

Physiological &
psychological
changes &
common
discomforts of
pregnancy
Dr.Sundss.b.
Dawod



Objectives:



- ❖ *at the end of this class the student is to:*
- ✓ Identify the physiological changes that occur during pregnancy.
- ✓ Recognize normal psychological and developmental adaptation to pregnancy.
- ✓ Describe the most common discomforts that occur during pregnancy.



Introduction

During pregnancy, a woman's body undergoes significant physiologic changes to support the needs of the developing fetus and prepare for childbirth and lactation. Pregnancy is also a time of significant psychosocial and developmental transition and adaptation.(AWHONN;2004).

women need care and support to understand the nature and significance of this developmental stage and prepare for the joys, challenges and responsibilities of motherhood.



➤ Common discomforts of pregnancy

First Trimester

- Breasts changes, pain, tingling, and tenderness.
- Urgency and frequency of urination.
- Languor and malaise.
- Nausea and vomiting “morning sickness”.
- Ptyalism.
- gingivitis and epulis.
- Nasal stiffness, epistaxis.
- Leukorrhoea.
- Psychosocial dynamics as mood swing, mixed feeling.



continued

Second
Trimester

- Constipation
- Flatulence with bloating and belching.
- Varicose veins.
- Leukorrhea.
- Headaches.
- Carpal Tunnel Syndrome.
- Periodic numbness.
- Round ligament pain.
- Joint pain, backache, and pelvic pressure; hyper-mobility of joints.



continued

Third Trimester

- Shortness of breathing and Dyspnea.
- Insomnia.
- Psychosocial Responses as mood swing, mixed feelings, and increased anxiety.
- Urinary frequency and urgency.
- Perinal discomforts and pressure.
- Braxton hicks contractions.
- Leg cramps.
- Ankle edema.



1st: Reproductive System :

■ Uterus →

* size:

- increased vascularity and dilation of blood vessels.
- **hyperplasia.**
- **hypertrophy.**
- **Decidua** “ endometrium during pregnancy”.

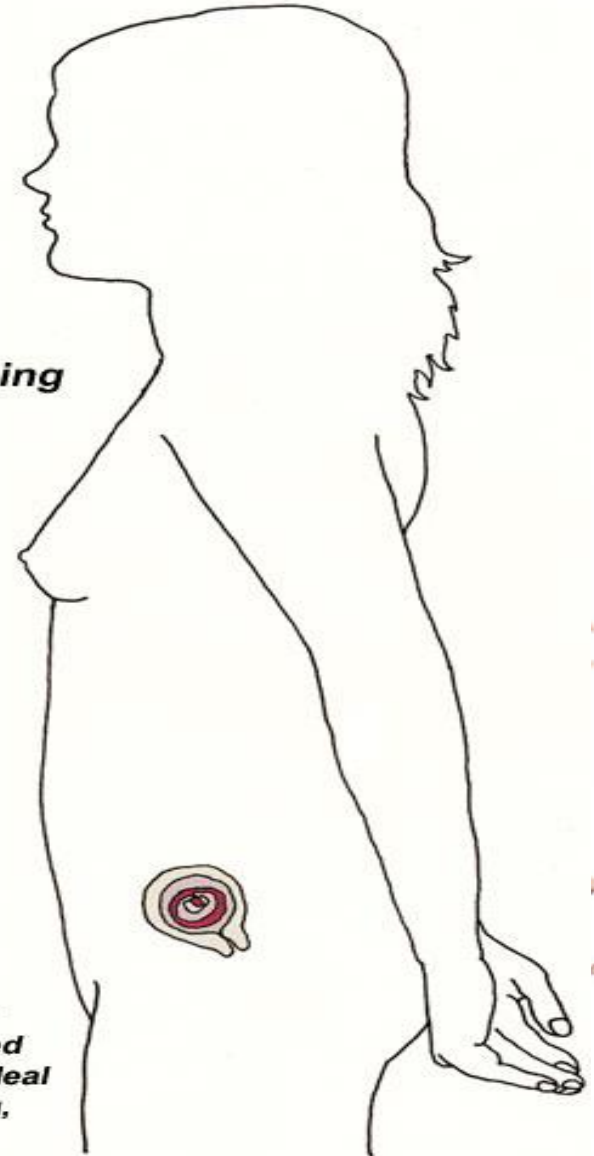


By 7 or 8 weeks of gestation, the uterus become as the size of a large hen's egg or a grape size.

Week #8
Approx. 1/10 oz.
1 inch long
Head is forming
Heart is beating
Placenta is developing

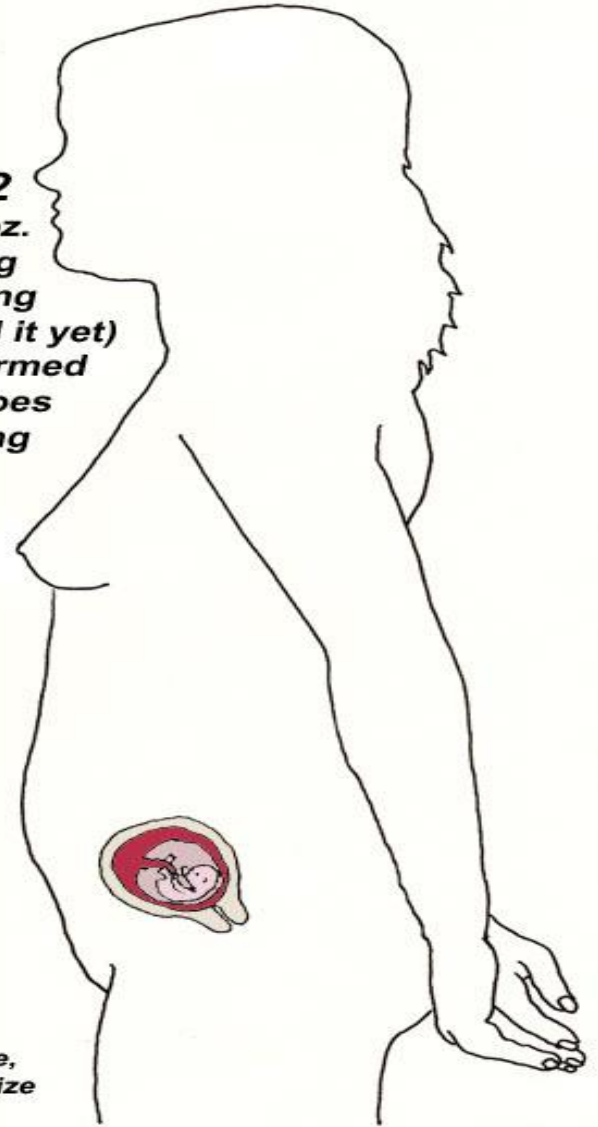


Grape Size
From a little seed
to a grape sized deal
baby's growing,
now it's real!



By 12 weeks of gestation , the uterus become as the size of a plum.

Week #12
Approx. 1/2 oz.
3 inches long
Baby is moving
(but you can't feel it yet)
Eyes are well formed
Fingers and Toes
are developing



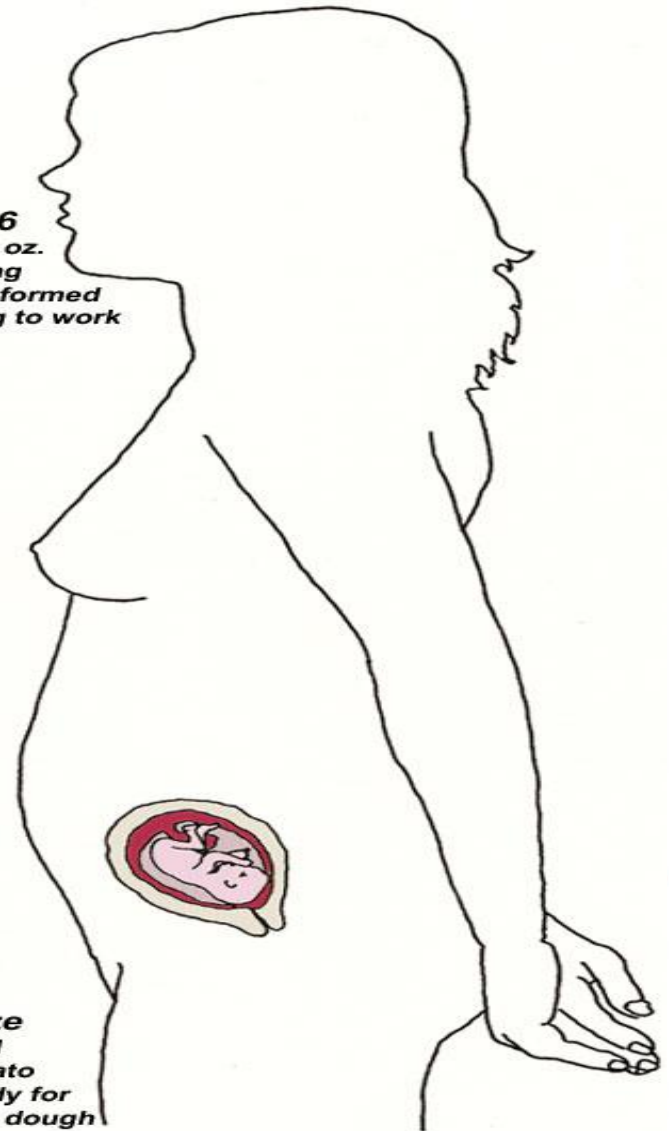
Plum Size
A little bigger
and more to come,
baby's about the size
of a plum.

By 16 weeks of gestation , the uterus become as the size of a Tomato.

Week #16
*Approx. 4 1/2 oz.
6 inches long
Baby completely formed
Placenta is starting to work*



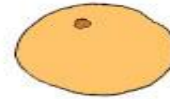
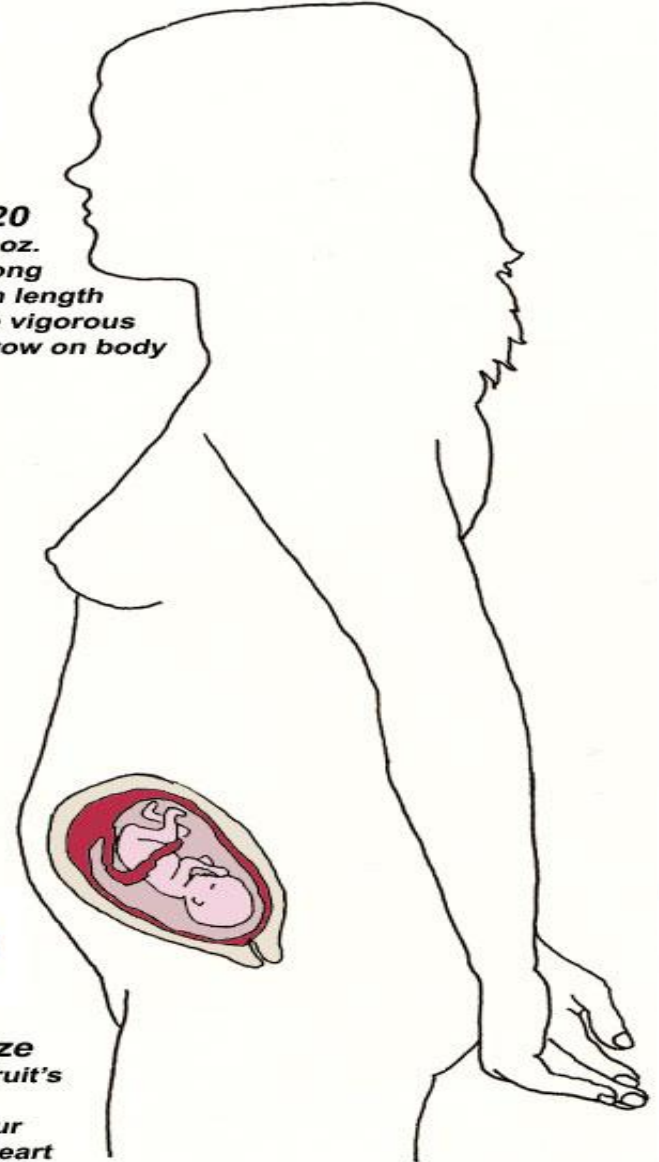
Tomato Size
*Growing still
a medium tomato
but not quite ready for
sculpting with play dough*



By 20 weeks of gestation , the uterus become as the size of a grapefruit.

كريب فوت

Week #20
Approx. 12 oz.
10 inches long
Baby growing in length
Movement may be vigorous
Fine hair starts to grow on body



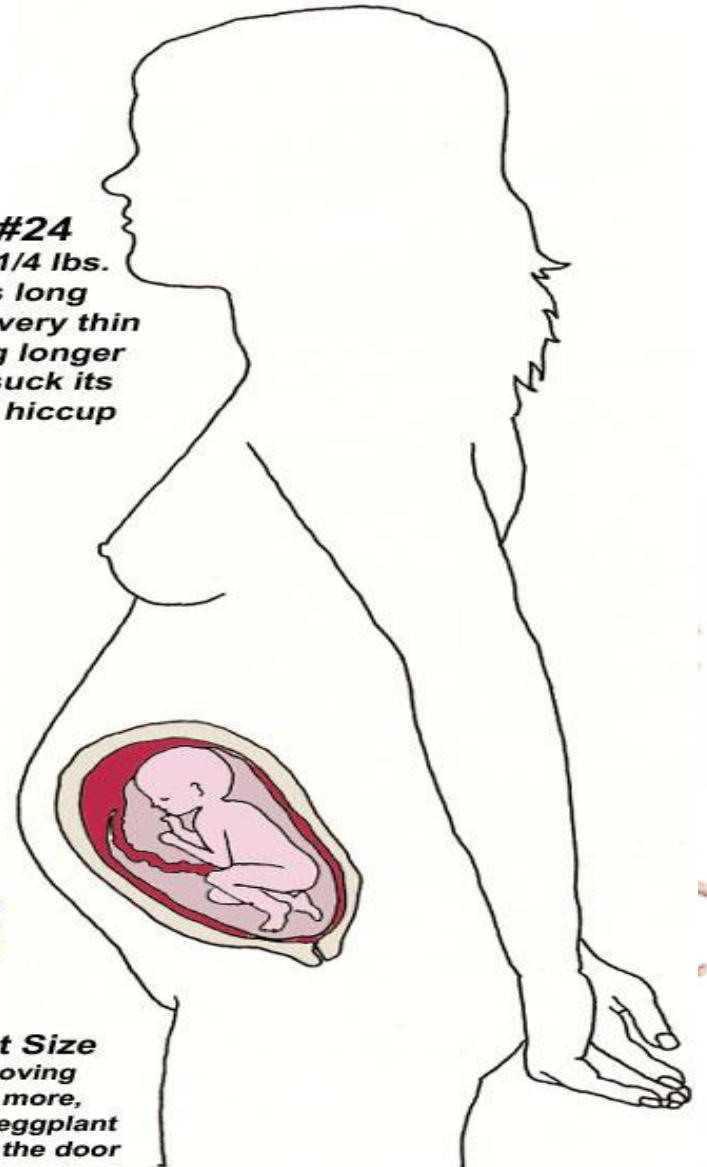
Grapefruit Size
Sometimes grapefruit's
a little tart,
but sweet or sour
baby melts your heart

By 24 weeks of gestation , the uterus become as the size of a Eggplant.

Week #24
*Approx. 1 1/4 lbs.
13 inches long
Baby is still very thin
but growing longer
Baby can suck its
thumb and hiccup*



Eggplant Size
*Baby's moving
more and more,
like a living eggplant
pounding at the door*



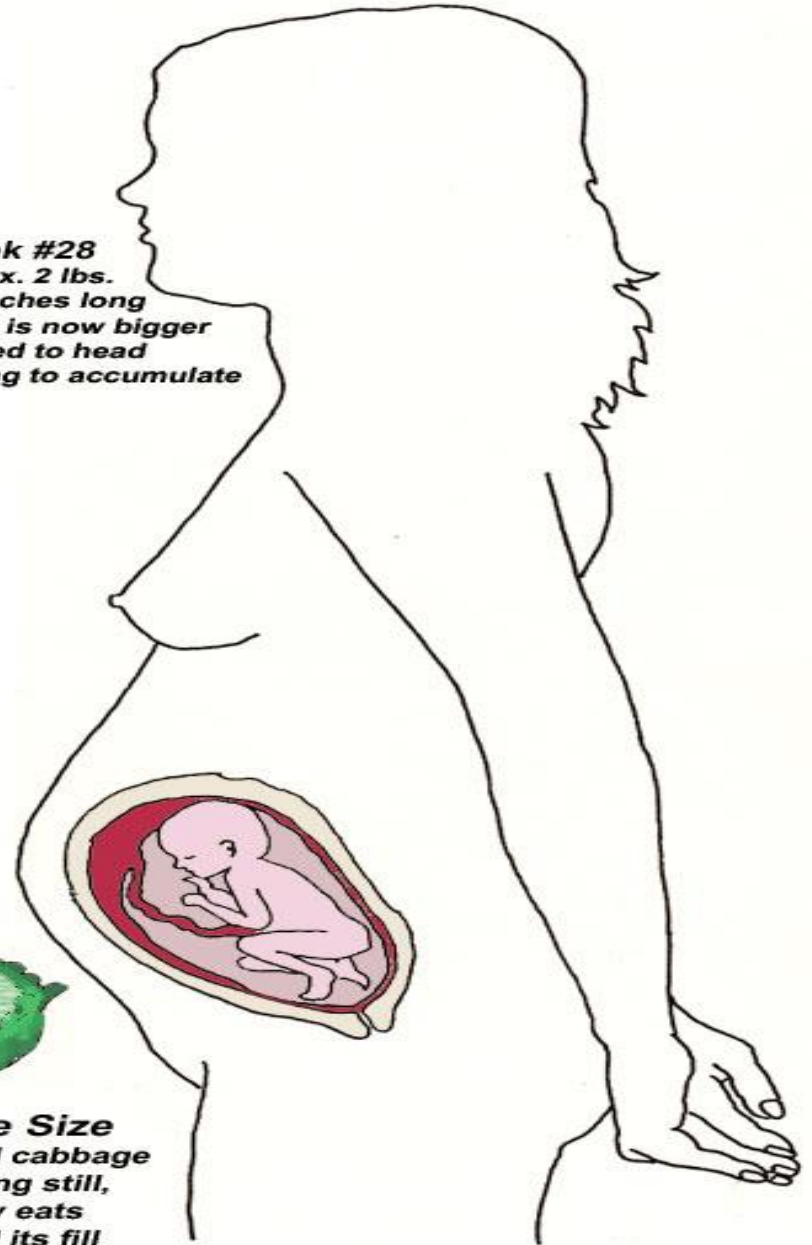
By 28 weeks of gestation , the uterus become as the size of a Cabbage.

الملفوف

Week #28
Approx. 2 lbs.
14 1/2 inches long
Baby's body is now bigger
compared to head
Fat is beginning to accumulate

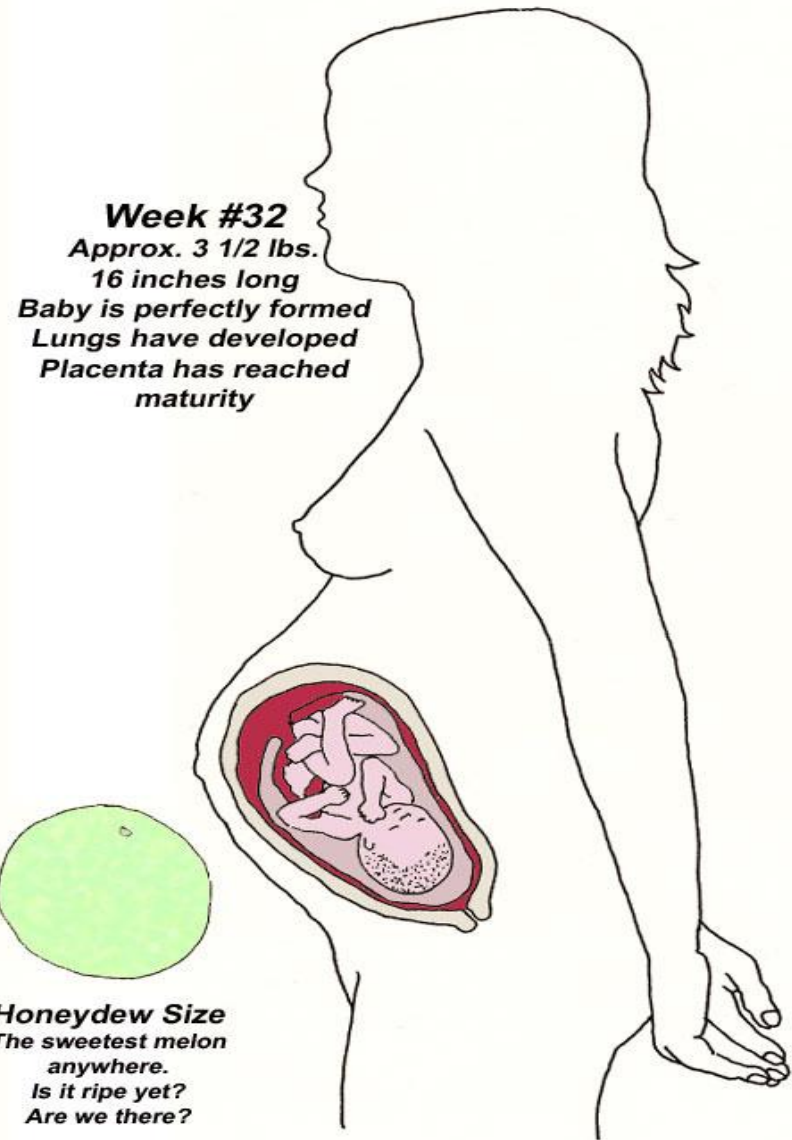


Cabbage Size
A good sized cabbage
and growing still,
this baby eats
till its had its fill



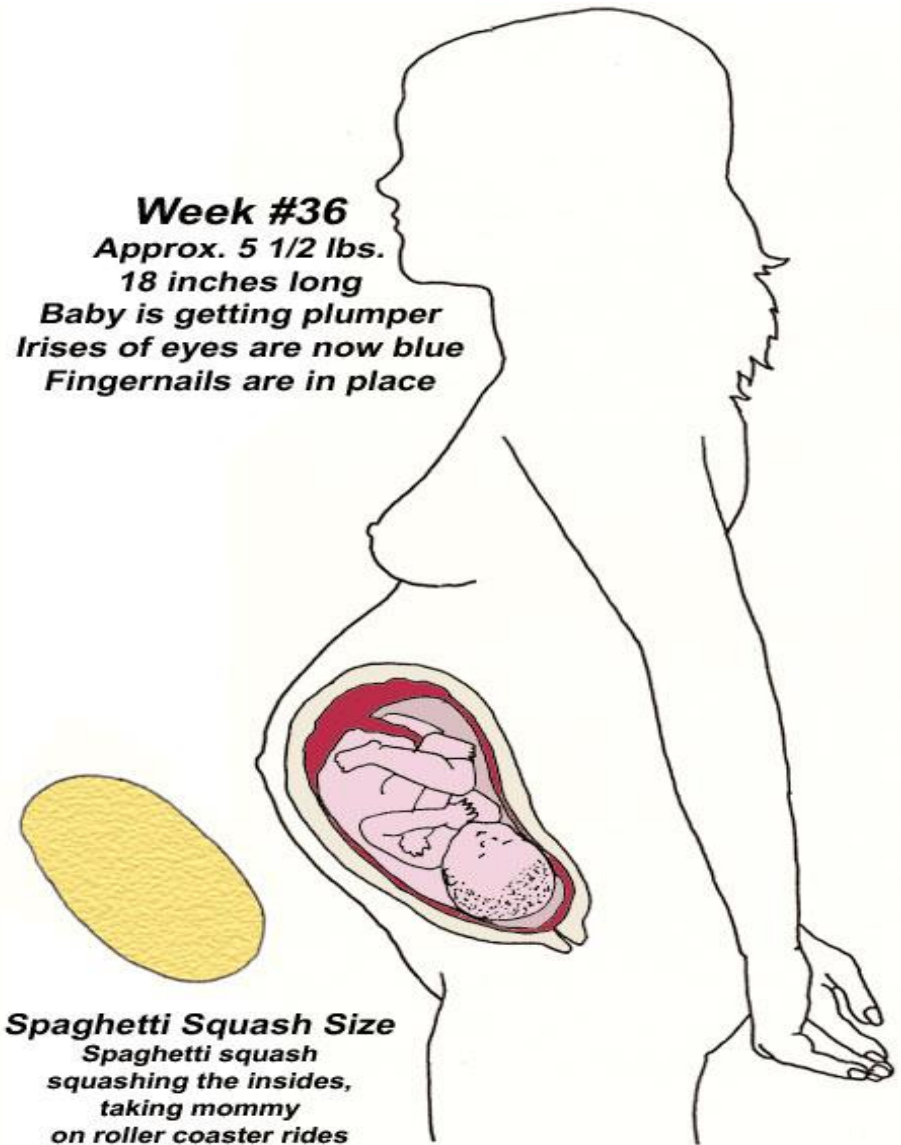
By 32 weeks of gestation , the uterus become as the size of a honeydew.

البطيخ



By 36 weeks of gestation , the uterus become as the size of a Spaghetti Squash.

القرع الاصفر



By 40 weeks of gestation , the uterus become as the size of a watermelon.

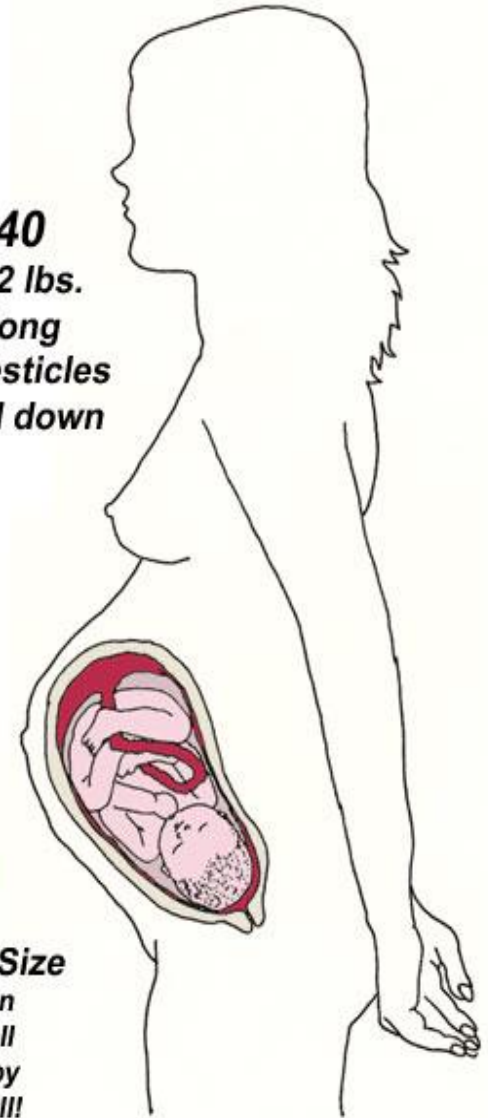
الراقي

Week #40
Approx. 7 1/2 lbs.
20 inches long
In a boy the testicles
have dropped down



Watermelon Size

A watermelon
large or small
Come on baby
surprise us all!



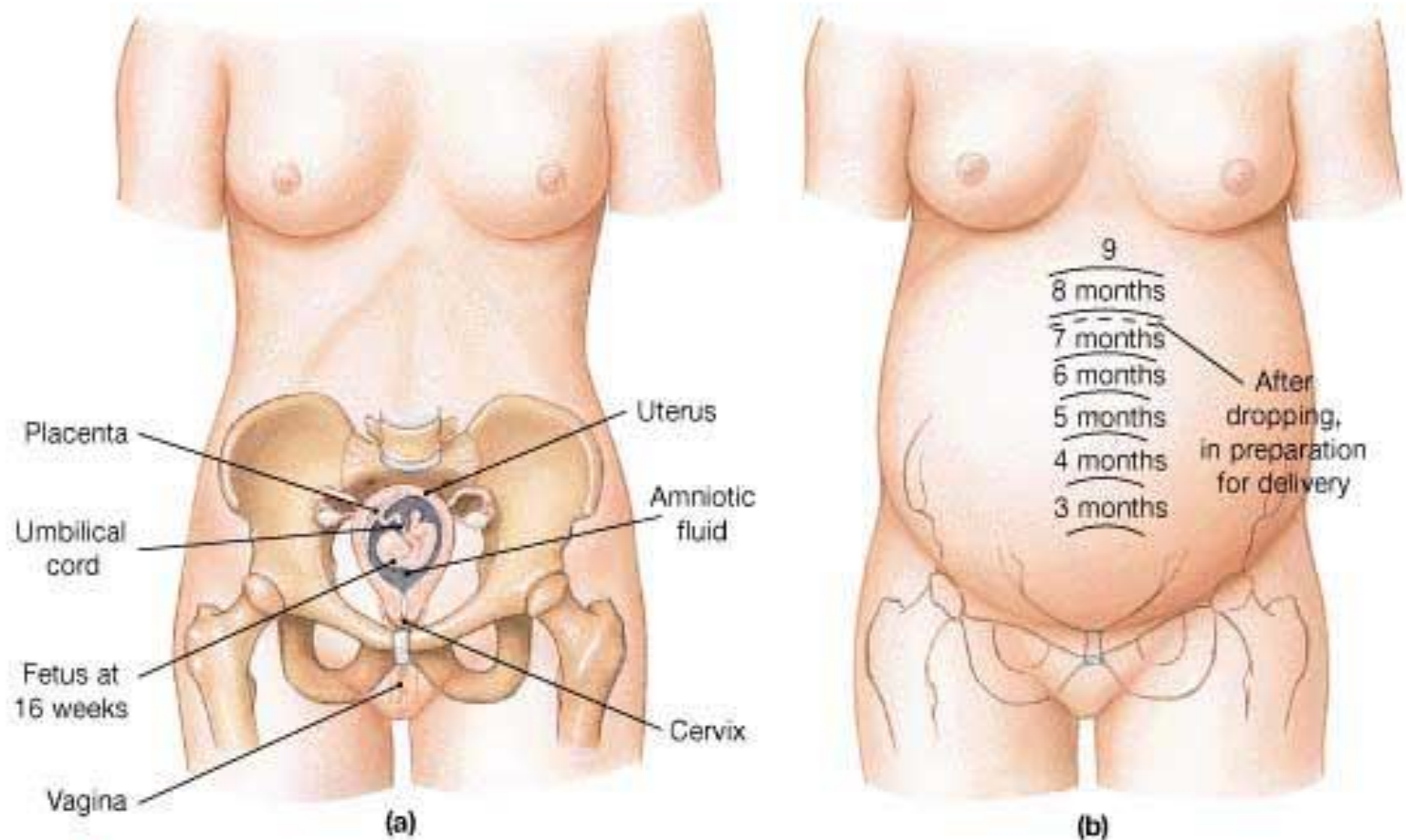
* Shape:

- At conception → an upside down pear.
- Second trimester → spherical or globular.
- Third trimester → larger, more ovoid, rises out of the pelvis into the abdominal cavity.

* position:

- At 12 and 14 weeks → palpated above symphysis pubis.
- At 22 and 24 weeks → level of umbilicus.
- At term 36 - 37 weeks → xiphoid process.
- At 38 – 40 weeks → fundal height drops as fetus descends and engage in the pelvis. "lightening".





• **FIGURE 29-9** Growth of the Uterus and Fetus. (a) Pregnancy at 16 weeks, showing the positions of the uterus, fetus, and placenta. (b) Pregnancy at 3 months to 9 months (full term), showing the position of the uterus within the abdomen.

Continued →

- Uterus rotates to the right as it elevates, but the extensive hypertrophy of the round ligaments keeps the uterus in the midline.
- Hegar sign → softening and compressibility of the lower uterine segment (uterine isthmus). **At 6 weeks.**

*Contractility:

- *Braxton Hicks Contractions* → (after 16 weeks) are irregular, painless, and occur intermittently throughout pregnancy.



■ Uteroplacental blood flow →

- * Maternal blood flow to the uterus increases rapidly as the uterus increase in size.
- * one sixth of the total maternal blood flow is within the uterine vascular system.

The rate of blood flow through the uterus averages **500ml/minute.**

* **Uterine soufflé:** blood sound in the uterine arteries, is synchronous with the maternal pulse.

* **Funic soufflé:** blood sound in the umbilical Vessels, is synchronous with the fetal heart rate.



■ Cervical changes →

- **Goodell sign:** softening of the cervical tip. (6 week).

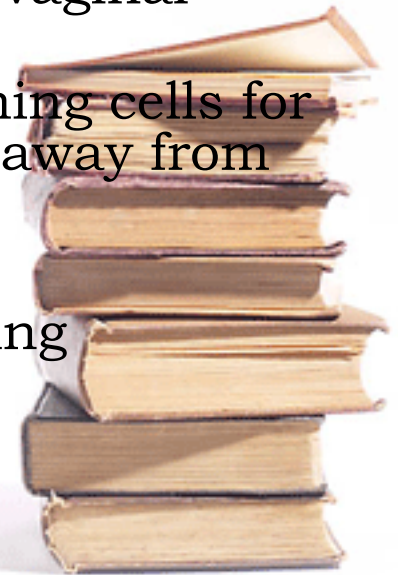
- **Velvety appearance.**

- **Friability:** increased and may cause slight bleeding after coitus with deep penetration or after vaginal examination.

- **Squamocolumnar junction** (site for obtaining cells for cervical cancer screening) become located away from the cervix.



“ **3%** of all cervical cancer are diagnosed during pregnancy”



■ Fetus – related changes →

- **Ballottement sign** : passive movement of the unengaged fetus. (16-18 weeks).

- **Quickening** : the first recognition of the fetal movement or *feeling life*.

↙
primipara
at 18 wks.

↘
multipara
at 16 wks.



Discomfort

Leg Cramps



Self-care education

- Eat calcium-rich foods, such as milk and milk products, fish and citrus fruits. your doctor may prescribe calcium supplements along with vitamin D.
- Don't wear high heeled shoes.
- Massage the affected calf or foot and walk around for sometime once the pain has reduced.

Discomfort

headache



Self-care education

- Warm or cold compresses: to soothe a headache in the sinus area, apply warm compresses to the front and sides of your face and around your nose, eyes and temples; while To relieve a tension headache, apply a cold compress to the back of your neck.

-Reduce stress. Avoid placing yourself in stressful situations. Relaxation exercises, which may consist of deep breathing or simply closing your eyes and imagining a peaceful scene, may also help.

-Rest and exercise. Resting in a dark, quiet room can soothe headaches.

Discomfort	Self-care education
<i>Continue.....</i>	<ul style="list-style-type: none">- Eat well-balanced meals: eating smaller, more frequent meals throughout the day can help keep your blood sugar from getting too low. - Get a massage. Massaging your temples, shoulders and neck can help reduce the pain of headaches - Avoid headache triggers: different kinds of food or stresses can trigger headaches. Keep a diary, and review the kinds of foods and activities that tend to trigger tension or migraine headaches. Triggers of migraine headaches include certain foods, such as chocolate, aged cheese, peanuts and preserved meats.

Weight changes during pregnancy

→ Continuing weight increase in pregnancy is considered to be a favorable indicator of maternal adaptation and fetal growth

- 4.0 kg in first 20 weeks.
- 8.5 kg in second 20 weeks.
- 12.5 kg approximate the total weight gain.



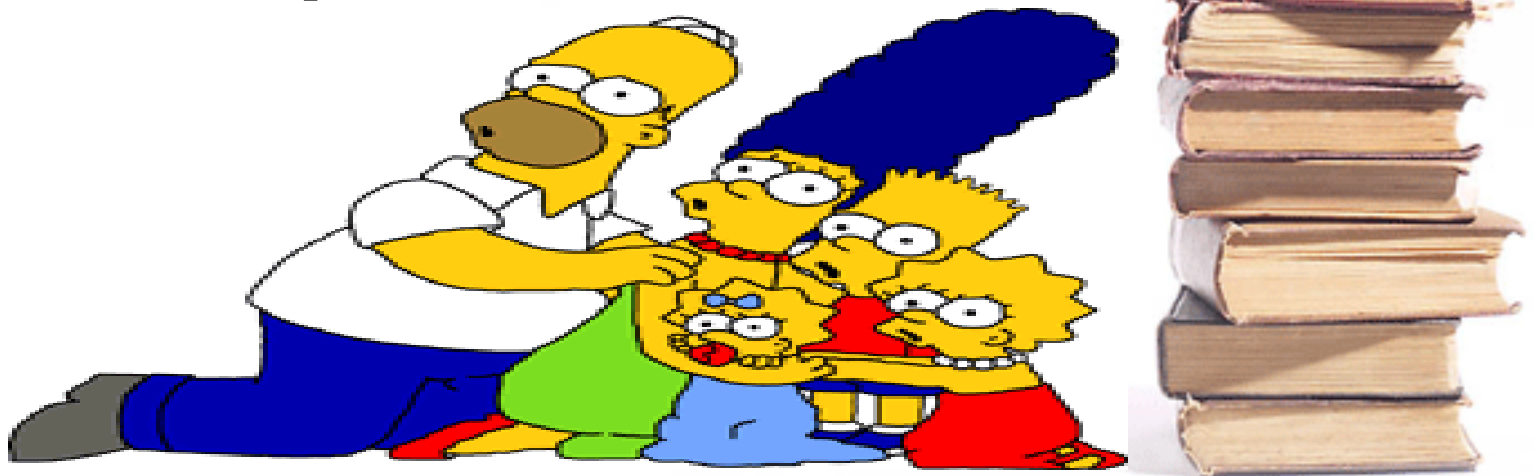
Disposition of weight gain in pregnancy

Breasts	0.4kg
Fat	3.5kg
Placenta	0.6kg
Fetus	3.4kg
Amniotic fluid	0.6kg
Uterus	1.0kg
Blood volume	1.5kg
Extracellular fluid	1.5kg
Total	12.5kg



Adaptation to Pregnancy

“ Pregnancy affects all family members , and each family member must adapt to the pregnancy and interpret its meaning in light of his or her needs within a cultural environment influenced by societal trends.....so the NURSE must be prepared to support single parent families, reconstituted families , dual-career families and alternative families as well as traditional families in the childbirth experience. “



Maternal Adaptation →

Pregnancy is a maturational mile-stones that can be stressful but also re-warding as women prepare her self to a new level of caring and responsibility.

→ With perception of fetal movement in the second trimester ; women turn her attention inward to her pregnancy and to her relationship with her mother and other women who are or are not pregnant..



a. Accepting the pregnancy:

it is a cognitive restructuring process. (Mercer 1995).

- some women may feel **DISMAYED** especially if the pregnancy is not intended, BUT non-acceptance of pregnancy should not equated with the rejection of child; because this may dislike being pregnant but feel love for the child to be born.



- Other women's may feel **HAPPY** and **PLEASED** about their pregnancy ; view it as biological fulfillment and a part of their life plan so they have high self-esteem and confidence about her , her child and family outcomes.



*** Self concept :**

Women's move gradually from being self-contained and independent to being committed to a lifelong concern for another human being



*** Emotional Liability:**

- it is a rapid unpredictable mood changes as swings in emotions, increased sensitivity to others , increased irritability, or explosions of tears , anger, feeling of great joy and cheerfulness .
- It may be related to hormonal influences , finances and lifestyle changes, or changes in physical contours and body functions.



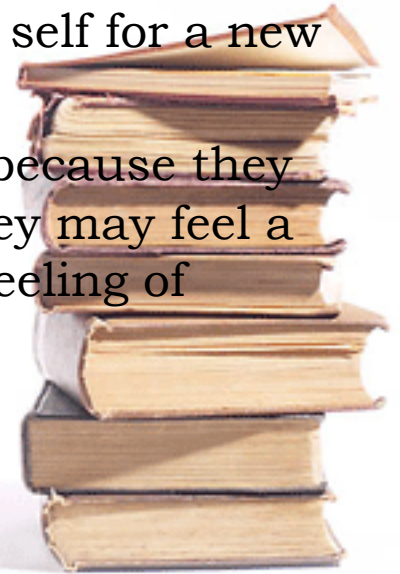
* Body image :

- As obvious changes of abdomen as bulging , thickening of waist and enlargement of breasts. It is usually occurred in the second trimester.
- It is also influenced by values and personality traits.

* Ambivalence :

- is a conflicting feelings during pregnancy.
- it is a normal response as women prepare her self for a new role.

EXAMPLE: some women may feel great pleasure because they are fulfilling their long life dream , whereas they may feel a great regret that life now is toward ending or feeling of responsibility of unborn child careetc.



* guilty feelings :

- It occurs when a new baby born with a defect ; his mother may look back at the times she did not want this pregnancy or ambivalence feelings. So NURSE role here is to assure the mother that her feelings were not responsible for the problem.

b. Identify the mother role:

- How dose the pregnant women define the mother role , motherhood; what is her perception regarding this point.

* It depends on :

1. The time when she is being mothered as a child.
2. Perception of what constitute the feminine role.
3. Practice role of mothers she know.
4. High motivation to become a parent.



c. Reordering personal relationship:

“pregnant women relationship with her mother”; in which its important component is

- Mothers availability(past and present times).
- Her reactions to her daughters pregnancy.

→ If the mother is not pleased about her daughters pregnancy , daughter will have doubt about her self-worth and concerns about how others will accept her child.

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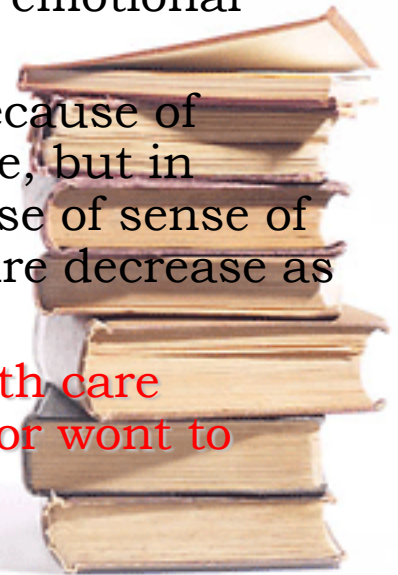
“They sort of grow on you.”

- But if the mother is supportive ; daughter will discuss her pregnancy, labor, feelings of joy or ambivalence. This will increase daughters self-confidence and sense of autonomy.
- Respect her daughters autonomy.
 - Willingness to reminisce about her early childhood or mothers childbirth experience ; this will make her feels that she is loved and wanted.



“ Pregnant women relationship with her husband”

- Husband is the most important person to support and concern pregnancy experience because it has several positive consequences as.....
- Within this relationship; women express two major needs : feeling loved and valued and having child accepted by her partner.
- Also during pregnancy couples grow close to each other, and assumes new roles and discover aspects of one another.
- Sexual relationship is affected by physical and emotional factors occurring during pregnancy.
- As : in first trimester sexual desire decrease because of breast tenderness, nausea, vomiting, or fatigue, but in second trimester sexual desire increase because of sense of wellbeing ; lastly at third trimester sexual desire decrease as exaggerated discomforts occurs.
- * **Couples may not express their concerns to health care provider because of feeling of embarrassment or wont to appear foolish.**



NURSE can facilitate communication between partners by talking to expectant couples about possible changes in feelings and behaviors they may experience as pregnancy progresses.

d. Establishing relationship with fetus:

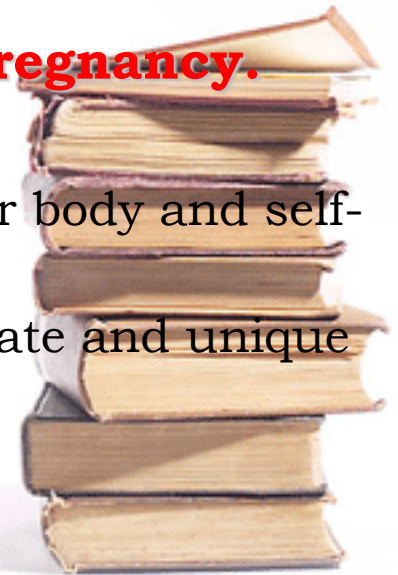
“attachment” is feeling of being tied by affection or love. It occurs during prenatal period.

*** Three phases:**

1. Women accepts the biological fact of pregnancy.

“ I’ am pregnant “

- women incorporates the idea of a child in to her body and self-image.
- Child is viewed as a part of herself , not a separate and unique person.



2. Women accepts the growing fetus as distinct from herself.

“ am going to have a baby”

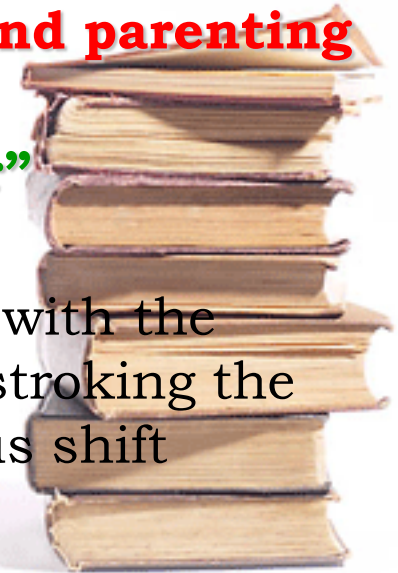
- This phase usually accomplished by the fifth month of pregnancy.
- Beginning of mother-child relationship involves caring and responsibility.
- Ultrasound and quickening may confirm the reality of fetus.



3. Women prepare realistically for birth and parenting of the child.

“ am going to be a mother”

- * Family members may interact a great deal with the unborn child by talking to the fetus and stroking the mother abdomen especially when the fetus shift position.



e. Preparing for childbirth:

by reading books , viewing films, attending prenatal classes or talking to another women





- pregnant women may experience feeling of ANXIETY concerning about a safe passage for herself and her baby during childbirth process, FEAR from pain of childbirth or what behaviors is appropriate during childbirth process and whether caregiver will accept them and their actions.



Now, relax...



Prenatal care



Definitions

- It is a planned examination and observation for the woman from conception till the birth .

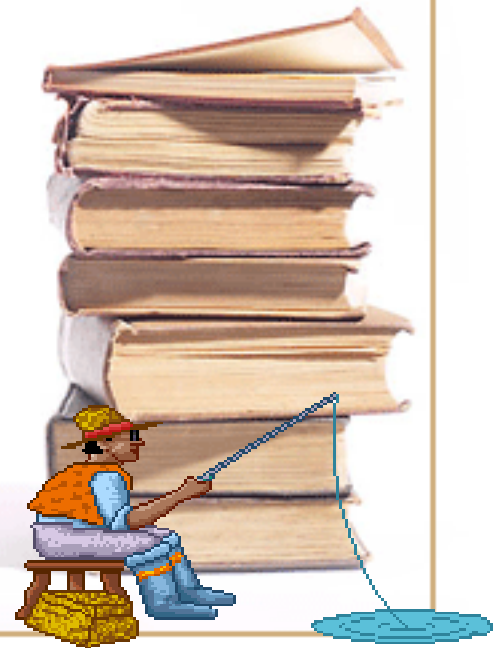
Or

- Antenatal care refers to the care that is given to an expected mother from time of conception is confirmed until the beginning of labor



Goals of Antenatal care

- The purposes of prenatal care are to
 - Establish a baseline of present health
 - Determine gestational age
 - Monitor fetal development
 - Identify the woman at risk for complications
 - Minimize the risk of possible complications
 - Provide time for education, which will relieve fear and anxiety



Principles of Antenatal care

- **Do assess the following**
- Risk factors
- Detailed history
- Self medication
- Diet
- Exercise
- Antenatal visits
- Pathology tests
- Common discomforts



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Why prenatal care is important

- Can decrease risk of pre-term babies or abortions
- Can decrease mortality rates (ectopic pregnancy, hypertension, embolism, infection, hemorrhage are the main causes of death during pregnancy)





The first prenatal visit

- Establish a baseline data.
- Explain why specific data are related to pregnancy
- Discuss weight changes and physical changes during pregnancy
- Urine analysis
- Establish communication in a private, quiet setting
- Confirm pregnancy: assess for signs of pregnancy



Ante-natal visits

- Visits are usually monthly to 28 weeks
- Every Two weeks from 29 to 36 weeks
- Weekly from 36 to delivery.
- Each visit should involved checks on maternal and fetal well-being.





Ante natal visits

- **In each visit you do the following**
 - Check BP
 - Weigh the woman
 - Check urine for (protein, acetone, and glucose)
 - Height of the uterus
 - Abdomen is palpated using leopold's maneuvers



Ante natal visits

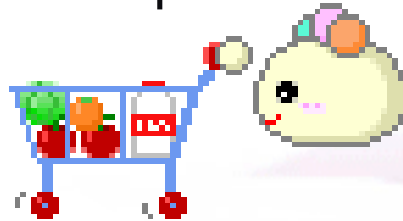
In each visit you do the following

- Assess fetal heart rate**
- Assess for tenderness over the area of the kidneys in the calf of the woman's legs**
- Ask the woman about discomforts that are disturbing her**
- Ask her if she is taking the vitamins and iron supplements**
- Later ask her about preparations for the baby and method of feeding**
- Reassure the woman's capacity of being a good mother**
- Develop trust relationship**



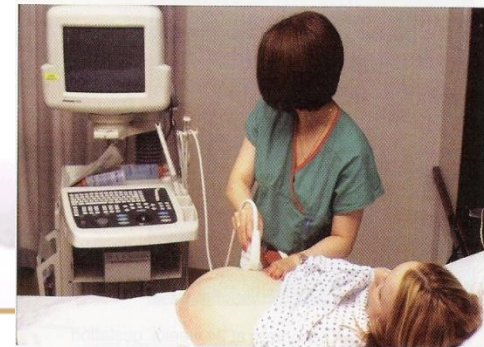
Self medication

- Vitamin A > 2500 I.U. daily (> 2 capsules) may cause birth defects;
- Advise the woman to minimize chemical and infection exposure in general - which includes occupational exposure.



Antenatal documentation

- Weight gain (12-15 kg in total, with 3kgs in first 20 weeks)
- BP (a diastolic pressure >90, from first visit is significant)
- Urinalysis (watch for protein, glucose, and UTIs)
- Fetal movements
- Uterine size in accordance with dates and ultrasound
- Fetal lie, presentation, and engagement, especially after 36 we



THANK YOU



FOR

EVERYTHING