RAMA UNIVERSITY

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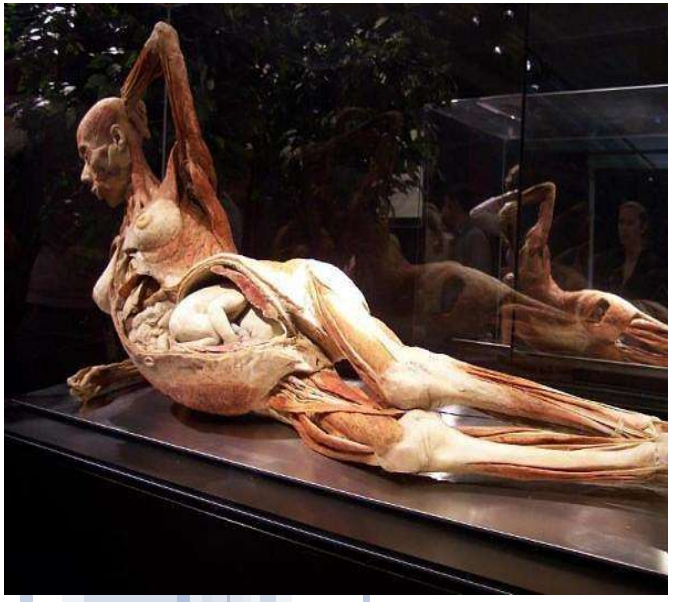
FACULTY OF NURSING



NORMAL LABOUR

Mrs.Jasmi Manu
Asso.professor cum
head of the department
(OBS/GYN)
Faculty of Nursing ,Rama
University, kanpur

DEFINITION

BIRTH: " The Process of being born."

LABOUR:

"Labour is series of events that takes place in the genital organs in an effort to expel the viable product of conception out of the womb through the vagina into the outer world."

- *D.C.Dutta*

"The Process by which the fetus, placenta and membranes are expelled from the maternal uterus."

- *Gloria Leifer*

"The process of moving the fetus, placenta and membranes out of the uterus and through the birth canal."

- *Lowdermilk & Perry*

"Labour or parturition is the process whereby the products of conception are expelled from the uterine

DEFINITION…

DELIVERY:

"Delivery is the expulsion or extraction of a viable fetus out of the womb."

- *D.C.Dutta*

NORMAL LABOUR:

Labour is normal if it fulfils the following criteria-

1) **Spontaneous in onset & at term**
2) **With vertex presentation**
3) **Without undue prolongation**
4) **Natural termination with minimal aids.**
5) **Without having any complication affecting the health of the mother/Baby.**

- Parturition:-

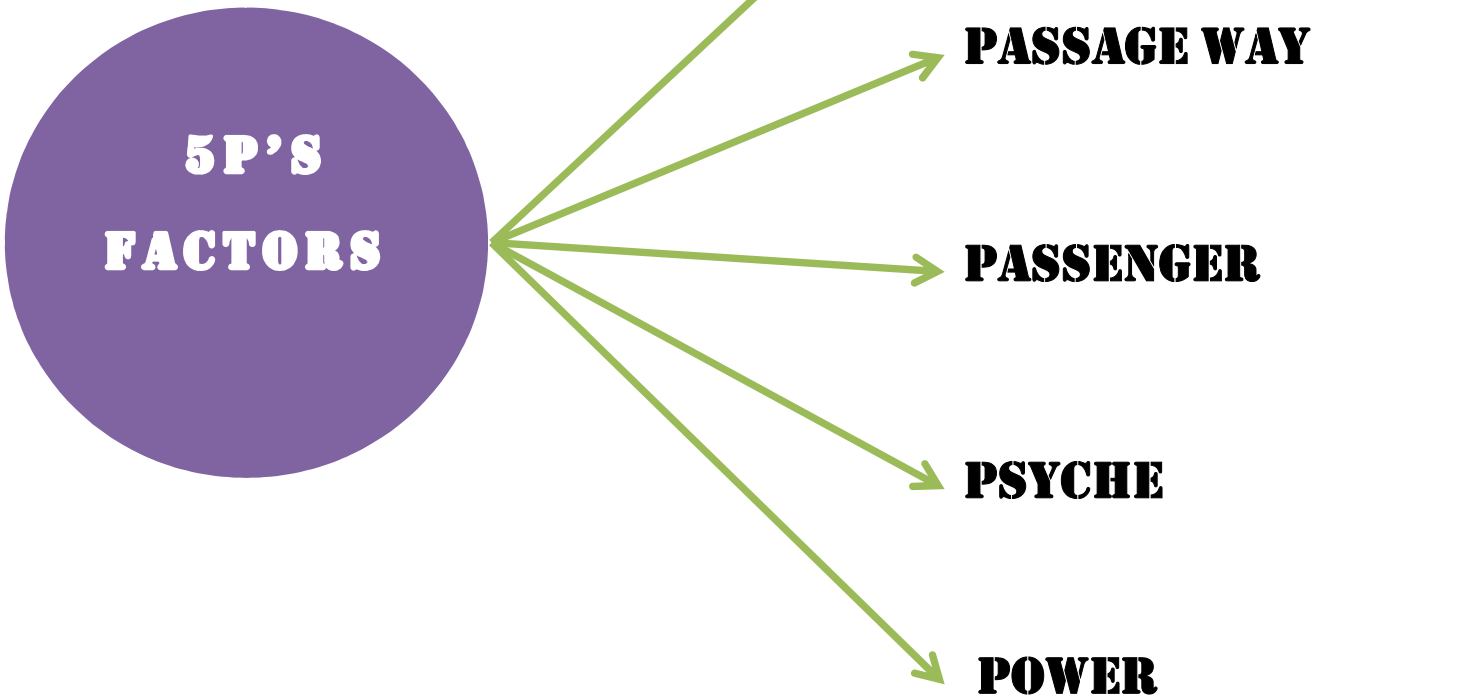
  process of giving birth

- Parturient:-

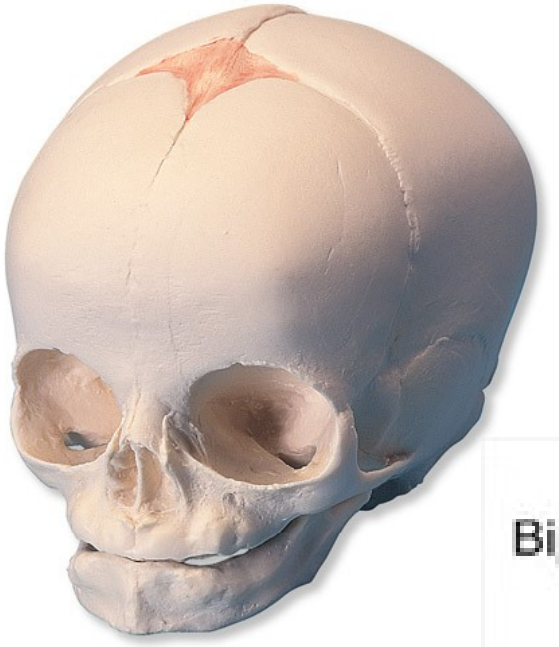
  Mother in labour

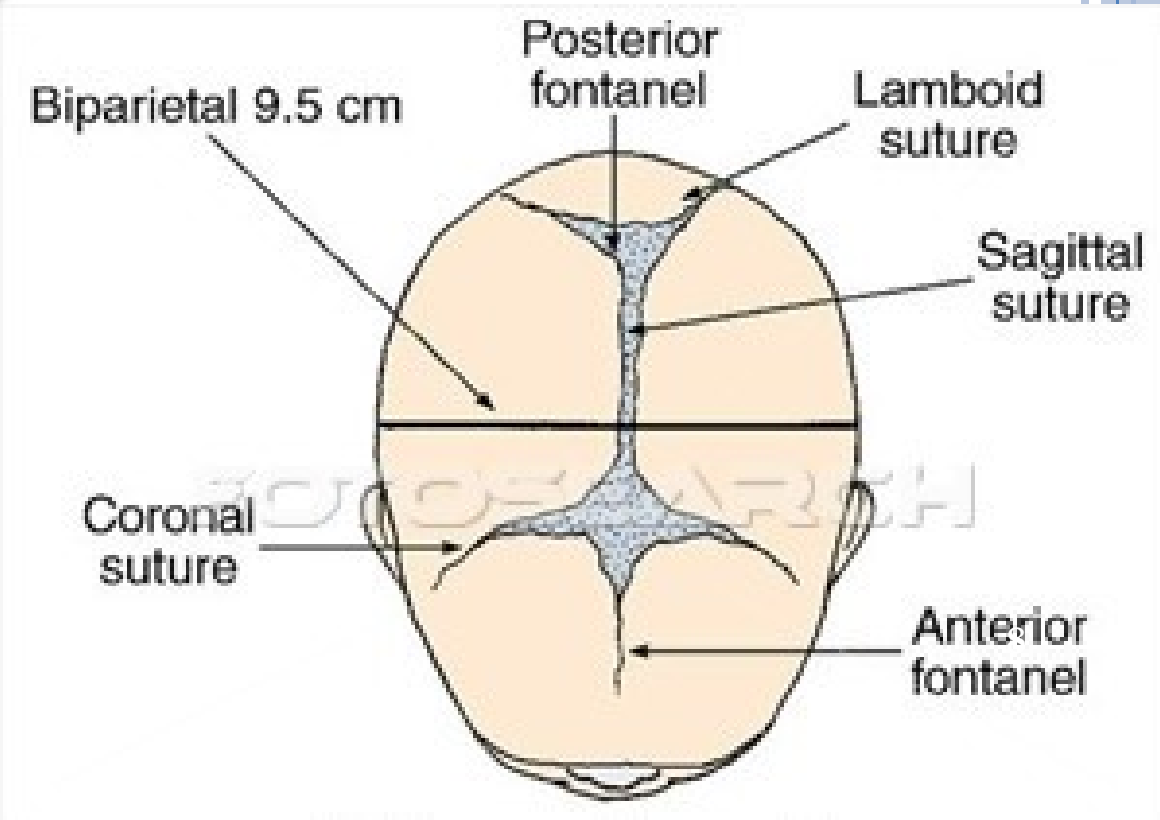
- Gravida - number of pregnancies
- Para - number of pregnancies carried to viability and delivered
- Primigravida - pregnant for first time
- Multigravida - pregnant more than once
- Viability - able to survive outside the womb (24+ weeks gestation)
- Nulliparous - never carried a pregnancy to viability
- Multiparous - has had two or more deliveries that were carried to viability

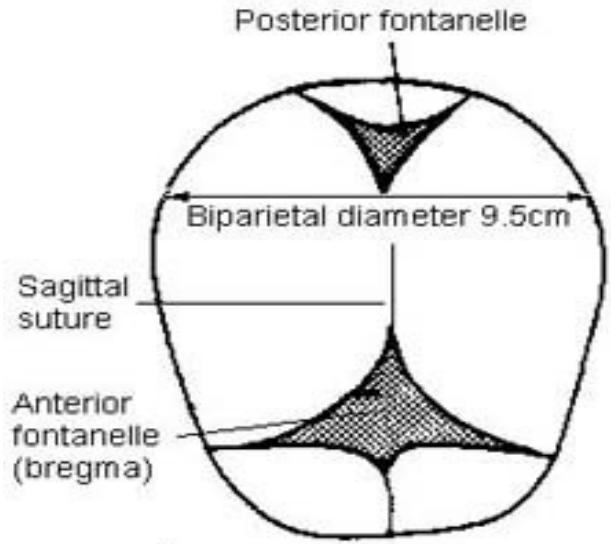
ESSENTIAL FACTORS OF LABOUR

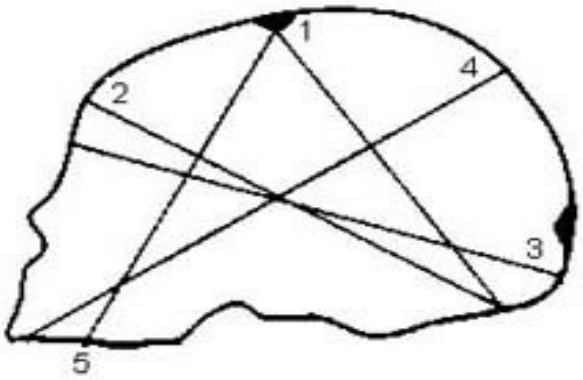


PASSENGER

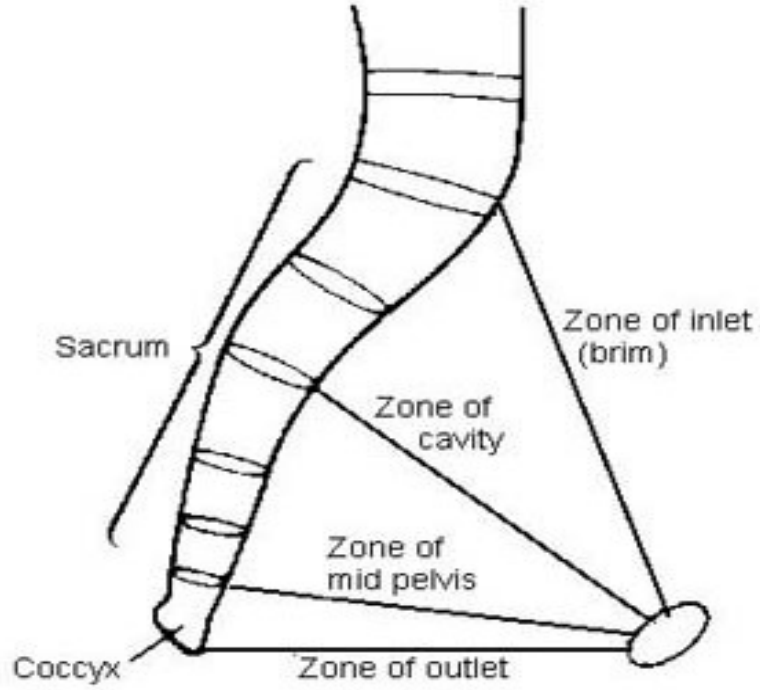



Posterior fontanel
Biparietal 9.5 cm
Lamboid suture
Sagittal suture
Coronal suture
Anterior fontanel





1 Suboccipitobregmatic 9.5cm flexed vertex presentation
2 Suboccipitofrontal 10.5cm partially deflexed vertex
3 Occipitofrontal 11.5cm deflexed vertex
4 Mentovertical 13cm brow
5 Submentobregmatic 9.5cm face



SIZE

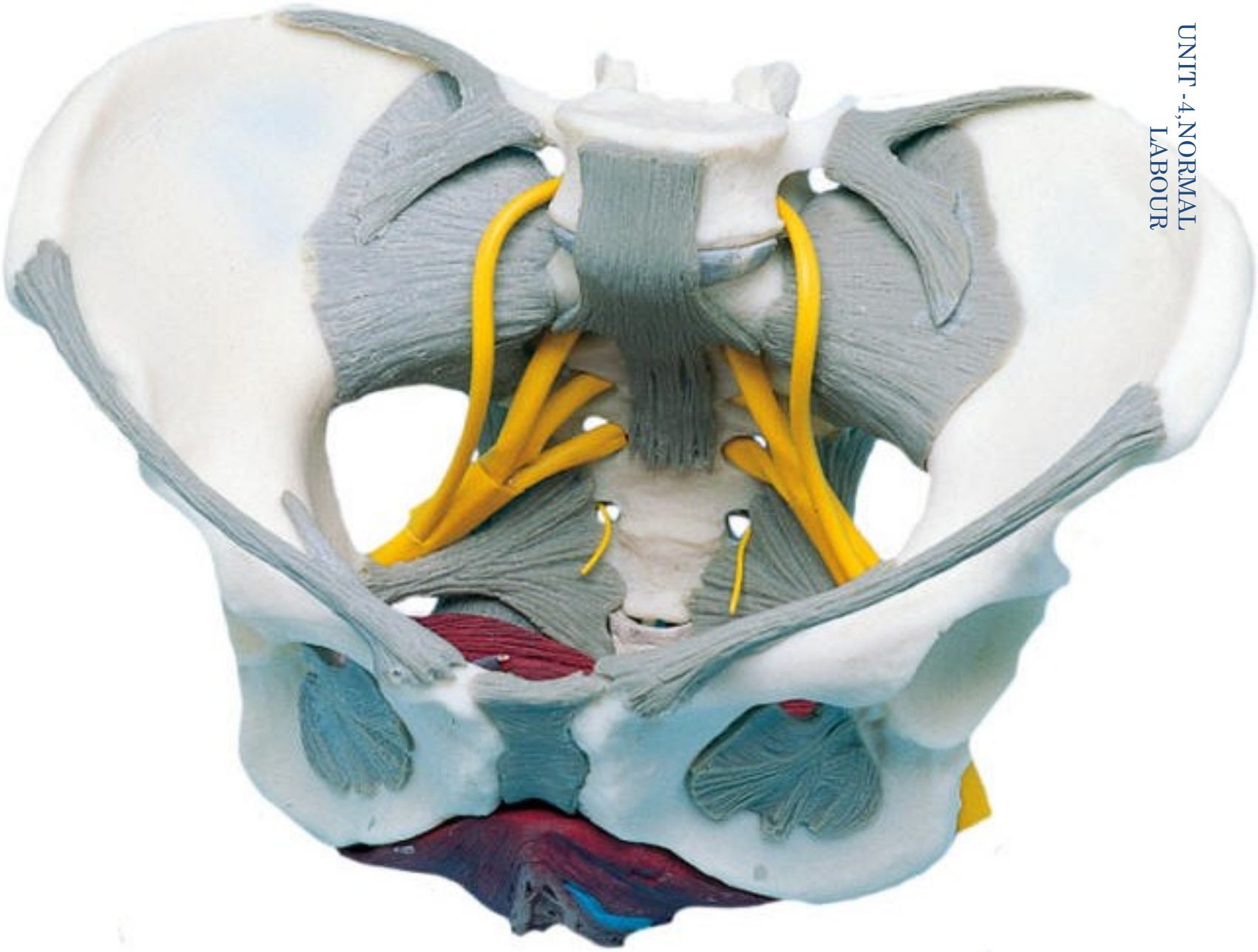
PRESENTATION

LIE

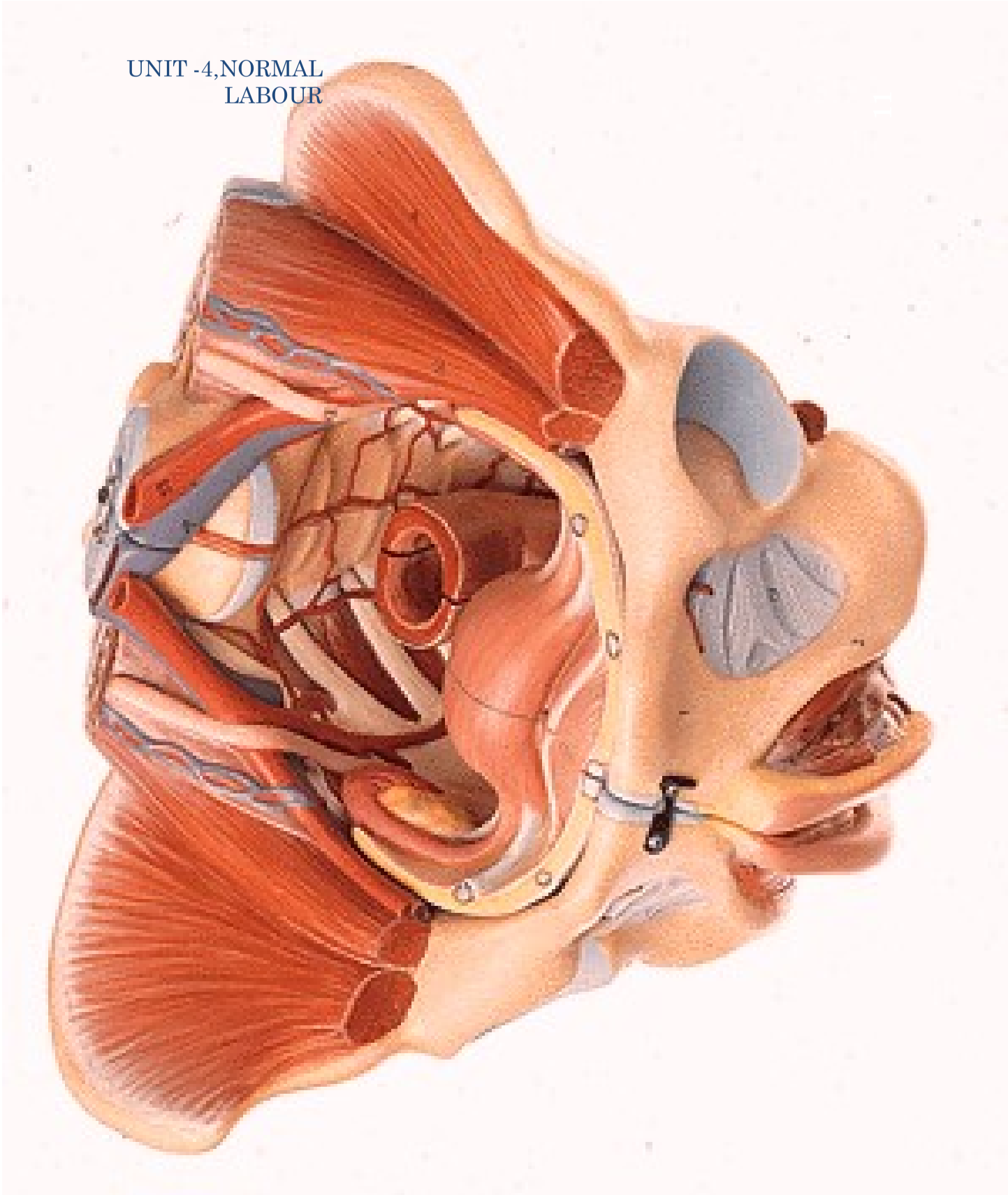
ATTITUDE

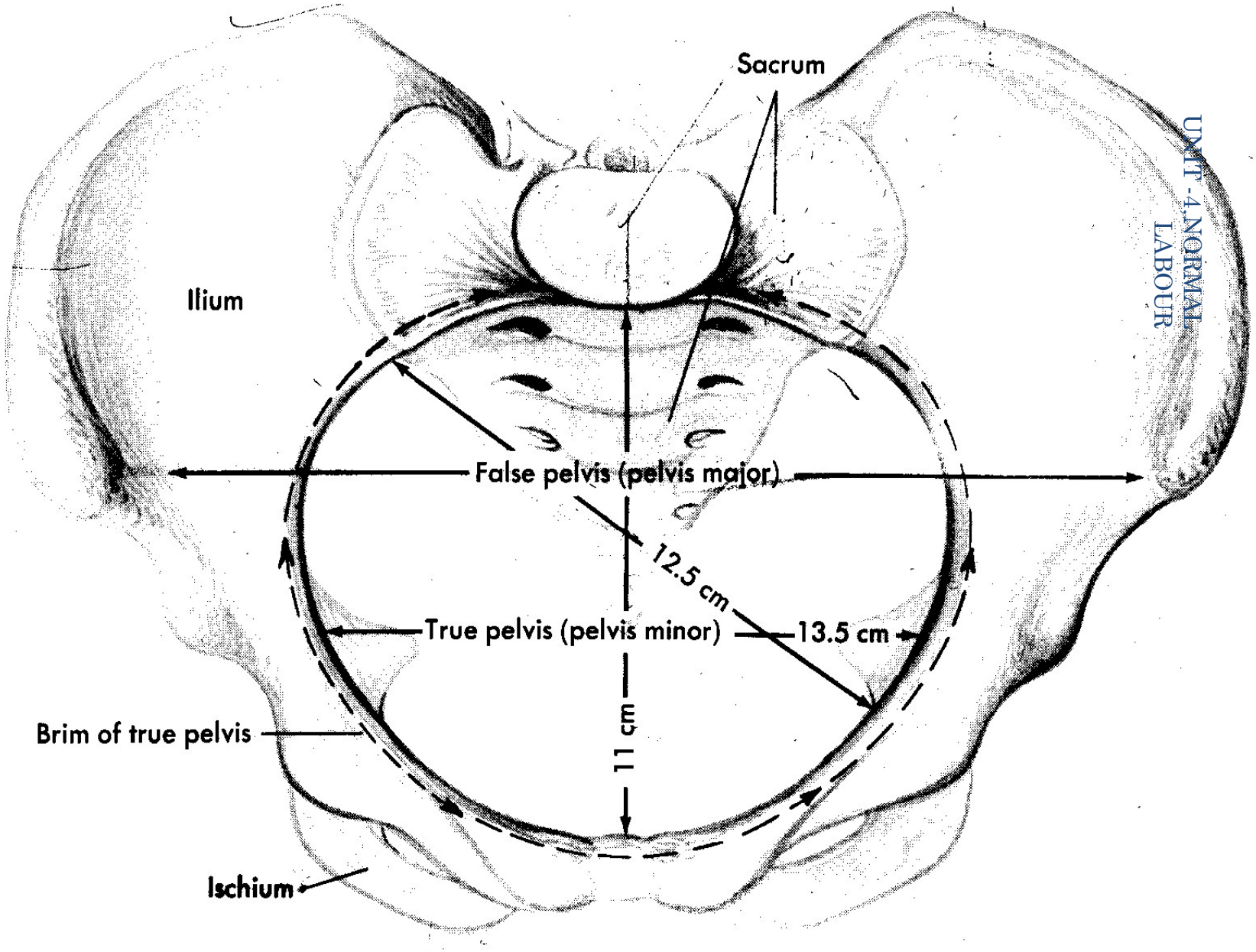
POSITION

PASSAGEWAY

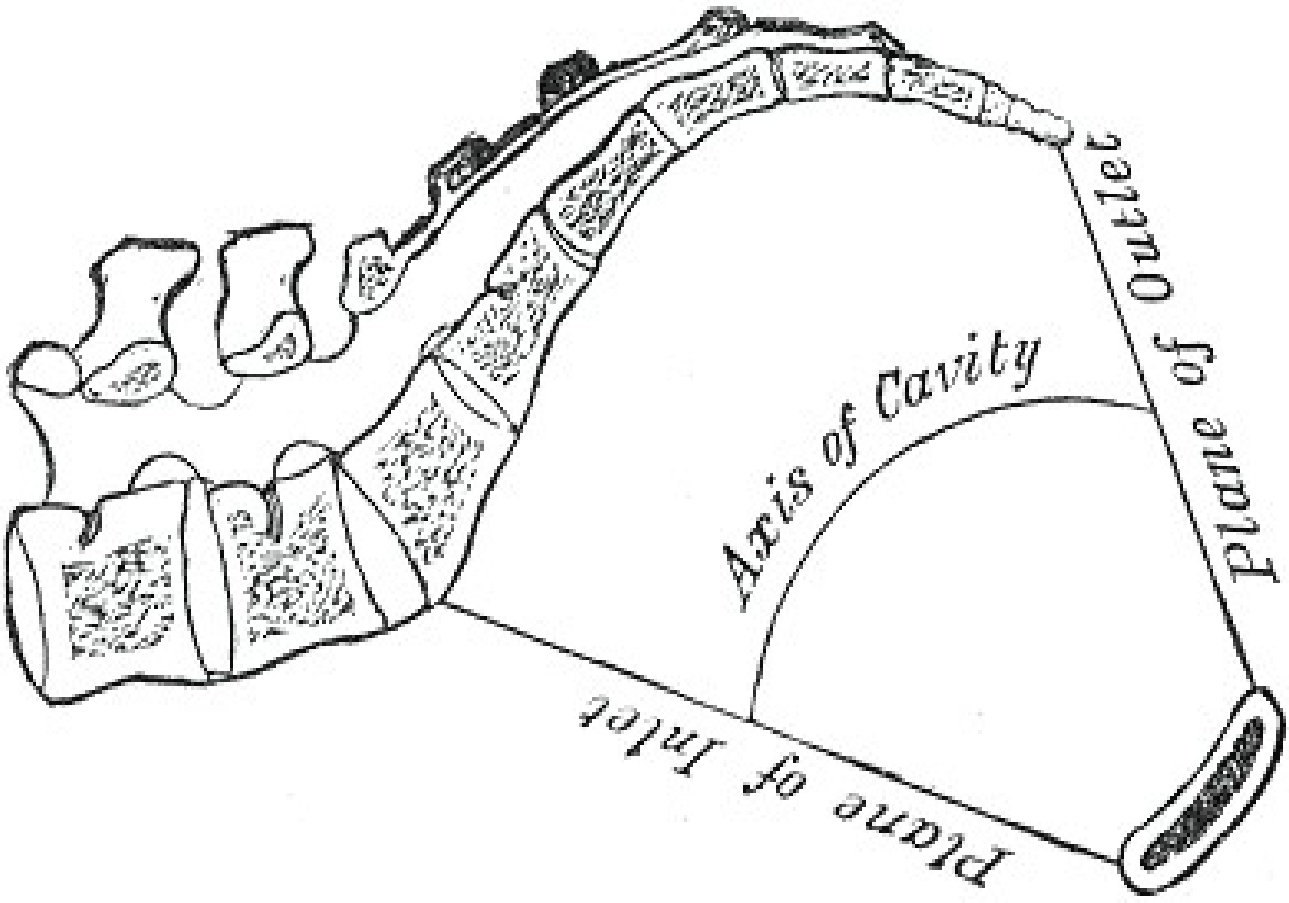


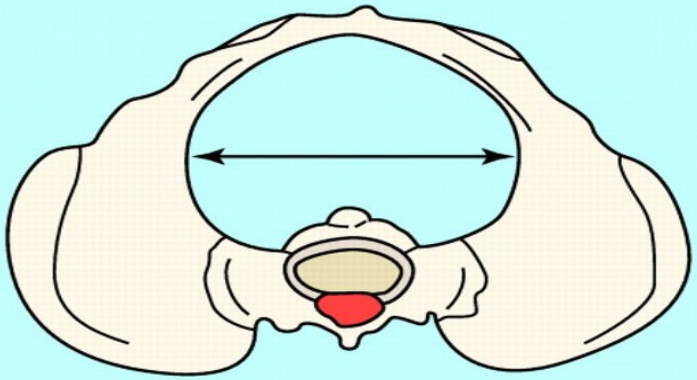
UNIT -4,NORMAL LABOUR

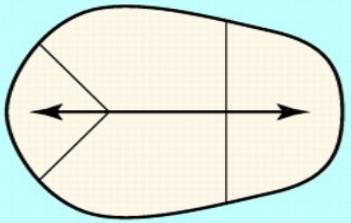




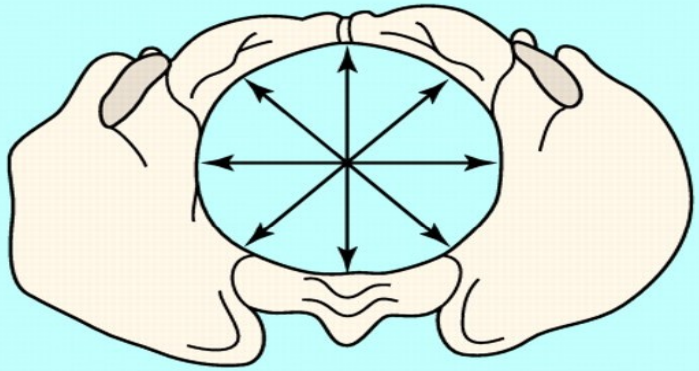
The female pelvis viewed from above. Note the brim of the true pelvis (dotted line) that marks the boundary between the false pelvis (pelvis major) above and the true pelvis (pelvis minor) below it.

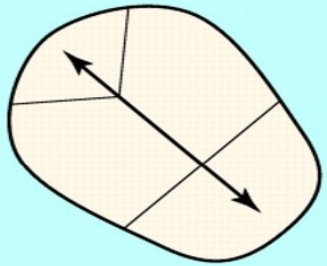

Plane of Outlet
Axis of Cavity
Plane of Inlet



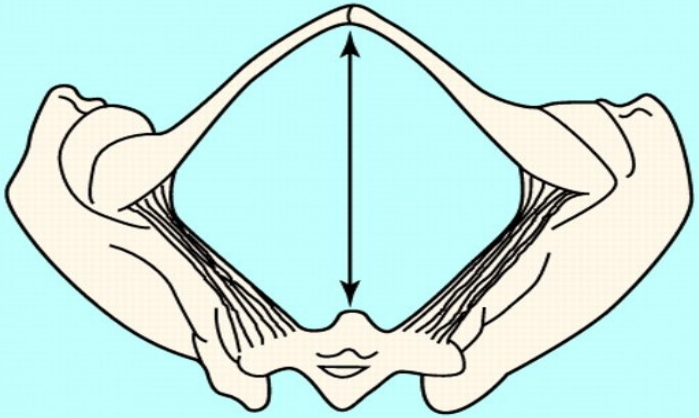


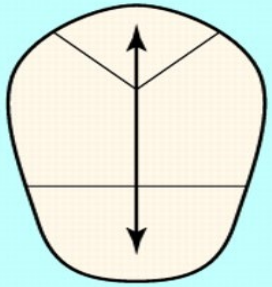
Transverse



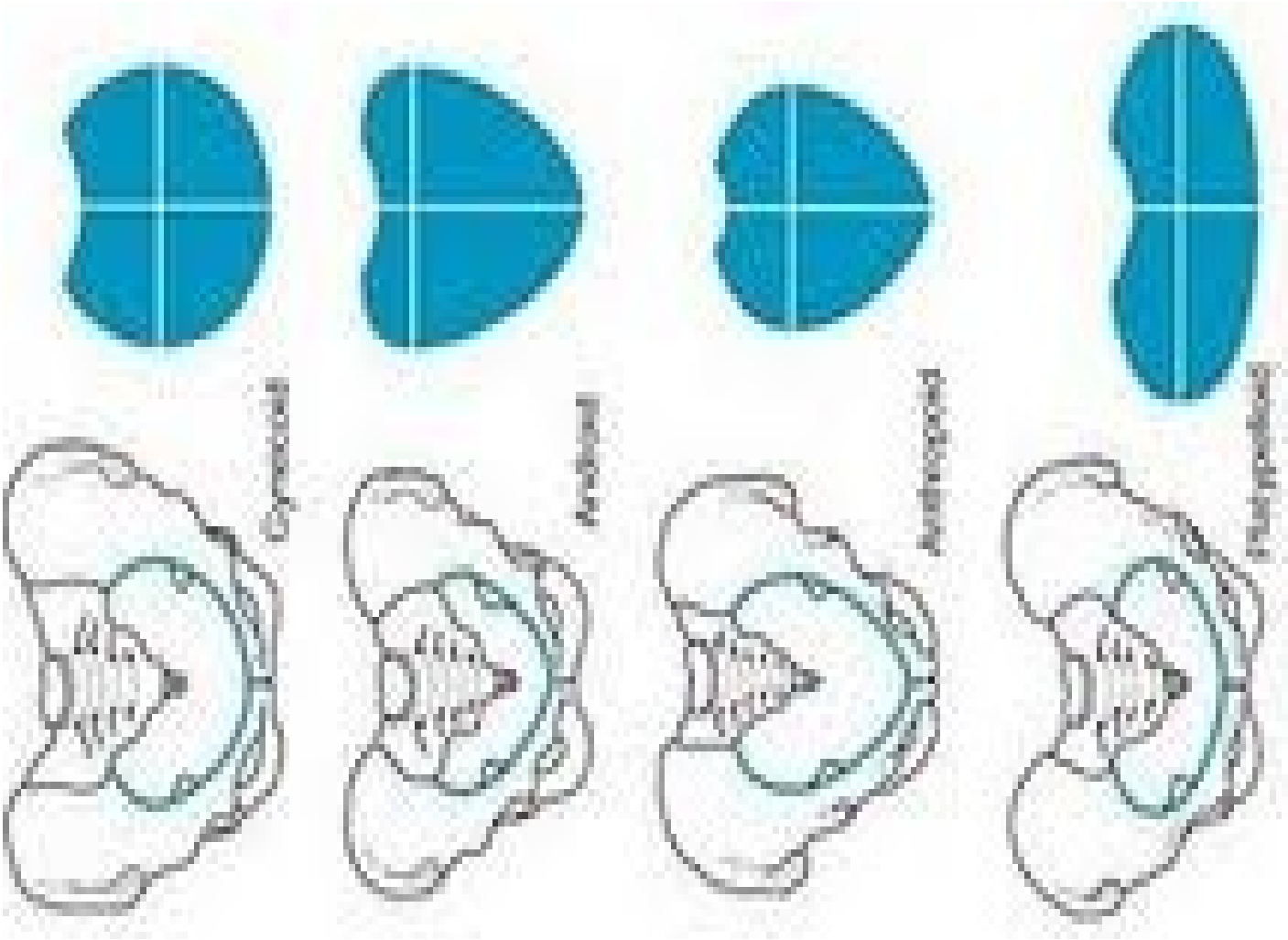


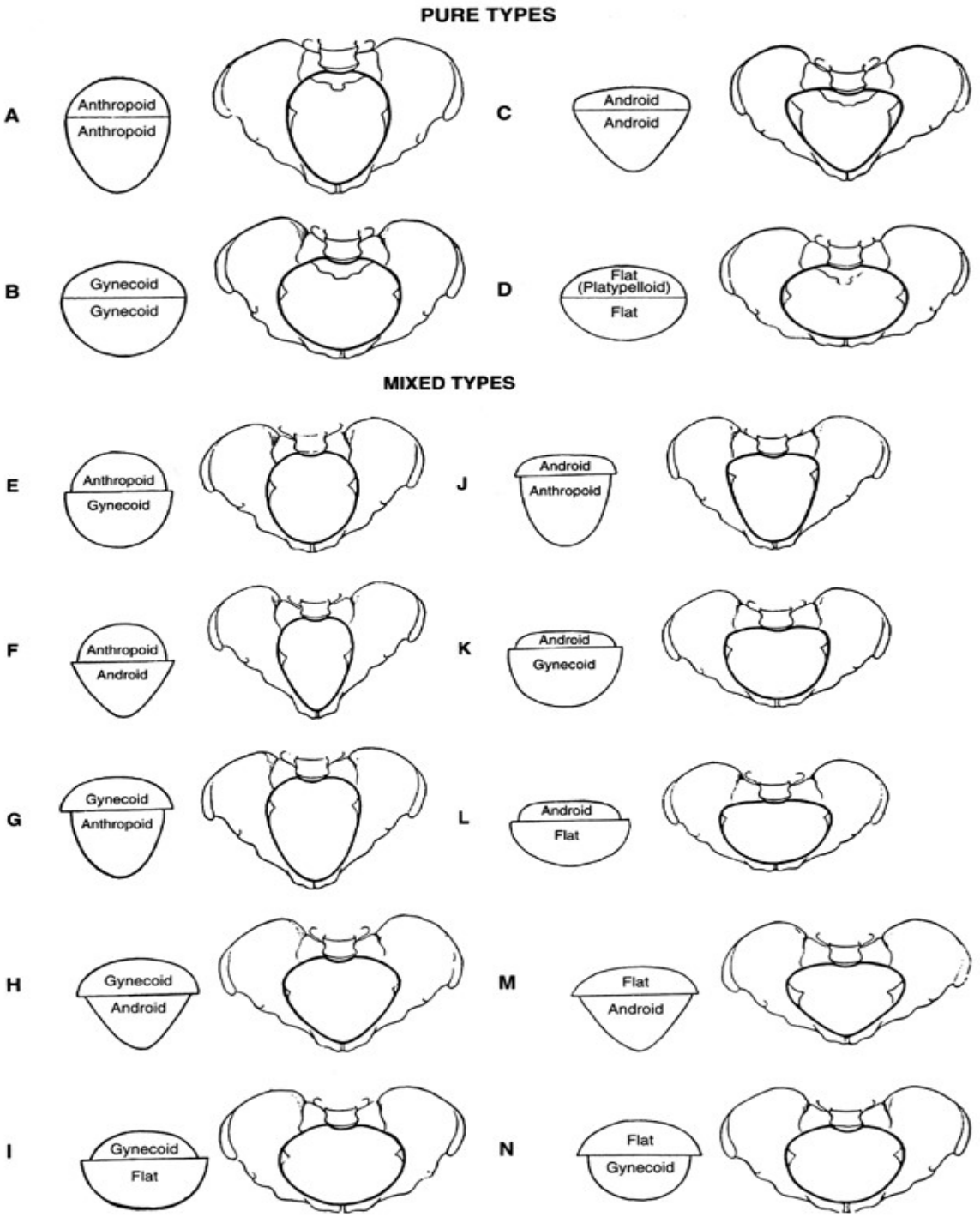
Left occipito-anterior

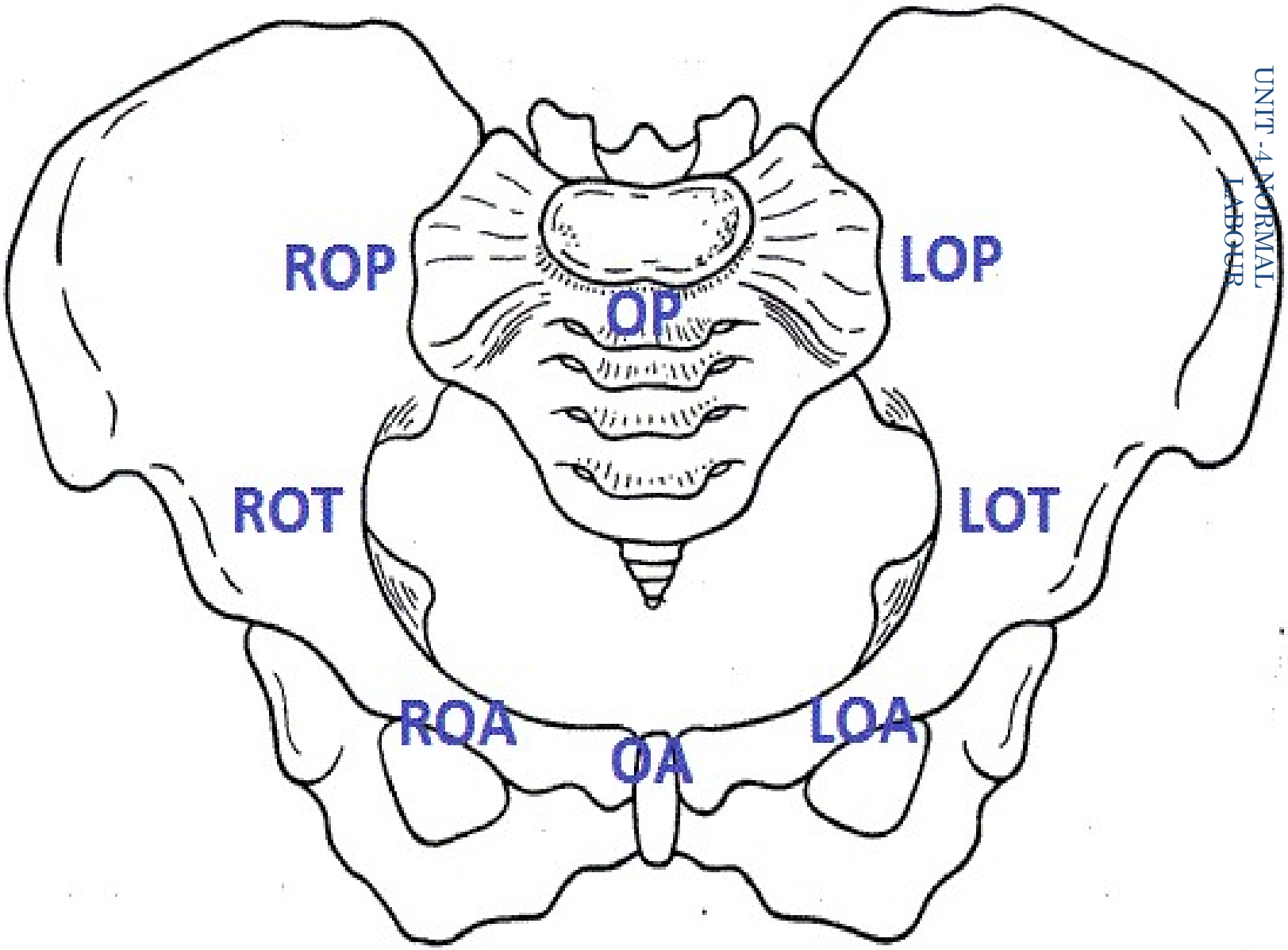




Occipito-anterior

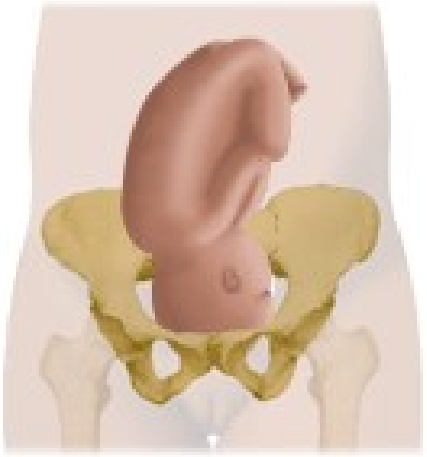

Occipito-anterior
Occipito-posterior
Occipito-transverse


PURE TYPES
A
Anthropoid
Anthropoid
C
Android
Android
B
Gynecoid
Gynecoid
D
Flat
(Platypelloid)
Flat
MIXED TYPES
E
Anthropoid
Gynecoid
J
Android
Anthropoid
F
Anthropoid
Android
K
Android
Gynecoid
G
Gynecoid
Anthropoid
L
Android
Flat
H
Gynecoid
Android
M
Flat
Android
I
Gynecoid
Flat
N
Flat
Gynecoid


ROP
LOP
OP
ROT
LOT
ROA
LOA
OA

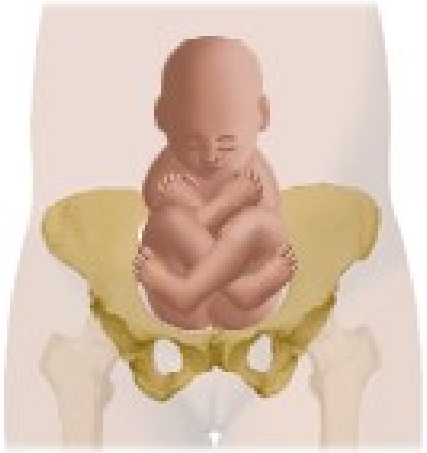
Delivery Presentations

Normal Delivery

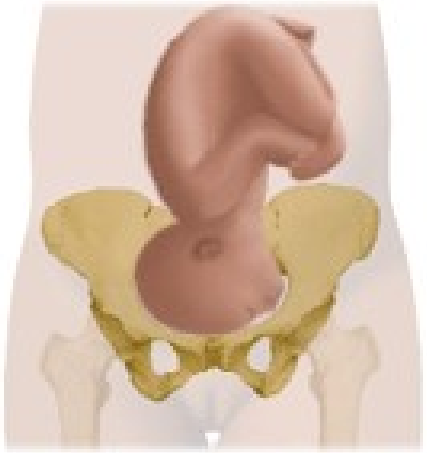


Head First Facing Backwards

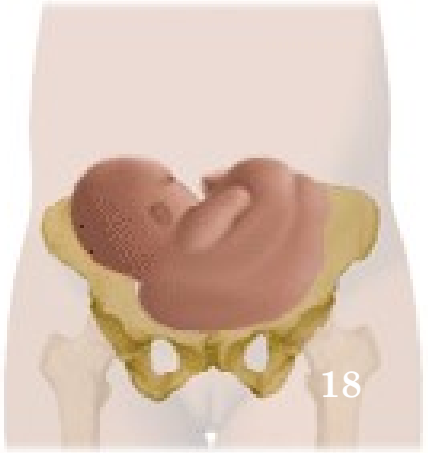
Abnormal Deliveries



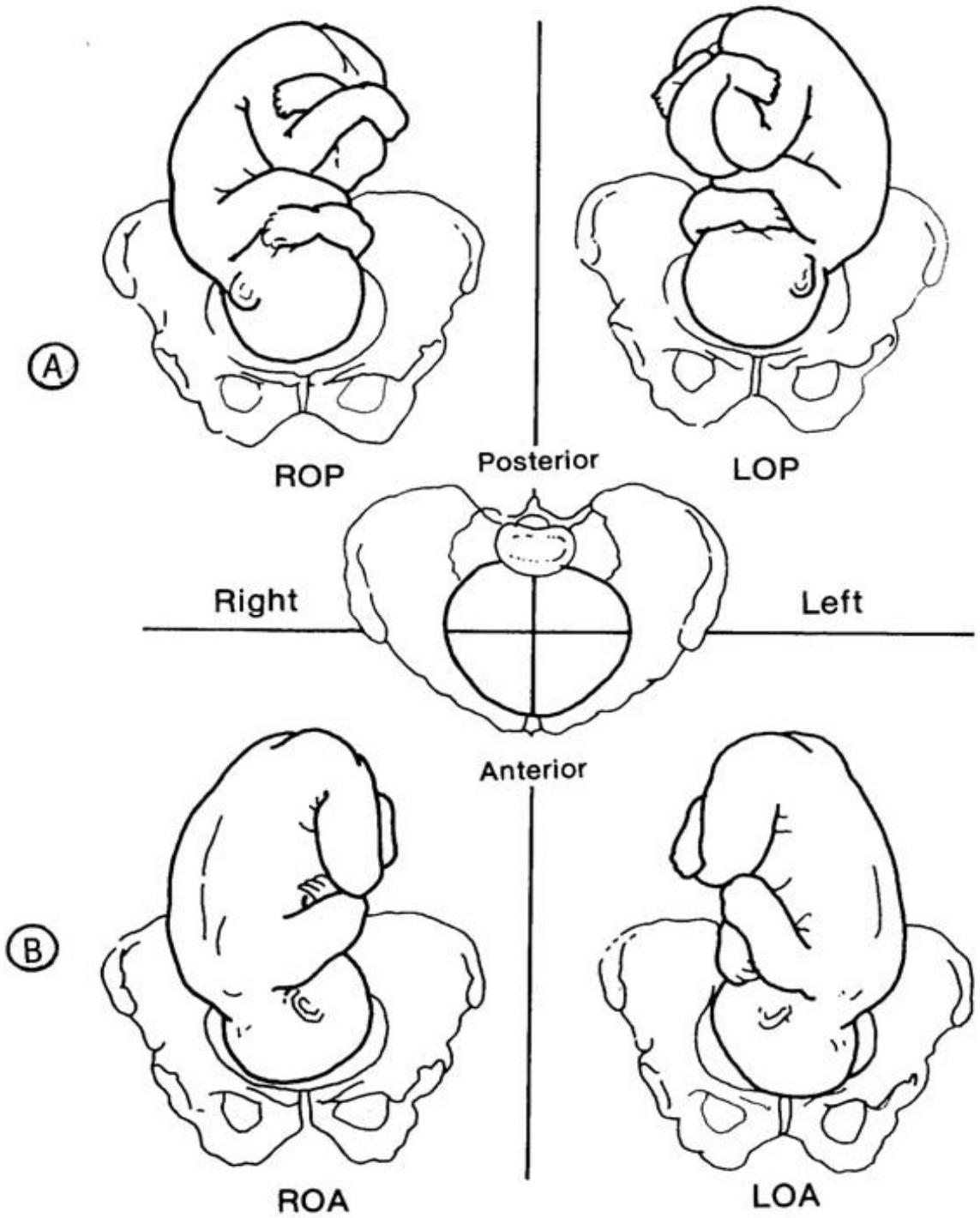
Breech

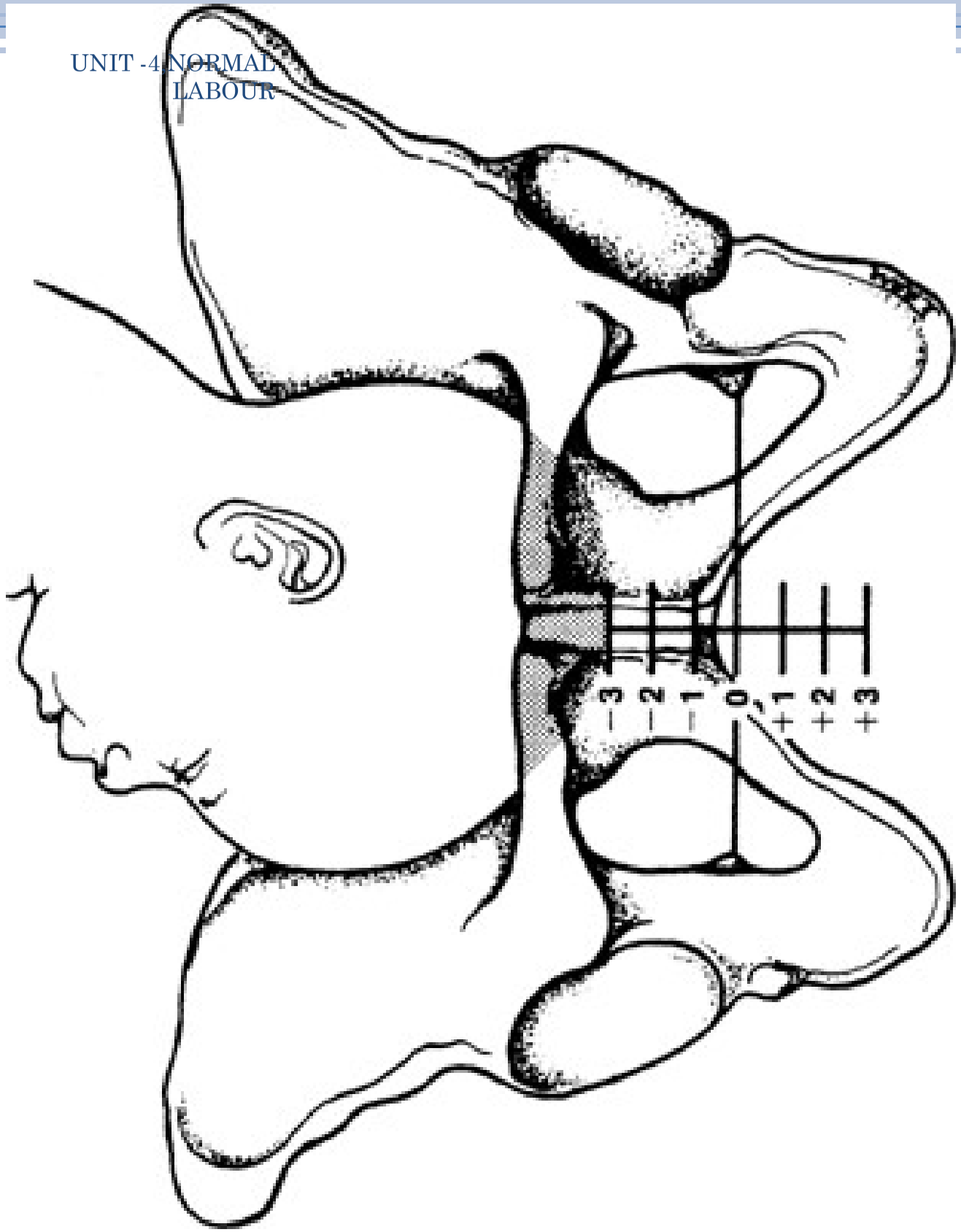


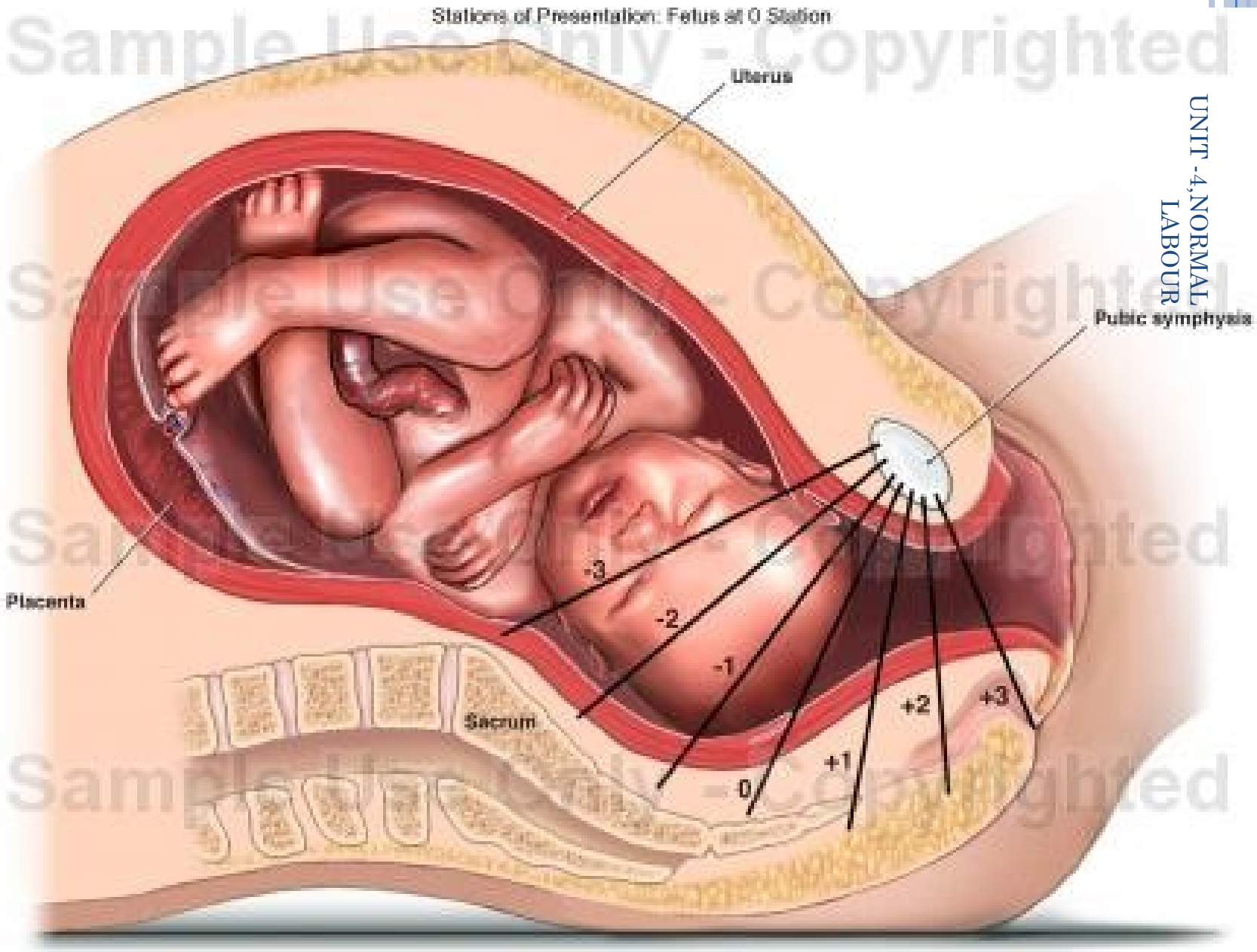
Face



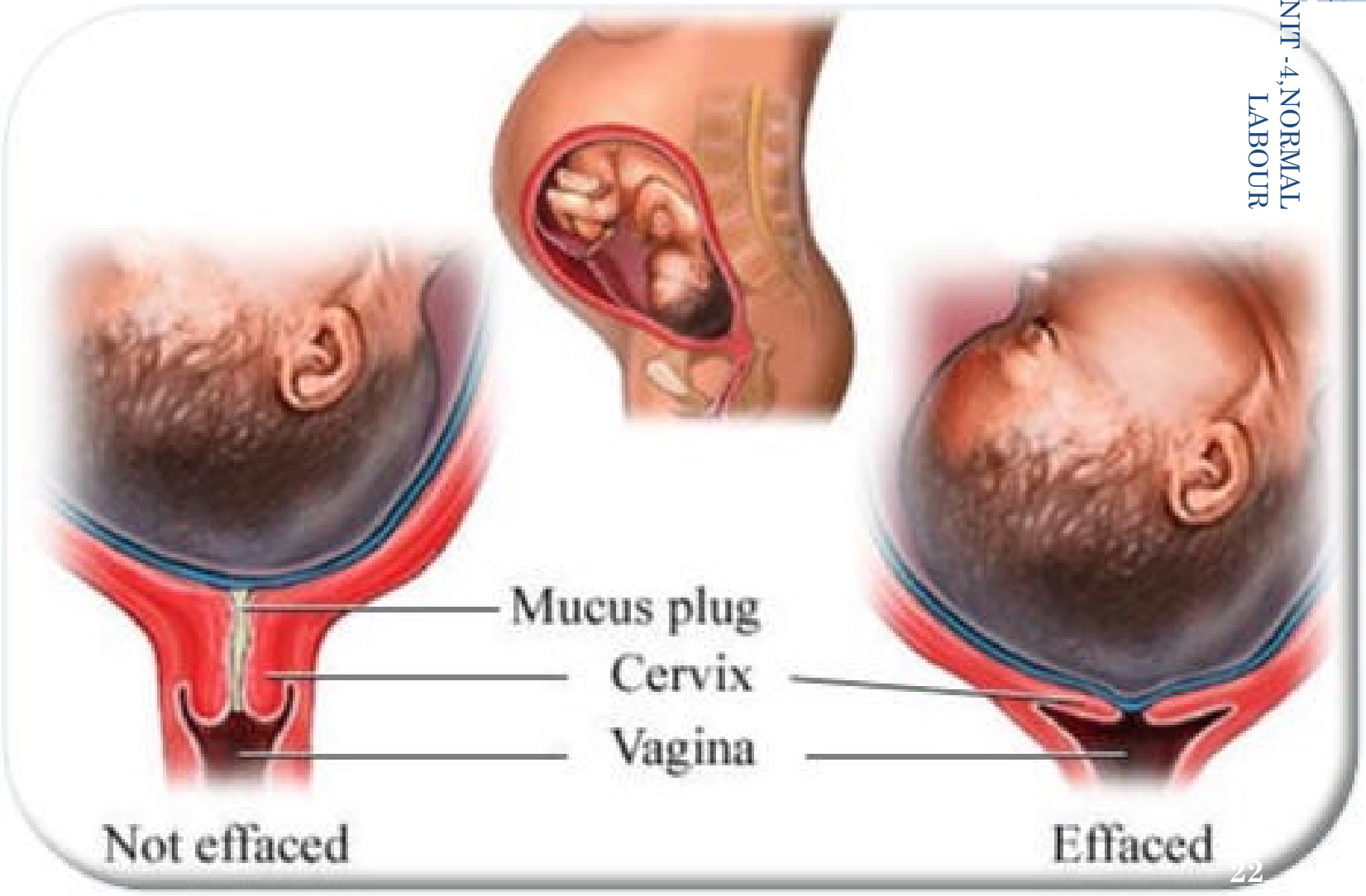
Shoulder

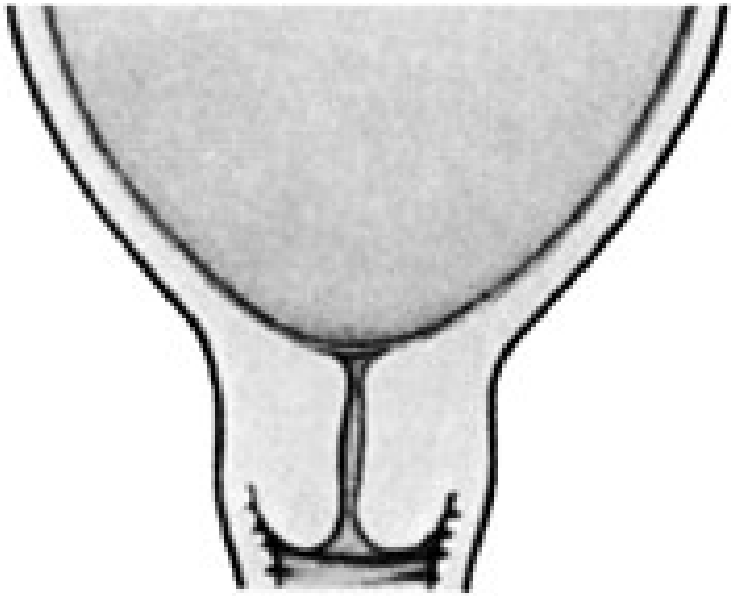

A
ROP
Posterior
LOP
Right
Left
Anterior
B
ROA
LOA


-3
-2
-1
0
+1
+2
+3

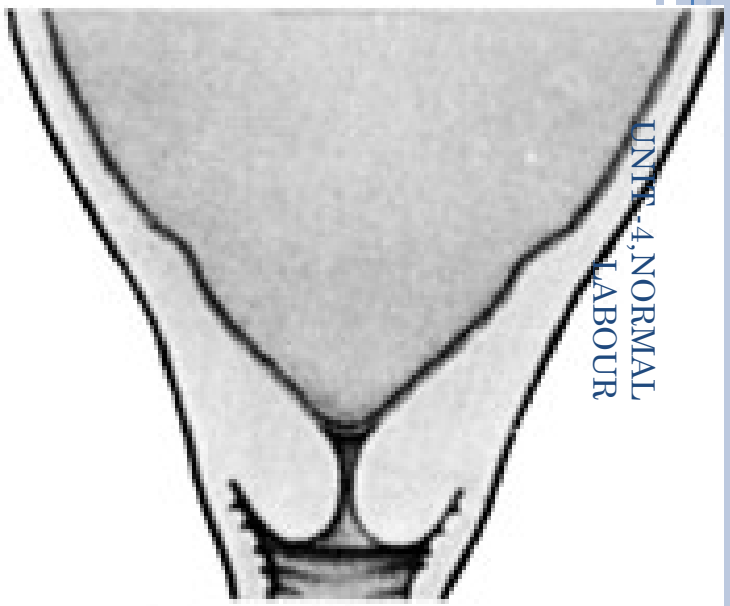


POWER

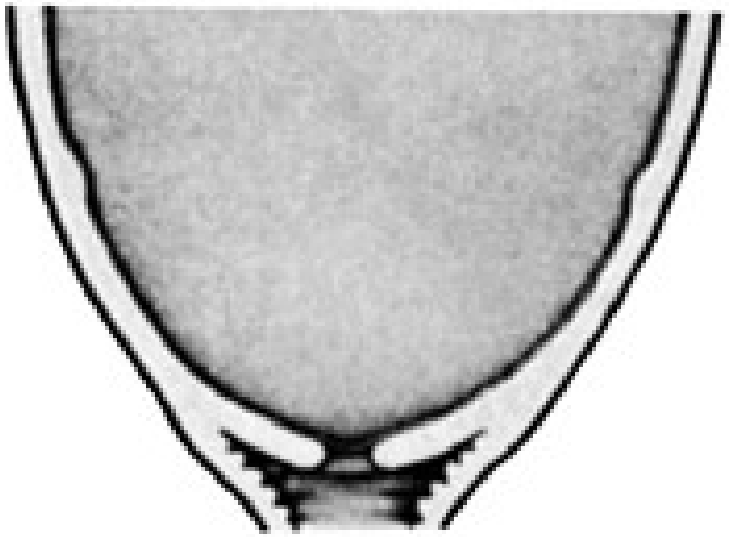




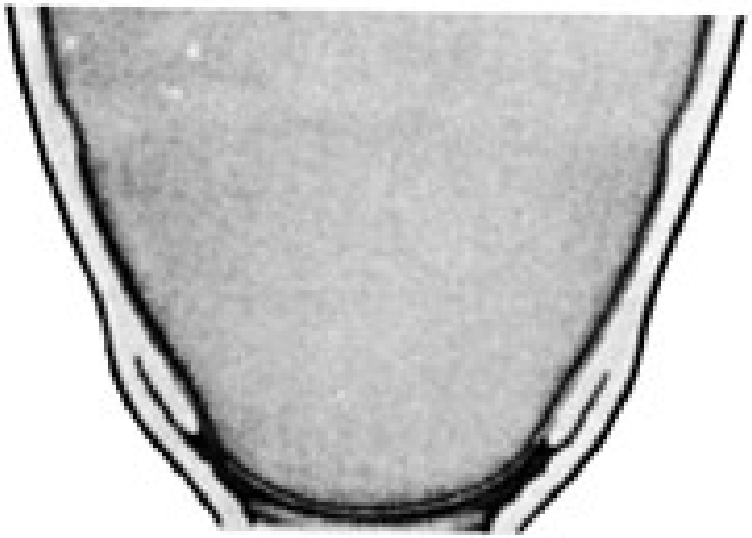
Before labor



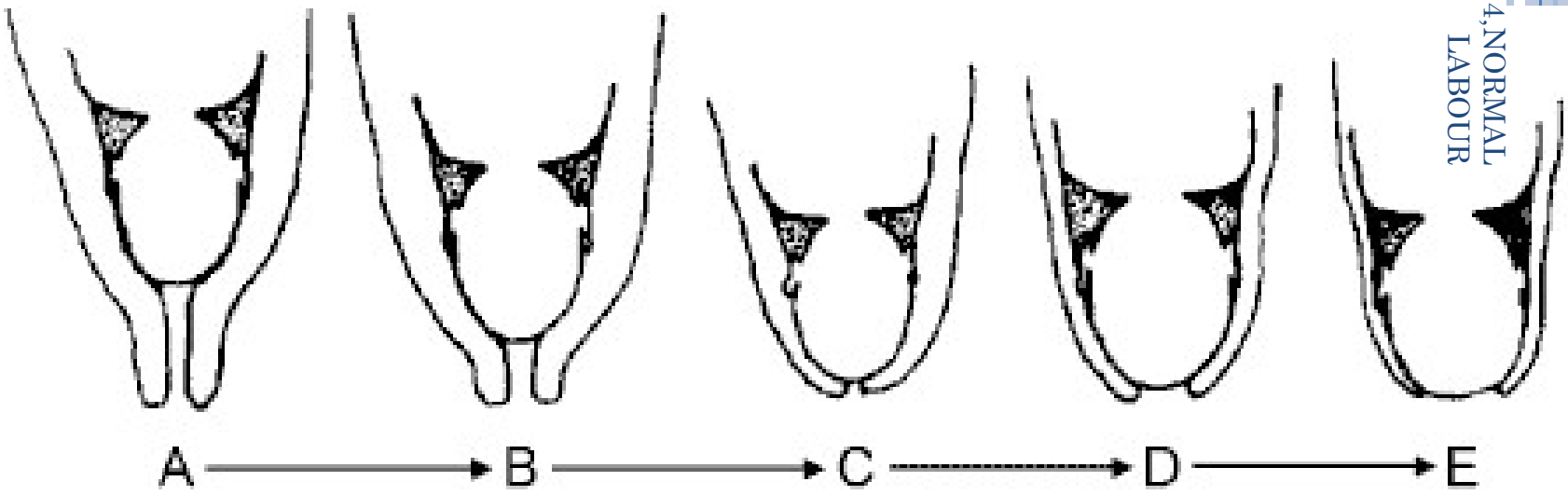
Early effacement



Complete effacement



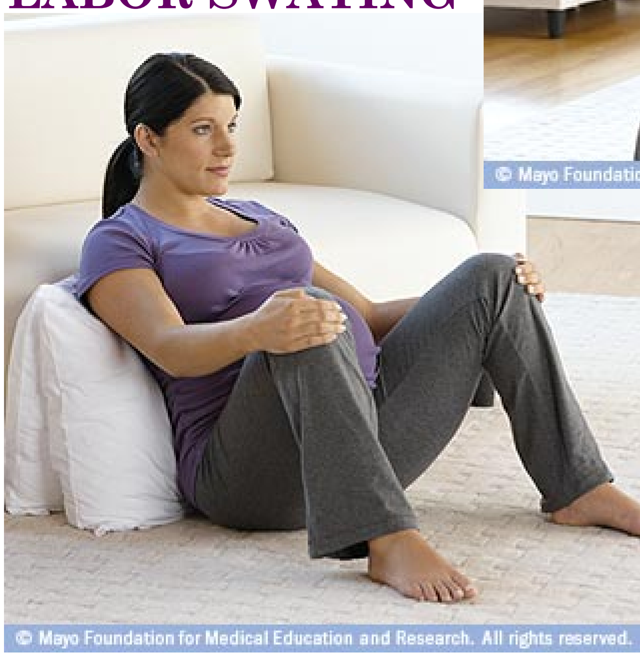
Complete dilation



A	B	C	D	E
Cervix not effaced. Length of cervical canal = 4 cm	Cervix partly effaced. Length of cervical canal = 2 cm	Cervix fully effaced	Cervix dilated 3 cm	Cervix dilated 8 cm

POSITION OF WOMAN

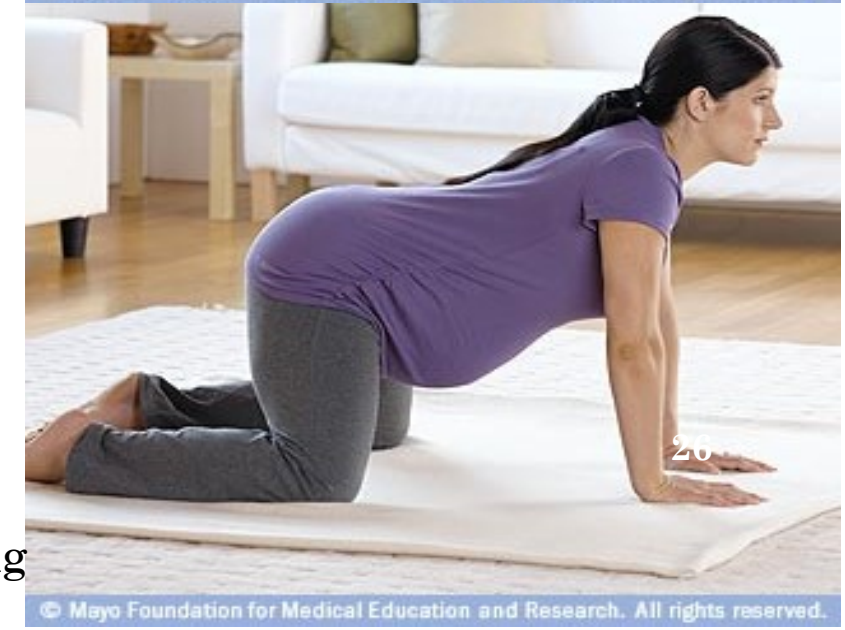
LABOR SWAYING



LABOR SIDELYING

SQUATTING

mcdc22_labor_sidelying



MECHANISM OF LABOUR

Engagement

↓

Descent

↓

Flexion

↓

Internal rotation

↓

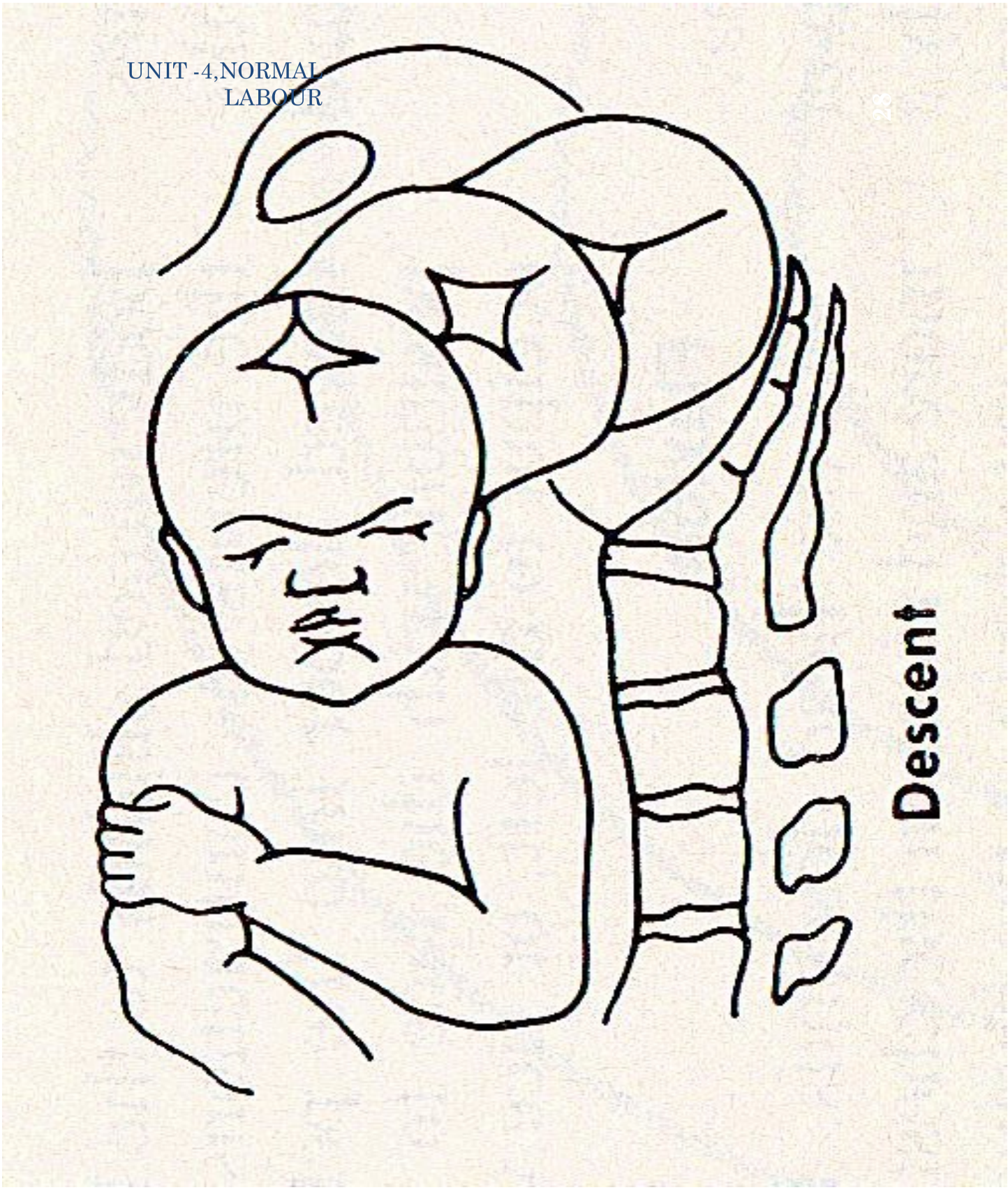
Extension

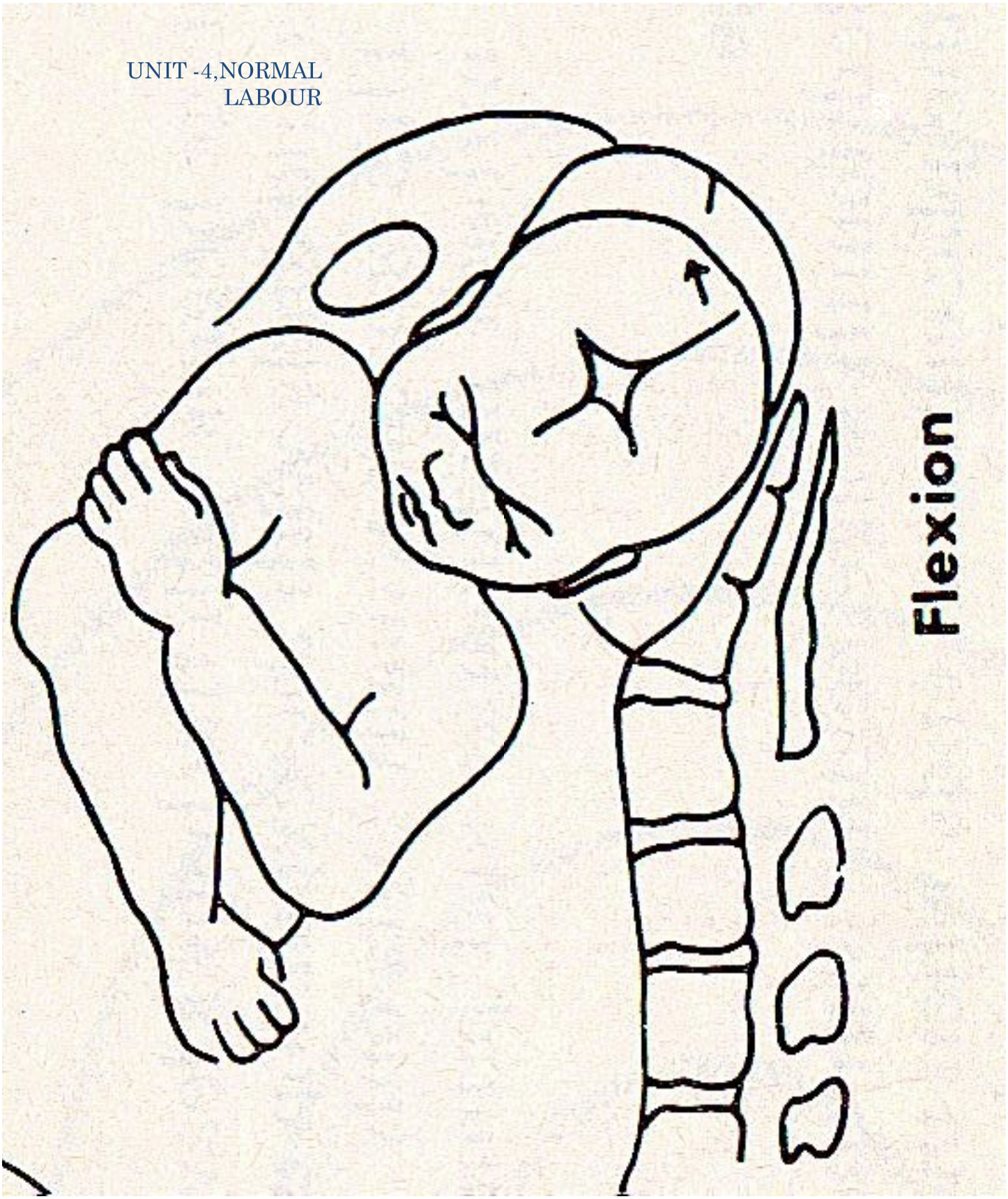
↓

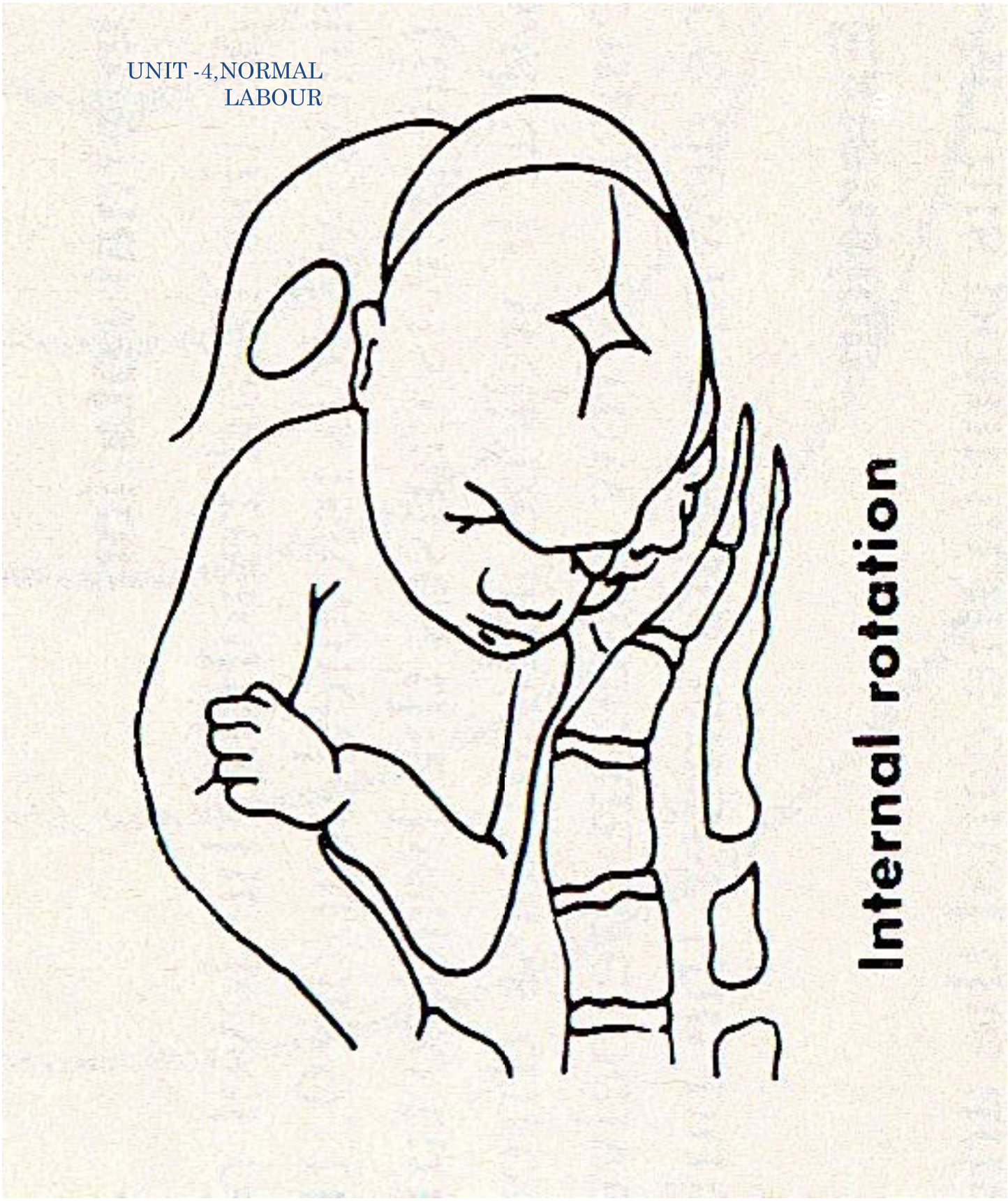
External rotation

↓

Expulsion


Descent


Flexion


Internal rotation


Extension

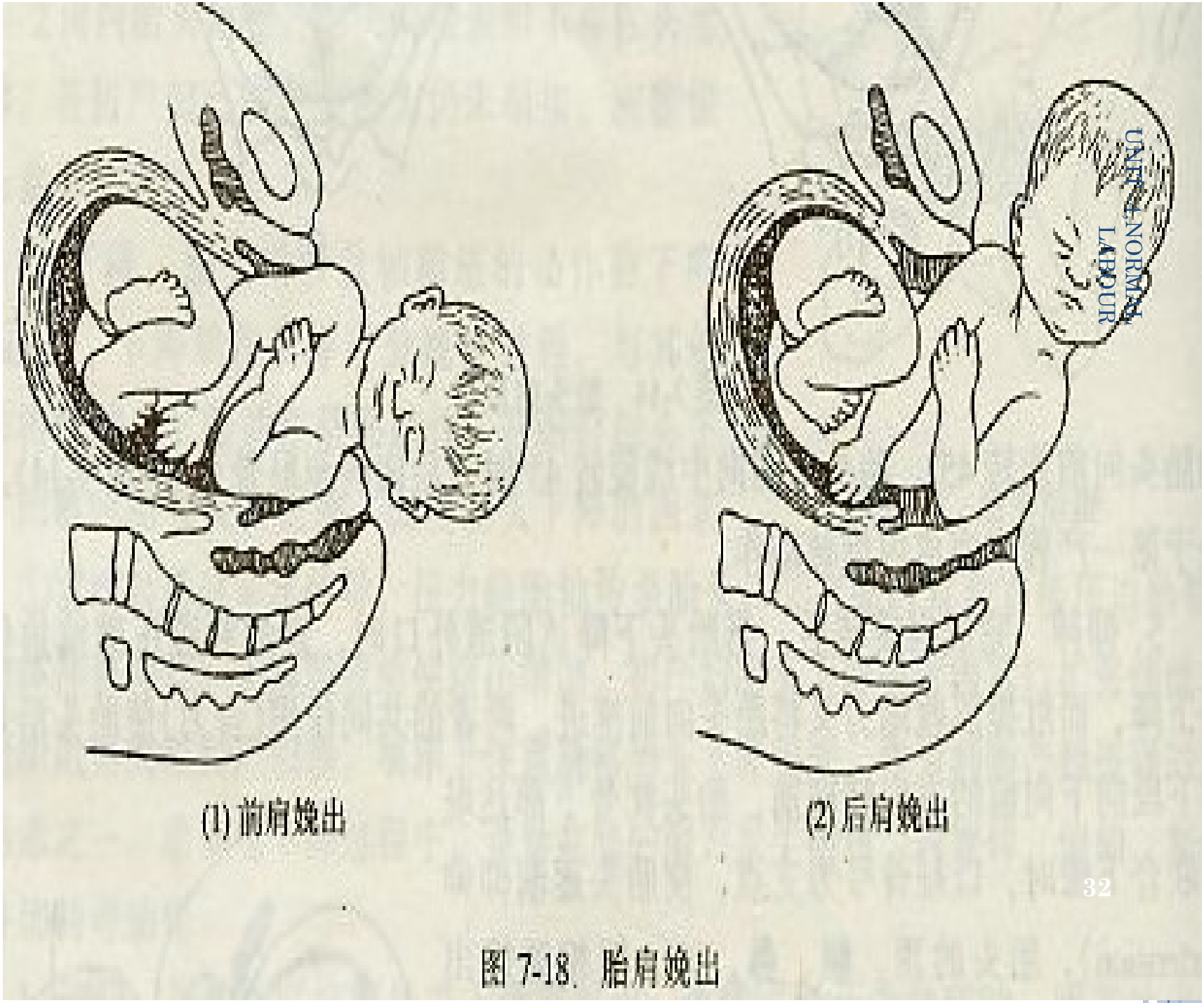


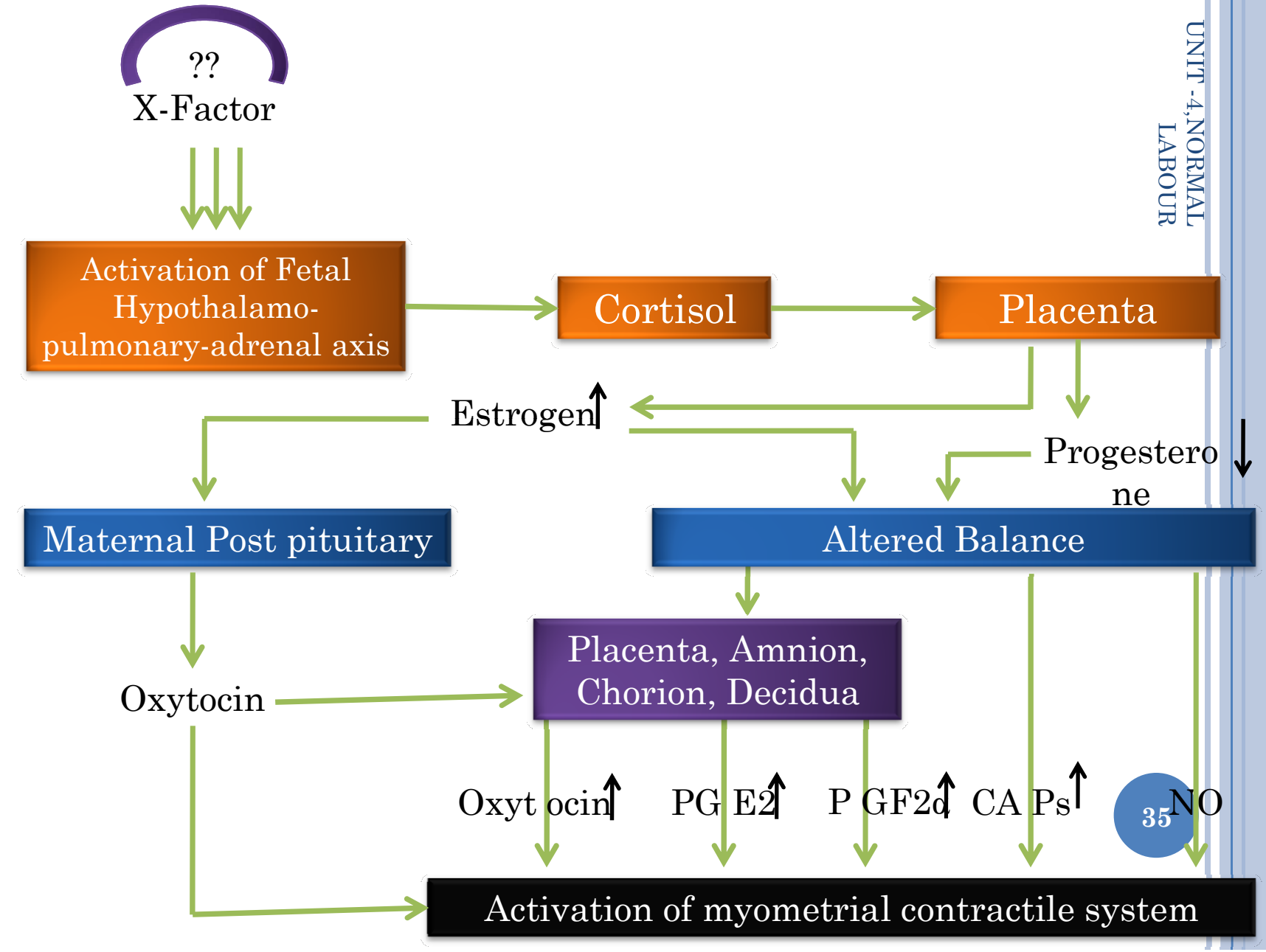
图 7-18. 胎肩娩出

CAUSES OF ONSET OF LABOUR

CAUSES OF ONSET OF LABOUR

- Oxytocin stimulation theory
- Uterine distension
- Progesterone withdrawal theory
- oestrogen stimulation theory
- Prostaglandin stimulation theory
- Feto placental contribution (fetal-cortisol theory)
- Neurogenic factor

ONSET


??
X-Factor
Activation of Fetal Hypothalamo-pulmonary-adrenal axis
Cortisol
Placenta
Estrogen
Progesterone
Maternal Post pituitary
Altered Balance
Placenta, Amnion, Chorion, Decidua
Oxytocin
Oxytocin
PG E2
PGF2α
CAPs
NO
Activation of myometrial contractile system

STAGES OF LABOUR

First stage (cervical stage)

Second stage

Third stage(placental stage)

Fourth stage

STAGES OF LABOUR

I cervical stage

Onset of true labour pain & ends with full cervical dilatation(12hrs in primi,6hrs in multi)

a. **Latent Phase 0-4 cm**
b. **Active Phase 4-8 cm**
c. **Transition Phase 8-10 cm**

II Full dilatation to birth of the baby

Two phases -propulsive

- expulsive

(in primi 2hrs,multi 30 mts)

- **Propulsive phase:-**

  From full dilatation up to the descent of the presenting part to the pelvic floor

- **Expulsive phase:-**

  By maternal bearing down efforts and ends with delivery of the baby

III placental stage

Birth of baby to expulsion of placenta & membrane (15mts)

IV observation stage

Time after birth (1-2 hours after delivery)mother and baby

FIRST STAGE OF LABOUR

EVENTS:

It is chiefly concerned with the preparation of the birth canal so as to facilitate expulsion of the fetus in the second stage.

A) Dilatation and effacement of the cervix-

- ✓ **Contraction**
- ✓ **Retraction**
- ✓ **Bag of membrane**
- ✓ **Fetal Axis pressure**
- ✓ **Vis-a-tergo**

B) Full formation of lower uterine segment-

FIRST STAGE OF LABOUR…

CLINICAL COURSE:

1st stage is about 11--12 hrs. in primipara and 6--8hrs. in multipara.

PAIN

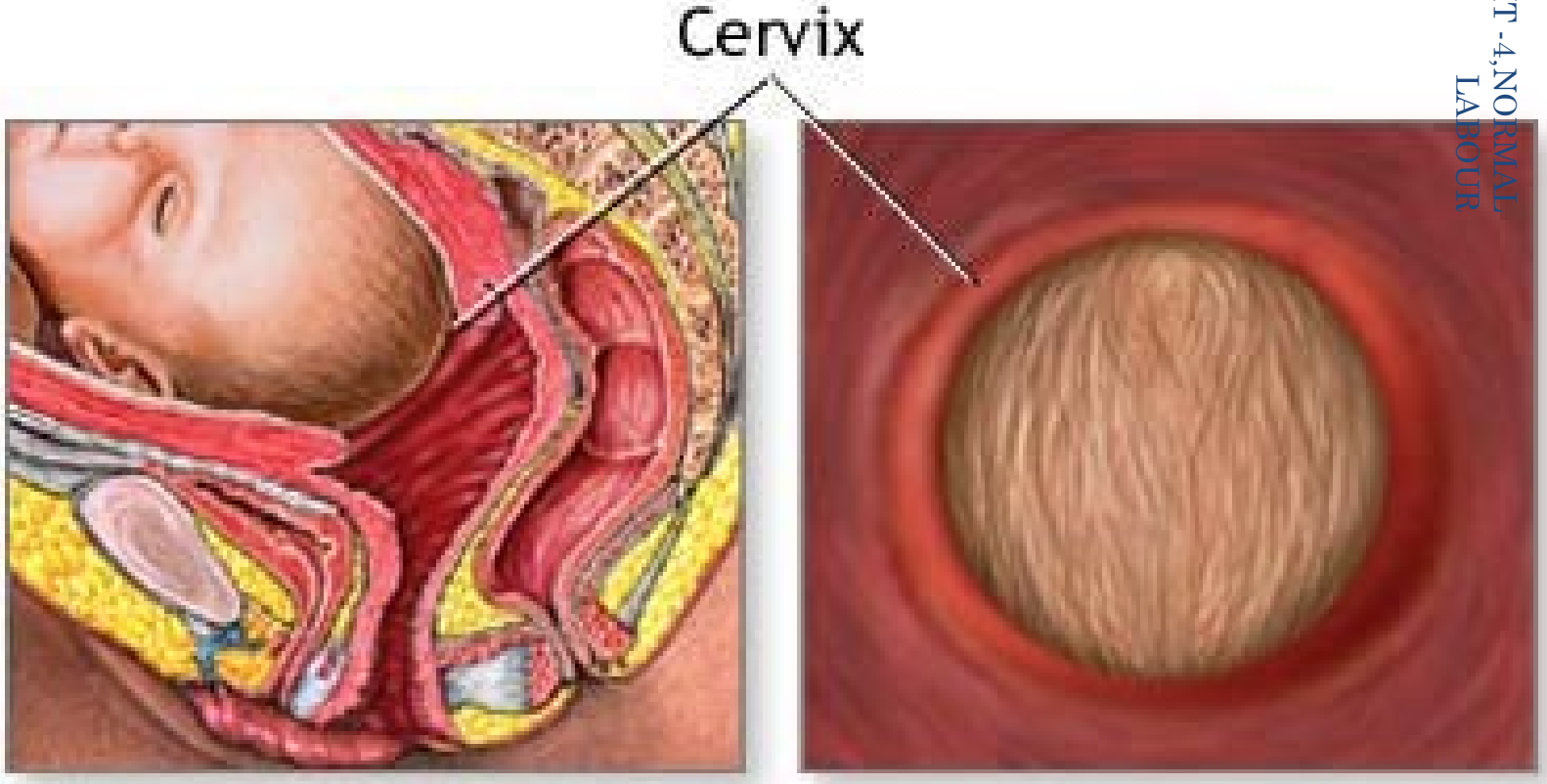
DILATATION & EFFACEMENT

MEMBRANE

MATERNAL SYSTEM

FETAL EFFECT

FIRST STAGE OF LABOUR…



When the cervix has dilated to 10 cm,
the mother has an uncontrollable urge to push

FIRST STAGE OF LABOUR…

MANAGEMENT :

Principles:

Non interference with watchful expectancy to prepare the patient for natural birth.
Monitor carefully the progress of labour to detect complication

First of all, we must recognize the true labor and the false labor:

True labor	False labor
1. Regular contractions	Irregular contractions
2. Show	No show
3. Progressive	Not progressive
4.Effacement and dilatation of cervix	No Present

FIRST STAGE OF LABOUR…

- General
- Partograph
- Bowel
- Diet
- Rest & Ambulation
- Bladder Care
- Relief of pain
- Fetal Monitoring

- General
  - Antiseptic dressing
  - Encouragement
  - Constant supervision
  - Privacy to be maintained

Bowel

Rest and ambulation –deep breathing exercise, relaxation therapy, comfortable position

- Diet
- Bladder care
- Relief of pain
- Assessment

- Reassure and advise the patient on how her labour is going.
- Measure 2 hourly pulse, temperature and blood pressure.
- Monitor contractions and fetal heart rate (FHR); the FHR should be auscultated for a minimum of 1 minute immediately after a contraction. The maternal pulse should be palpated to differentiate between maternal and FHR. Then the FHR should be measured every 15 minutes (should be 120-160 bpm), <100 bpm may indicate fetal distress.
- Assess cervical dilatation and fetal head descent every 4 hours.
- Ascertain patient's need for pain relief. There is no evidence of useful efficacy of TENS for labour pain
- Assess position of the fetal head with regard to the mother's pelvis

FIRST STAGE OF LABOUR…

During this stage of labor, routine observation should be charted on partogram at regular intervals to note the progress of the labor, the condition of the mother and to monitor the fetus. These observations include

PARTOGRAPH:

It is a composite graphical record of cervical dilatation and descent of head against duration of labour in hours.

COMPONENTS OF PARTOGRAPH:

Patient identification

Uterine contractions

Blood pressure

Urine analysis

Temperature record

Fetal heart rate recorded hrly.

State of membrane and colour of liquior

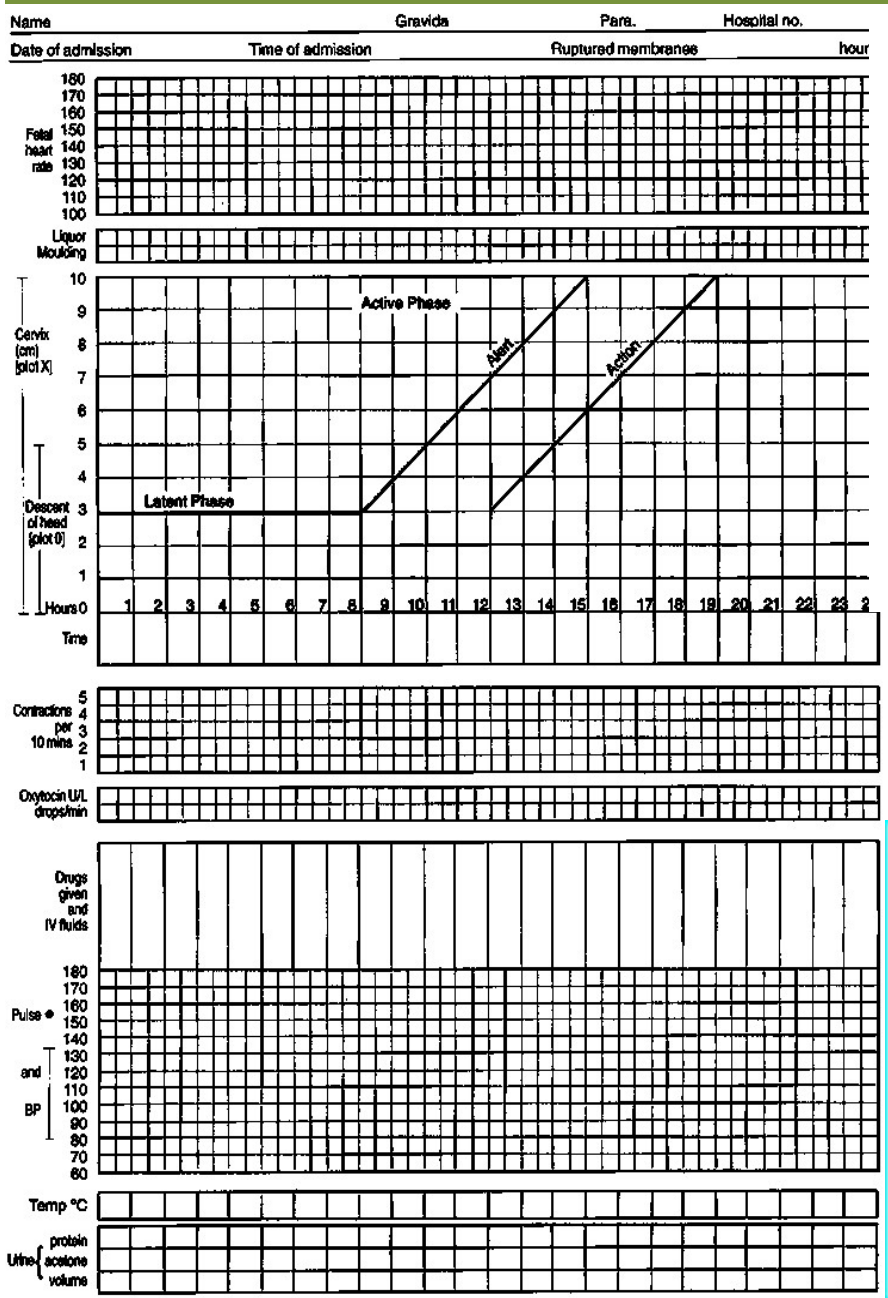
Cervical dilatation and descent of the head

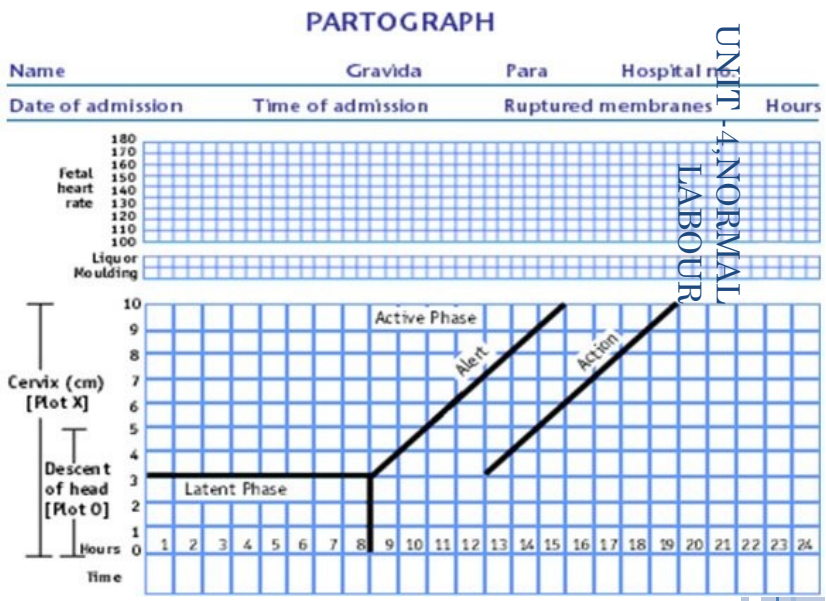
Time-recorded at hourly interval

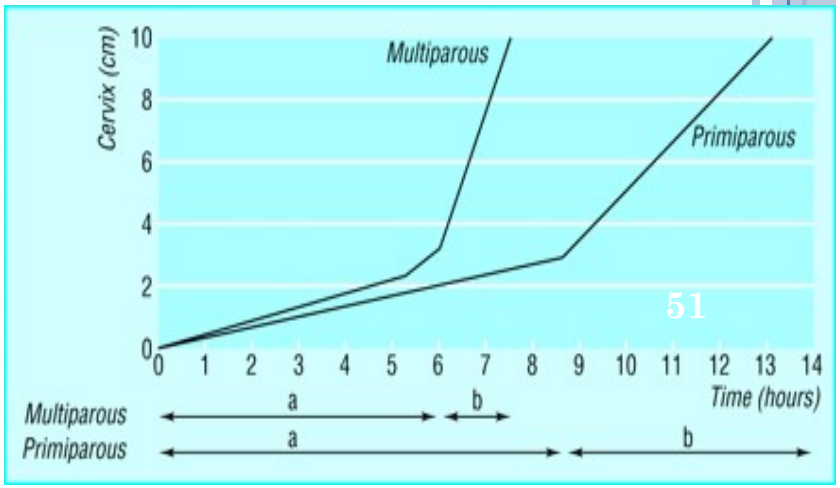
Drugs and fluids

Oxytocin

FIRST STAGE OF LABOUR…



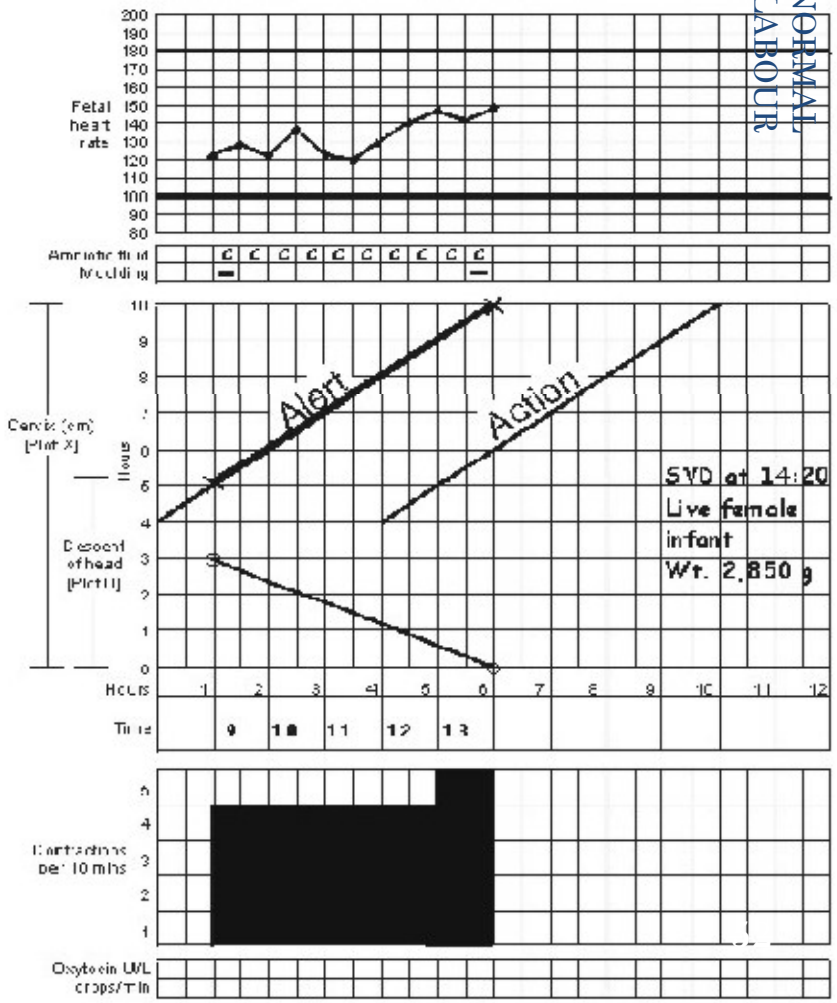


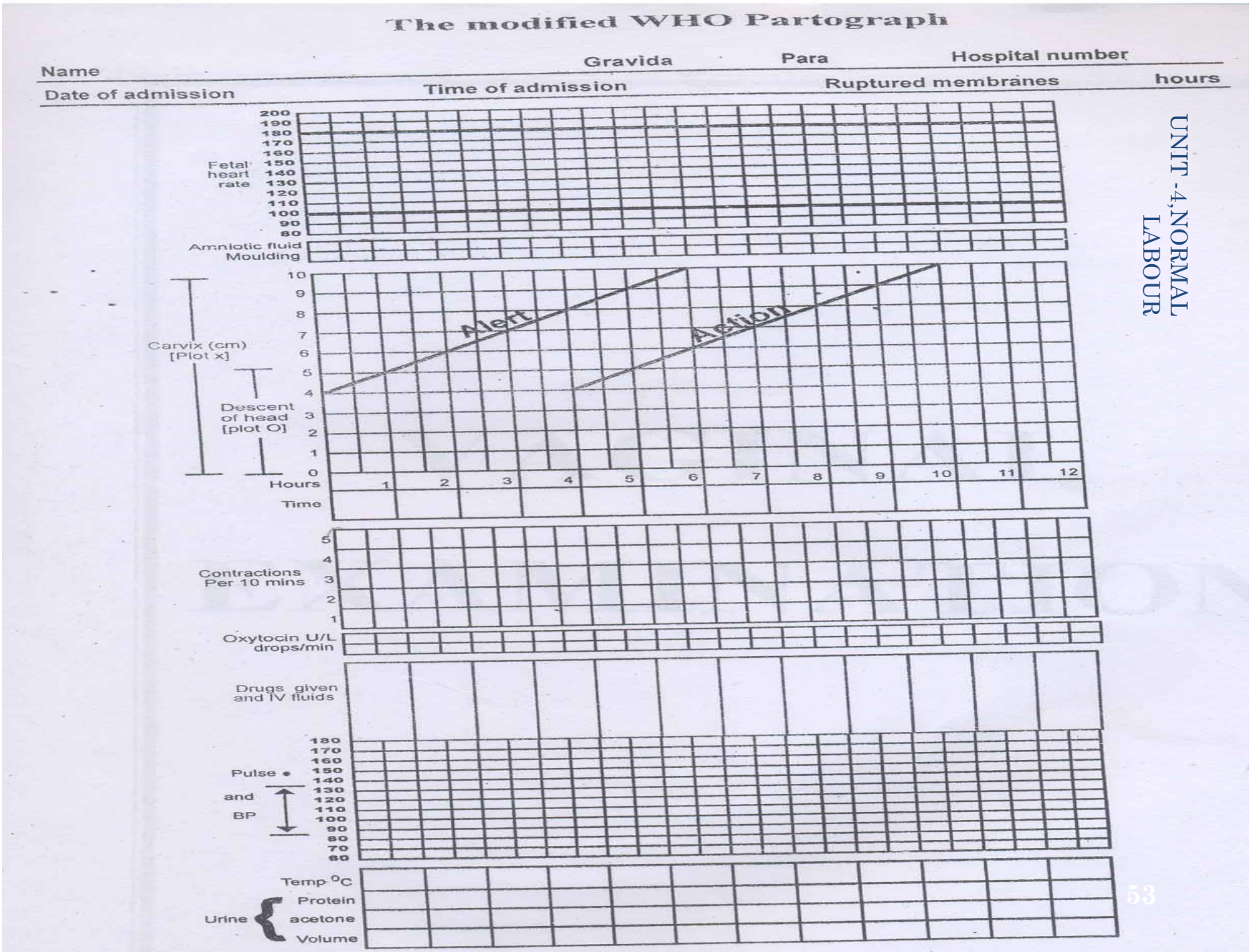


FIRST STAGE OF LABOUR…

Partograph and Criteria for Active Labor

- Label with patient identifying information
- Note fetal heart rate, color of amniotic fluid, presence of moulding, contraction pattern, medications given
- Plot cervical dilation
- Alert line starts at 4 cm-- from here, expect to dilate at rate of 1 cm/hour
- Action line: If patient does not progress as above, action is required





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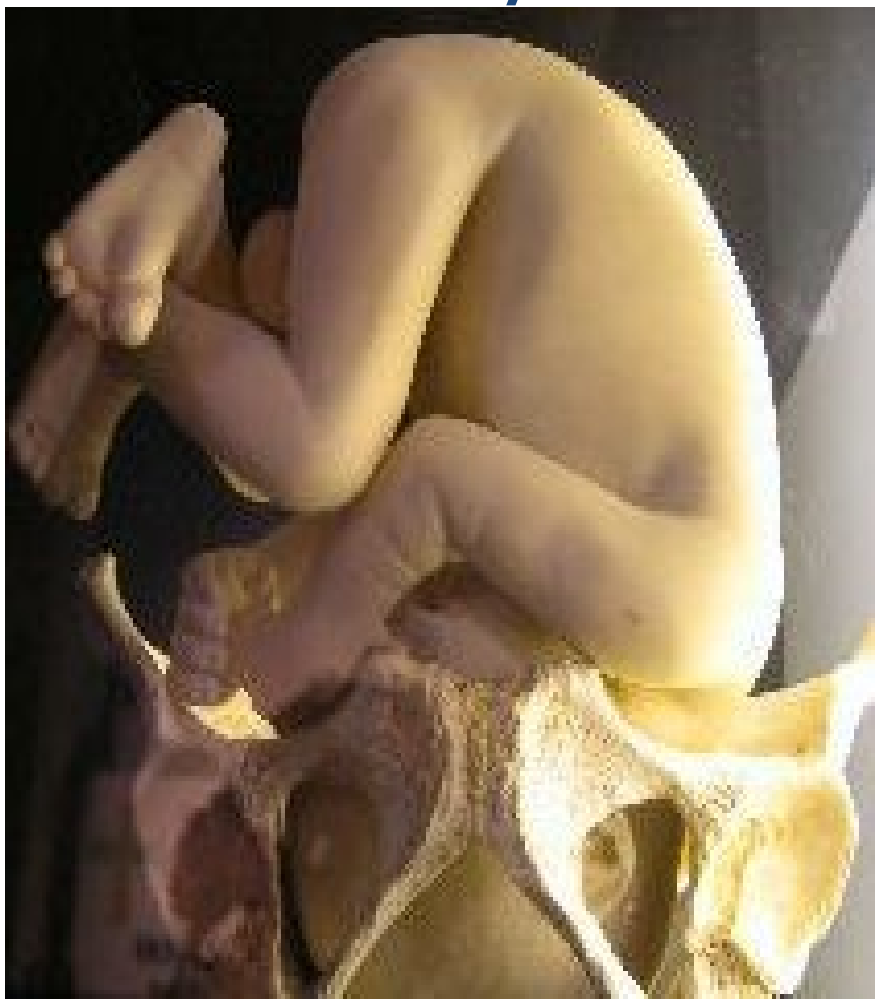
FIRST STAGE OF LABOUR…

NURSES ROLE

- ✓Risk For Infection
- ✓Risk for Fluid volume deficit
- ✓Pain
- ✓Nausea
- ✓Anxiety
- ✓Ineffective Breathing pattern
- ✓Ineffective coping

SECOND STAGE OF LABOUR / PUSHING STAGE / PELVIC STAGE



SECOND STAGE OF LABOUR

Definition:-

It is begins with the complete dilatation & Effacement of cervix and ends with expulsion of fetus.

Stage mainly concern with the decent and delivery of fetus through the birth canal.

DURATION :

Primi gravida	-	2 hours.
Multi gravida	-	30 minutes.

Phases-

- ✓ **Propulsive**
- ✓ **Expulsive**

RECOGNITION OF COMMENCEMENT OF II STAGE OF LABOUR

- Expulsive uterine contraction
- Rupture of the fore waters
- Dilatation and gaping of anus
- Appearance of present part
- Congestion of the vulva
- Show

SECOND STAGE OF LABOUR…

CLINICAL COURSE:

- PAIN
- BEARING DOWN EFFORTS
- MEMBRANE STATUS
- DESCENT OF THE FETUS
- MATERNAL SIGNS
- FETAL EFFECT

PHYSIOLOGY OF SECOND STAGE

- DESCEND
- UTERINE ACTION
- RUPTURE OF MEMBRANES
- SOFT TISSUE DISPLACEMENT

I Uterine action

- Contraction becomes stronger, longer but less frequent.
- Membranes rupture spontaneously.
- Consequent drainage of liquor allows the hard, round fetal head to be directly applied to the vaginal tissues and aid distension.
- Fetal axis pressure increasing the flexion of the head which results in smaller presenting diameter ,more rapid progress and less trauma to both mother and fetus.
- Expulsive contraction.
- Compulsive contraction
- Involuntary uterine contraction.

II Soft tissue displacement :

- As the hard fetal head descend, the soft tissue of the pelvis become displace.
- Anteriorly the bladder is pushed upwards into the abdomen which cause stretching and thinning of the urethra.
- Posterioly the rectum becomes flattened into the sacral curve and the pressure of the advancing head expels any residual faecal matter.
- Laterly the Levator ani Muscles dilate and thins out and perineal body is flattened ,displaced ,stretched and thinned.

SECOND STAGE OF LABOUR…

MANAGEMENT :

Principles:

- To assist natural expulsion of fetus
- To prevent the perineal injuries

Second stage evidence as follows:

- ✓Increase intensity of uterine contraction
- ✓Appearance of bearing down efforts
- ✓Urge to defecate with decent of the presenting part
- ✓Complete dilatation of the cervix as evidenced on vaginal examination.

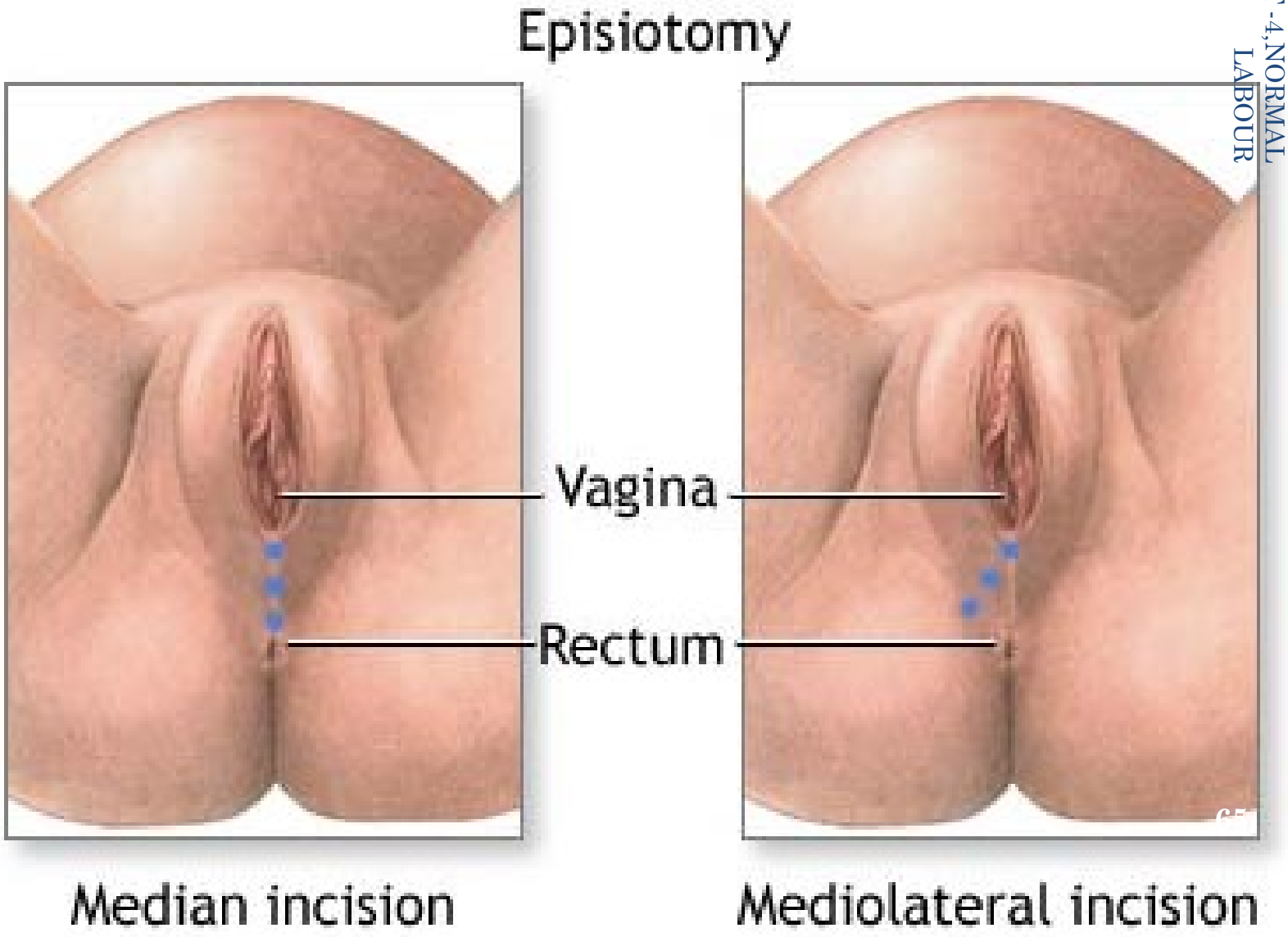
SECOND STAGE OF LABOUR…

- General
- Preparation
- Relief of pain
- Conduction Of Delivery
- Prevention of Perineal Laceration
- Immediate Care OF New Born

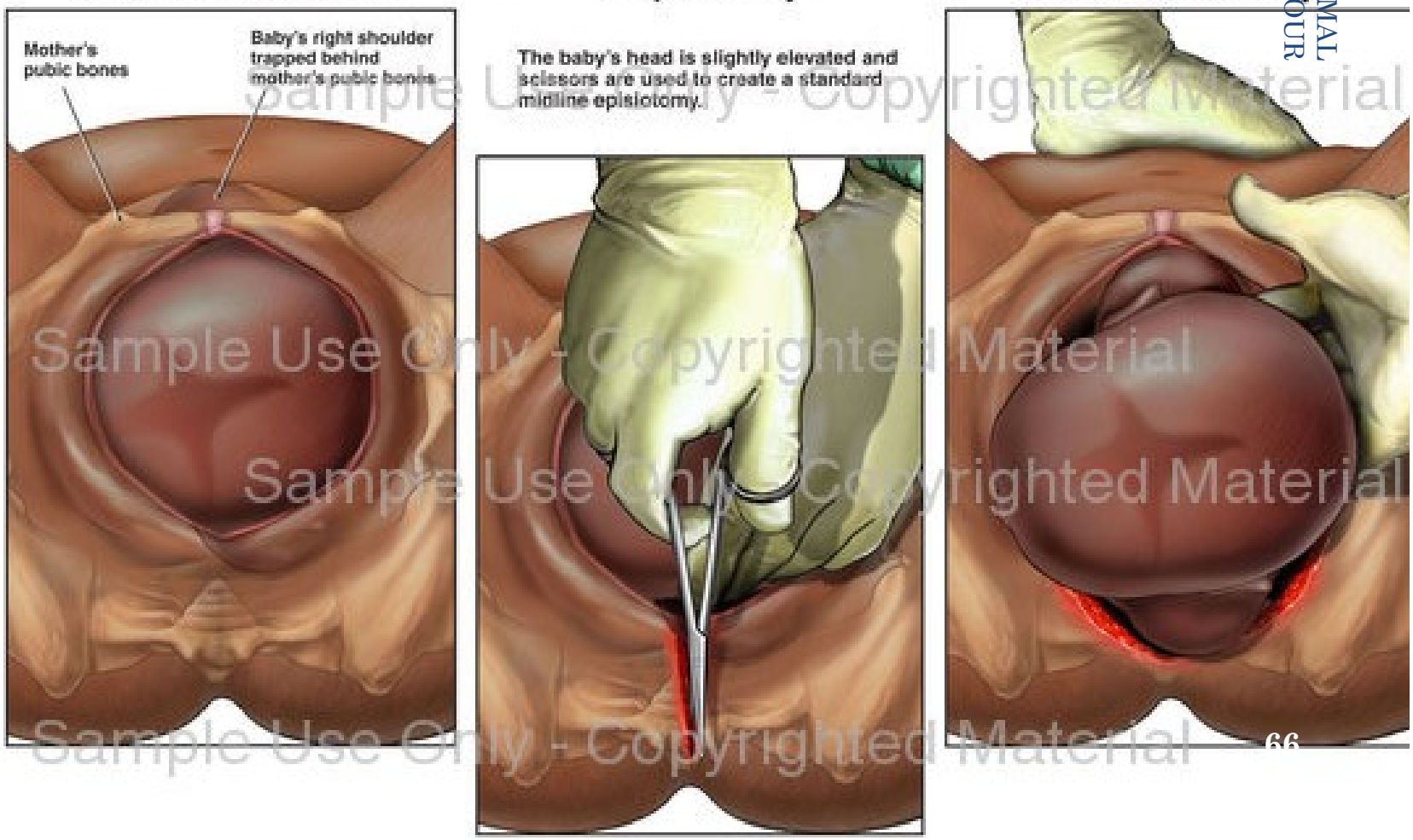
General Management-

- **Check for level of pain relief and supplement if required.**
- **Ensure midwife/doctor is present at all times to encourage pushing during contractions and relaxing in between.**
- **Monitor contractions and FHR – measure every 5 minutes - should be 120-160 bpm. If <100 bpm for >2 min then investigate possible causes.**
- **If this stage is >2–3 hours then instrumental delivery should be considered.**
- **There is debate about the optimal method to use during the second stage:**
  - **'Hands on' - where pressure is placed on the baby's head and the perineum supported**
  - **'Hands poised' - where these maneuvers are not carried out. The 'hands poised' method may reduce episiotomy rates but more trials are needed to decide the issue.**
- **Position during 2nd stage of labour:**
  - **As no good evidence currently exists to dictate optimal position for labour, women should be encouraged to adopt the position that they find most comfortable.**

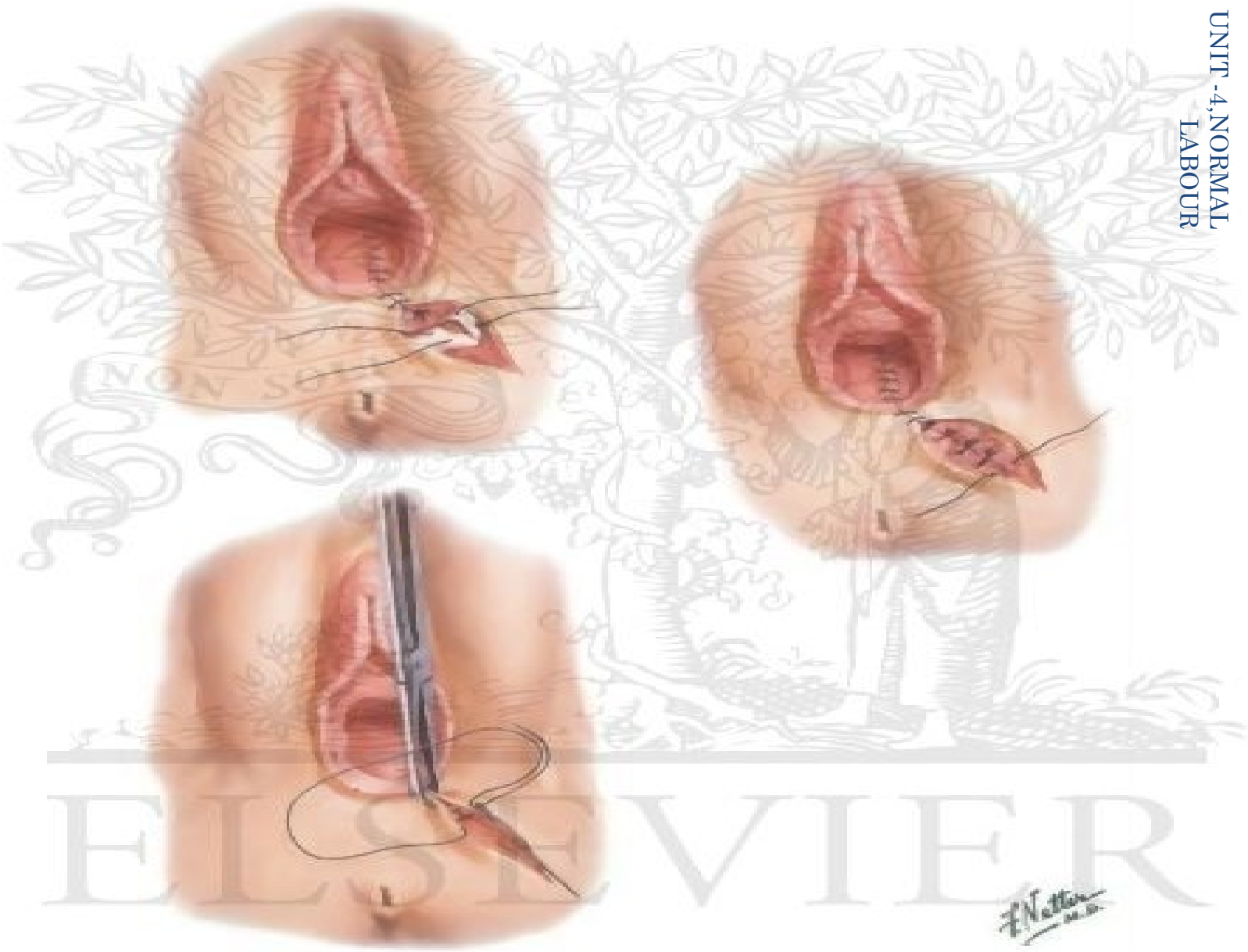
SECOND STAGE OF LABOUR…



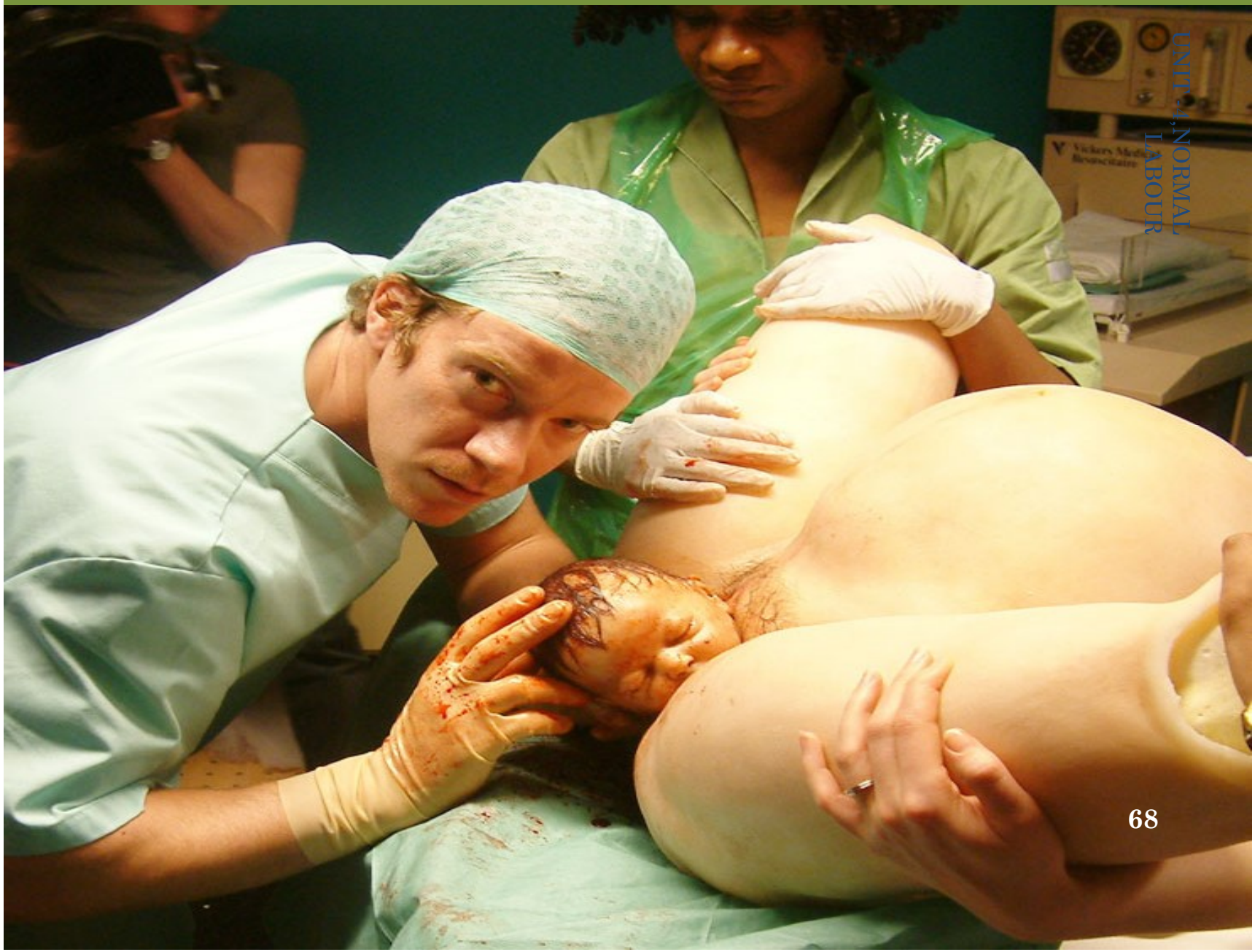
SECOND STAGE OF LABOUR…



SECOND STAGE OF LABOUR…



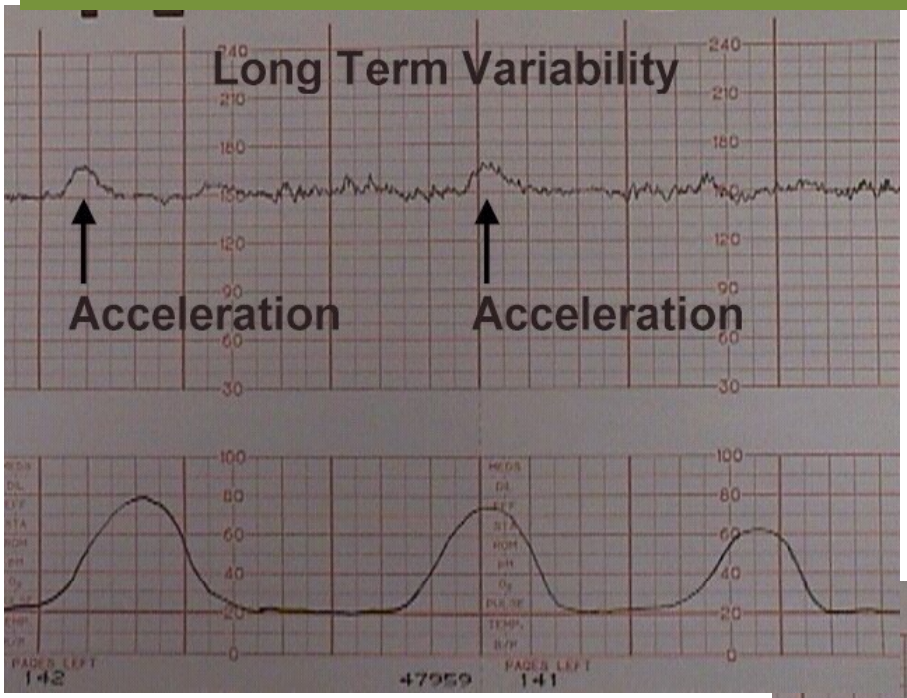
SECOND STAGE OF LABOUR…

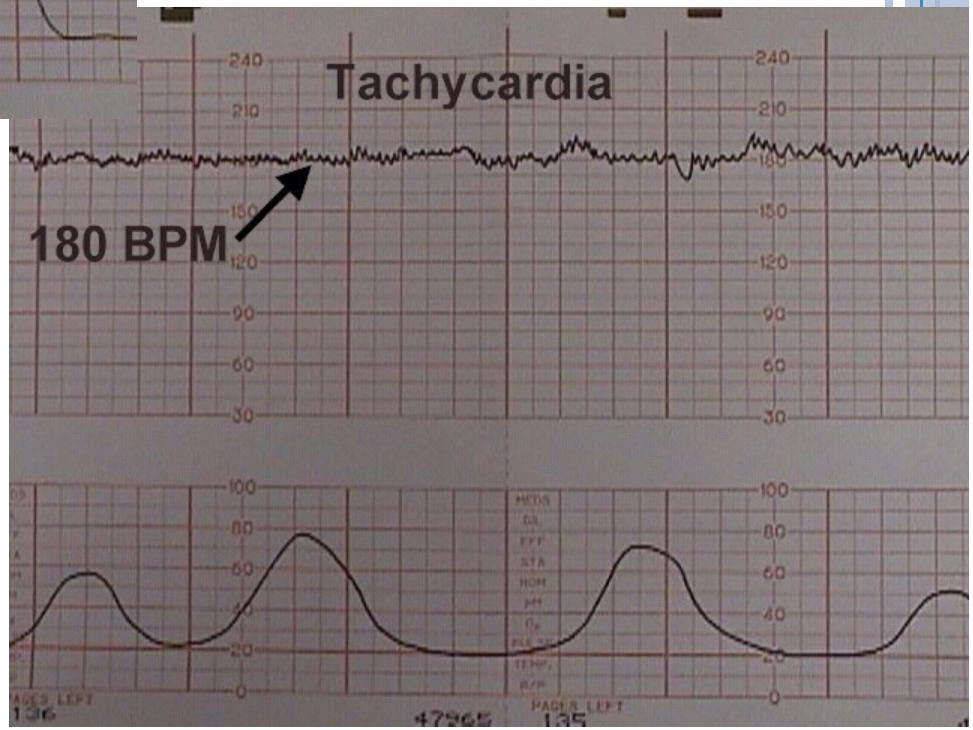


SECOND STAGE OF LABOUR…

FETAL MONITORING

SECOND STAGE OF LABOUR…





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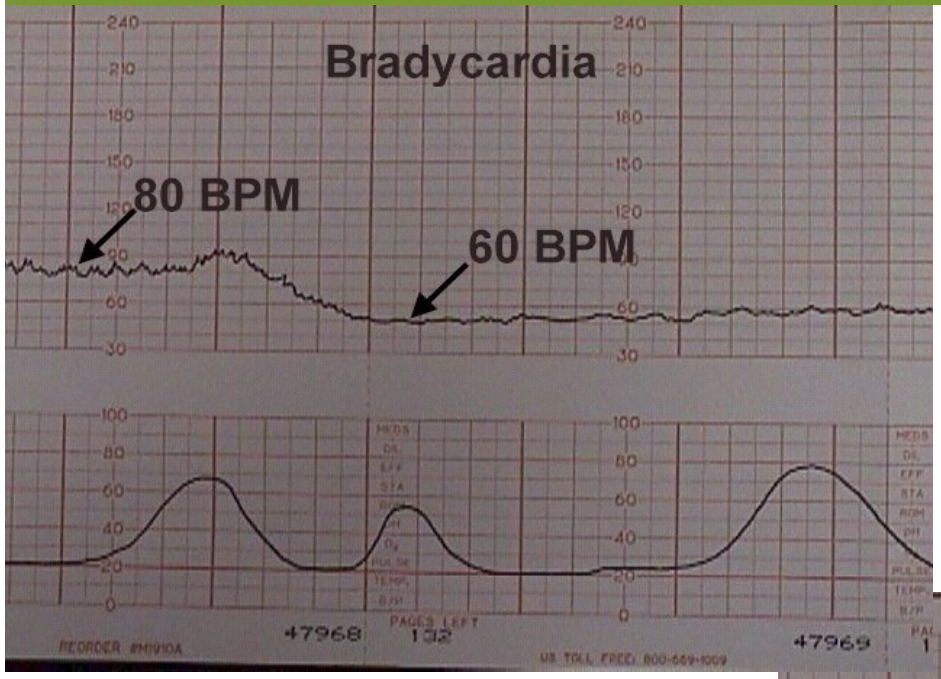

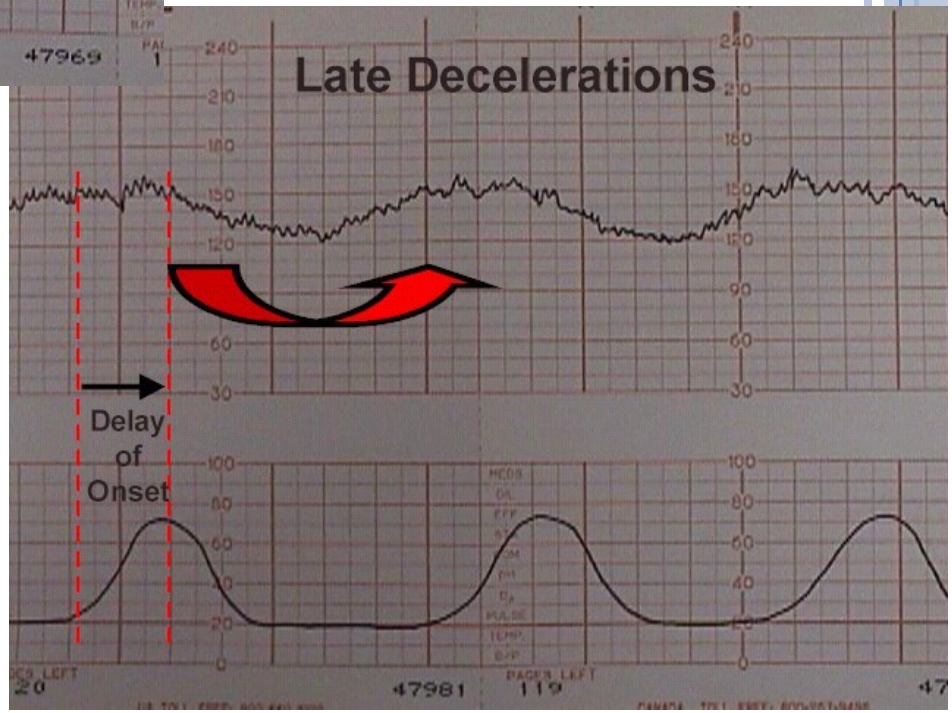

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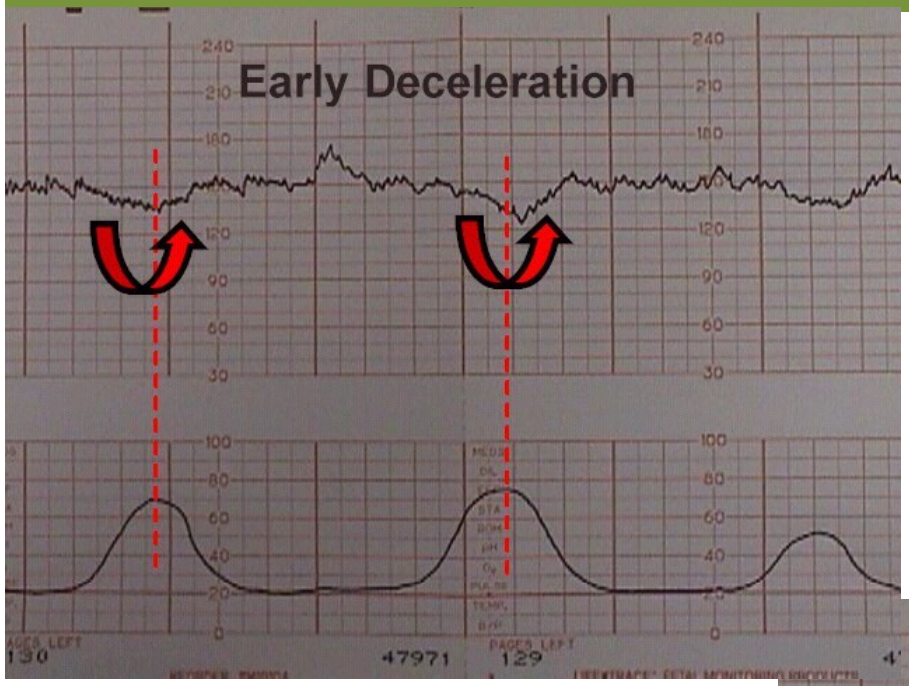

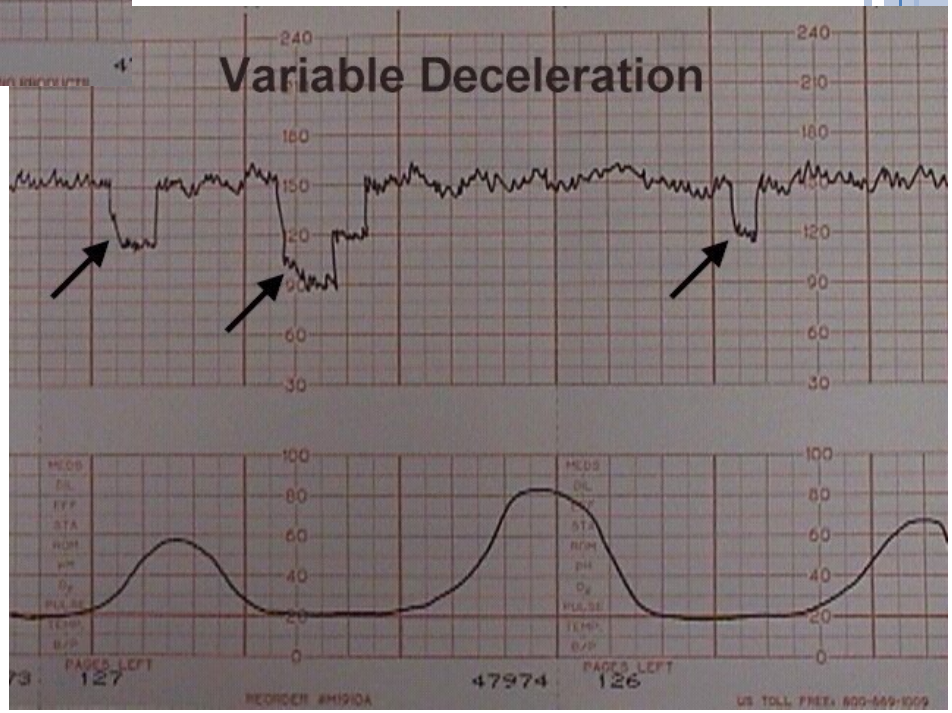

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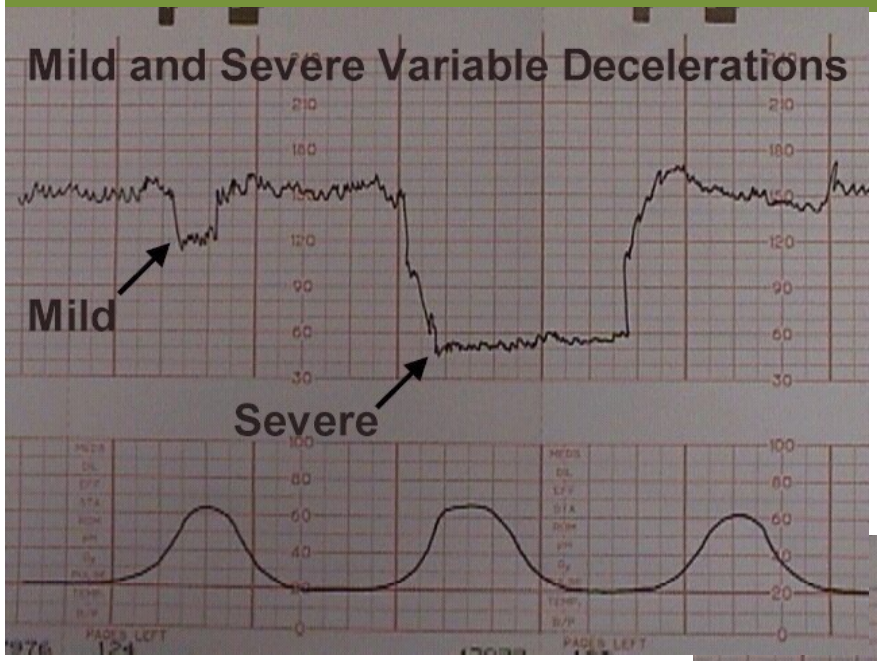

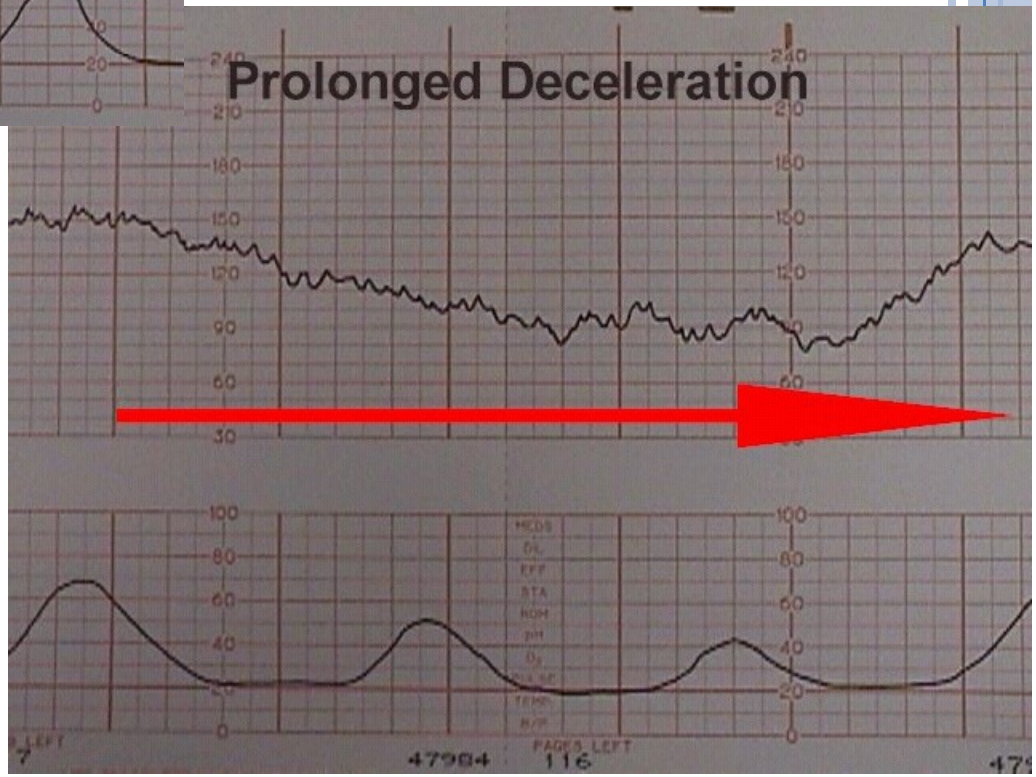

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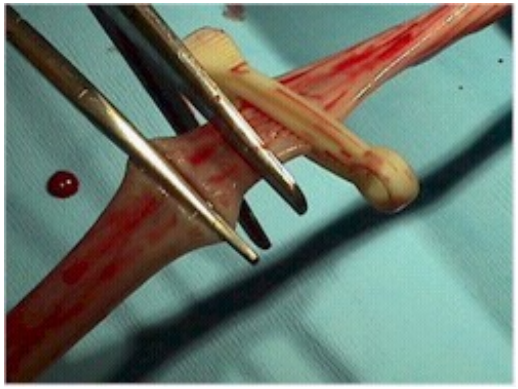
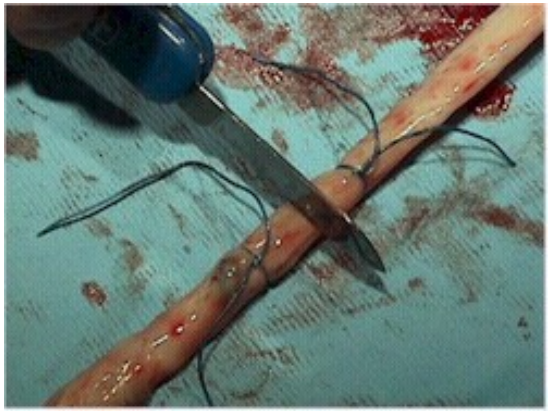
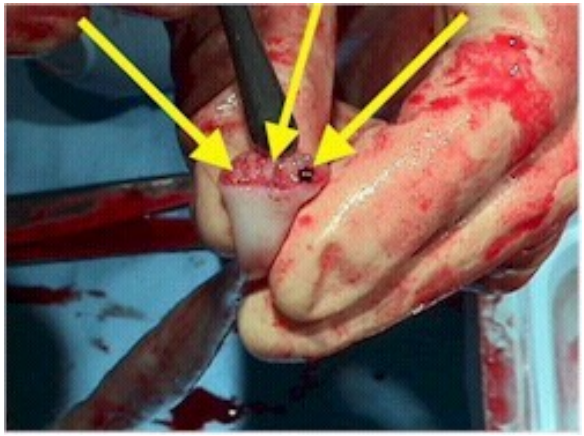
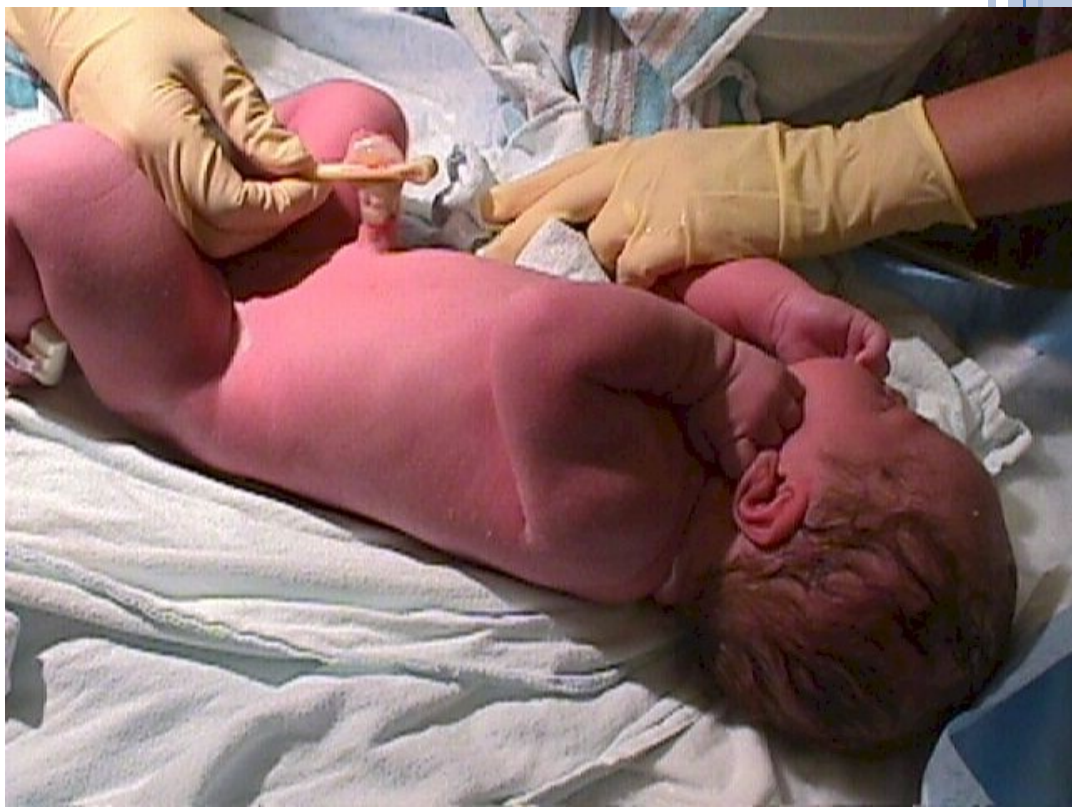






CARE OF UMBILICAL CORD



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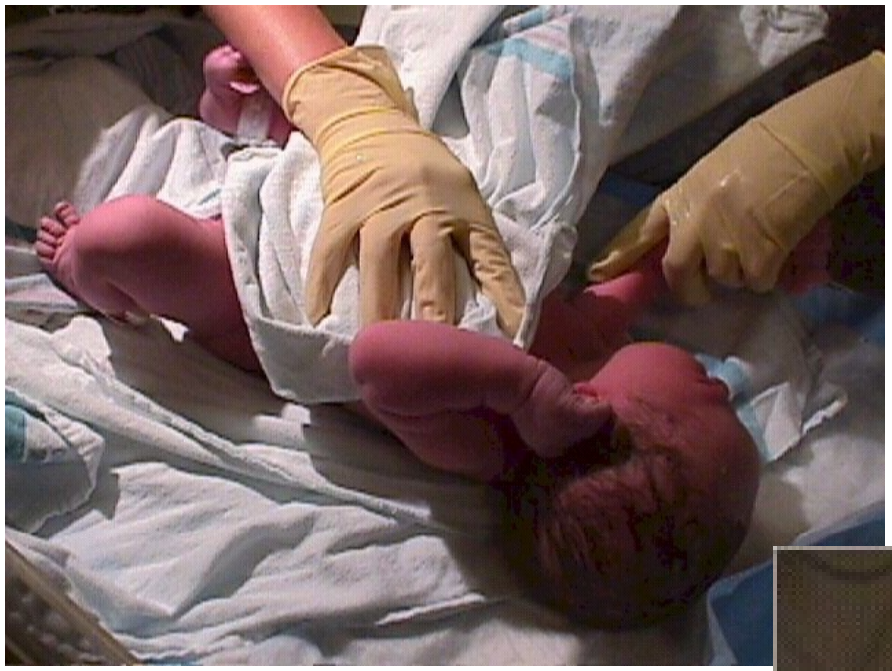
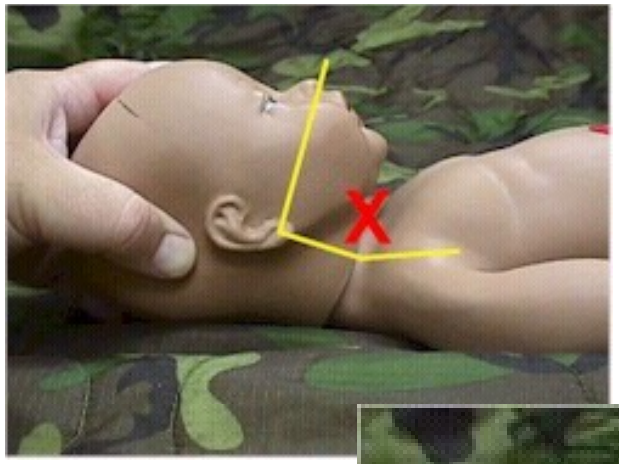
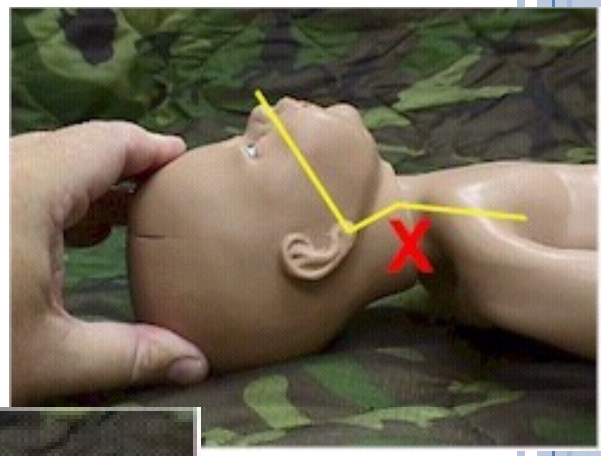


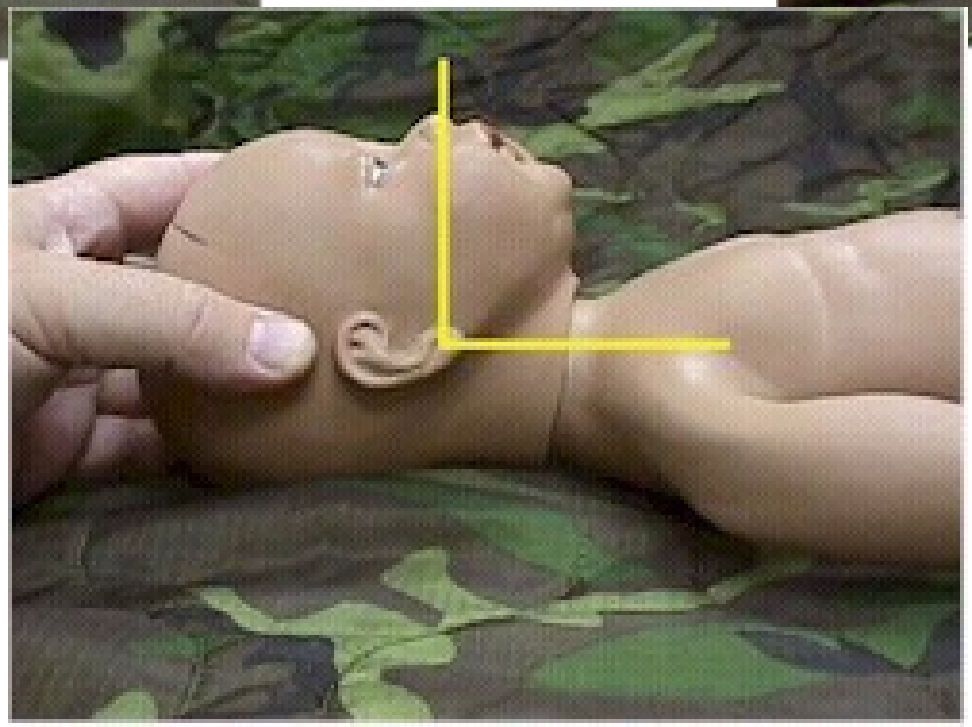
DRY THE BABY

SECOND STAGE OF LABOUR…

Position



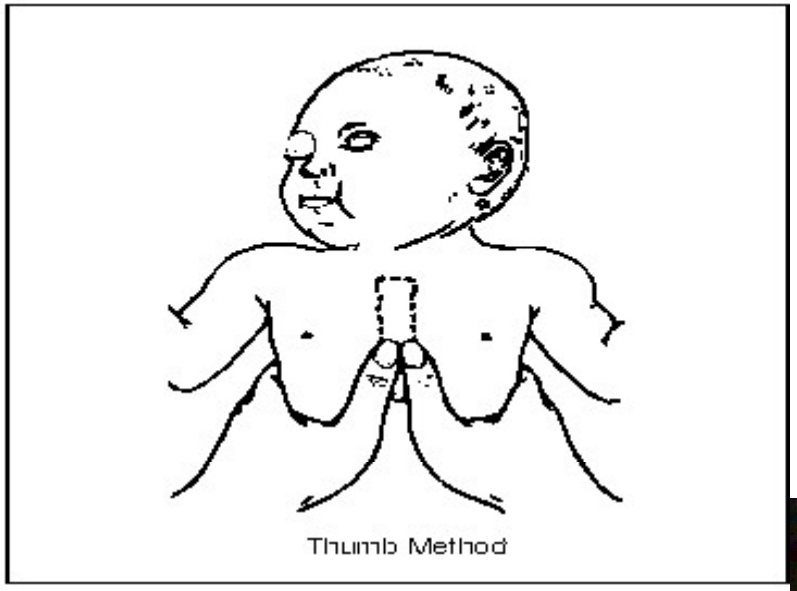


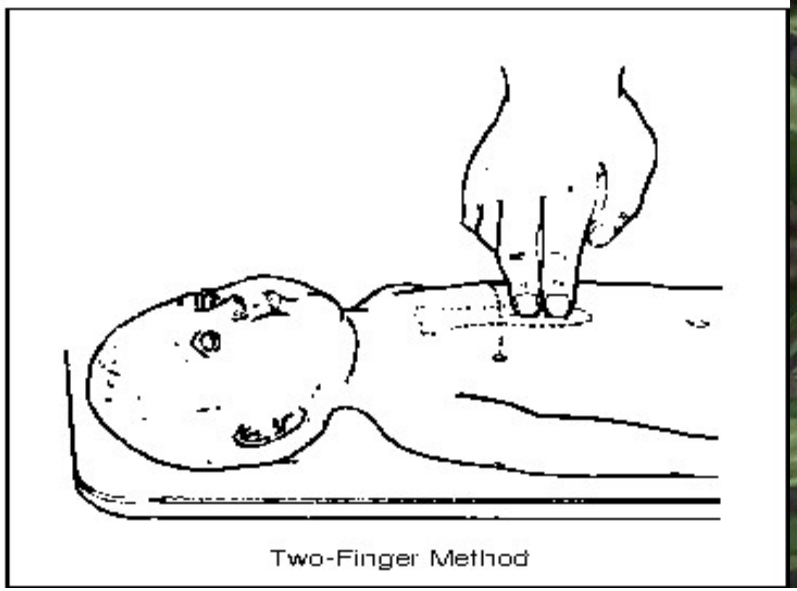


SECOND STAGE OF LABOUR…

SUCTION

SECOND STAGE OF LABOUR…





N.C.P.R.

SECOND STAGE OF LABOUR…

NURSES ROLE

- ✓Risk For Infection
- ✓Risk for maternal injury
- ✓Risk for Fluid volume deficit
- ✓Pain
- ✓Fatigue
- ✓Anxiety
- ✓Ineffective Breathing pattern
- ✓Ineffective coping

THIRD STAGE OF LABOUR

EVENTS:

Stage of Placental Separation
Lasts about 5-15 minutes and normally not exceed 30 minutes.

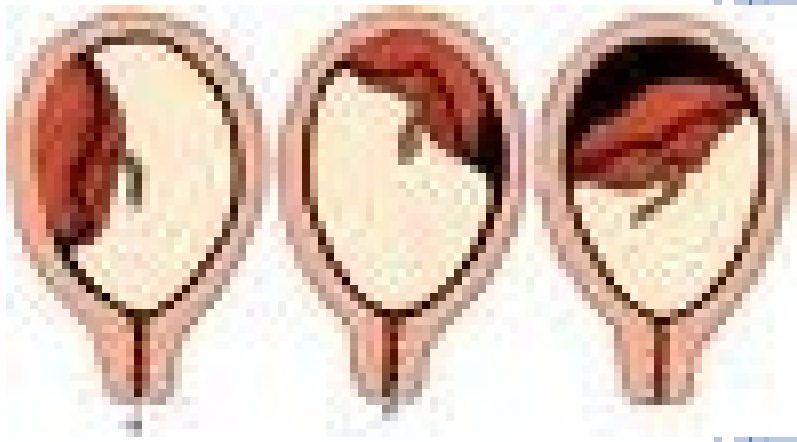
Signs of placental separation are –

I. The uterine body becomes firm and globular with the fundus rise up to the level of the umbilicus.
2. The umbilical cord lengthens outside the vagina.
3. A fresh show of blood from vagina.
4. The umbilical cord does not recede when the uterus is elevated.

THIRD STAGE OF LABOUR…

Mechanism Separation of Placenta:

- ✓ **Central [Schultze]**
- ✓ **Marginal [Mathews-Duncan]**

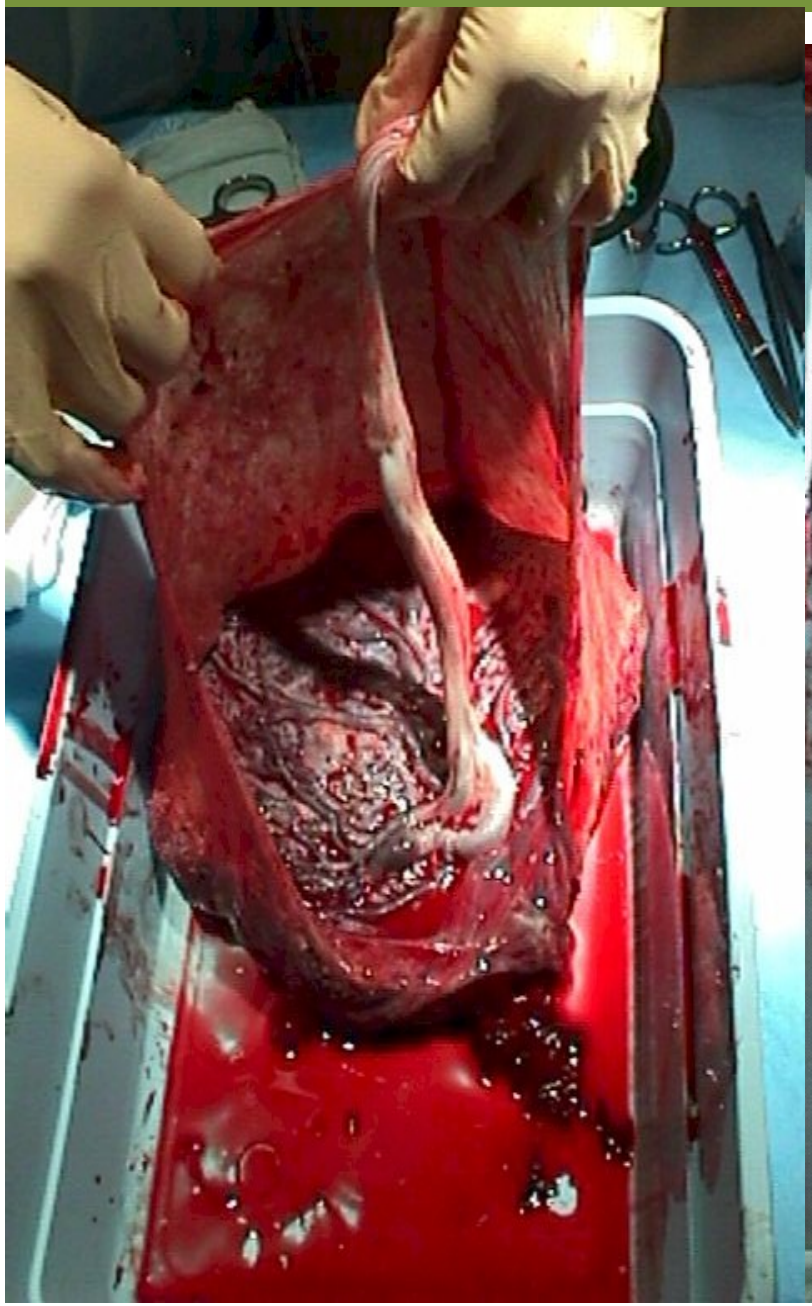


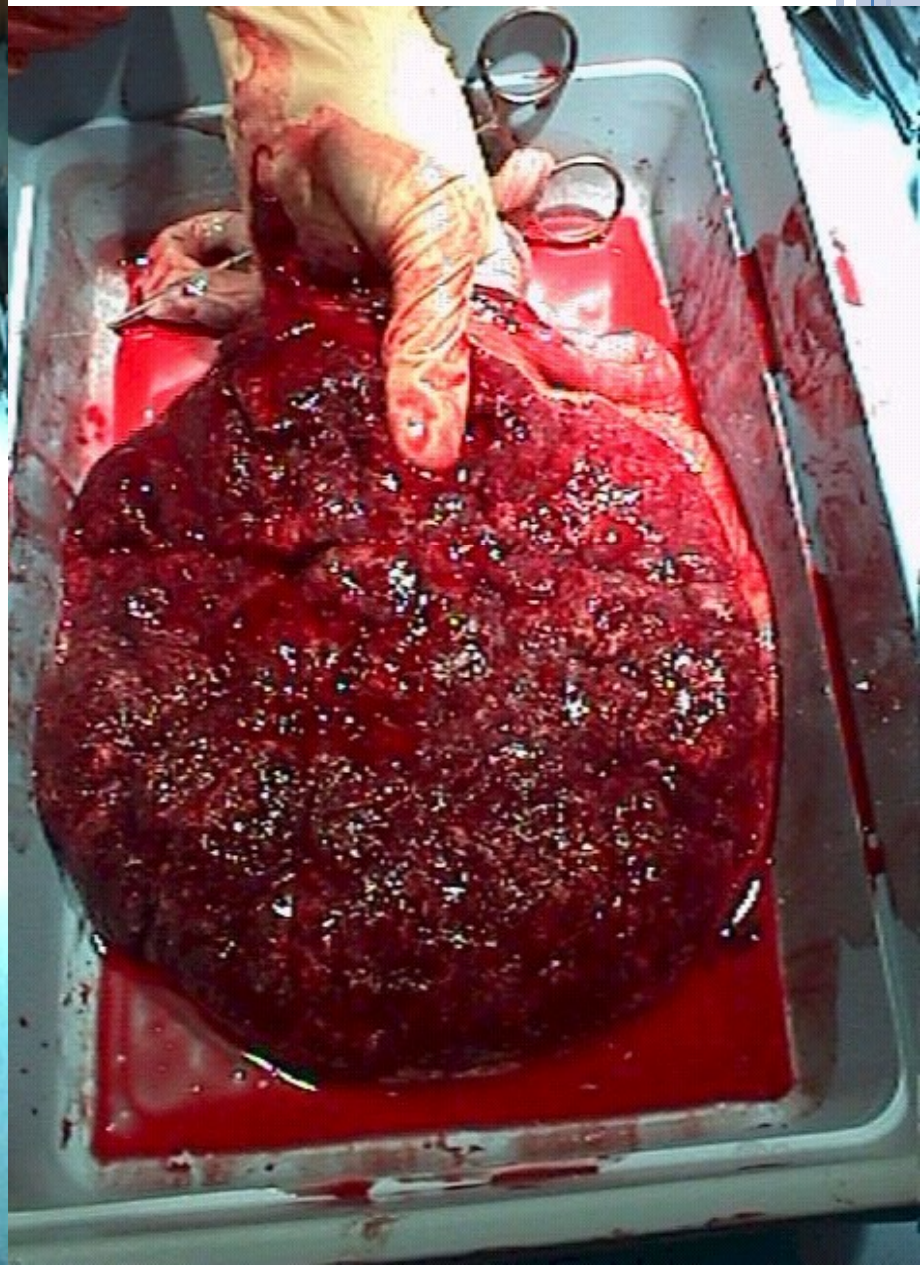
Separation of Membrane

Expulsion of Placenta

Mechanism of Control of Bleeding

THIRD STAGE OF LABOUR…





THIRD STAGE OF LABOUR…

CLINICAL COURSE:

Stage includes separation, descent, and expusion of placenta with membrane

PAIN

BEFORE SEPARATION

EXPULSION OF PLACENTA & MEMBRANE

MATERNAL SIGN

THIRD STAGE OF LABOUR…

MANAGEMENT :

Principles:

- To ensure strict vigilance
- To follow the management guideline strictly in practice

Steps as follows:

✓Expectant Management

✓Active Management

THIRD STAGE OF LABOUR…

Expectant Management

Delivery of Baby

↓

Clamp & Divide the Cord

↓

Wait & Watch

↓

Placenta Separated

↓

Wait for Spontaneous Exp.

↓

Fails

↓

Assisted Expulsion

Active Management

Inj. Oxytocin/Methargin

↓

Clamp& Divide the cord

↓

Controlled traction

↓

Fails

↓

Repeat (2-3min.)

↓

Fails

↓

Wait for 10min. & Repeat

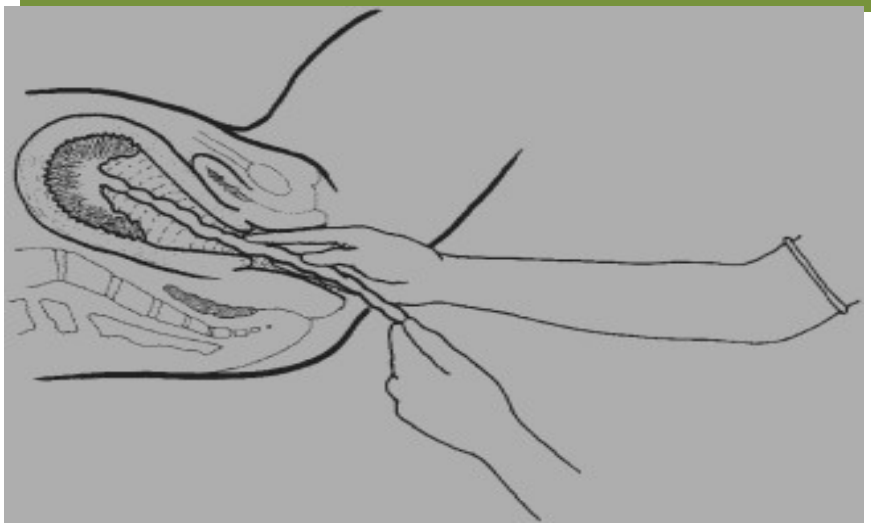
↓

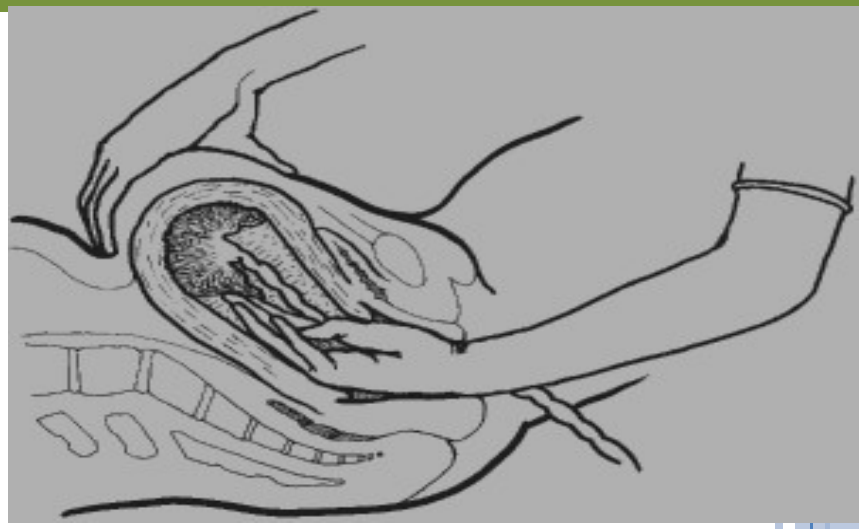
Fails

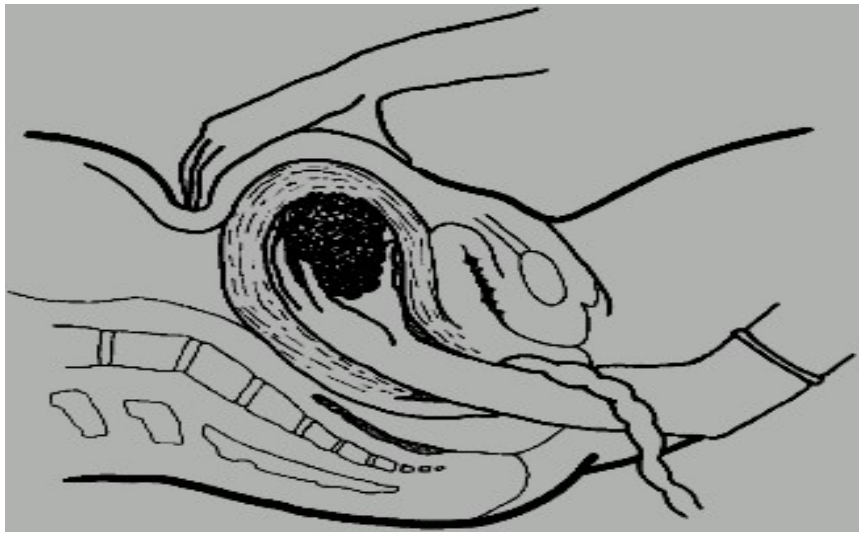
↓

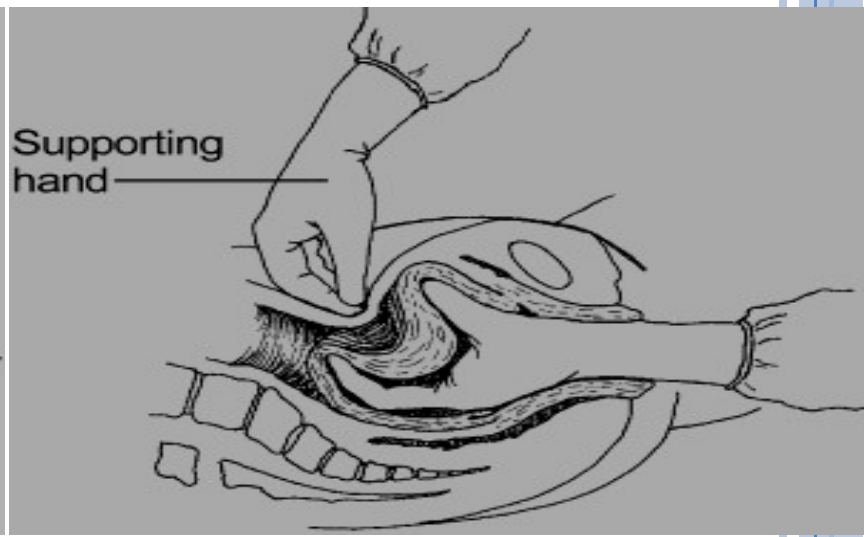
Manual Removal

THIRD STAGE OF LABOUR…









THIRD STAGE OF LABOUR…

NURSES ROLE

- ✓Risk For Infection
- ✓Risk for maternal injury
- ✓Risk for Fluid volume deficit
- ✓Risk for hemorrhage
- ✓Risk for impaired parent infant attachment
- ✓Pain
- ✓Anxiety

FOURTH STAGE OF LABOUR

EVENTS:

Stage of Recovery
Start at placental delivery
Lasts about 1-4 Hrs.

CLIENT ASSESSMENT

- Activity/Rest
- Circulation
- Ego Integrity
- Elimination
- Flood/Fluid
- Neurosensory
- Pain/Discomfort
- Safety
- Sexuality
- Social Interaction

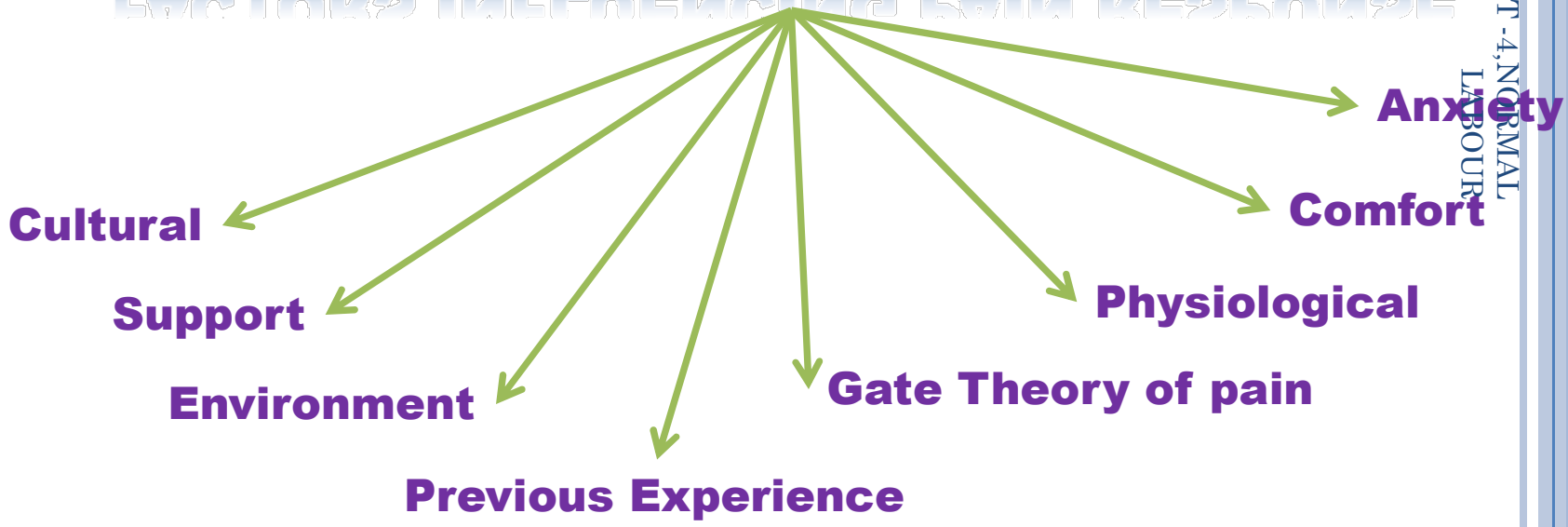
FOURTH STAGE OF LABOUR

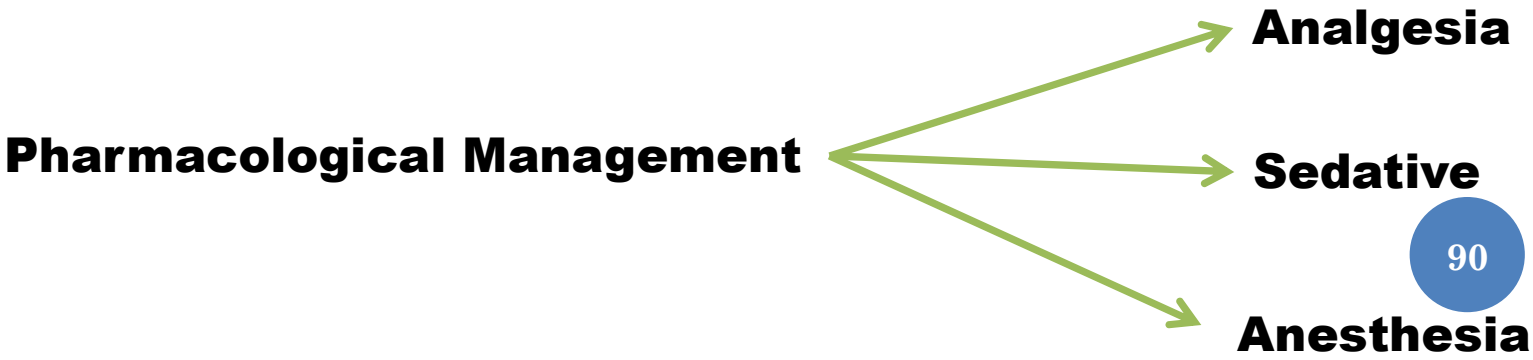
NURSES ROLE

Overall monitoring for the mother and child

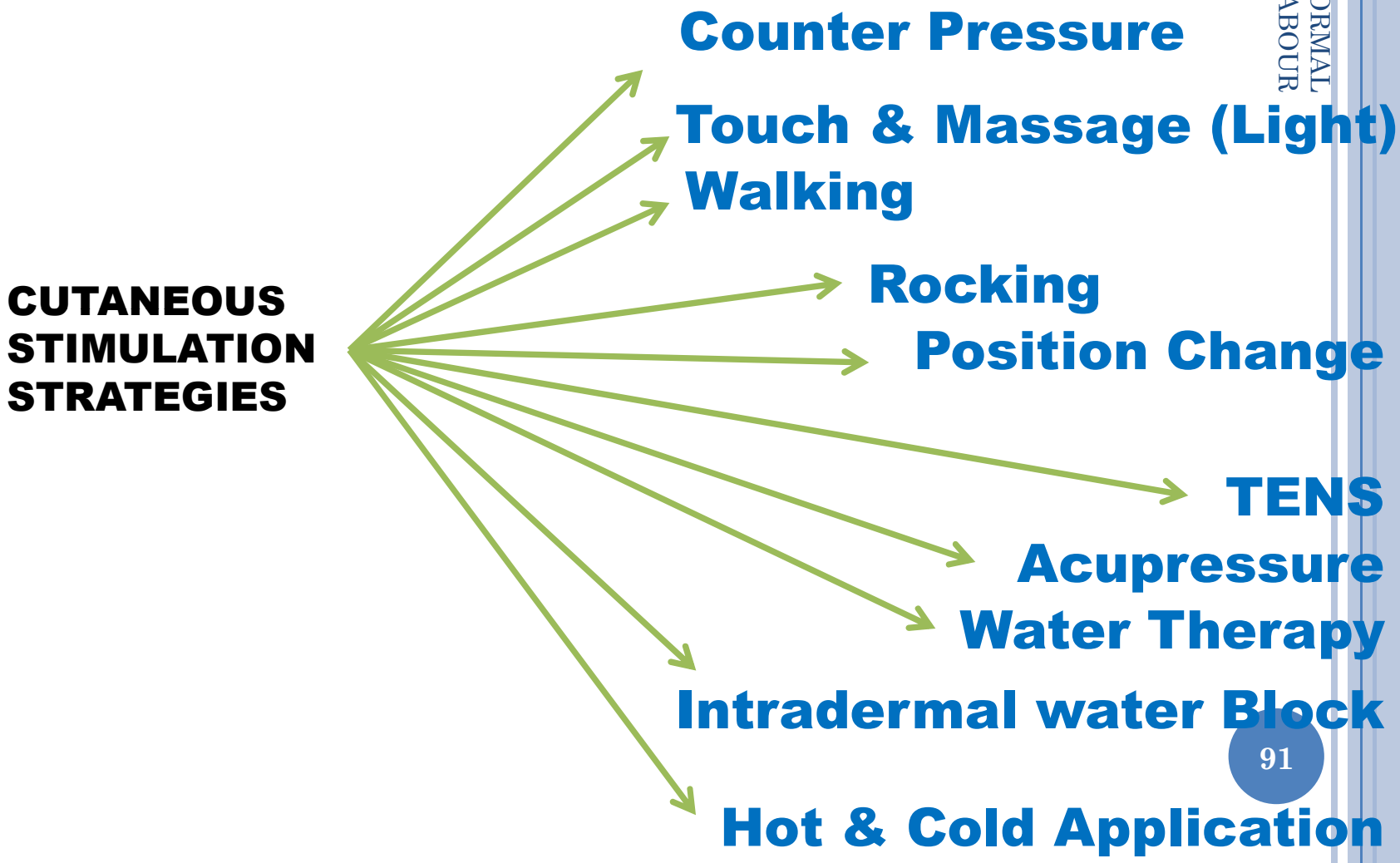
MANAGEMENT OF DISCOMFORT

FACTORS INFLUENCING PAIN RESPONSE

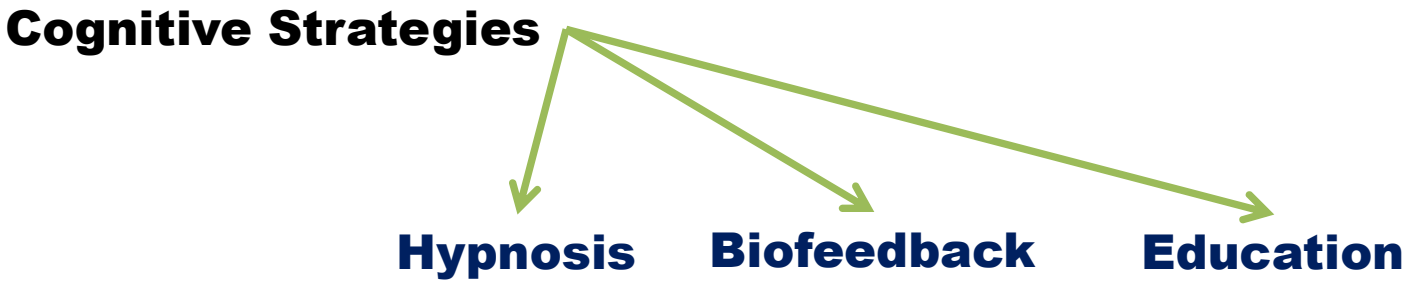




Non- Pharmacological Management




Sensory Stimulation Strategies
Music Therapy
Aroma Therapy
Breathing Technique


Cognitive Strategies
Hypnosis
Biofeedback
Education

Nursing Management

CONCLUSION

DISCUSSION

Different type of Alternative & Complimentary Therapy & its Application

Thank you...