
Labor Management

Nurses should be knowledgeable about the birth process

The biophysiologic factors that initiate labor are not fully understood

The uterus converts from a quiet state to a highly contractile organ

The two main hormones that help initiate labor are: oxytocin & prostaglandins

Stages and Phases of Labor

4

How many stages of Labor are there??

Stage I

- Dilation 0-10cm

Phases of Labor

Latent Phase

- 0-5cm

Active Phase

- 6-10cm

Latent Phase

0-5cm	U/C May be Irregular, May start infrequently (3-30 min)
Duration is short, 15-20 seconds then progressing to 30-60 seconds	Palpate Mild at beginning then progress to moderate
Pt may describe as mild menstrual cramps, low dull backache, or uterine tightening	Pt's behavior may be relief that labor has started, coping well, able to ambulate and talk through u/c
Pt may have a variety of emotions: excitement, talkative, mild anxiety	With an IUPC 25-40 mm Hg

How long do you think the latent phase of labor takes?

Nulliparous

Is not considered prolonged until > 20 hrs

Multiparous

Is not considered prolonged until >14 hrs

Active Phase

6-10cm

U/C Palpate Mod-Strong; IUPC 50-70mmHg

Duration
45-90 seconds
Q 2-5min

↑ discomfort; moaning/ screaming

Flushing of cheeks; trembling of thighs

↑ Bladder and rectal pressure

Emotionally: alert, serious & demanding

Evidence of fatigue

Stage II 10cm-birth

U/C
Q 2-3min

Lasting
60-90 sec

IUPC
70-100 mm Hg

↑urge to push, ↑ Rectal pressure

Perineal burning

Divided into passive fetal descent or active pushing

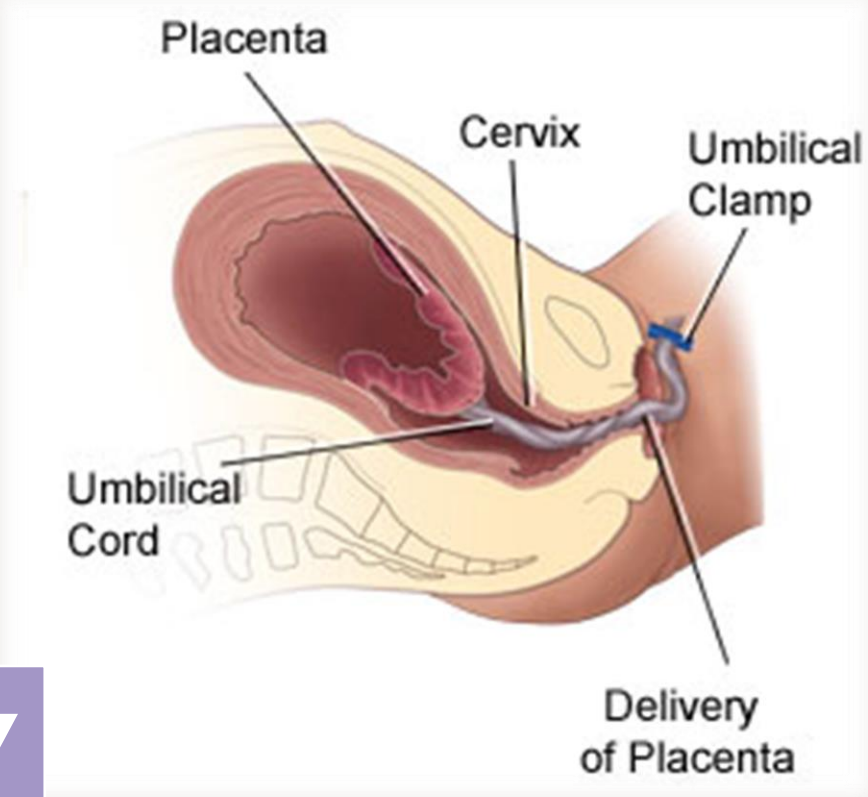
Stage III – from birth to delivery of placenta

Signs of separation

- Gush of blood
- Cord lengthens
- Fundus rises in abdomen

Types of placental delivery

- Spontaneous
- Manual extraction



Stage IV Immediate postpartum (1-4 hours)

1000 ml

How much blood is autotransfused into maternal circulation immediately after birth?

Immediately after birth

Cardiac output is greatest during which period of the birth process?

Labor Progress

There are significant variations in normal labor progress & duration among women

Parameters for Normal Labor

Current labor patterns are different than those reported by Friedman in the 1950's

Current labor patterns reveal significantly slower curves & a later onset of active labor (w/ a median closer to 6 cm)

Labor is defined as effacement and dilation of the cervix caused by regular uterine contractions

Vaginal exam is used to assess labor progress

Onset of labor is established by observing progressive effacement & dilation of cervix

Differentiation between true & false labor may require multiple exams

What Factors Affect Labor Progress??

Parity	Maternal obesity	Gestational age, fetal gender & size	Fetal Position
Pelvic Structure	Use of Pitocin	Amniotomy	Epidural analgesia/ anesthesia

Summary of Means and 95th %

Nulliparous	Mean	95%
Latent Labor	7.3-8.6 hours	17-21 hours
First Stage	6-13.3 hours	16.6-30 hours
Second Stage	36-57 minutes	122-197 minutes
Second Stage with Epidural	79 minutes	335 minutes

Summary of Means and 95th %

Multiparous	Mean	95%
Latent Labor	4.1-5.3 hours	12-14 hours
First Stage	5.7-7.5 hours	12.5-16.7 hours
Second Stage	17-19 minutes	57-81 minutes
Second Stage with Epidural	45 minutes	255 minutes

Labor Abnormalities

Historically described as:

- slow progress in labor
- failure to progress
- dystocia
- dysfunctional labor
- cephalopelvic disproportion

ACOG & SMFM do not recommend cesarean delivery for either slow progress in latent phase or a prolonged latent phase

Provide adequate time for latent phase labor to progress during induction of labor

What is Protracted Labor??

Protracted labor is abnormally slow cervical dilation or fetal descent during active labor

Protracted Labor

Nullip <0.7cm/hr	**Multip** <1.3cm/hr	**Change is similar until 6cm**
Arrest should not be diagnosed before 6cm	**To progress from 4-5cm may take >6hrs**	**To progress from 5-6cm may take >3hrs**

Active Phase Arrest

Reserved for women at or beyond 6cm w/ ruptured membranes

- **And one of the following**

Failure to progress after 4 hrs of adequate uterine activity

- **OR**

At least 6 hrs with inadequate u/c & absence of cervical change, despite Pitocin augmentation & titration

Adequate Uterine Activity

Mild= tip of nose

<50mmHg at peak

Moderate = Chin

≥ 50mmHg at peak

Strong = Forehead ≥ 50mmHg at peak;

≥ 200 mmHg with an IUPC in a ten min segment

Second Stage

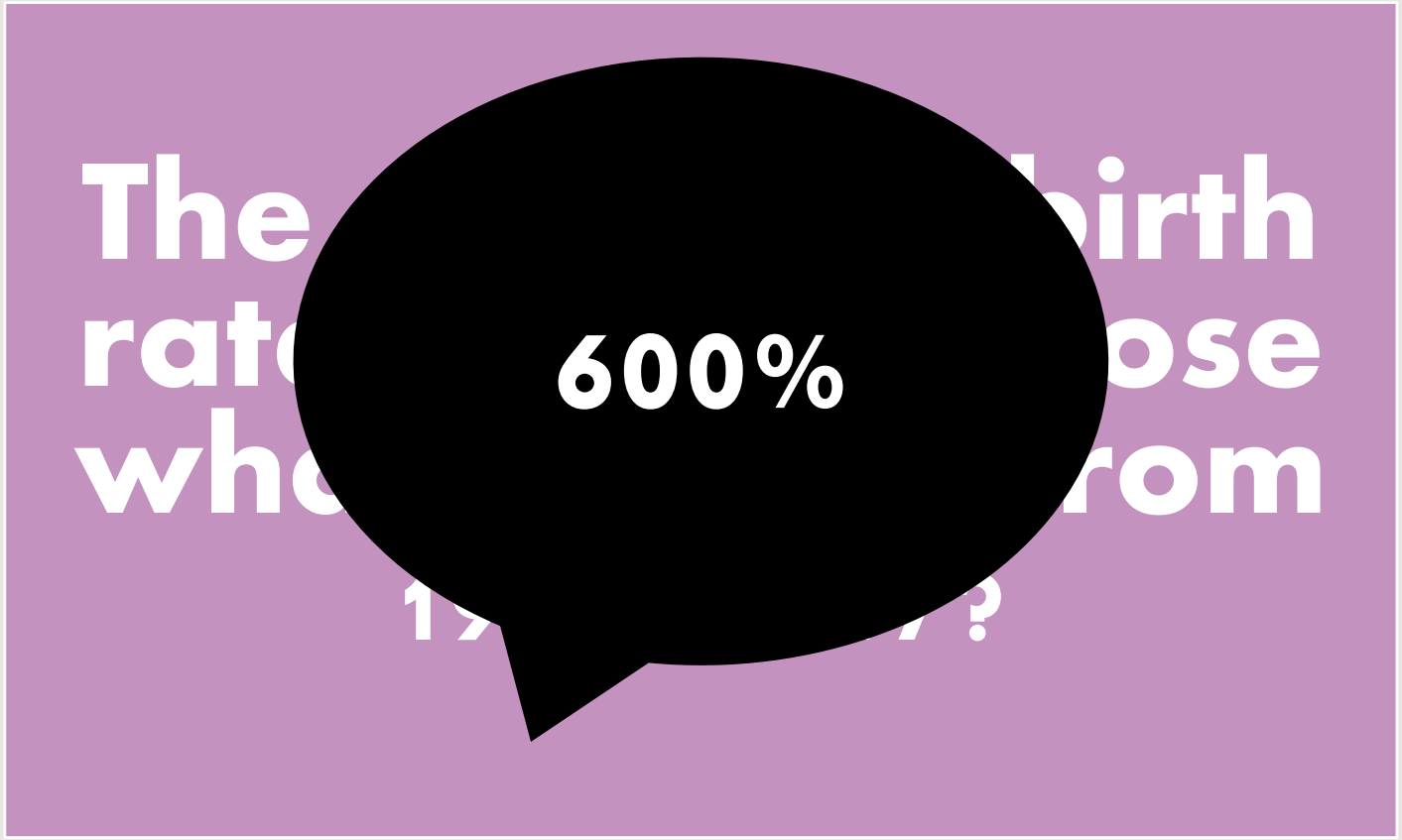
A specific absolute maximum length of time spent in second stage beyond which all women should undergo operative delivery has not been identified

Before diagnosing arrest of labor in the second stage, if maternal & fetal conditions permit allow for the following:

- At least 2 hrs of pushing in multips
- At least 3 hours of pushing in nullips

Longer durations may be appropriate on an individualized basis

Why is this important??



ACOG | Clinical

The American College of Obstetricians and Gynecologists

Clinical Guidance | Journals & Publications | Patient Education

> Clinical Practice Guideline > First and Second Stage Labor Management

First and Second Stage Labor Management

Clinical Practice Guideline | Number 8 | January 2024

In 2022, 32.2% of all births in the U.S. were by cesarean delivery

There are concerns that cesarean delivery is overused

Labor Arrest is the most common indication for cesarean delivery in the U.S.

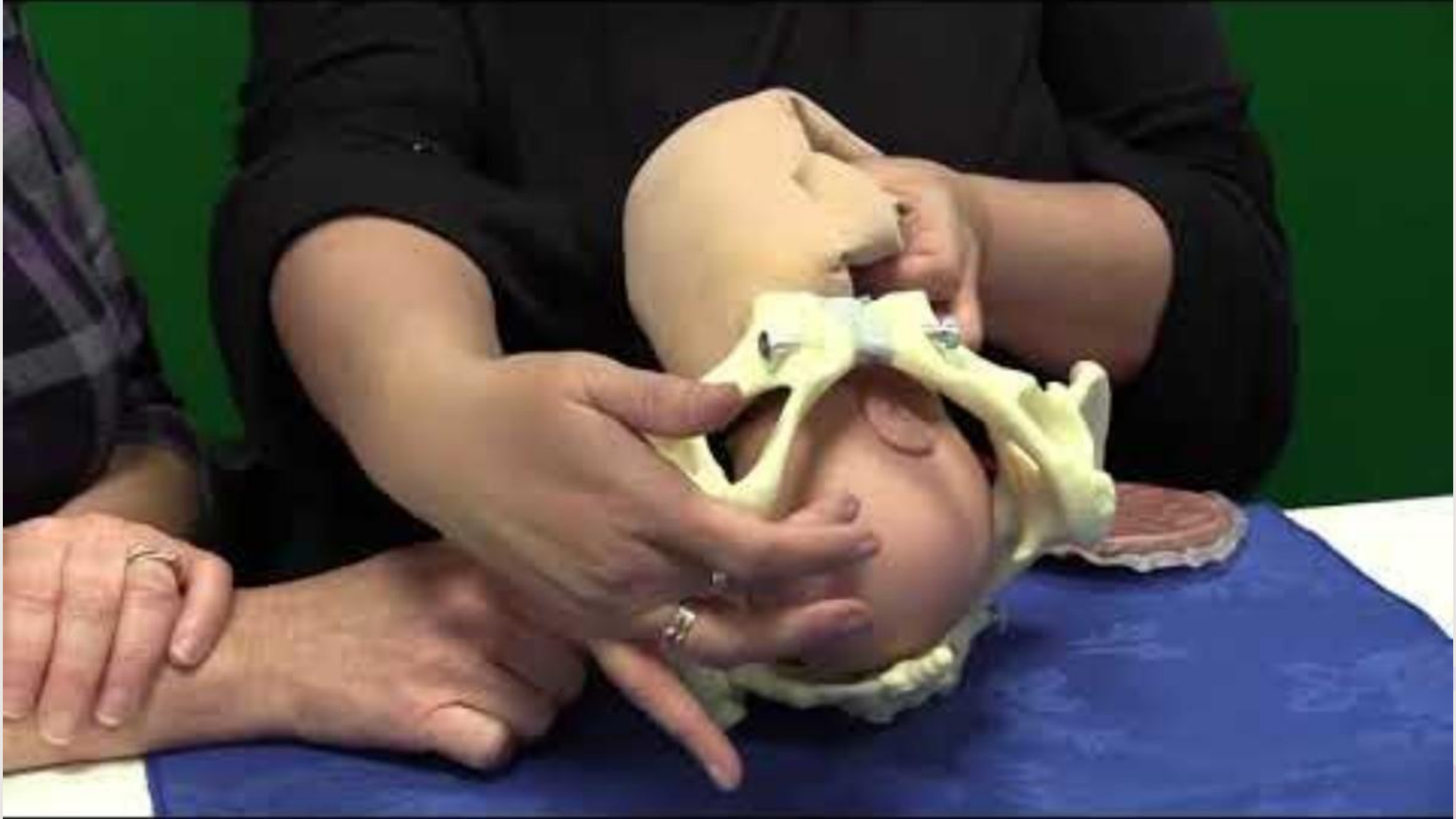
How can we help decrease cesarean rates??

Continuous labor support has been shown to improve health outcomes

- Shorter duration of labors
- Decreased cesarean birth
- Improved 5-minute apgar scores

Five factors affect the process of labor & birth

- The five P's
  - Passengers (fetus & placenta)
  - Passageway (birth canal)
  - Powers (contractions)
  - Position of the mother
  - Psychologic response



Let's talk about fetal position

Occiput Posterior (OP)

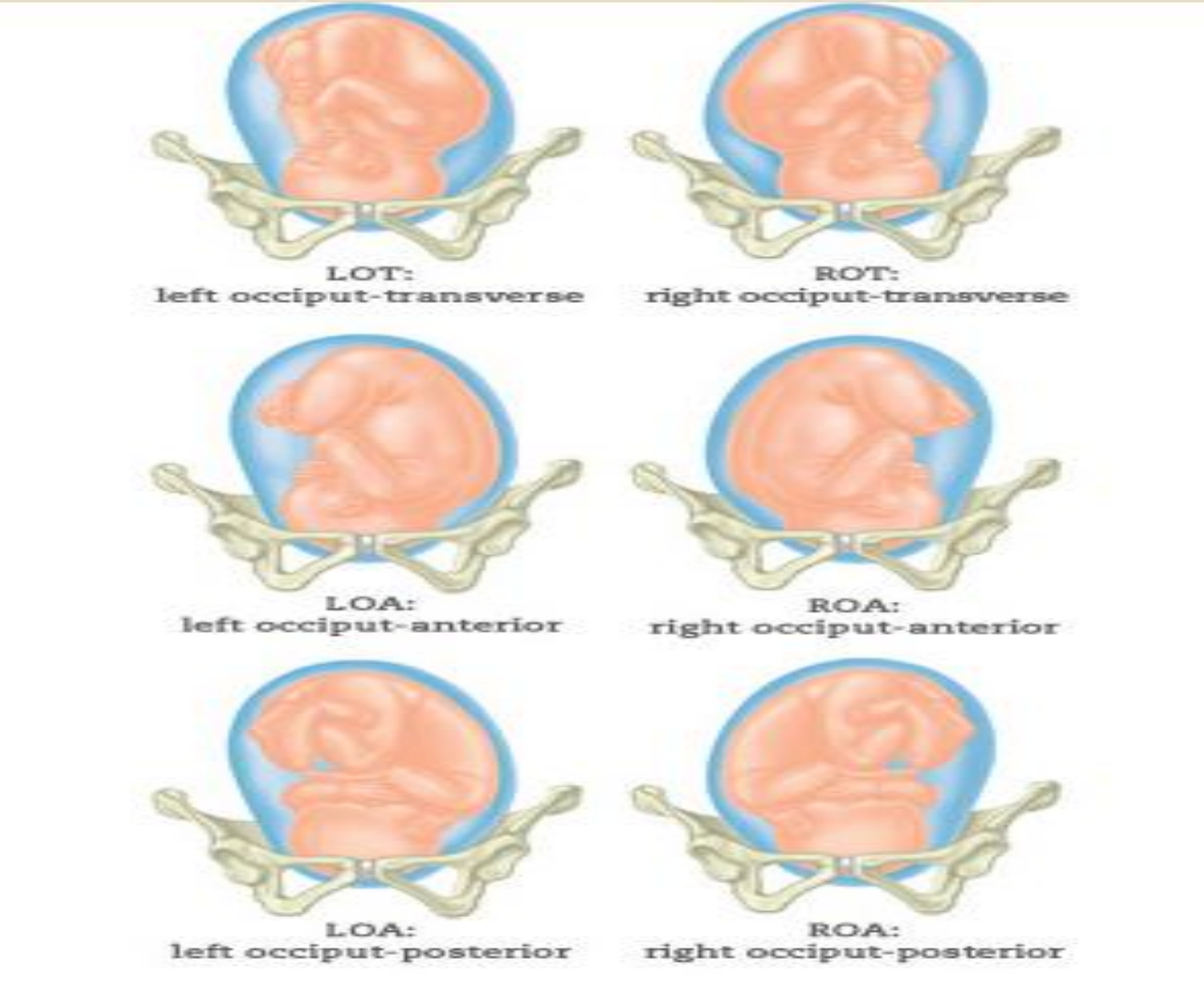
Occiput Anterior (OA)

Asynclitic

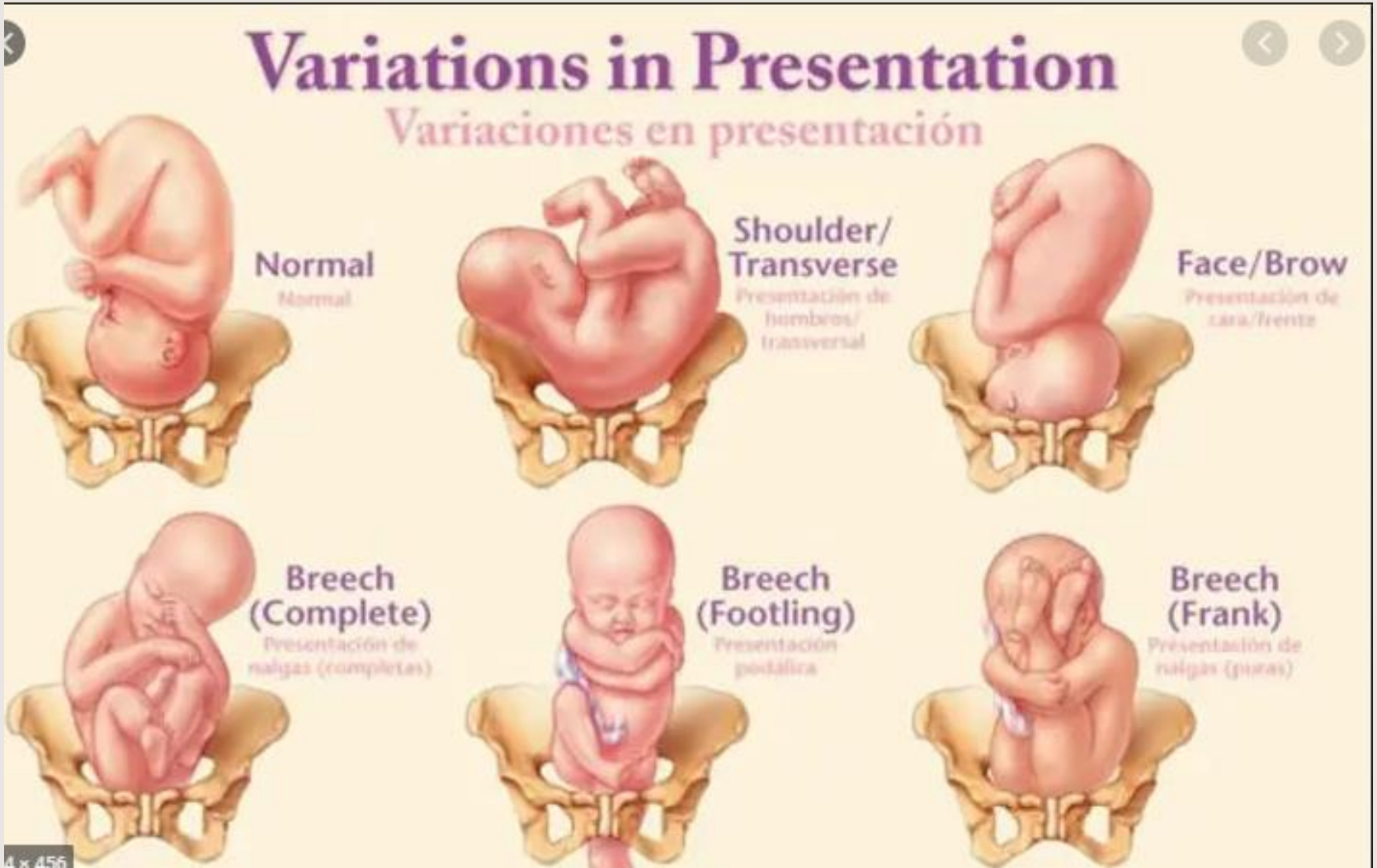
Left Occiput Transverse (LOT)

Right Occiput Transverse (ROT)

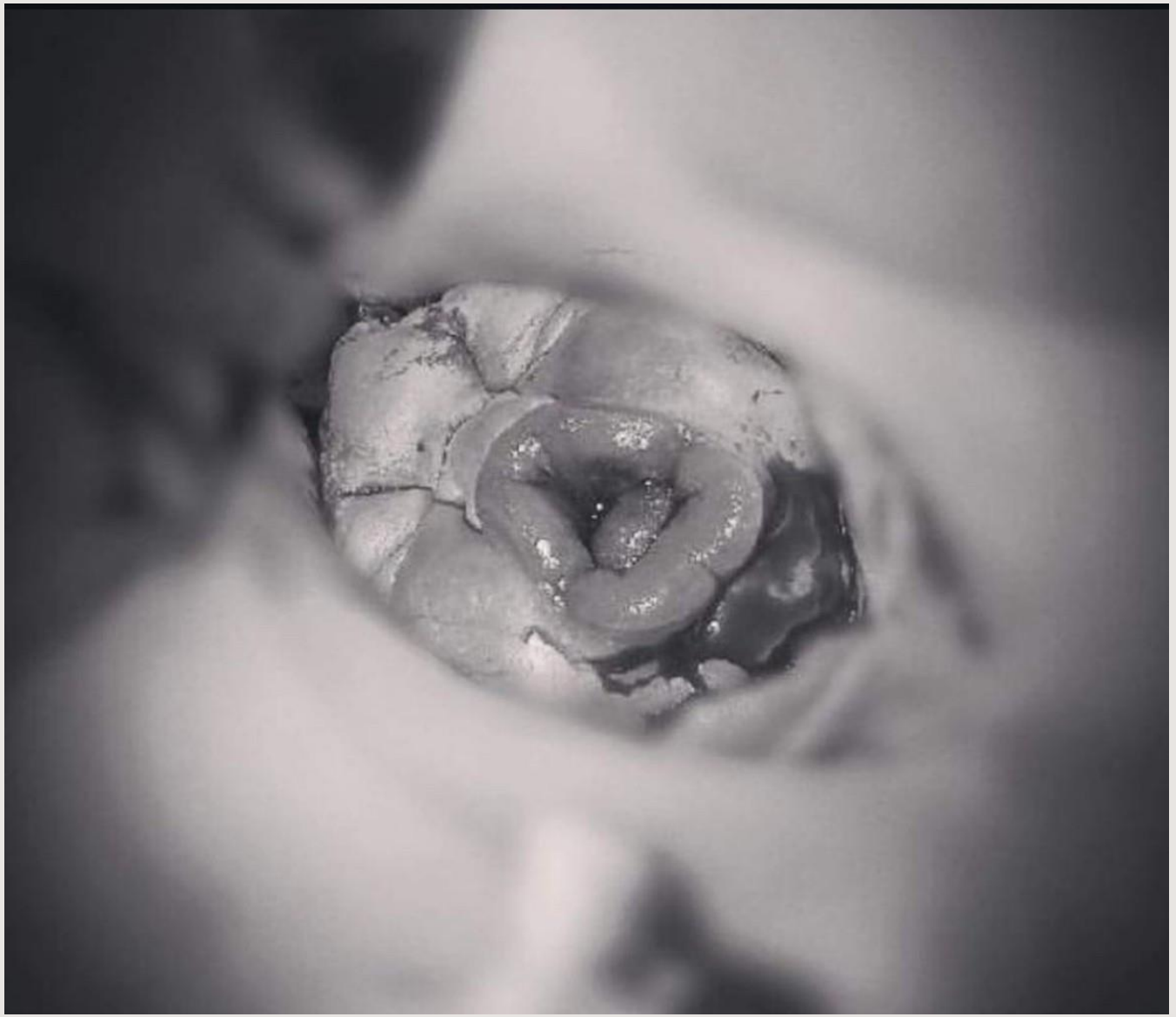
Fetal Positions at delivery



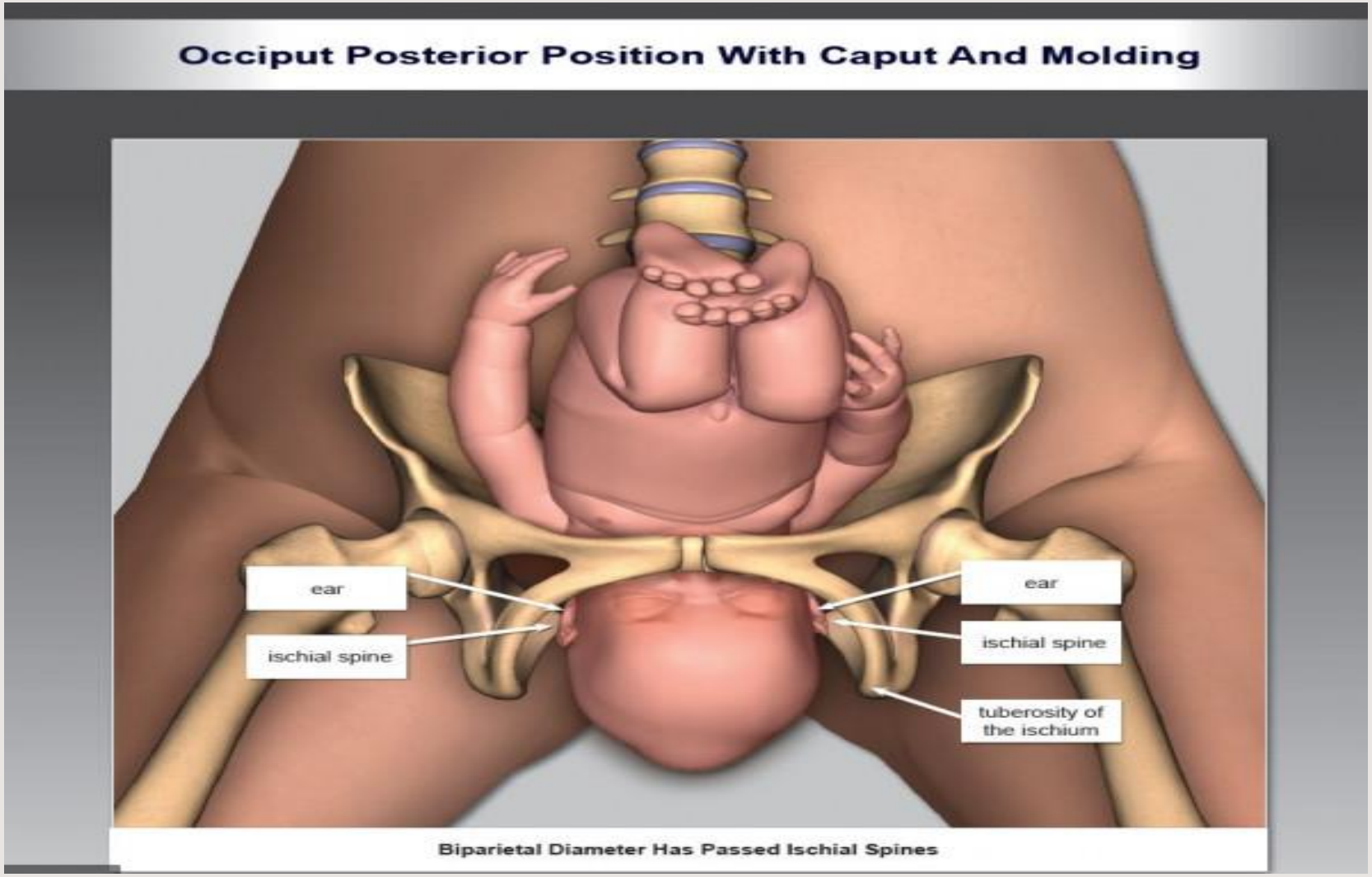
Presentation



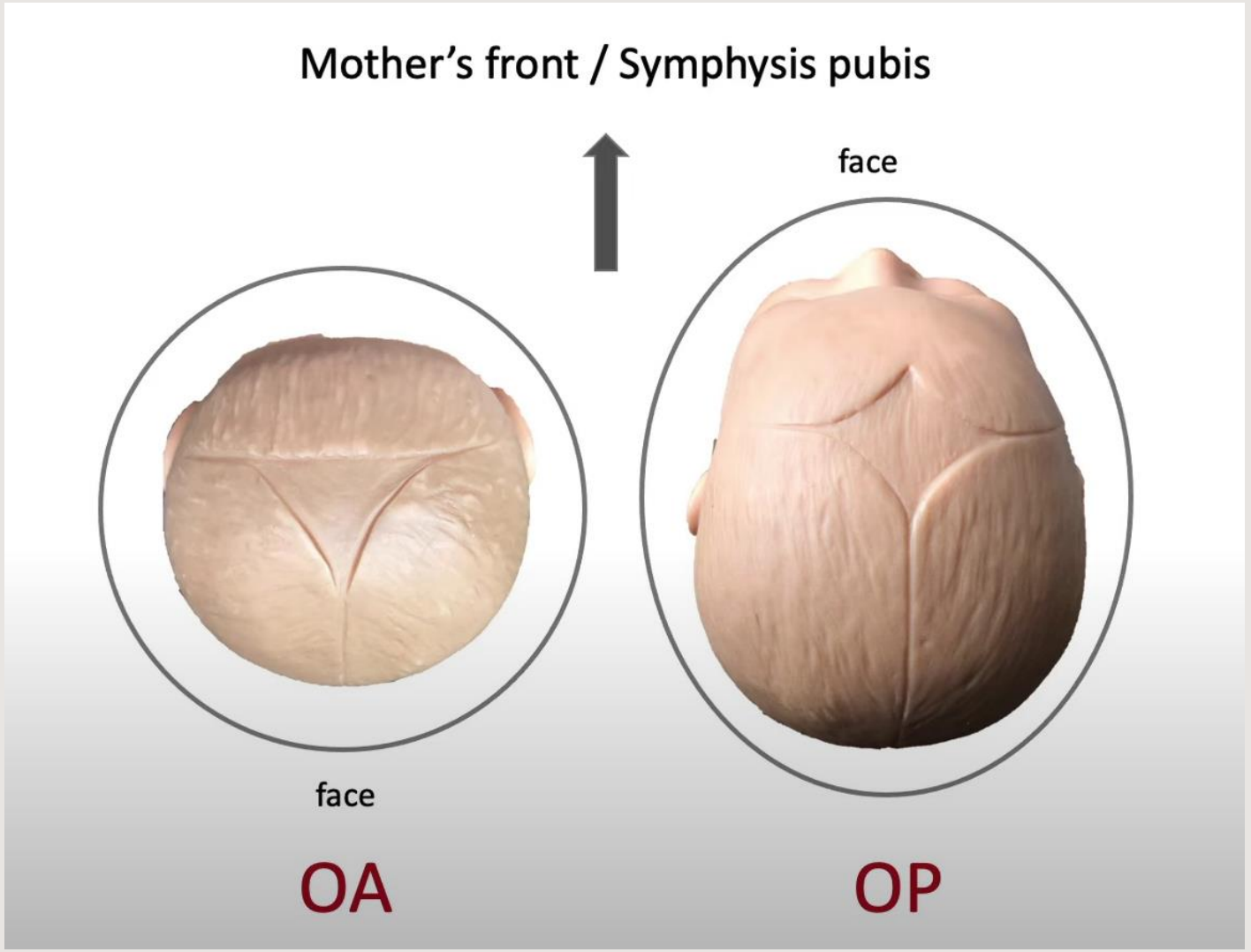
Face Presentation



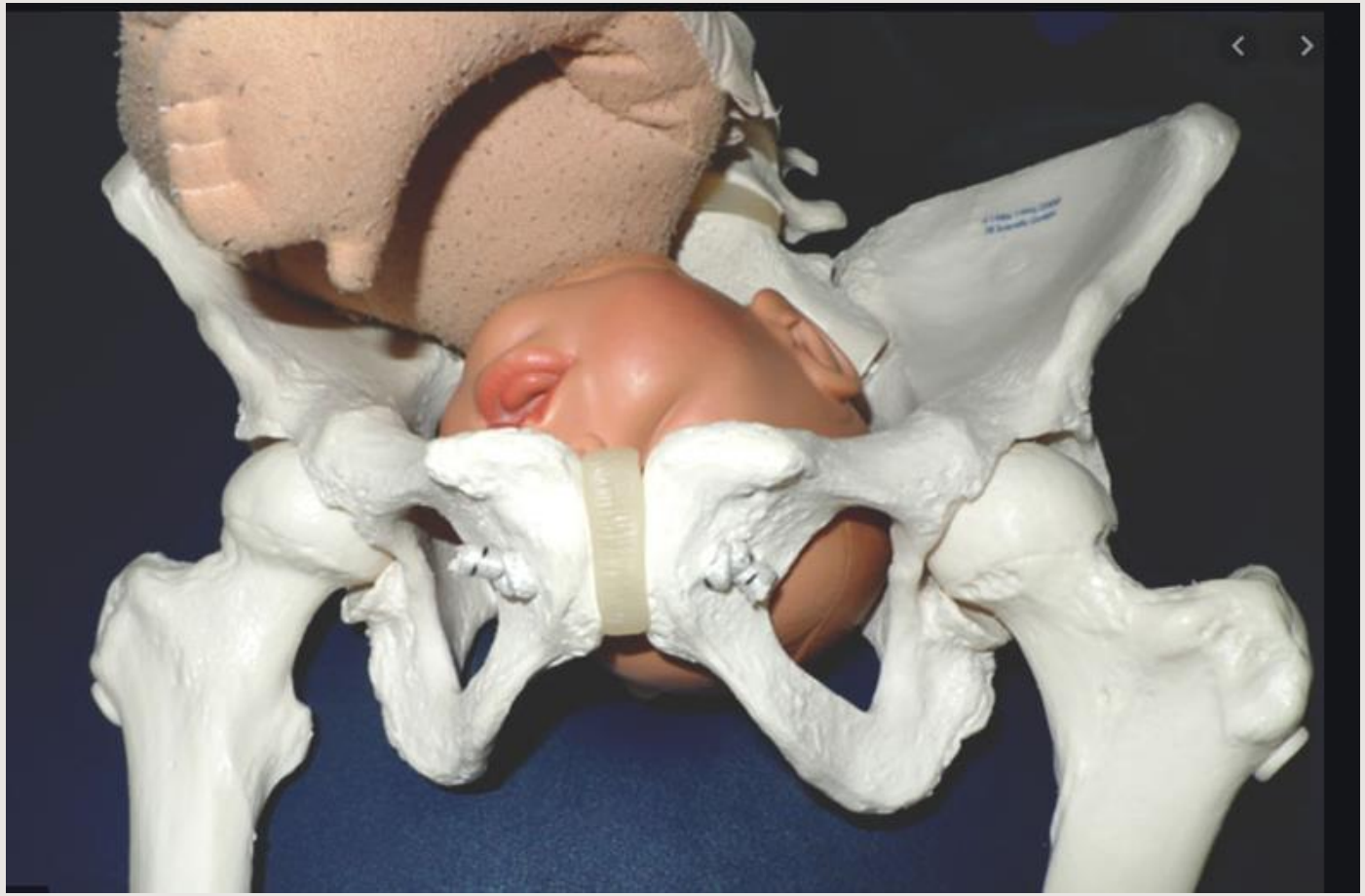
Occiput Posterior (OP)



Help in determining Fetal Position Feeling for Fontanels



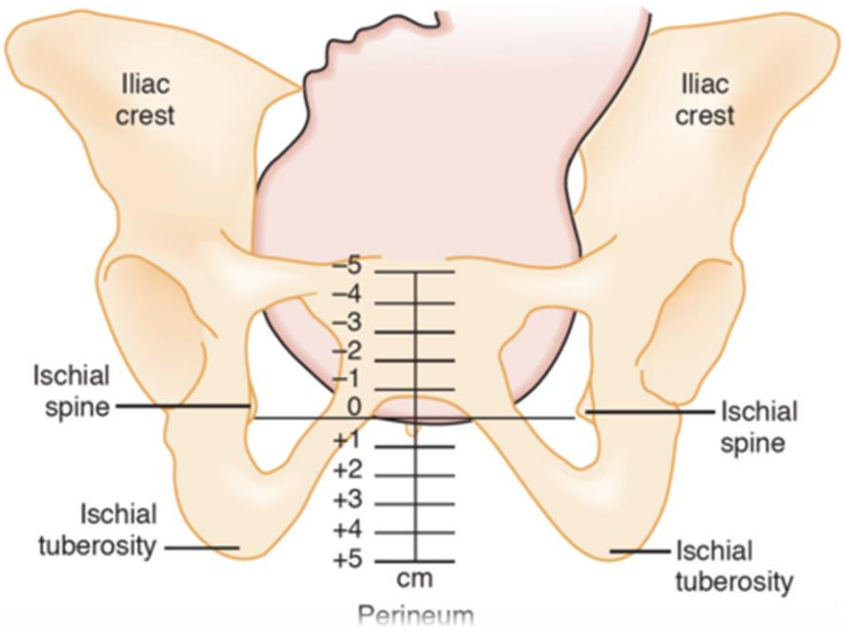
Asynclitic



FETAL STATION (PELVIS DIAGRAM)

- **ABOVE spines (higher):** –5 –4 –3 –2 –1
- **0 STATION:** Ischial spines (reference point)
- **BELOW spines (lower/closer):** +1 +2 +3 +4 +5

Negative = above the spines • Positive = below the spines



How does upright positions improve labor?

- Enhanced fetal descent
- u/c are more efficient; ↑ pressure on cervix
- Avoids vena cava compression
- Enable abdominal muscles to work in tandem w/ u/c
- Fetus well aligned with position of pelvis
- Encourages pt to participate in birth process
- Assoc w/ fetal well being; ↓ incidence of abnormal FHR, acidosis at birth & apgar score < 7

Squatting Position

- Enlarges the Pelvic outlet by approximately 28%
- ↑ Efficiency & effectiveness of expulsive forces
- Often cited as best position for second stage of labor

Caput

Molding

Caput Succedaneum

Edema under the scalp

Caused by pressure over the presenting part of the baby's head against the cervix during labor

Feels soft and spongy

Crosses suture lines

Resolves within a few days

Molding

Vaginal birth may cause the cranial bones to overlap as the fetus descends through the birth canal

Giving the head an elongated shape

Asymmetric appearance

The overlapping cranial bones can be palpated along the suture lines

May last several days and resolves on own


Questions

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