



LIFE BEGINS

We are all fascinated when we watch a baby playing all by itself in its bed. The tiny hands and feet, the innocent smile and twinkling eyes- all bring out the protective and parental instincts in us. We are sure you must have wondered how this tiny being comes into the world.

Well, it is no magic! You may have observed the birth of a baby in your own family or neighbourhood. You might have also observed the special care of the mother-to-be during pregnancy- a very special phase in her life. It will be interesting for you to learn about this process because you will soon come to a stage in life when you too, will become a parent. Girls would be able to understand better the changes their body may go through if they are pregnant and boys will be able to understand and appreciate the needs of women during this significant phase of their lives.

In this lesson, you will learn how a baby develops in the mother's body and how it arrives into the world after the completion of its development in the womb.



OBJECTIVES

After completing this lesson, you will be able to:

- relate the signs of pregnancy with the changes taking place in a woman's body;
- describe the development over the three trimesters;
- recognize the need for taking special care of a woman before and after she delivers a baby;
- advocate the right of the female foetus to be born and receive all the necessary post natal care;
- negotiate and plan your own family and
- assess the social and emotional consequences of an unplanned pregnancy.



Notes

- the frequency of urination may increase towards the end of pregnancy;
- hormonal changes taking place in the woman’s body could lead to:
 - a craving for certain foods such as sweets or spicy or sour food. Some pregnant women may even want to eat certain inedible things like mud or chalk or slate. If they have a craving for such inedible things, they must consult a doctor;
 - an aversion to certain foods and smells such as onion, apples, perfumes etc.

However, not all women undergo these changes to the same extent. The experience of cravings and aversion may vary. Some women may experience such feelings for one pregnancy and not for the other.



ACTIVITY 17.1

You may ask your mother to recall any cravings and/or aversion she had when she was carrying you or her other siblings. What did she do to overcome these cravings or aversions?

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Do You Know?

1. What determines the sex of a foetus? The sex of a foetus is determined by the combination of sex chromosomes of the mother and the father. You will recall that it is only the father who carries the chromosome that determines whether the sex of a baby will be male or female. You may read your Science books (Lesson- Heredity) or use a library or internet to find out more about chromosomes and how they help in deciding whether a baby would be a girl or a boy.
2. When two babies are born to a mother at the same time, they are



Fig. 17.3A mother with twins



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The Third Trimester: 6 – 9 months

The increase in size of the foetus continues and it can now regulate breathing, body temperature and suck its thumb. In the eighth month of prenatal development, the foetus' body prepares for life outside the uterus. It gets antibodies from the mother so that it can be protected from diseases after birth (Figure 17.4).

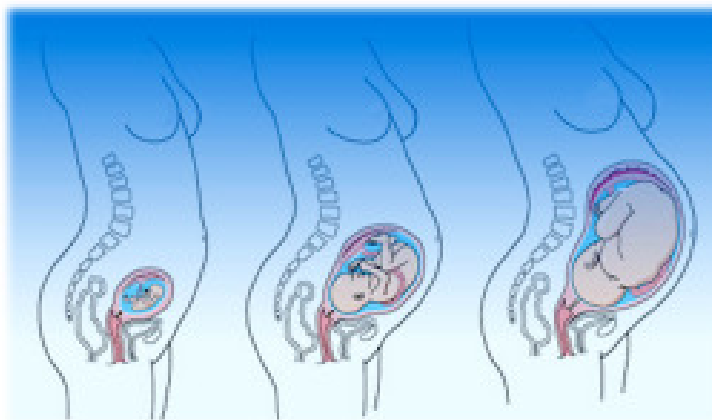


Figure 17.4: Development during the three trimesters

17.1.3 Factors Affecting the Growing Foetus

The growing foetus, although well protected inside the womb, is affected by certain factors.

1. Mother's emotional state

It is believed that a happy mother gives birth to a happy baby. That is why a pregnant woman must avoid tension and stress. The mother's emotions of anxiety, distress, fear or grief affect the foetus and the baby may be irritable after birth.

2. Mother's diet

A mother must take a nutritious diet so that her baby gets proper nutrition to grow. This is because oxygen and food needed by the foetus is obtained from the mother through the placenta. If the mother's diet is not enough or lacks in some nutrients, the baby will also be born weak. Such a baby is more likely to catch infections very soon and fall sick after birth. A pregnant woman's diet must contain:

- rice / wheat for carbohydrates - required for energy;
- pulses / eggs/ non vegetarian food for proteins - required for muscle development;



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Do You Know?

An ultrasound is a technique where sound waves of very high frequency are used to check the growth and development of the foetus. It is a very safe procedure and does not harm the unborn child in any way. This procedure is very useful in detecting any defects in the foetus at a very early stage.

5. Disease, germs that affect the foetus

If a mother catches diseases like German Measles or an infection like sexually transmitted infections or HIV/AIDS, their germs may sometimes pass the thin placental wall and damage the growing foetus. Mothers must therefore be careful during pregnancy and avoid catching infections.

6. Drugs, alcohol and smoking

Smoke from cigarette or 'bidi', chemicals from alcohol or drugs like 'afeem' (morphine) pass into the blood stream of the foetus through the placenta and can cause major damage to the foetus. A pregnant woman should avoid sitting in a room where someone is smoking as the smoke can affect the health of the baby.



Figure 17.6: A pregnant woman should avoid drugs, alcohol and smoking

**ACTIVITY 17.2**

Write two slogans/ messages to inform women about importance of good health or ill effects of taking drugs/alcohol/smoking during pregnancy. Samples are given below: "Healthy Mother – Healthy New born" or "Smoking can harm the foetus – Avoid it during pregnancy".



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people around her. You must have seen the concern shown by all the members of her family, neighbourhood and the community in general. They advise the pregnant woman to do or not do certain things. This advice may be based on local practices and customs. Therefore, it may be best to consult a trained professional before acting on any such advice.

During pregnancy, the family must ensure that the following are taken care of:

17.2.1 Medical Check-Up

After the first missed period, the lady becomes anxious to know if she is pregnant. This can be done with a simple urine test done by the doctor during her first visit to the health centre. Kits to test pregnancy at home are also available with chemists.

It is extremely important for all pregnant women to go to a doctor for a proper medical checkup. If a doctor is unavailable in the area, a trained midwife or some other trained health professional can be consulted. In fact, the pregnant woman should get herself registered at the nearest health centre or with a doctor as soon as possible. If you live in a village, seek the help of an ASHA or an Anganwadi Worker. She will take you to the nearest health centre. At the health care center a pregnant woman should not hesitate to consult the doctor available whether male or female. The doctor ensures that a pregnant woman undergoes some routine blood and urine tests - these are haemoglobin (for anaemia), blood group (for transmission of blood, if required) and blood sugar (for diabetes), VDRL test (for sexually transmitted infections) and HIV/AIDS.

Her weight is measured and she is given an injection for Tetanus. This ensures safe motherhood and delivery. A visit to a doctor at least once a month for the first 8 months of pregnancy and once a week during the last month is a necessity. Figure 17.7 indicates a pregnant woman being examined by a doctor. She may need to consult the doctor more frequently in the first trimester because of various problems she may have.

These days' doctors may advise ultrasound test or sonography to check for any abnormalities in the growth and development of the foetus. Some parents and doctors misuse this facility to determine the sex of the foetus and terminate the pregnancy if the foetus is found to be female. This is called female foeticide. The practice of female foeticide has led to a serious decline in the number of baby girls being born in our country.

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Figure 17.7: Medical Check-Up during pregnancy



Notes

In different regions and communities in our country, there are traditional practices which may sometimes advocate or prevent the pregnant women from consuming certain foods. This could be for various reasons like fear of abortion or other complications during pregnancy. Some foods are recommended to get a male child or even to have a baby with fair complexion. Most of these practices are simply myths and superstitious beliefs. The foods that may be advised to be avoided could be rich sources of various nutrients that are beneficial for a pregnant woman, like eggs, fish, pulses, milk and others.

**ACTIVITY 17.3**

1. Interview at least two pregnant women to find what changes (if any) they have made in their diet to ensure their and their baby's good health. Record your observations.
2. Talk to your elders and make a list of foods traditionally recommended by them during pregnancy. Then talk to a doctor/nutritionist and categorise these foods as desirable and undesirable giving appropriate reasons.

17.2.3 Weight

A pregnant woman gains weight as the foetus grows. Normally, she should gain on an average of 12 kg. This indicates healthy growth of the baby. How can a pregnant woman judge whether she is gaining weight normally? If possible, she should weigh herself during each visit to a doctor. If she stops gaining weight, or there is sudden weight gain in the last few months, she must go to a doctor.

17.2.4 Taking Medicines

Any medicine taken by a pregnant woman must be strictly under medical supervision of a doctor. Taking medicines must be avoided as far as possible. The pregnant woman must take a tetanus vaccination in order to prevent tetanus in the newborn child. This is taken in two doses. The first dose should be taken as early as possible followed by a second dose, a month after that. The doctor may prescribe medicinal supplements of iron and folic acid for preventing or treating anaemia.

17.2.5 Clothes to Be Worn

Clothes worn during pregnancy sometimes pose a problem, especially for young girls who feel shy of their growing abdomen. A loose kurta worn with a salwar would look good and be comfortable at the same time. A well draped sari also gracefully conceals the growing abdomen. Ensure that the clothes allow free and unrestricted movement of the body.



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17.3 SAFE DELIVERY

Perhaps the most anxious time in a woman's life is the time of giving birth. Some common questions are- Will I be safe? Will my baby be safe? What will happen in case of any complication?

She can easily reduce her anxiety by finding out where she can have a safe delivery- it may be a hospital, a primary health center (PHC) or a registered nursing home. By gathering this information beforehand, she can decide where to go at the time of delivery and also collect the things she would need at that time. By choosing to register with a doctor, she assures herself of competent medical attention at the birth of her child. It is always safer to have an institutionalized delivery, that is, in a hospital or nursing home. If a woman has not been able to get herself registered with a doctor and the health centre is far away, the next best option is to call a trained midwife or dai to the house for the delivery.

A trained midwife is important because she would -

1. do everything scientifically,
2. follow the rules of cleanliness,
3. know what to do in case of any complication.

The five Rules of Cleanliness :

- Clean hands and fingernails
- Clean surface for delivery
- Clean sheet
- Clean all items to be used for delivery with antiseptic solution and soap
- Clean cutting of the cord with a new blade and tying with new (fresh) thread



ACTIVITY 17.4

1. Identify and make a list of a hospitals/nursing homes/Primary Health Care Centre in your neighbourhood where deliveries can be conducted.
2. Make a list of things that would be required in case a delivery has to be conducted at home by a trained midwife/ dai.

17.4 CARE OF THE NEW BORN BABY AND MOTHER (POSTNATAL CARE)

Whether a girl or a boy—a baby brings a smile of joy to everyone's face! Both boys and girls have an equal right to be born and to get love and care from their parents. The human



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17.4.2 Immunization

The baby needs to be immunized against preventable infectious diseases. As a mother, you must find out the proper immunization schedule for your baby so that you can take your baby for immunization at the right time. Immunization is done free of cost at all government hospitals and health centres. Table 17.1 describes the National Immunization Schedule for babies. It also lists the immunization schedule for a pregnant woman.

Table 17.1: National Immunization Schedule

Vaccine	Disease Prevented	Age				
		Birth	6 weeks	10 weeks	14 weeks	9-12 months
Primary vaccination						
BCG	TB	✓				
Oral polio	Polio	✓	✓	✓	✓	
DPT	Diphtheria, Pertussis, Tetanus		✓	✓	✓	
Hepatitis B*	Jaundice		✓	✓	✓	
MMR	Measles, Mumps, Rubella					✓
Booster Doses						
DPT + Oral polio		16 to 24 months				
DT		5 years				
Tetanus toxoid (TT)		At 10 years and again at 16 years				
Vitamin A		9, 18, 24, 30 and 36 months				
Pregnant women						
Tetanus toxoid: 1 st dose		As early as possible during pregnancy				
2 nd dose		1 month after 1 st dose				
Booster		Within 3 years				



Notes

bottle-feeding their babies. If possible, they should still try to make an effort to breast feed the baby as it has important advantages for both the baby as well as the mother. Some of them are given in Table 17.2.

Table 17.2: Comparison between breast-feeding and bottle-feeding

Characteristic	Breast-feeding	Bottle-feeding
Nutrient content	Breast milk contains adequate proportions of all the nutrients that a baby needs. It can be easily digested.	The nutrients may be made adequate by fortifying powdered milk. If fresh milk is used, there may be an imbalance in dilution, making it difficult to digest.
Hygiene	Breast milk is clean and reduces chances of the baby getting diarrhoea.	Bottles need to be sterilized properly; otherwise the baby may catch infections and become ill.
Temperature	The temperature of breast milk is always right. It can directly go from the mother's breast to the child's mouth.	The temperature of milk has to be adjusted.
Protective quality	Breast milk contains antibodies that protect the baby from certain illnesses.	This milk does not contain any protective agents.
Emotional bond between the mother and baby	Breast-feeding helps in developing a special bond between the mother and child.	The baby can be bottle fed by any other person, so it may not form any special bond between the mother and child.

For the Mother

Mothers should not forget to have an adequate and balanced diet while they are breast feeding so that they are able to produce milk in appropriate amount and quality for their baby. Mothers who are working may have a problem in continuing breast-feeding their child. Government of India has now extended the leave from work with salary to all women to look after their babies in the first few months of their life. This is called maternity leave and is of 6 months duration. Now fathers who are in government employment can also get paternity leave of 15 days to look after their wives and the baby. For those who work in organizations where this facility is not available, one solution could be for mothers to extract (take out) their breast milk and store it in clean, sterilized bottles. The baby's caretaker can then feed the baby this milk like any other milk. This will at least help the baby to get



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17.5 PLANNING THE FAMILY

It is the right of both the parents to decide when and how many children they want to have. Married couples can talk to elders, friends or counsellors about the pros and cons of having a small family and methods to control birth. However, it is their final decision to decide when to start their family and how many children to have.

Family planning is often written about in magazines and newspapers and seen in documentaries or advertised on radio, television and cinema halls. Have you ever wondered what ‘family planning’ is and why planning the family is so important? Planning your family means that the parents can decide when to start their family that is have their first baby. It also means that there should be an adequate age gap between two children in a family. It is very important to plan a family so that both mother and children stay healthy and raising children is a stress free process for the parents.

You may have seen some families who have a large number of children born one after the other, as against others who have only one or two children. Do you see any difference in these two families? With so many pregnancies, the mother’s health is affected. With the birth of a second child immediately after the first, she is unable to give proper attention and care to the older one. She becomes irritable and scolds and beats her children often. Such children feel very insecure and unloved. Even the father feels helpless and often frustrated as he is not able to offer much help to the mother or the babies.

In a small family, the mother has more time and energy to look after all the needs of her child and spend time together so that the child feels loved and secure. A small family can also spend more money to meet the needs of the children such as education, entertainment and professional training.



(a) Unplanned family

(b) Planned family

Figure 17.9



Notes



TERMINAL EXERCISES

1. How does a woman come to know that she has become pregnant?
2. What do you think would be the consequences of conceiving a baby by a young woman who is under 18 years of age?
3. Trace the development of the foetus from the first to third trimester of pregnancy.
4. List four things a woman and her family can do to ensure the birth of a healthy and happy child.
5. What do you understand by the term fourth trimester?
6. Identify two practices to care for a mother and her baby after delivery. Why are these practices important?
7. Why is it important for a child to be breast fed right from birth? Give two reasons in support of your answer.
8. Prepare a short talk giving reasons for the need to give special care to a pregnant woman and the role of her family in doing so.
9. A couple should plan a small family. Give reasons.



ANSWERS TO INTEXT QUESTIONS

- 17.1**
1. (i) b, (ii) b, (iii) a
 2. March 22, 2010
 3. Ill effects: Complications during delivery, birth of a physically/mentally disabled child, risk to life of mother and child, miscarriages.
 4. Might be pregnant: Meena, Sheela,
Consult a doctor: Mary, Pinky
Not pregnant: Jaswinder
- 17.2**
1. (a) To prevent acidity and gastric discomfort
(b) To prevent heartburn/ gastric discomfort/ morning sickness
(c) To prevent infections during delivery
(d) To remain fit and active
(e) To check whether adequate foetal growth is taking place.

**Notes**

Reena has conceived immediately after marriage deterioration of her and has also had two more children in quick succession which could affect her health and nutritional status. Besides their children may not get enough nutrition and attention from her. This could make their children irritable and more susceptible to infections and disease. Reena and Abhay may also feel more irritable and guilty as they will not be able to devote adequate time to all their young children with their high demands.

2. Advice to family and friends:
 - (i) Family, friends and Ritu may rationally discuss the pros and cons of the situation and come to a mutually agreeable decision.
 - (ii) If the final decision is to abort the child then it should be under proper medical supervision. Ritu should be given emotional and physical support.
 - (iii) If pregnancy has to be taken to full term, then friends and family should keep Ritu happy; make her feel comfortable and normal; encourage her to face life bravely; they should not allow Ritu to feel guilty; should encourage her to take nutritious meals; go for regular medical check-ups; and continue with her studies.