Table 11.2: Health Assessment of the Newborn and Advice

Day of Visit	Health Assessment	Health Care and Advice	Referral
First visit; 1st-2nd day	<ul style="list-style-type: none"> <li>● Check the baby's ability to suck, pass urine and stools. Note the amount and colour of stools.</li> <li>● Check for convulsions, vomiting, birth defects, discharge from eyes and cord.</li> <li>● Observe body temperature, movements and the general appearance.</li> <li>● Weigh the baby.</li> </ul>	Instruct the mother/family regarding baby bath, breast feeding, cord care and general hygiene.	Refer if baby has <ul style="list-style-type: none"> <li>● Temperature</li> <li>● Persistent vomiting</li> <li>● Convulsions</li> <li>● Not passed urine and stools in first 24 hours</li> <li>● Cold skin</li> <li>● Birth defects</li> </ul>
Second visit; 5th-6th day	<ul style="list-style-type: none"> <li>● Re-examine the baby as on the first day.</li> <li>● Make sure that lactation is well-established.</li> <li>● Note that the cord is drying up.</li> </ul>	<ul style="list-style-type: none"> <li>● Reinforce the advice given on the first visit.</li> </ul>	<ul style="list-style-type: none"> <li>● Basically the same as mentioned for first visit</li> </ul>
Third visit; 9th-10th day	<ul style="list-style-type: none"> <li>● Examine and weigh the baby.</li> <li>● Examine the cord.</li> <li>● Check the elasticity of skin for nutritional assessment.</li> </ul>	<ul style="list-style-type: none"> <li>● Review and reinforce the advice given earlier.</li> <li>● Provide incidental health education</li> </ul>	Refer in case of <ul style="list-style-type: none"> <li>● Fever</li> <li>● Persistent jaundice</li> <li>● Foul discharge from umbilicus</li> <li>● Weight not increasing</li> </ul>
Fourth visit; 2-4 weeks after delivery	Check for <ul style="list-style-type: none"> <li>● Diarrhoea</li> <li>● Cough or nasal congestion</li> <li>● Fever</li> <li>● Signs/symptoms of tetanus</li> <li>● Any problem related to feeding</li> </ul>	<ul style="list-style-type: none"> <li>● Review and reinforce advice given earlier.</li> <li>● Treat any minor ailment.</li> <li>● Instruct mother to attend MCH clinic with her baby at 6-8 weeks after delivery.</li> </ul>	If the baby has any signs/symptoms as mentioned above.
Fifth visit; (Clinic visit); 6-8 weeks after delivery	<ul style="list-style-type: none"> <li>● Take detailed history.</li> <li>● Conduct detailed physical examination, take weight and height.</li> <li>● Ask questions about breast feeding, sleep, activity.</li> </ul>	<ul style="list-style-type: none"> <li>● Administer B.C.G.</li> <li>● Give specific instructions on immunization.</li> <li>● Prepare infant card.</li> <li>● Give health education as required.</li> </ul>	If baby shows <ul style="list-style-type: none"> <li>● Any signs/symptoms of fever, persistent weight loss/no weight gain.</li> <li>● Any complications, such as eye infection, umbilical infection, thrush or gastro-entritis. You will read more about these in Sub-section 11.6.2.</li> </ul>

## 11.5.2 Some Relevant Aspects in Postnatal Care

Let us now come to some other relevant aspects in postnatal care.

**Breast Feeding and Management of Lactation:** Breasts are developed and prepared during pregnancy for lactation. The actual secretion of milk usually starts from about the second day of the postnatal period. The baby should be put to breast within one hour after delivery and should be fed on demand. The maintenance of lactation to a great extent is dependent on the act of sucking. The quantity of milk secreted depends on the demand of the baby. The more and harder the baby sucks, the greater would be the flow of milk. On the whole, successful production of milk will depend on the mother's physical and mental well-being, good nutrition and regular feeding. Both rest as well as suitable exercise are important. Nervousness, illness and lack of good food will diminish the flow of milk and deprive the baby from receiving adequate nourishment for her growth and development.

**Rest and Sleep:** Adequate rest and sleep are very important for the mother and the baby. Caring for the small baby brings busy days and disturbed nights as the 24 hours are punctuated by the baby's need for feeding. Rest and sleep are needed to restore the normal well-being. It is important that the mother is provided frequent intervals of rest to catch up with the lost sleep. Mothers usually fall off to sleep during early hours of the morning and should be allowed to sleep on for as long as they are able to. The family members should be encouraged to take care of the baby for a period of time each day to allow the mother to take some rest.

**Activity and Exercise:** The mother should be encouraged to get up within six to twelve hours after the delivery. This gives a feeling of well-being, promotes circulation and drainage of lochia. It will also help the mother to take care of the baby. Postnatal exercises should be taught and the mother should be explained the need and importance of these exercises which must be done daily for three months following the delivery. Staying active is good for the mother.

**Diet:** As you read in Unit 9 of this Block, the diet of a delivered woman should be nutritious to promote good lactation and to keep her healthy.

**Care of the Bladder and Bowels:** During the first few days after delivery, large amounts of urine are excreted. The mother should empty her bladder regularly, as a full bladder can cause excessive bleeding. It is usual for a delivered mother not to open her bowels for the first two days due to the sluggishness of the bowel movements. Constipation should however be avoided as it may contribute to bleeding and cause complications. It may be necessary to give a mild laxative. However if the mother's food is rich in fibre, the laxatives may not be needed.

**General Comfort and Cleanliness:** Vulval toilet should be carried out twice daily with an antiseptic lotion. If the mother is not confined to bed, she should be advised to wash herself with boiled water after going to the toilet and use clean pads. The mother should be instructed on the importance of washing hands after cleaning herself. The cotton pad used to receive lochia should not be reused. The mother should be given daily bath and clean clothes to wear. Her bed linen should be changed frequently. The environment should be kept free from dust and over-crowding.

**Aiding Involution:** Normally, the uterus during the first ten days of postnatal period reduces in size very rapidly. This involution may be aided by encouraging postnatal exercises, a good diet and preventing infection. Breast feeding too helps in this process.

**Prevention of Infection:** Newly delivered mother is prone to infection as the placental site is raw. In order to prevent infection the number of visitors should be kept at a minimum. Hands must be washed frequently and the mother should be observed for any sign of fever.

**Health Education:** It is an important aspect of the care of the mother and child and starts from the antenatal period. The mother should be shown how to bathe and feed the baby and do some postnatal exercises. Health education on importance of maintaining personal hygiene and diet should be stressed.

**Check Your Progress Exercise 3**

1) State the importance of each of the following:

i) The baby should be put to breast as soon as the baby is keen to suck and the mother well enough to suckle after delivery, and should be fed on demand.

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ii) The mother should be allowed to have adequate rest and sleep.

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iii) The newly delivered mother should empty her bladder regularly. Constipation too should be avoided.

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## **11.6 MINOR DISORDERS DURING POSTNATAL PERIOD**

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In this Section, let us take a look at some common minor disorders which the mother or the newborn may suffer from particularly in the few weeks after birth.

### **11.6.1 Minor Disorders in the Mother**

Given below are some minor ailments which a woman may suffer from during the postnatal period. These, although known as minor, could be troublesome and cause sleeplessness, discomfort and poor appetite for the mother. The woman needs to be helped to adapt to her new role and to overcome these minor discomforts. The most common discomforts which occur in the six weeks following delivery are:

- **Afterpains:** The woman after delivery, especially one who has undergone 2nd or 3rd delivery, may get severe stomachache which closely resembles the menstrual pain. This is due to the excessive stretch of the uterine muscles and requires simple home remedies for its relief. Advise the woman to lie on her abdomen before the meals. She can use hot water bottle fomentations. If the pain does not get controlled, she can be given a pain relieving tablet. If it continues, the doctor should be consulted.

- **Inability to pass urine:** Inability to pass urine for 24 hours after delivery may occur due to the injury caused to external genital organs and associated muscles and tissues during the birth process. The woman may have received stitches over the perineum if it had been given a cut for easy delivery of the baby or if there has been any perineal tear. The bladder is also displaced during the delivery. The combination of all these factors result in the woman's inability to pass urine. It is necessary that she must be encouraged to urinate within the first twenty four hours after delivery in order to detect any major problem. She should be given warm drinks and offered assistance to pass urine, for example, by pouring warm water over the perineal region.

- **Painful stitches:** The stitches which are given on the cut made in the perineum to widen the birth passage can cause discomfort and pain. Advise the woman to clean the area with boiled warm water after passing urine or stool and apply antiseptic cream. A clean pad should be used to prevent infection. If the pain increases and there is swelling, she should consult the health worker/doctor.

- **Breast congestion:** On the 3rd or 4th day after delivery, the breasts start getting filled up with milk. If the baby is not put to breasts from the day of the delivery or is not sucking well, the breasts do not get empty and become congested, painful and swollen. In order to prevent the congestion, ask the woman to feed the baby on demand and express out the extra milk. This is necessary because the baby's need for the first few days (10-15) is less than the milk produced and whatever is not taken by the baby remains in the breasts clogging the milk ducts. After about a fortnight the demand of milk by the baby and mother's supply is usually equated. In case the breast congestion has occurred (normally by 4th to 6th day), the woman should be advised to give hot wet compresses, express out the milk and feed the baby more often. She should also be advised to use a well-fitting brassiere to prevent the pain and congestion in the breasts.
- **Cracked nipples:** If the pregnant woman does not clean her breasts and nipples during the antenatal period, the colostrum gets deposited on the mouth of nipples forming a crust. This gets dislodged when the baby starts sucking after delivery leaving a raw area on the nipple. Cracked nipples can also result due to excessive congestion of the breasts. The woman should be advised to a) maintain cleanliness of the breasts and nipples during the antenatal period b) wear clean and well supporting brassiere and c) prevent breast congestion during the postnatal period. If a crack has occurred, the mother, on the advice of the doctor, should not feed the baby from the breast for 12-14 hours and apply some antiseptic ointment. If the crack has occurred on both the breasts, she can use the treatment alternatively. The crack normally heals within 24 hours.
- **Backache:** This is often due to overwork or bad posture and lack of tone in the muscles. This is commonly seen in women who have had a number of children. The mother should be advised to rest more, told about correct posture and taught appropriate exercises.
- **Headache, dizziness and tiredness:** These are signs of weakness due to lack of food and anaemia. The mother should be advised appropriate measures like diet improvement and intake of iron and folic acid tablets.
- **Fever:** Fever is usually due to infection, and needs immediate medical attention.

### 11.6.2 Minor Disorders in the Newborn

Some complications which can occur in the newborn are as follows:

- **Umbilical Infection:** Umbilical infection may occur in the case of unsterile cord cutting. Purulent discharge, red and inflamed periumbilical area and foul smell are indicative of umbilical sepsis. The doctor must be consulted in this case.
- **Eye Infection:** Eye infection may be caused by some germs transmitted from the genital tract during delivery or by infected hands of caregivers. Profuse purulent discharge may occur in one or both the eyes. The doctor should be consulted. Sticky eyes without purulent discharge are common during first 2-3 days after birth and are not a cause for alarm. In such a case, the eyes should be cleaned daily with sterile cotton swabs soaked in normal saline/boiled water using one swab for each eye. Prescribed eye drops may be used.
- **Weight loss:** Most babies lose weight during the first 2-3 days of life. The weight loss usually varies between 5 and 8 per cent of birth weight. The normal factors contributing to initial weight loss include removal of vernix, mucus and blood from skin, passage of meconium and reduction of extra-cellular fluid volume. Normal birth weight is regained by the end of first week. But weight loss may be excessive due to:
  - lack of oral feeding
  - delayed feeding
  - persistent vomiting
  - diarrhoea

- Mother taking certain drugs
- cleft lip and cleft palate

In this regard, the following measures are recommended:

- Accurate weighing of babies. Weight should be routinely recorded.
- Mother should be advised to put the baby to breast frequently so that lactation is adequate.
- Intravenous feeding may be recommended for babies in case weight loss is serious.

**Oral Thrush:** This infection generally occurs during the newborn period. White patches or spots appear over the tongue, palate and gums. The baby may not be able to suck normally. In such a case, the mother should be advised to administer or apply prescribed medications and maintain hygiene.

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## 11.7 POSTNATAL EXAMINATION

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Postnatal examination is conducted six to eight weeks after the delivery to ensure that :

- The organs affected by pregnancy and delivery have returned to the pre-pregnant state.
- Lactation is successful with sufficient milk for the baby and there are no breast complications.
- The mother and the baby are in a good physical condition and there are no medical problems which may require prompt attention of the doctor for proper treatment.
- The baby is well and is attending the well baby clinic at the health centre for follow-up care and immunization.
- Advice on family planning has been given.

The activities which are performed in the postnatal clinic are as given below:

**a) With respect to the mother:**

- i) Urine is checked for albumen and sugar.
- ii) Blood is tested for haemoglobin level.
- iii) Blood pressure is checked.
- iv) Breasts are examined and mother is asked about the sufficiency of breast milk for baby's nourishment.
- v) Uterus is palpated to see the involution and to check the tone of the muscles of the abdomen.
- vi) Internal vaginal examination is done by the doctor to note the healing of muscles of perineum and genital tract. Mother is asked questions about vaginal discharge and onset of menstruation.

**b) With respect to the baby:**

Baby is weighed and examined. The colour of the skin, muscle tone and activity are noted. Discharge from the eyes, nose, ears and oral thrush is looked for. Stump of the umbilical cord is examined to make sure that it is healed. The mother is questioned about the well-being of the infant including feeding, sleep frequency and type of stool.



## 11.8 BREAST FEEDING AND MANAGEMENT OF LACTATION



In Unit 9 of this Block you have read about the various advantages of breast feeding. As you read in Sub-section 11.5.2, the first feed should be offered as soon as the baby is keen to suck and the mother is well enough to suckle. This is generally possible within 6-12 hours of birth.

- While feeding the baby, the mother should sit comfortably and keep the baby's head slightly raised.
- The entire body of the infant should be turned towards the mother's breast.
- Before feeding, the nipple must be cleaned properly with plain water and dried with cotton/soft cloth.
- The baby should be offered alternate breast at each feed.
- The mother should allow the baby to suck both the breasts.
- The baby must be fed after every 2-4 hours.
- During the first few days, most of the babies fall asleep after taking a few sucks. They may be aroused by gentle tickling behind the ears or on the soles during feeding.
- The baby should be allowed to burp during and after feeding to allow for escape of air by placing the baby over the shoulder or sitting her on the lap, flexed forward, and rubbing and patting her back.
- The mother should support her breasts day and night with properly fitting brassiere.
- If breasts are engorged, the mother should express out extra milk and put the baby to breast more frequently.
- The mother should take adequate diet and care of her health, take sufficient rest, do suitable exercise, keep free of tension and anxiety and feed the baby frequently for better lactation performance. It is a good idea to keep the mother and baby together so that the mother can feed the baby whenever the baby is awake and seems to want a feed.
- Contra-indications of breast feeding
  - a) For mother
    - acute febrile maternal illness, tuberculosis
    - development of breast abscess
    - mother consuming certain drugs like anti-coagulants or radioactive agents

- b) In infant
  - Cleft lip or palate or any other condition that interferes with or prevents grasp of the nipple.

Under these conditions, breast feeding is not advised/possible and top feed would need to be given.

**Check Your Progress Exercise 4**

- 1) What advice would you give to a newly delivered mother who is suffering from
  - i) Breast congestion  
.....  
.....
  - ii) Cracked nipples  
.....  
.....
  - iii) Tiredness  
.....  
.....
- 2) What are the reasons for the following complications in the newborn?
  - i) Umbilical infection  
.....  
.....
  - ii) Eye infection  
.....  
.....
  - iii) Excessive weight loss  
.....  
.....
- 3) What does the health worker/doctor assess during the postnatal examination with regard to
  - i) organs affected by pregnancy and delivery  
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.....
  - ii) lactation  
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  - iii) general physical condition of the mother and the baby  
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## 11.9 SUMMING UP

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In this Unit you recalled the risk factors in pregnancy which may endanger the life of the mother and the child. You have learnt about the preparations required for a safe delivery at home, the care required during the process of childbirth, the care of the mother and the baby immediately after the delivery and the follow-up postnatal care. You have also learnt the various minor disorders which may occur during this period and what health education should be given to prevent these and manage these disorders if they occur.

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## 11.10 GLOSSARY

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<b>Antisepsis</b>	: Process or principles of using antiseptics
<b>Antiseptics</b>	: Chemical substances used to prevent infection by inhibiting the growth of harmful micro-organisms
<b>Asepsis</b>	: Freedom from infection
<b>Breast abscess</b>	: Localised collection of pus in a cavity formed by disintegration of breast tissue
<b>Cleft lip</b>	: An anomaly wherein there is a cleft (fissure) in the upper lip. There may also be two clefts, with the central part of the lip jutting out
<b>Cleft palate</b>	: A condition in which there is a cleft (fissure) in the roof of the mouth (palate)
<b>Febrile illness</b>	: Any illness that pertains to fever
<b>Periumbilical area</b>	: Area around the umbilicus
<b>Sepsis</b>	: Growth of harmful micro-organisms in living tissues
<b>Umbilicus</b>	: Naval; The scar marking the site of attachment of the umbilical cord in the foetus

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## 11.11 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

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### Check Your Progress Exercise 1

- 1)
  - i) List any five risk factors from the list given in Section 11.2.
  - ii) Since risk factors can be life-endangering, a pregnant woman in whose case risk factors are present is normally advised to have the delivery conducted at the primary health centre or hospital, since the kind of medical expertise and equipment that may be needed to ensure her health as well as the baby's well-being during and after delivery may not be available at home.
- 2)
  - i) Labour; uterine
  - ii) first
  - iii) supported; pulled
  - iv) half-an-hour/5-15 minutes or a maximum of 30 minutes

### Check Your Progress Exercise 2

- 1)
  - i) & ii) Refer to Sub-section 11.3.1.
  - iii) Refer to Section 11.4

### Check Your Progress Exercise 3

- 1)
  - i) Important for successful lactation. The more the baby sucks, the greater will be the flow of milk.
  - ii) Adequate rest and sleep are important for the newly delivered mother's recovery and well-being, and also for production of adequate amount of milk to nourish the baby.
  - iii) A full bladder, as also constipation, contribute to bleeding and can cause complications.

### Check Your Progress Exercise 4

- 1) Refer to Sub-section 11.6.1
- 2) Refer to Sub-section 11.6.2
- 3) Refer to Section 11.7