

Unit 7 Girls – Healthy Pregnancy

During pregnancy, a woman must consider her physical and nutritional needs and the needs of the foetus. At every stage of the pregnancy, a woman's nutritional and physical requirements change to meet her demands and the demands of the foetus. To understand these needs, a woman must understand each stage of pregnancy. WHY? Because If a pregnant woman knows what to expect during a healthy pregnancy, she will know when to seek extra medical care at any stage.

Definitions

Anemia: a medical condition where there is not enough red blood cells in the blood.

Breast feeding: when a woman feeds a child with milk from her breast.

Embryo: the name given to a developing baby (of less than 8 weeks old) in the womb.

foetus: an unborn baby that is still developing in the womb.

Folic acid: one of the B vitamins that is found in fortified bread and cereals.

Gestation = Pregnancy: is the time a woman carries her developing embryo/foetus in her womb.

Labour: the process of childbirth.

Supplement: something that provides a nutrient; it can be added to a food or a drink or taken in liquid or tablet form (**Fortified**).

Trimester: a period of three months.

****Remember**** Iron is needed for making blood; Calcium is needed for healthy bone and teeth.

Stages of pregnancy

❖ Pregnancy usually lasts 40-42 weeks which are about 9 months.



1st Trimester

❖ A fertilised egg forms an embryo that looks like a group of cells. From around eight weeks, this group of cells gradually turns into the shape of the human body called foetus.

❖ Changes that happen to the baby during the **First** trimester:

- The nervous system (brain and spinal cord) begins to develop.
- The umbilical cord forms.
- The heart, eyes, ears, mouth, nose, hands and feet take shape.
- By the end of the first trimester, the organs have formed and are developing.

❖ A lot of changes happen to the mother during pregnancy, These include:

- Missed period
- Nausea and vomiting (morning sickness)
- Heart burn
- Fatigue



1) Which of the following about the 1st trimester is True?

- a) The heart starts taking shape in the 17th week
- b) A foetus is a group of cells in the first 8 weeks of gestation
- c) The umbilical cord is formed during the 1st trimester
- d) Pregnancy usually lasts 28-30 weeks

2nd Trimester

❖ Changes that happen to the baby during the **Second** trimester:

- The foetus begins to make urine.
- They develop meconium. This is the first bowel movement.
- The gender will become apparent.
- The musculoskeletal system is developing, and the bones begin to harden.
- The skin is translucent (almost see-through).
- The foetus can suck their thumb, and their fingerprints form.
- By the end of this trimester, they are gaining some body fat.

❖ Mothers start to feel better and the morning sickness goes away. The mother can feel the foetus moving.

3rd Trimester

❖ Changes that happen to the baby during the **Third** trimester:

- The foetus' bones are fully formed.
- The eyes can open and close.
- At 37 weeks, they are classed as full-term and the organs are functioning.



❖ Mothers feel uncomfortable as the foetus gets bigger, it becomes more difficult for them to sleep, and the frequency of urination increases as the baby is pushing against her internal organs

❖ Near to the end of the third trimester, the woman's body will prepare for childbirth. The foetus will turn and be in position for childbirth.

2) The organs of the foetus are fully functioning:

- a) By the end of the 1st trimester
- b) By the beginning of the 3rd trimester
- c) By the end of the 2nd trimester
- d) By the end of the 3rd trimester

3) Which of the following Don't happen during the 2nd trimester ?

- a) The gender of the foetus becomes more apparent
- b) The eyes of the foetus opens and close
- c) Skeletal movement of the fetus begins
- d) The foetus begins to make urine

4) Which of these changes can normally happen to the mother during pregnancy ?

- a) Morning sickness
- b) Lose weight
- c) She develops meconium
- d) It becomes more easy to sleep

Healthy diet and nutritional requirement during pregnancy

- ❖ During pregnancy, there are many different nutritional requirements for the mother and for the developing baby. Eating a healthy balanced diet means that the mother must consume a variety of foods.
- ❖ Energy needs increase during pregnancy, so the mother should consume more food. a pregnant woman will need to increase her calorie intake by 360 calories during the second trimester and by 475 calories in the third trimester.
- ❖ The food groups include:
 - **Cereals and their products**, like grains, wholegrain cereals, wholegrain bread, potatoes, rice, crackers and pasta make up this food group. These foods are a good source of carbohydrates.
 - **Fruits and vegetables**, as they contain lots of vitamins and minerals. They are also a good source of fiber. Pregnant women should aim to eat at least five fruit and vegetables every day. It doesn't matter if they are raw or cooked, eaten on their own or as part of a meal.
 - **Milk and dairy foods**, provide pregnant women and the foetus with the calcium needed for healthy bones, heart, muscles and nerves. Pregnant women should aim to eat three servings of dairy products every day. Low-fat dairy products are recommended over the full-fat versions. non-dairy alternatives to milk such as soya, rice or almond milk can also be used.
 - **Meat, eggs and legumes**, Foods from this group include meat, poultry, fish, pulses and eggs. These sources give the mother and foetus protein and iron. Pregnant women should aim to eat two to three servings from this food group every day, because iron deficiency is common in pregnancy and these foods contain iron.
 - **Fats** are essential to give the body energy. However, not all fats are healthy, There are different types of fats; saturated, unsaturated and trans-fat. Pregnant women should eat **unsaturated fat**, limit their intake of **saturated fats** and avoid **trans-fats**. Foods containing unsaturated fats include the following: Nuts, Seeds, Olive oil, Rapeseed oil, Avocados, Oily fish such as salmon and trout.
 - **Water !**

5) Choose the correct answer. Trans-fats are:

- a) Good source of energy
- b) Rich in calcium
- c) Rich in iron
- d) Should be avoided

6) When including meat, eggs and legumes in diet, which of the following should pregnant women avoid doing?

- a) Trimming the fat from meat before cooking
- b) Frying meat instead of baking or grilling
- c) Have fresh meat and fish
- d) Cook the meat well to kill any bacteria

❖ Foods to avoid during pregnancy:

Caffeine can reach the foetus and be harmful.

- **Fish high in Mercury**, like: bigeye tuna, shark, mackerel, marlin and swordfish should be avoided. Pregnant women should choose fish and seafood that are **low** in mercury such as canned light tuna, salmon, anchovies and sardines. These are safe to eat 2-3 times a week.

- **High fat, salt and sugary foods**. These can raise a pregnant woman's blood pressure and cause her to gain too much weight.

- **Saturated fat** such as: butter, crisps, chips, mayonnaise and the fat on meat. **Trans-fat** as: fried fast food, cookies and cakes. These can build up fat layers in arteries.

- **Processed meat** such as: hot dogs, canned meats, cured or salted meats and many fast food. These contain high salt and saturated fat.

- **Food that contain bacteria and parasites**, such as: raw or undercooked food (fish, meat, eggs), unwashed fruits and vegetables, unpasteurized milk and dairy products.

❖ There are certain supplements that are so important in pregnancy:

- **Folic acid**. Women should take a supplement of 400µg of folic acid before, and up to the 3 months of pregnancy. help prevent the foetus developing defects of the brain, spine or spinal cord (these are known as neural tube defects). Folic acid is the synthetic (man-made) version of folate (vitamin B9). Folate can be found in spinach, broccoli and asparagus.

- **Calcium**. Pregnant woman should aim to eat three servings of calcium-rich foods every day. Food that are rich in calcium are: Milk and dairy products (cheese, yogurt), soy, almond and oat milk, green leafy vegetables, dried fruit.

- **Iron**, the demand for iron increases as the foetus grows. Iron rich food include: Red meat, Eggs, Pulses, Seafood, Green leafy vegetables, Fortified foods.

7) Which of the following is healthy for a pregnant woman and her foetus?

- Canned meat
- High mercury tuna
- Folic acid
- Caffeine rich drinks like coffee

❖ Weight gain is a healthy and normal part of pregnancy.

❖ The amount of weight gain depends on the weight of the woman before pregnancy

❖ If she is a healthy weight before pregnancy, she can expect to gain between 11.5 and 16 kg.

8) A 32 year old Fatima had a BMI of 28 before pregnancy, how much weight is she expected to gain during pregnancy ?

- 5 – 9 kg
- 7 – 11.5 kg
- 11.5 – 16 kg
- 12.5 – 18 kg

Underweight (BMI < 18.5)	12.5 - 18 kg (28-40 lb)
Healthy weight (BMI 18.5 – 24.9)	11.5 - 16 kg (25-35 lb)
Overweight (BMI 25.0 – 29.9)	7 - 11.5 kg (15-25 lb)
Obese (BMI ≥ 30.0)	5 - 9 kg (11-20 lb)

Exercise during pregnancy

❖ Pregnant women should exercise at least 150 mins/week = 30 mins/day for 5 days/week

**** Remember **** Moderate exercise increase breathing and heart rate but the person can still hold a conversation.

❖ When women get pregnant should not over exercise and should follow exercise guidelines:

- Those who are **not active** >> consult a doctor and start with light activity then increase gradually.
- Those who are already active but **not enough** >> continue to slowly increase their level of activity.
- Those who are **already** doing cardiovascular and resistance training >> don't stop and keep following the guidelines throughout pregnancy.

❖ Benefits of physical activity during pregnancy:

- Help reduce stress and anxiety. Improve mood and energy levels.
- Help women gain only healthy amount of weight during pregnancy.
- Maintain cardiovascular and muscular fitness that help the mother's body be ready for childbirth.
- Reduce the risk of gestational diabetes.
- Help the mother recover faster after giving birth.

9) Which of the following exercises are not recommended during pregnancy?

- a) Swimming
- b) kickboxing
- c) Walking
- d) Pelvic floor strengthening exercises

10) Which of the following exercises are recommended during pregnancy?

- a) Rock climbing
- b) Judo
- c) Horse riding
- d) Low impact aerobics

❖ Pregnant woman should not lie flat on their back for long periods of time, particularly after 16 weeks, as she might feel faint or dizzy.

❖ When to stop exercising? If the mother have any of these signs:

- Difficulty breathing and chest pain
- Dizziness
- Muscle weakness
- Pain around stomach or pelvis
- Irregular heart beat
- Bleeding or fluid loss
- Pre-term labour or contractions
- Decreased movement of the fetus.

Medical care during pregnancy

- ❖ If she knows what to expect during her pregnancy, she might be able to identify when she needs medical attention.
- ❖ Women can experience **hypertension** (high blood pressure) during pregnancy. High blood pressure during pregnancy should be monitored by a healthcare professional.
- ❖ **Gestational diabetes** is a type of diabetes that sometimes develops during pregnancy. It happens because the body cannot produce enough insulin to meet the extra demands of the pregnancy. This leads to hyperglycemia. This generally goes away after pregnancy is finished.
- ❖ An **ultrasound scan** will let the doctor know if the foetus is growing and developing at a healthy rate. The scan will record the heart rate and breathing.
- ❖ The following symptoms may occur during pregnancy and the mother needs to see a doctor but does Not need emergency medical care:
 - Back pain
 - Low iron levels in the blood (anaemia)
 - Constipation
 - Fatigue (tiredness)
 - Heartburn
 - Morning sickness
 - Swelling of the legs (oedema)
- ❖ When to get Emergency medical care?
 - No movement from the foetus
 - Excessive fatigue
 - Excessive thirst
 - Feeling of anxiety
 - Heavy bleeding
 - More than three contractions per hour
 - Sudden loss of fluid
 - Unexplained pains
- ❖ If the woman thinks that she is in labour, she should get medical attention. The following signs indicate that the mother is in labour:
 - Lower back pain or pain around the stomach
 - The release of amniotic fluid known as the 'waters breaking'
 - Contractions
- ❖ Stages of labour:
 - Stage 1: the mother will feel contractions and pain, which are the muscles in the womb tightening and relaxing regularly every 5 minutes.
 - Stage 2: the contractions get stronger, more frequent and last longer. The mother will feel the need to push using her abdominal muscles and this will deliver the baby. This stage lasts 1-2 hours.
 - Stage 3: the umbilical cord is clamped. The placenta is delivered 5-20 mins after the baby.

11) Fatima is asking about the possible signs or symptoms during her pregnancy that she might develop and will require her to seek emergency medical care?

- a) Sudden loss of fluid or heavy bleeding
- b) Constipation and heartburn
- c) Morning sickness and fatigue
- d) Anemia and swelling of the legs

12) In which stage of labour is the placenta delivered?

- a) Stage 1
- b) Stage 2
- c) Stage 3
- d) Stage 4

Nutritional needs of a newborn

- ❖ The nutritional needs of a newborn are very specific. A newborn baby is growing and developing very fast. During the first six months, a baby's weight will have doubled. They are building up their immune system to fight infection and disease. The best way to support this growth and development is to breastfeed the baby.
- ❖ The baby must latch onto the breast and suckle to feed from the mother's breast.
- ❖ Breastmilk contains all of the nutrients and antibodies the baby needs to grow and develop and fight infection. It gives the baby all of the energy they need to meet their demands. Mothers should try to feed their baby for the first time within one hour of birth.
- ❖ The World Health Organization recommends that women breastfeed exclusively for the first 6 months. This means that no other food or drinks are given to the baby during this time. After the end of 6 months, the baby should be introduced to home-made food, but breastfeeding should continue until two years of age or longer.
- ❖ Breastfeeding is important for many reasons:
 - It encourages bonding between the mother and the baby.
 - It contains all the nutrients the baby needs.
 - It is free, safe and readily available.
 - It helps to develop the baby's immune system.
 - It is environmentally friendly.
- ❖ **Colostrum** is the first form of milk that is produced by the mother straight after the baby is born. This is what the baby feeds on for their first few days during breastfeeding. It is a sticky yellowish substance. It is concentrated and provides the best nutrients for the baby, including protein, vitamins and minerals.
- ❖ Colostrum helps the baby to get rid of meconium. During the first week, the amount of colostrum produced reduces and more mature milk is produced. The mature milk begins thin then becomes rich and creamy.
- ❖ The baby's needs will determine how much milk is produced by the mother. The more often the baby feeds from the breast, the more milk will be produced to meet the demand. During the first few days, the baby can feed up to 15 times a day.

❖ Babies will feed when they are hungry and stop when they are full. A baby should be breastfed as often as they want it. They will take enough milk to help them to grow and develop at a healthy rate.

❖ Breastmilk contains all of the nutrients that babies need. The amount of nutrients in breast milk depends on the quality of the mother's diet. This is why a healthy diet is important during pregnancy as well as during the time when a mother is breastfeeding her baby.

❖ Breastmilk contains the following:

- Antimicrobial factors
- Carbohydrate
- Digestive enzymes
- Fat
- Protein
- Vitamins and minerals

13) What is the name of the breast milk produced during the first week of breastfeeding the baby?

- a) Meconium
- b) Mature milk
- c) Creamy milk
- d) Colostrum

14) Which of the following about breastfeeding is False ?

- a) Provide the baby with proteins, vitamins, minerals, enzymes
- b) Should be stopped after 6 months of age
- c) Gives the baby good immunity against infections
- d) Encourages bonding between mother and baby

15) Susan has just delivered her baby 2 days ago and is asking you how many times she should breastfeed her baby every day ?

- a) 5 times
- b) 3 times
- c) 15 times
- d) As much as the baby wants

16) Laila has a 4 month old son and she is thinking to start feeding him some home-made food. What do you think?

- a) She should wait until the baby is at least 6 months
- b) She can start but with soft food only
- c) No food should be given before the age of 2 years
- d) It doesn't matter if she feed the baby food or milk

17) Mariam has just gave birth to her first baby and is afraid that she doesn't have enough breast milk to feed her baby. What do you tell her ?

- a) If the baby is still hungry, give him some fruits
- b) You can give the baby for someone else to feed
- c) The more often the baby feeds, the more milk will be produced
- d) Don't feed the baby too much so that it doesn't finish quickly