MOTHER BABY

ABBREVIATIONS

IUP/IUFD ..... Intrauterine pregnancy / intrauterine fetal demise
SAB ..... Spontaneous abortion
TAB ..... Therapeutic abortion
LMP ..... Last menstrual period
ROM ..... Rupture of membranes
SROM ..... Spontaneous rupture of membranes
AROM ..... Artificial rupture of membranes
PROM ..... Prolonged rupture of membranes (>24 hours)
PPROM ..... Preterm premature rupture of membranes
SVD ..... Spontaneous vaginal delivery
FHR ..... Fetal heart rate
EFM ..... Electronic fetal monitoring
US ..... Ultrasound transducer (detects FHR)
FSE ..... Fetal scalp electrode (precise reading of FHR)
IUPC ..... Intrauterine pressure catheter (strength of contractions)
LTV ..... Long term variability
SVE ..... Sterile vaginal exam
MLE ..... Midline episiotomy
NST ..... Non-stress test
CST ..... Contraction stress test
BPP ..... Biophysical profile
VBAC ..... Vaginal birth after cesarean
AFI ..... Amniotic fluid index
BUFA ..... Baby up for adoption
NPNC ..... No prenatal care
PTL ..... Preterm labor
BOA ..... Born on arrival
BTL ..... Bilateral tubal ligation
D&C / D&E ... Dilation & curettage / dilation & evacuation
LPNC ..... Late prenatal care
TIUP ..... Term intrauterine pregnancy
VMI / VFI ..... Viable male infant / viable female infant
EDB ..... Estimated date of birth
EDC ..... Estimated date of confinement
EDD ..... Estimated date of delivery

PREGNANCY DURATION

40 weeks gestational age

The number of completed weeks counting from the 1st day of the last normal menstrual cycle (LMP).

38 weeks fetal age

This refers to the age of the developing baby, counting from the estimated date of conception. The fetal age is usually 2 weeks less than the gestational age.

TRIMESTERS

First Trimester →	0 – 13 WEEKS
Second Trimester →	14 – 26 WEEKS
Third Trimester →	27 – 40 WEEKS

PRENATAL TERMS

Gravida / Gravidity

A woman who is pregnant / the number of pregnancies

Nulligravida	Primigravida	Multigravida
Never been pregnant	Pregnant for the first time	A woman who has had 2+ pregnancies

Parity

The number of pregnancies that have reach viability (20 weeks of gestation) whether the fetus was born alive or not

Nullipara	Primipara	Multipara
0 Zero pregnancies beyond viability (20 weeks)	1 One pregnancy that has reached viability (20 weeks)	2+ Two or more pregnancies that have reached viability (20 weeks)

Preterm

Pregnancies that have reached 20 weeks but ended before 37 weeks

Term

Pregnancies that have lasted between week 37 and week 42

Early Term: 37 – 38 6/7
Full Term: 39 – 40 6/7
Late Term: 41 – 41 6/7

Postdate/Postterm

A pregnancy that goes beyond 42 weeks

GTPAL

An acronym used to assess pregnancy outcomes

G — GRAVIDITY →

The number of pregnancies
- Includes the present pregnancy
- Includes miscarriages / abortions
- Twins / triplets count as one

T — TERM BIRTHS →

The number born at term
- > 37th week of gestation
- Includes alive or stillborn
- Twins / triplets count as one

P — PRE-TERM BIRTHS →

The number of pregnancies delivered beginning with the 20th - 36 6/7th weeks of gestation
- Includes alive or stillborn
- Twins / triplets count as one

A — ABORTIONS / MISCARRIAGES →

The number of pregnancies delivered before 20 weeks gestation
- Counts with gravidity
- Twins / triplets count as one

L — LIVING CHILDREN →

The number of current living children
- Twin / triplets count individually

ANSWER KEY
Q#1 is (D) 3-2-0-1-2
Q#2 is (C) 4-2-1-0-4

PRACTICE QUESTION 1

You are admitting a client to the mother-baby unit. Two hours ago she delivered a boy on her due date. She gives her obstetric history as follows: she has a three-year-old daughter who was delivered a week past her due date and last year she had a miscarriage at 8 weeks gestation. How would you note this history using the GTPAL system?

A. 2-2-1-0-2
B. 3-2-1-0-1
C. 3-2-1-0-2
D. 3-2-0-1-2

PRACTICE QUESTION 2

A prenatal client's obstetric history indicates that she has been pregnant 3 times previously and that all her children from previous pregnancies are living. One was born at 39 weeks gestation, twins were born at 34 weeks gestation, & another child was born at 38 weeks gestation. She is currently 38 weeks pregnant. What is her gravidity & parity using the GTPAL system?

A. 4-1-3-0-4
B. 4-1-2-0-3
C. 4-2-1-0-4
D. 4-2-2-0-4

PREGNANCY SIGNS & SYMPTOMS

PRESUMPTIVE — SUBJECTIVE

Think "Mom" — These are changes felt by the women that are subjective. Can be associated with other things.

NOT a definite diagnosis for pregnancy!

- **P** Period Absent (Amenorrhea)
- **R** Really tired
- **E** Enlarged breasts
- **S** Sore breasts
- **U** Urination increased (urinary frequency)
- **M** Movement perceived (quickening)
- **E** Emesis & nausea

Why is quickening not a positive sign?

Quickening can be difficult to distinguish from peristalsis or gas so it can not be a positive sign.

PROBABLE — OBJECTIVE

Think "Doctor" — Pregnancy signs that the nurse or doctor can observe

- **P** Positive (+) pregnancy test (high levels of the hormone: hCG)
- **R** Returning of the fetus when uterus is pushed w/ fingers (ballottement)
- **O** Objective
- **B** Braxton hicks contractions
- **A** A softened cervix (Goodell's sign)
- **B** Bluish color of the vulva, vagina, or cervix (Chadwick's sign)
- **L** Lower uterine segment soft (Hegar's sign)
- **E** Enlarged uterus

Why is a positive pregnancy test not a positive sign?

High levels of hCG can be associate with other conditions such as certain medications or hydatidiform mole (molar pregnancy).

POSITIVE — OBJECTIVE

Think "Baby" — Can only be attributed to a fetus

Definite diagnosis for pregnancy!

- **F** Fetal movement palpated by a doctor or nurse
- **E** Electronic device detects heart tones ♥
- **T** The delivery of the baby
- **U** Ultrasound detects baby
- **S** Seeing visible movements

PREGNANCY PHYSIOLOGY

HORMONES

Prolactin: Allows for breast milk production
Estrogen: Growth of fetal organs & maternal tissues
Progesterone & Relaxin: Relaxes smooth muscles
hCG: Produced by placenta, prevents menstruation
Oxytocin: Stimulates contractions at the start of labor

MUSCULOSKELETAL

- **Lordosis**: center of gravity shifts forward leading to inward curve of spine
- Low back pain
- Carpal tunnel syndrome
- Calf cramps

RESPIRATORY

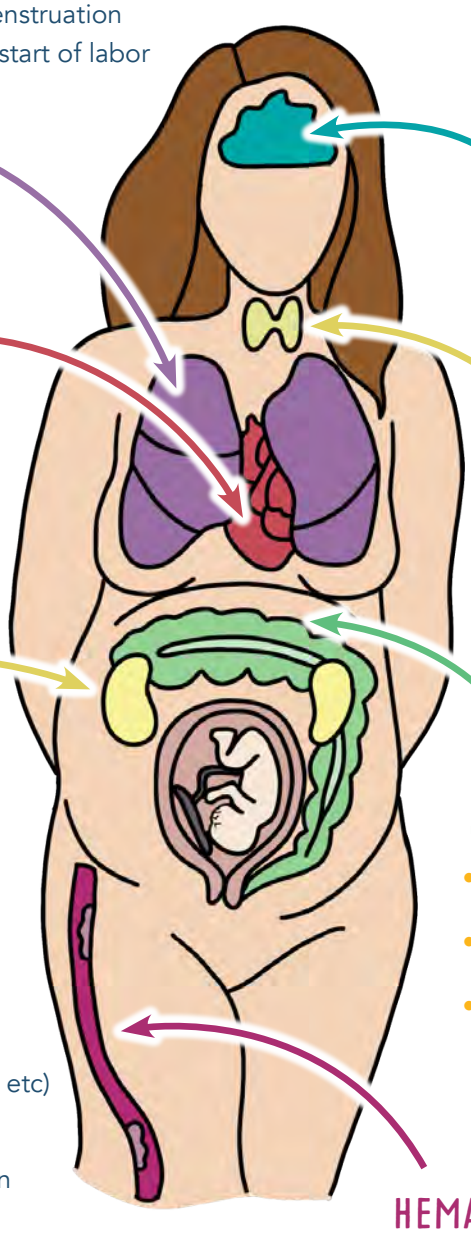
- ↑ Basal metabolic rate (BMR)
- ↑ O2 needs
- Respiratory alkalosis (MILD)

PITUITARY

- ↓ FSH/LH due to ↑ Progesterone
- ↑ Prolactin
- ↑ Oxytocin

CARDIOVASCULAR

- ↑ Cardiac output
  (↑ Heart rate + ↑ stroke volume)
- Blood pressure stays the same or a slight decrease
- ↑ in plasma volume
- ❤ Enlarges
  (May develop systolic murmurs)



THYROID

- ↑ Thyroxine
- May have moderate enlargement of the thyroid gland (goiter)
- ↑ Metabolism & ↑ appetite

RENAL

- ↑ GFR from ↑ plasma volume
- Smooth muscle relaxation of the uterus = ↑ risk of UTI's!
- ↑ Urgency, frequency & nocturia
- EDEMA!!

GASTROINTESTINAL

- **Pyrosis**
  ↑ Progesterone = LOS to relax = ↑ heartburn
- **Constipation & hemorrhoids**
  ↑ Progesterone = ↓ gut motility
- **Pica**
  Non-food cravings such as ice, clay, and laundry starch

SKIN

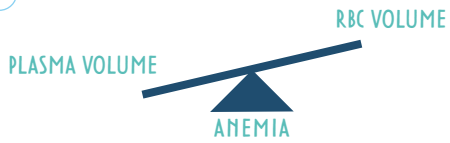
- **Striae**
  Stretch marks (abdomen, breasts, hips, etc)
- **Chloasma**
  Mask of pregnancy
  Brownish hyperpigmentation of the skin
- **Linea Nigra**
  "Pregnancy line" dark line that develops across your belly during pregnancy
- **Montgomery glands / Tubercles**
  Small rough / nodular / pimple-like appearance of the areola (nipple)

HEMATOLOGICAL

FIBRINOGEN
Non-pregnant levels: 200-400 mg/dL
Pregnant levels: up to 600 mg/dL

Pregnant women are **HYPERCOAGULABLE** (increased risk for DVT's)

- ↑ White blood cells
- ↓ Platelets



ANEMIA

Plasma volume is greater than the amount of red blood cell (RBC) = hemodilution = **physiological anemia**

NAEGELE'S RULE

Used for estimating the expected date of delivery (EDD) based on LMP (last menstrual period)

DATE OF LAST MENSTRUAL PERIOD — 3 CALENDAR MONTHS + 7 DAYS + 1 YEAR

REMEMBER:

How many days are in each month?

↓

30 days hath September, April, June & November. All the rest have 31, except February alone (28 days)

EXAMPLE

1st day of last period:	September 2, 2015
Minus 3 calendar months:	June 2, 2015
Plus 7 days:	June 9, 2015
Plus 1 year:	June 9, 2016 (EDD)

FACTS ABOUT NAEGELE'S RULE

- Bases calculation on a woman who has a 28-day cycle (most women vary)
- The typical gestation period is 280 days (40 weeks)
- First-time mothers usually have a slightly longer gestation period

WHAT TO AVOID DURING PREGNANCY

TERATOGENIC DRUGS

REMEMBER THE MNEMONIC!

TERA-TOWAS

- **T** Thalidomide
- **E** Epileptic medications (valproic acid, phenytoin)
- **R** Retinoid (vit A)
- **A** Ace inhibitors, ARBS
- **T** Third element (lithium)
- **O** Oral contraceptives
- **W** Warfarin (coumadin)
- **A** Alcohol
- **S** Sulfonamides & sulfones

TORCH INFECTIONS

TORCH infections are a group of infections that cause fetal abnormalities. Pregnant women should avoid these infections!

REMEMBER THE MNEMONIC!

TORCH

- **T** Toxoplasmosis
- Parv **O** Virus-B19 (fifth disease)
- **R** Rubella
- **C** Cytomegalovirus
- **H** Herpes simplex virus

STAGES OF LABOR

STAGE 1 — CERVIX DILATES FROM 0-10 CM

Longest Stage

LATENT (EARLY)

- **Cervix dilates**: 1- 3 cm
- **Intensity**: Mild
- **Contractions**: 15 - 30 mins

ACTIVE

- **Cervix dilates**: 4 - 7 cm
- **Intensity**: Moderate
- **Contractions**: 3 -5 min (30-60 sec in duration)

TRANSITION

- **Cervix dilates**: 8 - 10 cm
- **Intensity**: Strong
- **Contractions**: Every 2-3 min (60-90 sec in duration)

INTERVENTIONS

- Promote comfort
  - Warm shower, massage, or epidural
- Offer fluids & ice chips
- Provide a quiet environment
- Encourage voiding every 1 - 2 hours
- Encourage participation in care & keep informed
- Instruct partner in **effleurage** (light stroking of the abdomen)
- Encourage effective breathing patterns & rest between contractions

REMEMBER THE MNEMONIC!

Labor
Actively
Transitioning

STAGE 2 — THE BABY IS DELIVERED

→ Starts when cervix is fully dilated & effaced

→ Ends after the baby is delivered

PUSHING!!!

INTERVENTIONS

- Provide ice chips & ointment for dry lips
- Provide praise & encouragement to the mother
- Monitor uterine contractions & mothers vital signs
- Maintain privacy & encourage rest between contractions
- Encourage effective breathing patterns & rest between contractions
- Monitor for signs of birth (perineal bulging or visualization of fetal head)

STAGE 3 — THE PLACENTA IS DELIVERED

>30 MIN = RETAINED PLACENTA

The PLACENTA is expelled (5 - 30 min after birth)

SIGNS OF A PLACENTA DELIVERY

- Lengthening umbilical cord
- Gush of blood
- Uterus changes from oval to globular shape

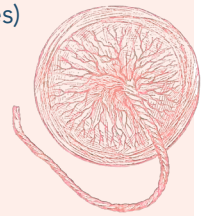
DELIVERY MECHANICS

"Shiny Schultz"
Side of *baby* delivered 1st

"Dirty Duncan"
Side of *mother* delivered 1st

INTERVENTIONS

- Assessing mothers vital signs
- Uterine status (fundal rubs every 15 minutes)
- Provide warmth to the mother
- Promote parental-neonatal attachment
- Examine placenta & verify it's intact
  - Should have 2 arteries & 1 vein



A A
V

TIP — Looks like smiley face!

2 "**A**" for Arteries
1 "**V**" for Vein

STAGE 4 — RECOVERY!

RECOVERY: first 1-4 hours after delivery of the placenta

- Assessing the fundus
- Continue to monitor vital signs & temperature for infection
- Administer IV fluids
- Monitor lochia discharge (lochia may be moderate in amount & red).
- Monitor for respiratory depression, vomiting, & aspiration if general anesthesia was used
- *Great time to watch for complications such as bleeding (postpartum hemorrhage)*

✓
- FIRM
- Midline

✗
- Soft
- Boggy
- Displaced

TRUE VS. FALSE LABOR

	FALSE LABOR	TRUE LABOR
CONTRACTIONS	• Irregular • Stops with walking / position change • Felt in the back or the abdomen above the umbilicus • Often stops with comfort measures	• Occur regularly - Stronger - Longer - Closer together • More intense with walking • Felt in lower back -> radiating to the **lower** portion of the abdomen • Continue despite the use of comfort measures
CERVIX	• May be soft • NO significant change in.... - Effacement - Dilation • No bloody show • In posterior position (baby's head facing mom's front of belly) 	• Progressive change - Softening - Effacement - Dilation signaled by the appearance of bloody show - Moves to an increasingly anterior position (baby's head facing mom's back) 
FETUS	• Presenting part is usually not engaged in the pelvis	• Presenting parts become engaged in the pelvis • Increased ease of breathing (more room to breathe) • Presenting part presses downward & compresses the bladder = urinary frequency

SIGNS OF LABOR

LABOR

Moving the fetus, placenta, & the membranes out of the uterus through the birth canal

Signs of Preceding Labor

- Lightening
- Increased vaginal discharge (bloody show)
- Return of urinary frequency
- Cervical ripening
- Rupture of membranes "water breaking"
- Persistent backache
- Stronger Braxton Hicks contractions
- Days preceding labor
  - Surge of energy
  - Weight loss (1- 3.5 pounds) from a fluid shift

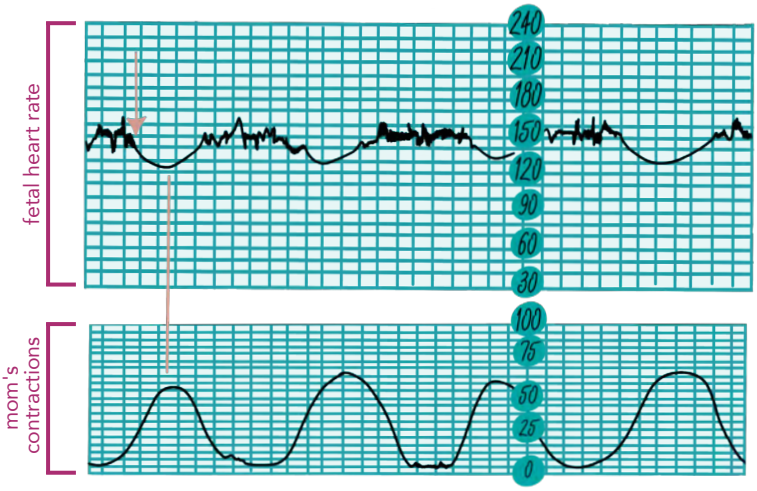
FETAL HEART TONES

Normal fetal heart rate 120 - 160 BPM

EARLY DECELERATIONS

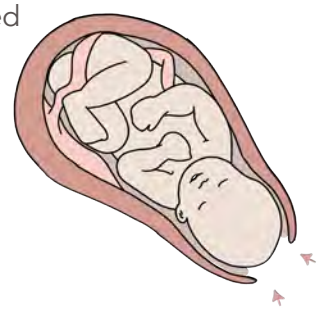
"Mirror" image of mom's contractions (They don't technically come early)

NORMAL! ✓



Cause:
- From head compression

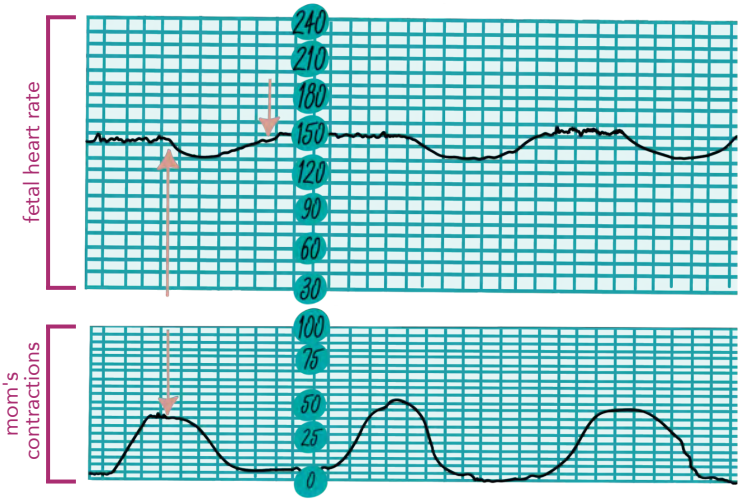
Intervention:
- Continue to monitor
- No intervention needed



LATE DECELERATIONS

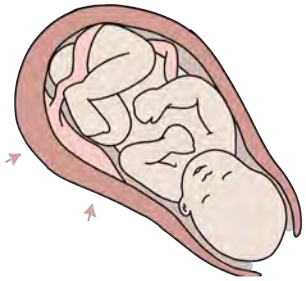
Literally comes late after mom's contraction

NON-REASSURING ✗



Cause:
- Uteroplacental insufficiency

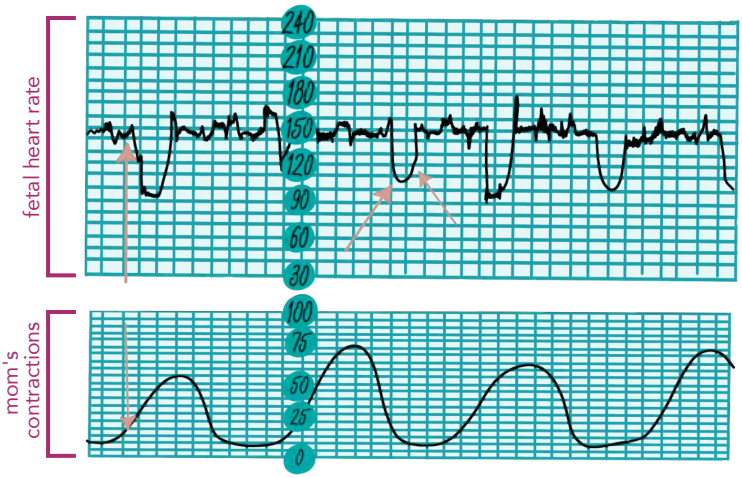
Intervention:
- D/C oxytocin
- Position change
- Oxygen (nonrebreather)
- Hydration (IV fluids)
- Elevate legs to correct the hypotension



VARIABLE DECELERATIONS

*Variable: Looks "V" shaped

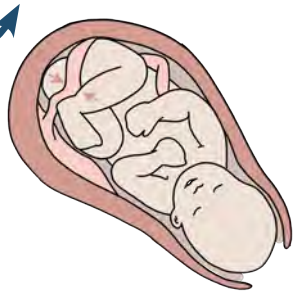
NON-REASSURING ✗



Cause:
- Cord compression

Intervention:
- D/C Oxytocin
- Amnioinfusion
- Position change
- Breathing techniques
- Oxygen (nonrebreather)

Side-lying or knee chest will relieve pressure on cord



PREECLAMPSIA OVERVIEW

Overview of Hypertensive disorders during pregnancy

1st Trimester | 20 WEEKS | **2nd Trimester** | **3rd Trimester**

CHRONIC HTN: Before pregnancy or before 20 weeks!

PREECLAMPSIA: HTN after 20 weeks gestation with systemic features

GESTATIONAL HTN: HTN after 20 weeks without systemic features

WHAT IS HYPERTENSION?

SYSTOLIC >140
OR
DIASTOLIC > 90

Hypertension may be abbreviated "HTN"

SIGNS & SYMPTOMS

"PRE" eclampsia

- **P** Proteinuria
- **R** Rising BP
- **E** Edema

Triad Signs

- Severe headache
- RUQ or epigastric pain
- Visual disturbances
- ↓ Urine output
- Hyperreflexia
- Rapid weight gain

PATHOLOGY

Pathology isn't completely known

***PLACENTA* is the root cause**

- Defective spiral artery remodeling
- Systemic vasoconstriction & endothelial dysfunction

RISK FACTORS

- HX of preeclampsia in previous pregnancies
- Family history of preeclampsia
- 1st pregnancy
- Obesity
- Very young (<18) or very old (>35)
- Medical conditions (Chronic HTN, renal disease, diabetes, autoimmune disease)

AMA (advanced maternal age)

HELLP SYNDROME

Variant of preeclampsia
Life-threatening complication

- **H** Hemolysis
- **EL** Elevated liver enzymes
- **LP** Low platelet count

ECLAMPSIA

(seizures activity or a coma)

Immediate care:

- Side-lying
- Padded side rails with pillows/blankets
- O2
- Suction if needed
- Do not restrain
- Do not leave

MAGNESIUM SULFATE

RX given to prevent seizures during & after labor.

***Remember**: magnesium acts like a depressant*

THERAPEUTIC RANGE: 4 – 7 mg/dL

TOXICITY!

- RR <12
- ↓ DTR's
- UOP <30 mL/hr
- EKG Changes

**Mag is excreted in urine*
↓UOP → ↑Mag levels

ANTIDOTE: calcium gluconate
*because magnesium sulfate can cause respiratory depression

VEAL CHOP

A tool to help interpret fetal strips

V	Variability →	C	Cord Compression
E	Early Decelerations →	H	Head Compression
A	Accelerations →	O	OK (normal fetal oxygenation)
L	Late Decelerations →	P	Placental Insufficiency

ASSESSMENT OF UTERINE CONTRACTIONS

Duration	**BEGINNING** of the contraction to the **END** of that same contraction	• Lasts 45 - 80 seconds • Should not exceed 90 seconds *Only measured through external monitoring*	
Frequency	Number of contractions from the **BEGINNING** of one contraction to the **BEGINNING** of the next	• 2 - 5 contractions every 20 minutes • Should not be more FREQUENT then every 2 minutes *Only measured through external monitoring*	
Intensity	Strength of a contraction at its **PEAK**	• 25 - 50 mm Hg • Should not exceed 80 mm HG *Can be palpated*	*Mild - nose* *Moderate - chin* *Strong - forehead*
Resting Tone	**TENSION** in the uterine muscle between contractions (relaxation of the uterus = fetal oxygenation between contractions)	• Average: 10 mm HG • Should not exceed 20 mm HG *Can be palpated*	*Soft = good* *Firm = not resting enough*

LABOR & BIRTH PROCESSES

5 P's — 5 factors that affect the process of labor & birth

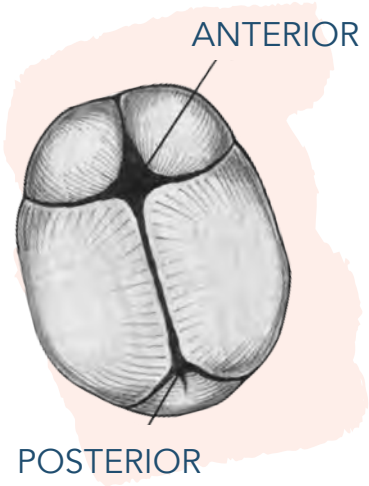
PASSENGER	PASSAGEWAY	POSITION	POWERS	PSYCHOLOGY
Fetus & Placenta	The Birth Canal	Position of the Mother	Contractions	Emotional Response

PASSENGER — FETUS & PLACENTA

SIZE OF THE FETAL HEAD

FONTANELS
- Space between the bones of the skull allows for molding
- Anterior (larger)
  - Diamond-shaped
  - Ossifies in 12-18 months
- Posterior
  - Triangle shaped
  - Closes 8 - 12 weeks

MOLDING
- Change in the shape of the fetal skull to "mold" & fit through the birth canal



FETAL PRESENTATION

Refers to the part of the fetus that enters the pelvic inlet first through the birth canal during labor

CEPHALIC (Most Common)
- Head first
- Presenting part: Occipital (back of head/skull)

BREECH
- Buttocks, feet, or both first
- Presenting part: Sacrum

SHOULDER
- Shoulders first
- Presenting part: Scapula

FETAL LIE

Relation of the long axis (spine) of the fetus to the long axis (spine) of the mother

LONGITUDINAL OR VERTICAL
- The long axis of the fetus is parallel with the long axis of the mother
- Longitudinal: cephalic or breech

TRANSVERSE, HORIZONTAL, OR OBLIQUE
- Long axis of the fetus is at a right angle to the long axis of the mother
- Transverse: vaginal birth **CANNOT** occur in this position
- Oblique: usually converts to a longitudinal or transverse lie during labor

CONTINUED →

LABOR & BIRTH PROCESSES

PASSENGER CONTINUED

FETAL ATTITUDE

GENERAL FLEXION
- Back of the fetus is rounded so that the chin is flexed on the chest, thighs are flexed on the abdomen, legs are flexed at the knees

BIPARIETAL DIAMETER
- 9.25 cm at term, the largest transverse diameter and an important indicator of fetal head size

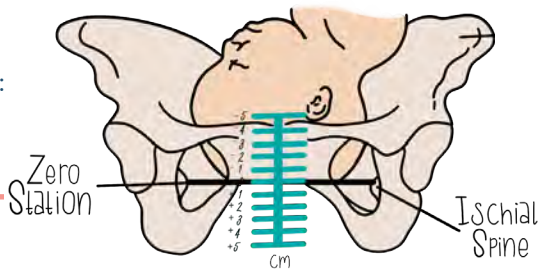
SUBOCCIPITOBREGMATIC DIAMETER
- *Most critical* & smallest of the anteroposterior diameters

FETAL POSITION

FETAL STATION
- Where the baby's **presenting part** is located in the pelvis
- **Presenting part?**
  - Head, foot, butt (closest to exit of uterus)
- Measured in centimeters (cm)
  - Find the ischial **spine = zero**
  - **Above the ischial spine is (-)**
  - **Below the ischial spine is (+)**
    +4 / +5 = Birth is about to happen
  - Documented
    -5, -4, -3, -2, -1, 0, +1, +2, +3, +4, +5

ENGAGEMENT
- Fetal station zero = baby is "**engaged**"
- Presenting parts have entered down into the pelvis inlet & is at the ischial spine line (0)
- When does this happen?
  - First-time moms: 38 weeks
  - Already had babies: can happen when labor starts

LIGHTENING
What is this?
When the baby "drops" into the mother's pelvis



PASSAGEWAY

THE BIRTH CANAL: Rigid bony pelvis, soft tissue of cervix, pelvic floor, vagina & introitus

TYPES OF PELVIS

GYNECOID
- Classic female type
- Most common

ANDROID
- Resembling the male pelvis

ANTHROPOID
- Oval-shaped
- Wider anteroposterior diameter

PLATYPELLOID
- The flat pelvis
- Least common

SOFT TISSUE

LOWER UTERINE SEGMENT
- Stretchy

CERVIX
- Effaces (thins) & dilates (opens)
- After fetus descends into the vagina, the cervix is drawn upward and over the first portion

PELVIC FLOOR MUSCLES
- Helps the fetus rotate anteriorly

VAGINA

INTROITUS
- External opening of the vagina

LABOR & BIRTH PROCESSES

POSITION

POSITION OF THE MOTHER DURING BIRTH

UPRIGHT POSITION
Sitting on a birthing stool or cushion

"ALL FOURS" POSITION
On all fours: putting your weight on your hands & feet

LITHOTOMY POSITION (Most Common)
Supine position with buttocks on the table

LATERAL POSITION
Laying on a side

Frequent changes in position helps with:
- Relieving fatigue
- Increasing comfort
- Improving circulation

POWERS

CONTRACTIONS: PRIMARY & SECONDARY

PRIMARY POWERS

Involuntary uterine contractions
Signals the beginning of labor

DILATION

- Dilation of the cervix is the enlargement or widening of the cervical opening & canal once labor has begun
- Cervix: closed → full dilation (10 cm)
- Pressure from amniotic fluid can also apply force to dilate

EFFACEMENT

- Shortening & thinning of the cervix during the first stage of labor
- Cervix normally:
  - 2 -3 cm long
  - 1 cm thick
- The cervix is "pulled back / thinned out" by a shortening of the uterine muscles

Degree of EFFACEMENT is EXPRESSED in % (0-100%)

FERGUSON REFLEX

- When the stretch receptors release oxytocin, it triggers the maternal urge to bear down

SECONDARY POWERS

Does not affect cervical dilation but helps with expulsion of infant once the cervix is fully dilated

- Voluntary bearing-down efforts by the women once the cervix has dilated
- When the presenting part reaches the pelvic floor, the contractions change in character & become expulsive.
- Laboring women start to feel an involuntary urge to push & she uses secondary powers to aid in the expulsion of the fetus

PSYCHOLOGY

EMOTIONAL RESPONSE

Anxiety can increase pain perception & the need for more medications (analgesia & anesthesia)

THINGS TO CONSIDER:

- SOCIAL SUPPORT
- PAST EXPERIENCE
- KNOWLEDGE

NEWBORN ASSESSMENT

APGAR

7 - 10 supportive care
4 - 6 moderate depression
< 4 aggressive resuscitation

SCORE	0 POINTS	1 POINT	2 POINTS
A Activity (Muscle tone)	Absent	Flexed arms & legs	Active
P Pulse	0	< 100	> 100
G Grimace (Reflex irritability)	Floppy	Minimal response to stimulation	Prompt response to stimulation
A Appearance (Skin color)	Blue / pale all over	Pink body, Blue extremities (acrocyanosis)	Pink all over
R Respiration (Effort)	No Breathing	Slow & irregular	Vigorous cry

INITIAL GOALS:

1ST PRIORITY = AIRWAY
Suction with bulb syringe / deep suction
*Newborns are obligatory nose breathers

2ND PRIORITY = WARMTH
Dry with a blanket or place in warmer

CIRCULATORY SYSTEM

- Blood flow from umbilical vessels & placenta stop at birth
- **Acrocyanosis**:
  - Blueness of hands & feet (normal during the first 24 hours of life)
- Closure of
  - Ductus arteriosus
  - Foramen ovale
  - Ductus venosus
- Transient murmurs are normal

VITAL SIGNS

Respiratory Rate:
30 - 60 breaths/min

Breathing pattern is **IRREGULAR**.
Newborns are ***abdominal*** breathers.
To count breaths, place your hand on their abdomen
Count for a full minute!

Heart Rate: 110 - 160 BPM
Can be 180 if *crying*
Can be 100 if *sleeping*
Take apical pulse for 1 full min

Temperature (auxillary):
97.7° - 99.5° F
36.5° - 37.5° C

Blood Pressure:
Not done routinely
Systolic 60 – 80 mm Hg
Diastolic 40 – 50 mm Hg

MAP
Equal to the # of weeks gestation or higher

Signs of Respiratory Distress
Retractions
Nasal flaring
Grunting

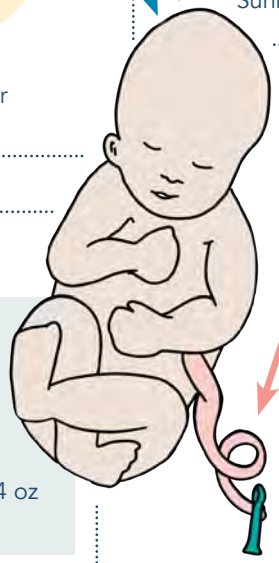
HEAD

Caput Succendeum:
- Edema (collection of fluid)
- Crosses the suture lines
- (Like a baseball ***cap***)

Cephahemtaoma:
- Birth trauma (collection of blood)
- Does not cross the suture lines

- **Molding**: abnormal head shape that results from pressure (*normal*)
- **Fontanelles**:
  Bulging = increase ICP or hydrocephalus
  Sunken = dehydration

Fontanelles may be bulging when the newborn cries, vomits, or is lying down. This is normal.



UMBILICAL CORD

Should have **2 arteries** & **1 vein**

A A
V

Should be dry, no odor, & no drainage

GENERAL CHARACTERISTICS

Head & Chest Circumference

Head circumference
32 - 39 cm
14 - 15 inches
*measure above eyebrows

Chest circumference
30 - 36 cm
12 - 14 inches
*measure above nipple line

Length & Weight

Expected Length
44 - 55 cm
17 - 22 in

Expected Weight
2,500 - 400 g
5 lb, 8 oz - 8 lb, 14 oz

↓ TEMP → HEAT LOSS DUE TO:

Evaporation: Moisture from skin & lungs
Convection: Body heat to cooler air
Conduction: Body heat to a cooler surface in direct contact
Radiation: Body heat to a cooler object nearby

POSTPARTUM ASSESSMENT: "BUBBLES"

B BREASTS

- May be sore after breastfeeding
- Breastfeed every 2 - 3 hours (15 - 20 minutes each breast)
- Position newborn "tummy to mummy"
- Latch should be completey around the areola

MASTITIS

Infection & inflammation of breast tissue

- Continue breastfeeding
- Warm compress
- Hydration
- Rest
- Analgesics
- Wash hands!

U UTERUS

UTERINE ATONY

RISK FACTORS

- Retained placenta
- Chorioamnionitis (infection)
- Uterine fatigue
- Full bladder

SYMPTOMS

- Enlarged
- Boggy
- Poorly contracted uterus
- Soft
- Not midline

INTERVENTIONS

- Fundal massage
- Assist to void or use in-and-out catheter

B BOWELS

Constipation is common after birth.
Increasing **FLUIDS & FIBER** may help!

HEMORRHOIDS

- May see blood in the stool
- Should begin to shrink following birth

INTERVENTIONS

- Tucks / witch hazel
- Ice pack
- Squeeze bottle
- Sitz Bath

B BLADDER

- Postpartum urinary retention is common
  - In-and-out caterization may be needed
  - Bladder distention can cause a displaced & boggy utuerus!

SIGNS OF INFECTION

- Foul smelling or purulent lochia
- Fever (>100.4 F)
- Abodminal tenderness
- Tachycardia

L LOCHIA

"Really Sore After"

RUBRA	**bright red** 1 - 3 days	SEROSA	**pinkish/brown** 4 - 10 days	ALBA	**whitish-yellow** 10 - 14 days **Can last up to 6 weeks*

E EMOTIONAL STATUS

- Postpartum depression (PPD) is common for women following childbirth
- As the nurse ask about feelings of...
  depression • hopelessness • self-harm • harm to the newborn

- Crying
- Irritable
- Sleep disturbances
- Anxiety
- Feelings of guilt

S SECTION (c-section incisions) / Episiotomy

- Promote proper wound healing
- Report to the health care provider: *pain • inflammation • surrounding skin is warm to touch*

POSTPARTUM HEMORRHAGE

Postpartum Hemorrhage is defined as:

VAGINAL BIRTH: loss of >500 ml of blood

CESAREAN BIRTH: loss of >1,000 ml of blood

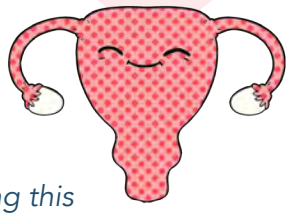
A CHANGE IN HEMATOCRIT BY 10%

PATHOLOGY

The uterus is like a BASKET WEAVE OF MUSCLE FIBERS that crimps off vessels **protecting mom from hemorrhage.**

If the uterus is not doing this crimping off, it causes bleeding!

The uterus is often called the **LIVING LIGATURE**



SIGNS & SYMPTOMS

- Hypotonia of the uterus
- Atony / boggy uterus
- Deviated to the right
- Uncontrolled bleeding

#1 cause of uterine atony is
A FULL BADDER

RISK FACTORS

- Multiple gestations
- Polyhydramnios
- Macrosomic fetus (> 8 lbs)
- Multifetal gestation

overdistended uterus

DRUGS

"OH MY HEMORRHAGE" → This is a way to remember the order in which the drugs are used

#1 OXYTOCIN

"Pitocin"

ACTION
Stimulates contraction of the uterine smooth muscle

#2 METHERGINE

"Methylergonovine"

ACTION
Vasoconstriction

CONTRAINDICATIONS
Contraindicated in people with hypertension

**Remember vasocontriction causes blood pressure to rise*

#3 HEMABATE

ACTION
Hemabate is a prosta-glandin! Hemabate helps control blood pressure and muscle contractions (uterine contractions).

CONTRAINDICATIONS
Contraindicated in people with asthma

ANOTHER MEDICATION THAT CAN BE USED:

MISPROSTOL

given rectally

ACTION
Stimulates contraction of the uterine smooth muscle