Fetal Heart Rate

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Definition: Fetal heart rate (FHR) monitoring is a widely used method to assess the status of the fetus during pregnancy, labor, and birth.

Objective or purpose:

used to check the rate and rhythm of the heartbeats. It assesses for any increases or decreases in the baby's heartbeat

Equipment: There are three different commonly used devices to monitor the fetal heart rate. These are:

stethoscope

1. Stethoscope 2. Fetoscope (Pinard) 3. Doppler ultrasound

4. Cardiotocograph (CTG) machine (electronic fetal monitor externally or internally)

1

2

3

4

Procedure description:

1. Explain procedure & ask woman if has any questions or concerns.
2. Obtain verbal women's consent.
3. Hand washing and wearing gloves.
4. Provide privacy for women
5. Palpate the woman's abdomen accurately to determine the fetal lie and locate the fetal shoulder (fetal upper back) to ascertain the correct location for placement of the stethoscope (By use Leopold's maneuver)
6. Apply ultrasonic gel to device if using Doppler ultrasound. If using fetoscope, firm pressure may be needed.
7. Count maternal radial pulse while listening to FHR to differentiate it from fetal rate.
8. Palpate abdomen for presence or absence of contractions to count FHR.
9. Count FHR for 30 to 60 seconds after a uterine contraction.

.10. When distinct discrepancies in FHR are noted during listening periods, auscultate for longer period during, after, and between contractions to identify significant changes that may indicate need for another mode of FHR monitoring.

11. Determine the FHR every 30 minutes during beginning labor, every 15 minutes during active labor, and every 5 minutes during the second stage of labor

12. The normal heart rate for a fetus is approximately 120 to 160 beats per minute (bpm).

13. If a slower heart rate is detected, oxygen may be administered by mask and the patient should be instructed to take slow deep breaths.

14. Document FHR in partograph sheet

Calculate Expected Date of Delivery (EDD)

- ***Introduction***

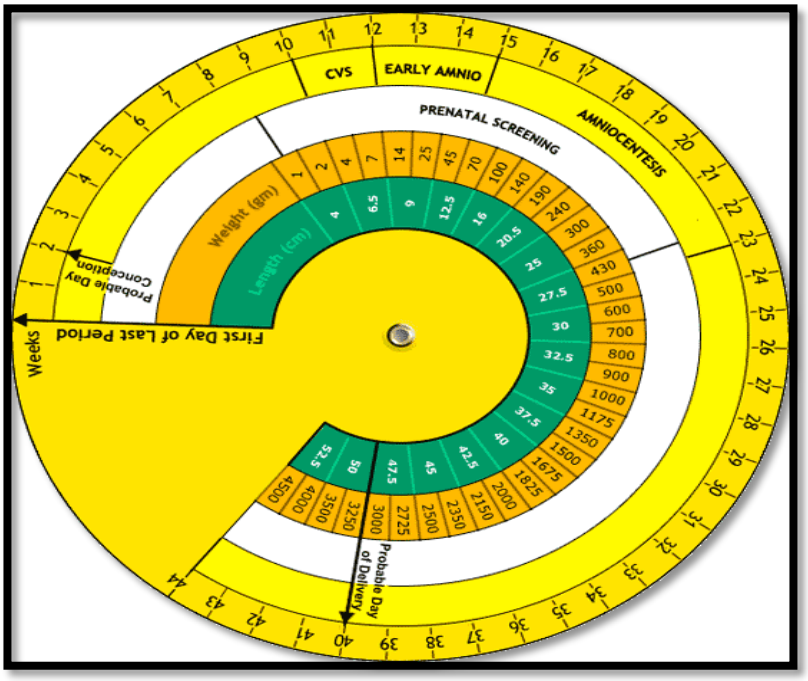
  Expected date of delivery is the most important factors in early pregnancy assessment

- ***Purpose***

✓ For the mother is to estimation expected date of delivery is important to know when to birth of her baby.
✓ For health care providers to be able:
❖ Timing appropriate prenatal care
❖ Scheduling and interpretation tests
❖ Determining appropriate fetal growth
✓ Intervention purpose :
❖ Prevention of preterm birth
❖ Prevention postdate
✓ For research purpose

- ***Equipment with figures***

  1:EDD calculator 2: pen and paper



- ***Implementation or intervention***

  Nagele's Rule: is a standard way of calculating the EDD for a Pregnant whenassuming a gestational age of 280 days at childbirth which is equal 40 weeks.

- Most common method of determining the EDD
- Begin with the **first day** of the last menstrual period (LMP)
- Subtract three months and add seven days and one year (in case of April, may,June, July, August, September, October, November and December).
- OR add nine months and add seven days and still same year (in case of January,February and March)
- ***Example:***

15-04-2016 **Date LMP**

3 - **Subtract 3 Months**

15-1-2017

1 Add 7 Days & 1 year + 7

EDD **22-1-2017**

15-03-2016 **Date LMP**

+9 **Add 9 Months**

15-12-2016

Add 7 Days + 7

EDD **22-12-2016**

- ***Documentation***

  Antenatal record (LMP , EDD and GA)

L4 = Breast Examination For Early Detection Of Any Abnormality

1-Clinical breast Examination

Definition:

Clinical-breast examination (CBE) is the inspection and palpation of the breast by the health care provider(nurse or physician)

Objective or purpose:

It can be used as a screening method for women without any signs and symptoms of breast cancer as a component of triple assessment in women with signs and symptoms when diagnosing breast cancer.

Equipment: Only the hand

Procedure description:

1. Steps of Clinical Breast Examination (CBE) CBE should be done in a covered room with good light.
2. A female chaperon should be there if the examiner is a male.
3. Before starting the examination, it is necessary to explain the procedure to the client.

Inspection: Breasts should be inspected in each of the following positions:

1. Arms relaxed at her sides
2. Hands placed on the hips and pushing inward (contraction of the Pectoralis Major muscle)
3. Arms raised over her head the breasts should be inspected from the front and from each side. Pay particular attention to:

- Breast size, contour, shape, symmetry
- Skin changes such as erythema, dimpling, tethering or puckering, Peau d' orange, eczematous skin changes, visible lumps.
- Nipple – position, inversion, retraction, erythema, eczema, nodules

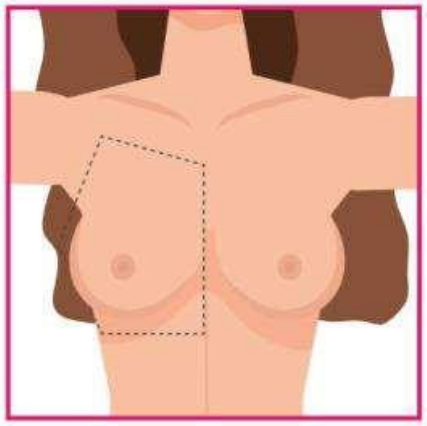
Palpation:

The ability to identify breast lumps by palpation is influenced by the characteristics of the tumour, the surrounding breast tissue, the position of the lesion in the breast, proper positioning of the client and thoroughness of the search, the area covered and use of a consistent pattern of search. During the process of palpation, the client should feel comfortable and need to ask about it.

<u>Positioning the woman for palpation</u>

For the palpation of the breasts, the woman should be placed in the supine position, placing both arms under her head, which will facilitate palpation of the outer quadrant of a large breast. Use the examiner's other hand to stabilize breast in position. Perimeter of the breast should be noted during clinical breast examination. Anatomically, breast tissue extends superiorly from the second rib or clavicle,

medially to the lateral border of the sternum, inferiorly to the sixth rib and laterally to the Latissimus Dorsi muscle.



Palpation technique

The examiner should use the distal phalanges of the middle three fingers to palpate the breast. The entire breast should be palpated using overlapping dime–sized circles. Use three different levels of pressure (superficial, intermediate and deep) at each point to palpate different layers of the breast.

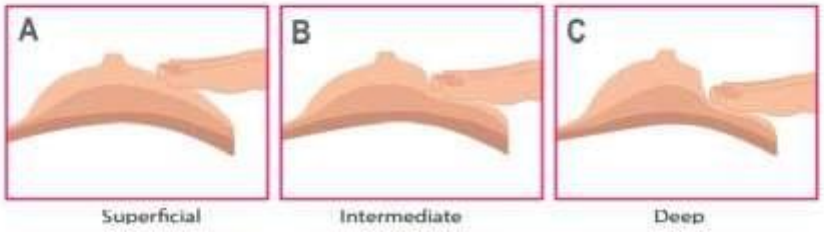


Figure III: Palpation of the breasts in superficial, intermediate and deep pressure levels

<u>There are three typical patterns used to palpate the breast:</u>

1. Circular technique
2. Radial spoke technique (wedges)
3. Vertical strip technique (lines) Whichever pattern is used for palpation of the breasts, it is important to make sure that the entire perimeter of the breasts are being covered.

Figure IV: Look for nipple discharge.

The woman should be asked to squeeze areolar region of the nipple to see whether there is any nipple discharge. (Nipple discharge that occurs only with nipple or breast stimulation is a normal physiological function.)

Palpation of Regional Lymph Nodes

The regional lymph nodes (Supra-clavicular, Infra-clavicular and axillary nodes) should be palpated while woman is in the sitting position

2-Breast Self-Examination

All women after age 20 years should perform BSE at about the same time each month.

- The best time for BSE is **1 week after the beginning of the menstrual period**.
- If she is not menstruating, the woman may choose any day that is easy for her to remember, such as the first day of each month.

How to Perform Breast Self-Examination : Examine your breasts three ways: before a mirror, lying down, and in the shower.

1- In Front of a Mirror

Visually inspect your breasts with your arms at your sides. Next, raise your arms high overhead.

Look for any changes in the contour, any swelling, or dimpling of the skin, or changes in the nipples. Next, rest your palms on your hips and press firmly to flex your chest muscles. Left and right breasts will not exactly match—few women's breasts do, so look for any dimpling, puckering, or changes, particularly on one side.

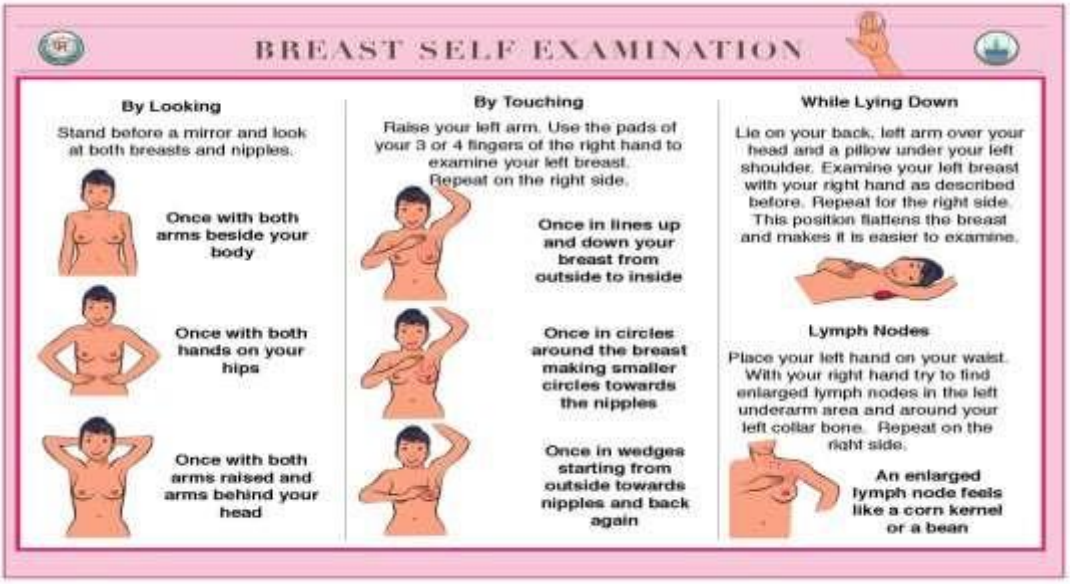
2-In the Shower

Using the pads of your fingers, move around your entire breast in a circular pattern moving from the outside to the center, checking the entire breast and armpit area. Check both breasts each month feeling for any lump, thickening, or hardened knot. Notice any changes and get lumps evaluated by your healthcare provider

3-Lying Down

When lying down, the breast tissue spreads out evenly along the chest wall. Place a pillow under your right shoulder and your right arm behind your head. Using your left

hand, move the pads of your fingers around your right breast gently in small circular motions covering the entire breast area and armpit.
Use light, medium, and firm pressure. Squeeze the nipple; check for discharge and lumps. Repeat these steps for your left breast.



3-Mammogram

Mammography uses very-low-dose x-rays to visualize the breast tissue.

- The **breast** is exposed to a small dose of iodizing radiation that **produces** an image of the breast tissue.
- Scheduling the mammogram **after a menstrual period** reduces the discomfort, because the **breasts** are less tender at that time.
- Recommendations for women 40 and older should have mammograms **every 1 or 2 years**.
- Younger than 40 and have risk factors for brea**st cancer**

Why Do I Need a Mammogram? show

1. A breast lump **before** it can be felt.
2. Tiny clusters of calcium called **micro calcifications**.
3. Lumps or specks can be **caused** by cancer, fatty cells, or other conditions like cysts.

What happens if my mammogram results are abnormal?

1. Although lumps are usually non-cancerous, the only way to be certain is to **perform** additional **tests**, such as an ultrasound or MRI.
2. If **tests show** that the mass is solid, **recommend** a biopsy

What Can I Do To Reduce My Risk of Breast Cancer?

1. Maintain a healthy weight
2. Stay physically active
3. Eat fruits and vegetables
4. Do not smoke
5. Limit alcohol consumption

L7= Anthropometric Measurement

1. Chest Circumference

Definition: Chest circumference is measured by placing a tape measure around the nipple line below the axilla and on the neonate's nipple-line

Purpose : To ensure correct and uniform measurement of newborn circumferences

Equipment: A plastic tape and accurate flexible non-stretchable measuring tape

Procedure description:

1. Wash your hands and explain the procedure to the parent.
2. Fully remove the baby's clothes to expose the mid & lower chest.
3. Feel for the xiphisternum where the ribs meet the sternum and mark the base of the xiphisternum.
4. Pass the tape around the lower chest so that the mark is at the upper border of the tape.
5. Record three measurements of chest circumference

2. Abdomen Circumference

Definition: Abdominal circumference Measuring abdominal girth at the level of the umbilicus.

Purpose: Important indicators for abdomen growth

Equipment: A plastic tape and accurate flexible non-stretchable measuring tape

Procedure description:

1. Wash hands and explain the procedure to the parent.
2. Pass the tape around the baby's bare skin at the level of the umbilicus.
3. Place the neonate in a supine and measure his girth just above the umbilicus. Ensure the nappy is not obstructing or constricting the area. If so, it will be necessary to adjust or remove the nappy.
4. If the umbilicus protrudes too much and it is not possible to measure at this level, then the reading should be taken immediately above the umbilicus.
5. Pass the tape around the abdomen at the position described above. Take the reading at the end of expiration (when the abdomen is relaxed).
6. Make three measurements of abdomen circumference.
7. Record all three measurements and the mean (average) by adding the values together and dividing by three.
8. Record measurements

3. Measuring Newborn's Head to Heel length

Definition: Measured in the recumbent position, is the correct linear measurement for newborn. The average newborn is about 50 cm or 19 3/4 in long.

Purpose:

1. Monitor the growth of newborn
2. Detect growth abnormalities
3. Monitor nutritional status
4. Track the effects of medical or nutritional intervention

Equipment:

1. Length is measured with a suitable measuring board
2. Use a calibrated length board with a fixed headpiece and movable foot piece which is perpendicular to the surface of the table
3. Measure newborn with wearing light underclothing or diaper 4. tape

Procedure description:

1. Length measurements for infants should be obtained while the child is dressed in light underclothing or a diaper. The child's shoes must be removed. Hair ornaments should be removed from the top of the head.
2. Measured in the recumbent position.
3. Spread a blanket over a table or countertop to protect baby from the cold surface.
4. Lay baby on the blanket-covered surface with the top of the head (crown) in the contact with the headboard.
5. Gently press down on baby's knees to straighten the legs so can get an accurate measurement.
6. Ask assistant to measure the length from the wall down to the baby's heels. Parents may participate in the length measurement between the two trained measures to provide reassurance and security to the infant.
7. Record the resulting number in inches or centimeters onto your baby's growth chart

4. Head Circumference

Definition: Head circumference. The distance around the baby's head.

Purpose

Important indicators for brain growth

Equipment: A plastic tape and accurate flexible non-stretchable measuring tape

Procedure description:

1. Wash hands and explain the procedure to the parent.
2. The measures should agree within 0.2 cm or 1/4 inch
3. Slide the tape over the most prominent part on the back of the head (occiput) and just above the eyebrows (supraorbital ridges). This can be translated to mean the largest circumference of the head. If head swelling or molding after delivery may skew initial head circumference measurement.
4. Document the result in baby chart.

5. Immediate Umbilical Cord care in newborn

Definitions: the umbilical cord supplies nutrients and oxygen to developing baby. After birth, the umbilical cord is no longer needed — so it's clamped and snipped. This leaves behind a short stump. Baby's umbilical cord stump will change from bluish white to black as it dries out and eventually falls off — usually within three weeks after birth. In the meantime, treat the area gently.

Purpose

1. To keep the umbilical cord stump and surrounding skin clean and dry.
2. To prevent infection.
3. To help the umbilical cord stump to fall off
4. To heal more quickly.

Equipment:

1. An antibacterial solution.
2. Sterile surgical gloves, if available.
3. A clean cotton pad or (preferably) sterile gauze.
4. A sterile clamp or strip of woven umbilical tape.
5. A sterile sharp knife or pair of scissors

Procedure description:

1. Change gloves
2. Clamp and cut the cord
3. Put ties tightly (clip) around the cord at 2cm and 5cm from the baby's abdomen.
4. Cut between the ties with a sterile Scissor.
5. Observe for oozing of blood from the stamp.
6. Record measurements

Care of baby's umbilical cord

1. Washing hands with clean water and soap before and after care,
2. Keep the stump clean. Parents were once instructed to swab the stump with rubbing alcohol after every diaper change. If the stump becomes dirty or sticky, clean it with plain water — then dry it by holding a clean, absorbent cloth around the stump or fanning it with a piece of paper.
3. Keep the stump dry. Expose the stump to air to help dry out the base. Keep the front of your baby's diaper folded down to avoid covering the stump. In warm weather, dress your baby in a diaper and T-shirt to improve air circulation
4. Stick with sponge baths. Sponge baths might be most practical during the healing process. When the stump falls off, you can bath your baby in a baby tub or sink.
5. Let the stump fall off on it's own. Resist the temptation to pull off the stump yourself.

6. Anthropometric Measurement for Newborn

Definition: Anthropometry measurements serve as a baseline and show whether the neonate s size is within normal ranges, also reveal the presence of a significant problem or anomaly especially if values stray far from the mean it includes weight, head and chest circumference and head to heel length.

Objective or purpose:

1. Monitoring neonatal health.
2. To detect such disorders as small size for gestational age, hydrocephalus and intracranial bleeding
3. Weigh a newborn and record weight.
4. Measure and record length or height.
5. The neonatal' s age, sex, and measurements of weight and length or height will be used to calculate the following growth indicators, length/height-for-age ,weight-for-age , weight-for-length/height , BMI (body mass index)-for-age

Equipment:

1. Crib or examination table with firm surface
2. Scale with tray
3. Scale paper
4. Tape measure
5. Length board
6. Gloves if the neonate hasn't been bathed yet
7. Disposal paper tape measure

Procedure description:

1. Baby's Birth weight.

- Confirm the newborn identity.
- Take measurement before feeding.
- Explain the procedure to the parent.
- Wash hands and put on gloves.
- Position the neonate in supine position in the crib or examination table.
- Remove all clothing but not diaper.
- Place a clean cloth/ paper in the weighing pan.
- Adjust the scale to zero with the cloth/paper in the pan.
- Place the naked baby gently on the cloth/paper.
- Wait for the baby to settle and the weight to stabilize.
- Read the weight in the scale.
- Record the weight in the baby 's record and plot it on the weight chart.
- clean the scale tray to prevent cross contamination among neonates

Apgar score

Is determined by evaluating the newborn baby on five simple criteria on a scale from zero to two, then summing up the five values thus obtained.

- The resulting Apgar score ranges from zero to 10.
- The five criteria are summarized using words (Color, Pulse, Reflex, Muscle tone, and Respiration).

APGAR
Test Scoring

	Score 0	Score 1	Score 2
Appearance	 Blue all over	 Blue only at extremities	 No blue coloration
Pulse	No pulse	<100 beats/min.	>100 beats/min.
Grimace	 No response to stimulation	 Grimace or feeble cry when stimulated	 Sneezing, coughing, or pulling away when stimulated
Activity	 No movement	 Some movement	 Active movement
Respiration	No breathing	Weak, slow, or irregular breathing	Strong cry

L8= Laboratory Test During Pregnancy

1- Pregnancy test by urine

Equipments:

- Gloves
- Cup for collection of urine
- Pregnancy strip

Procedure

1. Ask the patient to put the urine in the cup (The first morning urine specimen because it usually contains the highest concentration of Human Chorionic Gonadotrophin hormone (HCG)
2. Immersed the strip of pregnancy test in the urine for 30 second
3. Put the strip on the un absorbable surface
4. Wait for 3-5 min.
5. If you see one red line appears, its means negative result (No pregnancy)
6. If you see two red lines appear, its means positive result (pregnant).

2- Pregnancy test with blood : **Equipments**

- Gloves , 2cc syringe, Tourniquet, Cotton ball with antiseptic, Test tube, Centrifuge, Pregnancy stripe

Procedure

1. Wear the gloves
2. Select a visible vein
3. Clear the area with antiseptic solution
4. Collect the blood specimen (2cc)
5. Put the specimen in a test tube in a centrifuge (3000/min)
6. Withdraw the serum from the tube
7. Insert the strip into the serum
8. Wait for one minute until the red line appeared.
9. If you see one red line appears, its means negative result (No pregnancy).
10. If you see two red lines appear, its means positive result (pregnant).

3- Blood group and RH : **Equipment**

1. Lancet
2. Cotton ball with antiseptic
3. Blood stage
4. Drops of [anti A, anti B, anti D]

Procedure

1. Clean the tip of the thumb with antiseptic
2. Pinch the tip of the finger
3. Press, release the blood, then put the blood on 3 spots on the stage
4. Use the anti A on the first spot & mix it, put one drop of anti B on the second spot & mix it, put one drop of anti D on the third spot & mix it.

Wait for 2-5 min for agglutination

1. Read the result:
2. If the first agglutinate, and others not, its mean that the blood group is "A"
3. If the second agglutinate and others not, its mean that the blood group is "B"
4. If the both are agglutinate, its mean that the blood group is AB
5. If both not agglutinate its mean" O"
6. If the third not agglutinate, its mean "Rh-"
7. If the third agglutinate, its mean " Rh+".

4- General urine examination

1. **Equipments**
2. Urine cup
3. Test tube
4. Urine strip
5. Pasteur pipette

Procedure

1. Collect the urine by urine cup
2. Put the urine in the test tube, then put in the centrifuge for 10 min
3. Dip the urine strip in the test tube
4. Read the strip and compare with the stander of the container.

5- Measuring the Hb% : **Equipment**

1. Cotton ball with antiseptic
2. Sahli measures tube
3. HCL acid diluted
4. Lancet and Pipette of Sahli

Procedure

Take a sample of blood (2 ml)

Put the blood in a sally method calibrated tube

Add (HCl acid) until the blood color becomes

equal to the stander color

1. Read the result in comparison with the stander then write down in the paper
2. Read the calibrated number.

6- TORCH screen

The TORCH screen is a group of blood tests that check for several different infections in a pregnant woman. TORCH stands for toxoplasmosis, other pathogens, (including HIV, syphilis, and measles), rubella, cytomegalovirus, Herpes simplex.

Purpose

TORCH screen is typically performed when a woman shows symptoms of any of these diseases during pregnancy. **These particular diseases can cross the placenta and cause birth defects in the newborn**, including:

- Cataracts , Deafness, Intellectual disability, Heart problems, Seizures, Jaundice, Low platelet levels.

These infections such as toxoplasmosis, cytomegalovirus, herpes simplex, syphilis and others

These infections may lead to birth defects, growth delay, and brain and nervous system problems in the baby.

Equipments

1. Lancet
2. Cotton ball with antiseptic
3. Laboratory diagnostic TORCH kit.

Procedure

1. Take a sample of blood (2ml) by making a pinch in the figure by lancet
2. Put the blood in a TORCH kit
3. Wait for one minute
4. Read the kit
5. If you see one red line, its mean negative result (No TORCH infection)
6. If you see two red lines, its mean positive result (presence of TORCH).