

Childbirth Series

Section Three: Medical Procedures



Presenter:

Thomas Tri Quach, M.D., F.A.C.O.G.

Contact Info:

Thao Ngo, RN IV, BSN, IBCLC, PHN

Phone: (714) 378-7833

Email: tngo7@memorialcare.org



Agenda

1. Tests for monitoring fetal well-being
2. External cephalic version
3. Fetal monitoring during labor
4. Induction for labor
5. Augmentation for labor
6. IV fluid
7. Second stage intervention
8. Medical pain relief

Decision Making

B

Benefits – Why do I need to have the procedure?

R

Risks – What are the risks of the procedure?

A

Alternatives – Do I have other options in this situation?

I

Intuition – How does this procedure make me feel?

N

No – What happens if I say “No” or “Not now”?



Fetal Well-Being Assessment

Baby:

- Healthy, active
- Getting enough oxygen
- Growing at an appropriate rate

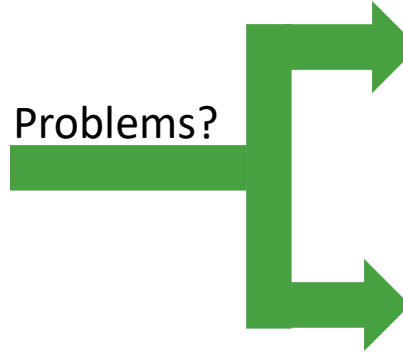
Pregnancy:

- Healthy
- No medical issue or complication

No problem?



Problems?



Routine checkup



Kick count

An additional test:

Nonstress Test - NST



Who Needs a Nonstress Test (NST)?

❖ Mom with complications during the pregnancy

- Compromised uterus
- Taking medication or insulin for gestational diabetes
- High blood pressure
- Previous history of stillbirth
- Any problems that may affect the blood flow to the uterus

❖ Problems of placenta or umbilical cord

❖ Low amniotic fluid volume

❖ Reduced kick counts

❖ Other common reasons:

- Baby is not growing at an appropriate rate.
- Mom experiences a decreased fetal movement.
- The pregnancy goes beyond its due date.
- Too much amniotic fluid.

Nonstress Test (NST)

Measure

Baby's heart rate, baby's movement, and uterine contractions

Duration

About 20-40 minutes

When

After 26 weeks of pregnancy

Frequency

One time, or may be repeated weekly or biweekly until delivery

Nonstress Test (NST) Continued...

How it is performed

- Laying down on a bed or a recliner chair
- With two monitors and belts around the abdomen
- One monitor measures your baby's heartbeat.
- The other monitor measures the uterine contractions.
- You're asked to press a button when you feel your baby move.

How it makes you feel

- Does not put any stress on your baby
- Painless procedure
- It's safe for you and your baby.
- Time consuming



What Does the NST Result Mean?

Reactive

Baby is getting enough oxygen and is doing well.

Non-reactive

Does not mean that the baby is in immediate danger
More tests might be needed

Contraction stress test

The test uses an artificial way to get the uterus to contract and assesses fetal heart rate in response to the uterine contractions.

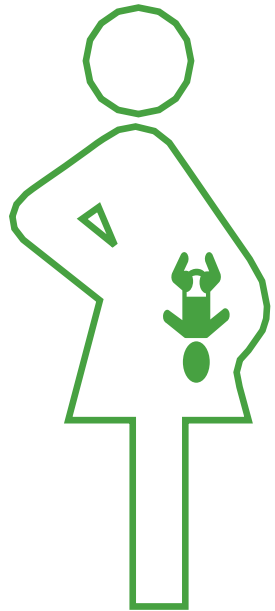
Biophysical profile

The test examines the baby's breathing, spontaneous movement, tone, and amount of amniotic fluid.

Any risks



External Cephalic Version for Breech Presentation



Cephalic
presentation



Breech
presentation

- ❖ Natural ways to help baby turn: walking, shaking back-and-forth
- ❖ **External cephalic version – ECV** is a procedure to turn the baby into head down position.
- ❖ May be offered at 37 to 38 weeks of pregnancy
- ❖ Benefits: If the procedure is successful, it increases the chance for normal vaginal delivery.

Who Is Not a Candidate for External Cephalic Version?

- ❖ Have a complicated pregnancy
- ❖ Currently carrying more than one baby
- ❖ Have abnormally shaped uterus
- ❖ Have history of C-section
- ❖ Have low level of amniotic fluid

How Is the External Cephalic Version Performed?

1. Do not eat or drink anything for eight hours prior to the procedure.
2. Ultrasound and a nonstress test is performed.
3. Medication is given to prevent the contraction of the uterus.
4. Lubricating gel or oil is placed on the abdomen.
5. The doctor will press his/her hands on mom's belly to turn the baby.
6. Baby's heartbeat will be monitored before, during and after the procedure.
7. Ultrasound may be used to check your baby's position and to guide the process.
8. A nonstress test is done after the procedure.



External Cephalic Version Procedure (Cont.)

Risks

- ❖ Emergency C-section due to fetal distress, rupture of placenta, or rupture of membranes
- ❖ The success rate: 40% to 70% *

How it makes you feel

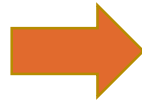
- ❖ Uncomfortable from the pressure on the abdomen
- ❖ Described as a strong deep-tissue massage
- ❖ May have a sensation of not being able to breathe

When Can You Be Admitted to the Hospital?



Electronic fetal monitoring:

- Baby's heart rate
- Uterine contractions



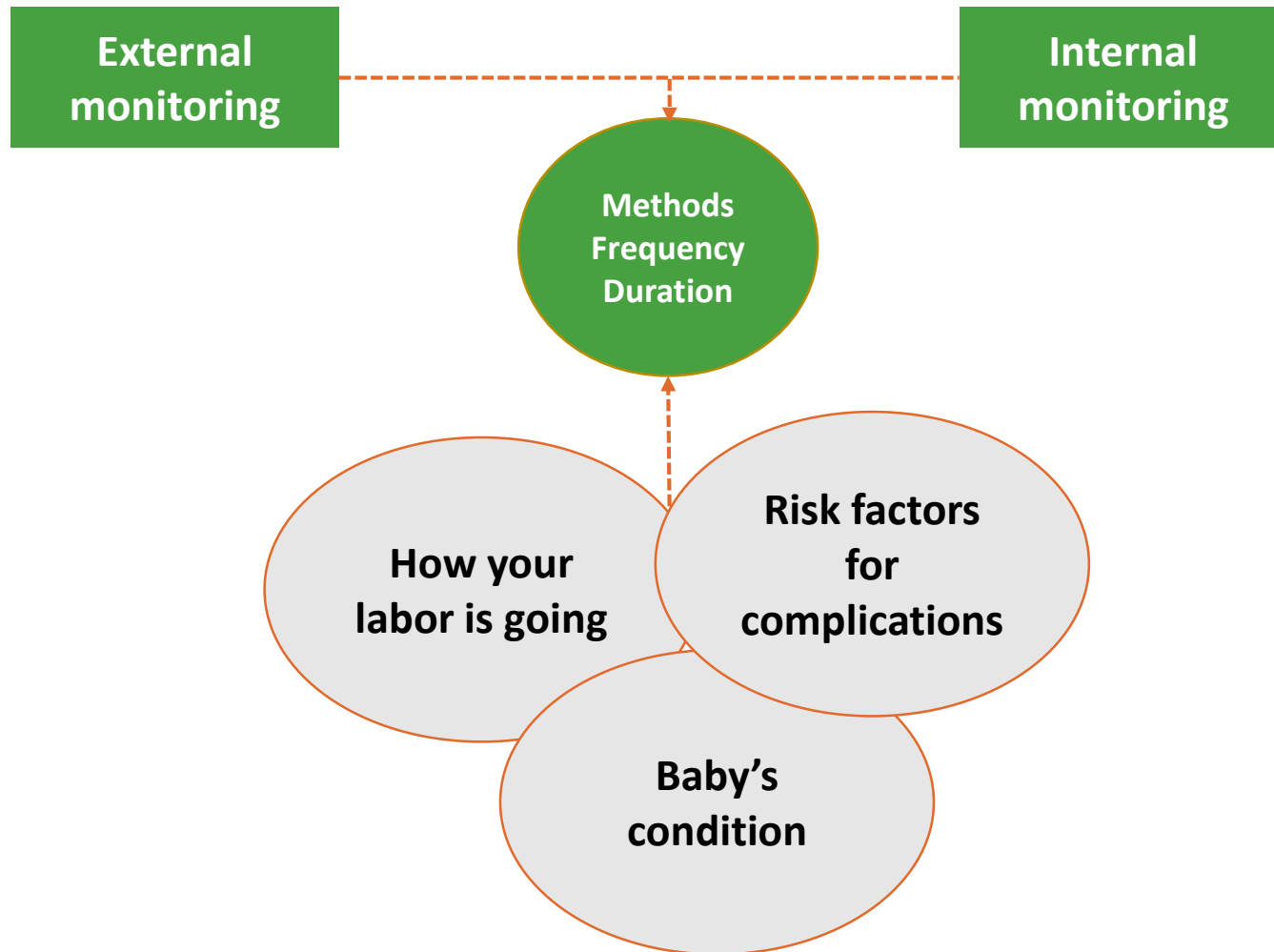
Vaginal exam, if permitted:

Cervix has thinned out or
has dilated?

Admitted to the hospital or not

Remember: It won't be a
wasted trip to the hospital if
you aren't admitted.

Electronic Fetal Monitoring



External Fetal Monitoring

How it is performed

- ❖ With two monitors and belts around the abdomen
- ❖ One monitor measures your baby's heartbeat.
- ❖ The other monitor measures the frequency and duration of uterine contractions.

Risks

- ❖ The method is not directly harmful to babies.
- ❖ False-positive results may lead to unnecessary additional fetal evaluations or interventions.



External Fetal Monitoring (Cont.)

How it makes you feel

- ❖ Not painful
- ❖ Some moms find:
 - Uncomfortable
 - Limit their movements

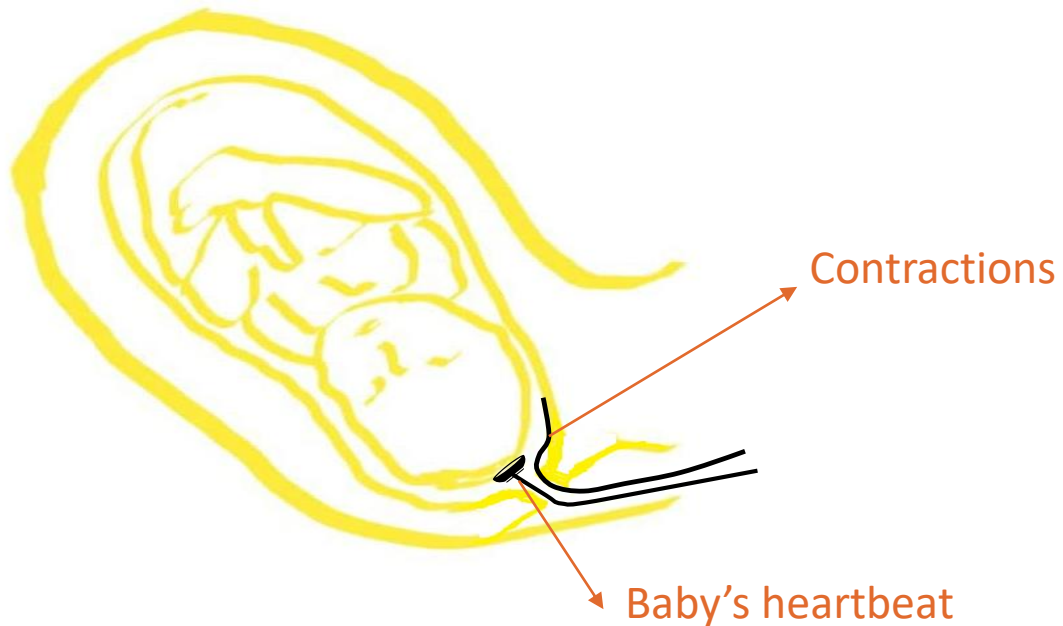
Alternatives

- ❖ Innovative wireless external monitor device called Monica Novii System
 - Without belts around your abdomen
 - Allow more mobility for the patients

Internal Fetal Monitoring

Benefits

- ❖ Provide more information about
 - Strength of the contractions
 - The response of the baby to these contractions



Internal Fetal Monitoring (Cont.)

Risks

- ❖ Infection
- ❖ Abrasion or bruising on baby's head
- ❖ If mom has tested Hepatitis-B positive, there is a small risk of transmitting it to the baby.
- ❖ Premature intervention such as cesarean section

How it makes you feel

- ❖ Discomfort during the insertion of the device into your uterus
- ❖ After the devices are connected:
 - Less discomfort
 - Feel their presence, but generally tolerable

What If You Say “No” to Fetal Monitoring . . .



**Not all babies can handle stress well
during the labor process.**

**If you feel uncomfortable, please talk to
your doctor.**

Induction and Augmentation of Labor

The difference

- ❖ In labor or not
- ❖ Induction of labor: help **initiate or start** the labor process
- ❖ Augmentation of labor: help **push along** the labor process that has already begun

Benefits

- ❖ Avoid medical complications as well as fetal complications of prolonged pregnancy.

Reasons to Induce or Augment Labor

Induction

- ❖ Hypertensive complications of pregnancy
- ❖ Post-term pregnancy
- ❖ PROM= premature rupture of membranes
- ❖ Your bag of water has broken, but labor hasn't begun within 24 hours.
- ❖ Low amniotic fluid volume
- ❖ Signs of infection

Augmentation

- ❖ Contractions are not strong enough.
- ❖ Labor process is slowing down, stalling, or not making enough progress.

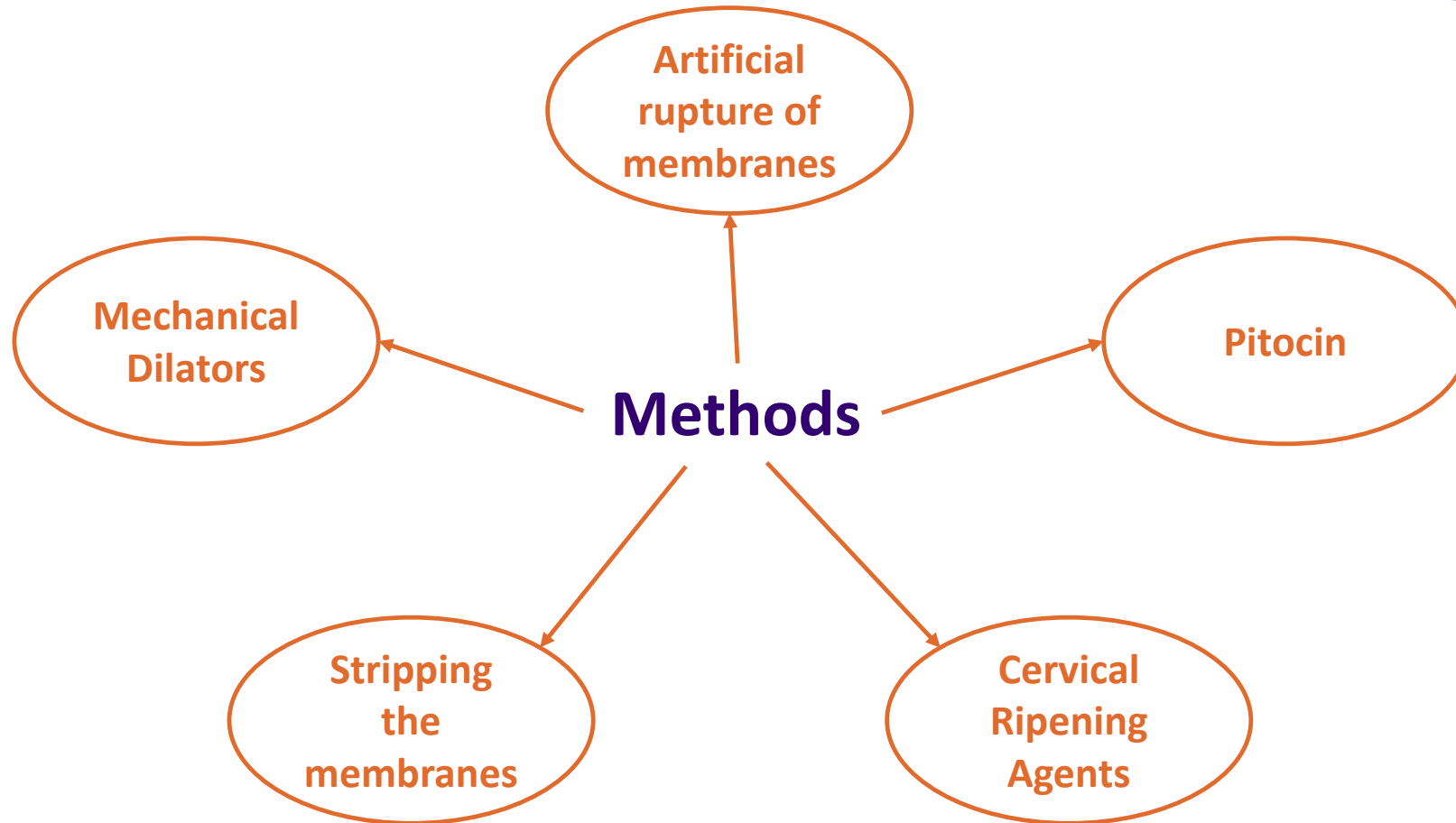
Risks of Inducing or Augmenting Labor

- ❖ Compression of the umbilical cord
- ❖ Decrease the fetal heart rate
- ❖ Tear of the uterus
- ❖ Early separation of the placenta
- ❖ Cesarean section delivery
- ❖ Risk of infection
- ❖ Non-response to induction or augmentation

Who Is Not a Candidate for Induction of Labor?

- ❖ Have history of cesarean section or uterine surgery
- ❖ Have conditions like placenta previa or umbilical cord prolapse
- ❖ Have breech or sideways presentation
- ❖ Have active genital herpes infection
- ❖ Choose a special day for the baby to be born

Methods of Induction & Augmentation



Mechanical Dilators for Induction



- ❖ The balloon slowly putting pressure on the cervix helps the cervix thin out and open.
- ❖ Purely mechanical
- ❖ No medication or chemical involved

Stripping the Membranes for Induction



- ❖ The physician uses his/her finger to separate the bag of water from the cervix
- ❖ Triggers the cascading natural chemical changes in the cervix
- ❖ Helps you go into labor naturally
- ❖ Can be done at the doctor's office
- ❖ During the procedure: feel discomfort
- ❖ After the procedure: sensation of regular cramping and a small amount of spotting

Cervical Ripening Agents for Induction



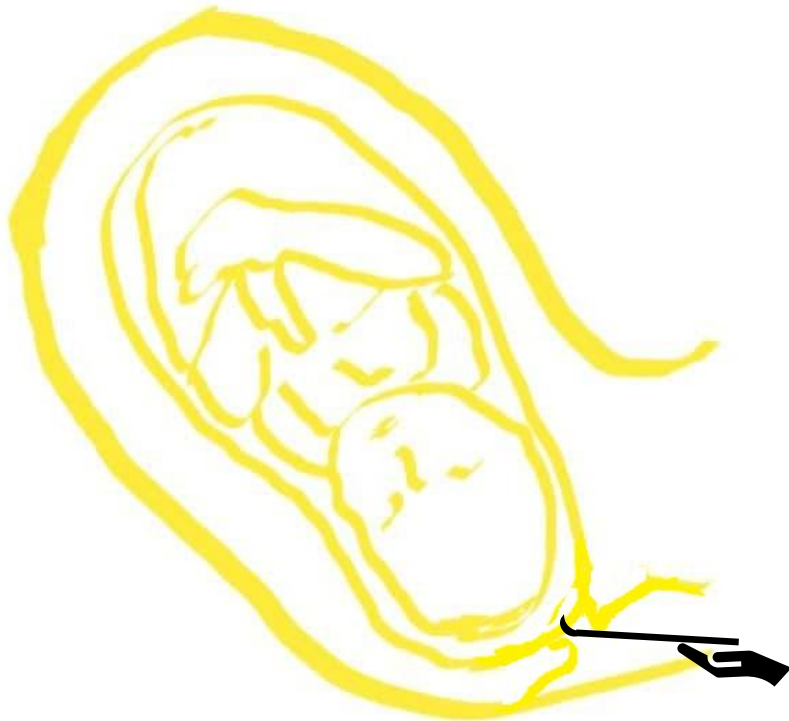
- ❖ The medication can be applied on or near cervix or taken by mouth.
- ❖ Medication, such as Cytotec, can cause the uterus to contract.
- ❖ Not all patients respond to the medication.

Pitocin for Induction & Augmentation



- ❖ Oxytocin hormone stimulates uterine contractions.
- ❖ Pitocin is the man-made form of oxytocin.
- ❖ Pitocin is used to start labor, increase labor process, or to stop bleeding after delivery.
- ❖ Delivered through an IV into your vein
- ❖ Contractions can be perceived as more painful with Pitocin.

Artificial Rupture of Membranes for Augmentation



- ❖ Amniotic sac is intentionally broken by your physician.
- ❖ A sharp instrument is used to puncture the amniotic sac.
- ❖ The amniotic fluid is released.
- ❖ Baby's head would drop lower against the cervix.
- ❖ Concerns of increased risk of infection

IV Fluids

IV Hep-lock

- ❖ IV - Intravenous
- ❖ A plastic tubing
- ❖ Allows immediate venous access
- ❖ Prepares for an IV line

How IV is placed

- ❖ A needle is inserted into your vein
- ❖ A needle contains a small, flexible plastic catheter.
- ❖ The needle is removed.
- ❖ Plastic catheter remains in your vein, and secured with the tape
- ❖ Uncomfortable when the needle is inserted
- ❖ Feel the presence of the IV hep-lock, but generally tolerable



IV Fluids

Reason for an IV

- ❖ To deliver IV fluid
 - Help maintain your blood pressure
 - To prevent or treat dehydration
- ❖ To deliver medication such as pain medication, Pitocin, or antibiotic
- ❖ To receive blood if needed

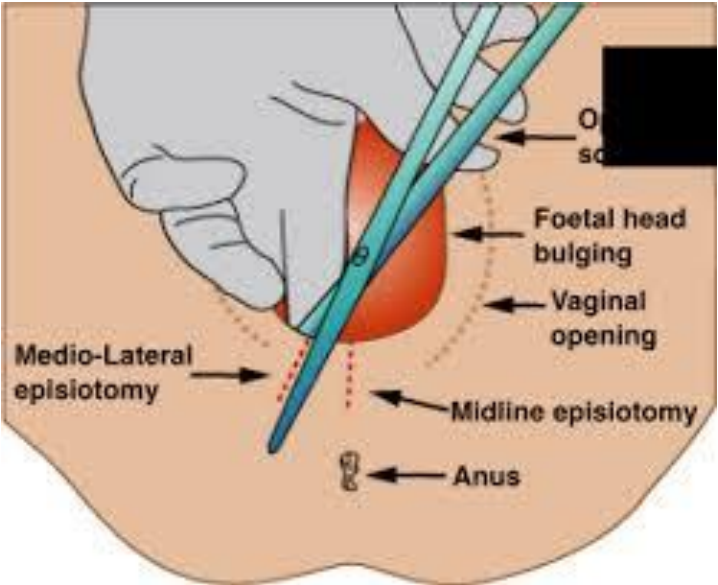


2nd Stage Intervention

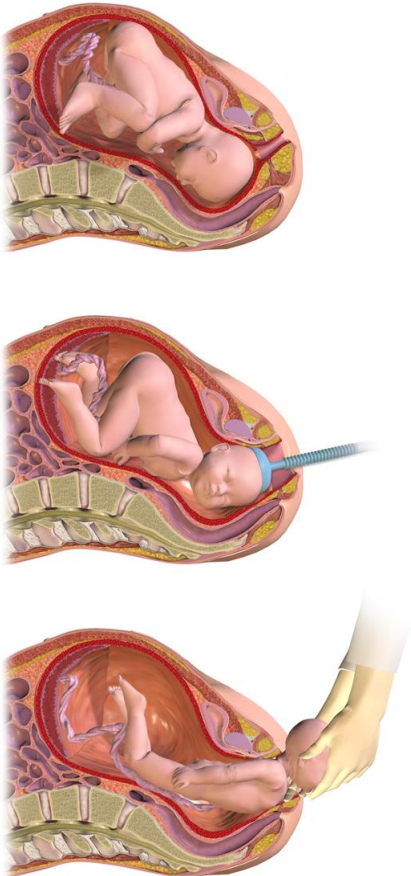
- ❖ Episiotomy, vacuum extractor, or forceps
- ❖ Reasons:
 - Maternal fatigue
 - Fetal heart rate deceleration
 - Blood pressure elevation
 - Maternal cardiac condition that prevent the mom from being able to sustain pushing

Episiotomy, Vacuum Extractor & Forceps

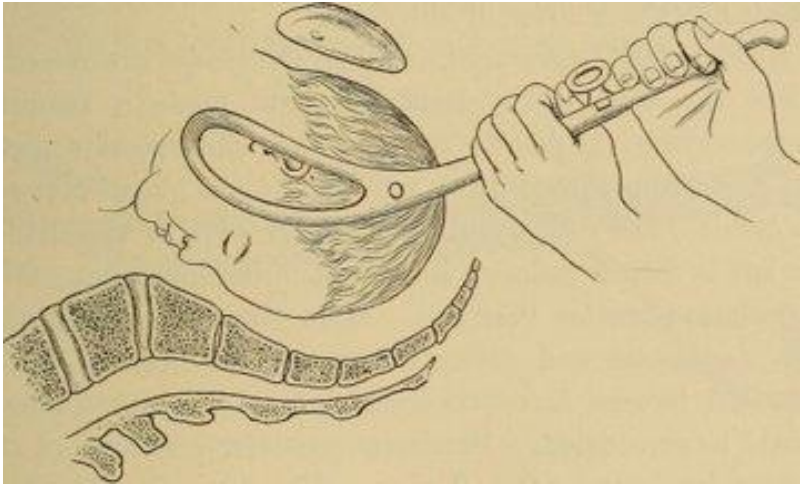
Episiotomy



Vacuum Extractor



Forceps



Risks and Benefits of the 2nd Stage Intervention

Benefits

- ❖ Avoid a cesarean section delivery

Risks

- ❖ **Episiotomy**

- Extension of the incision into the perineum or the anal sphincter complex
- Infection
- Postpartum pain and pain with intercourse

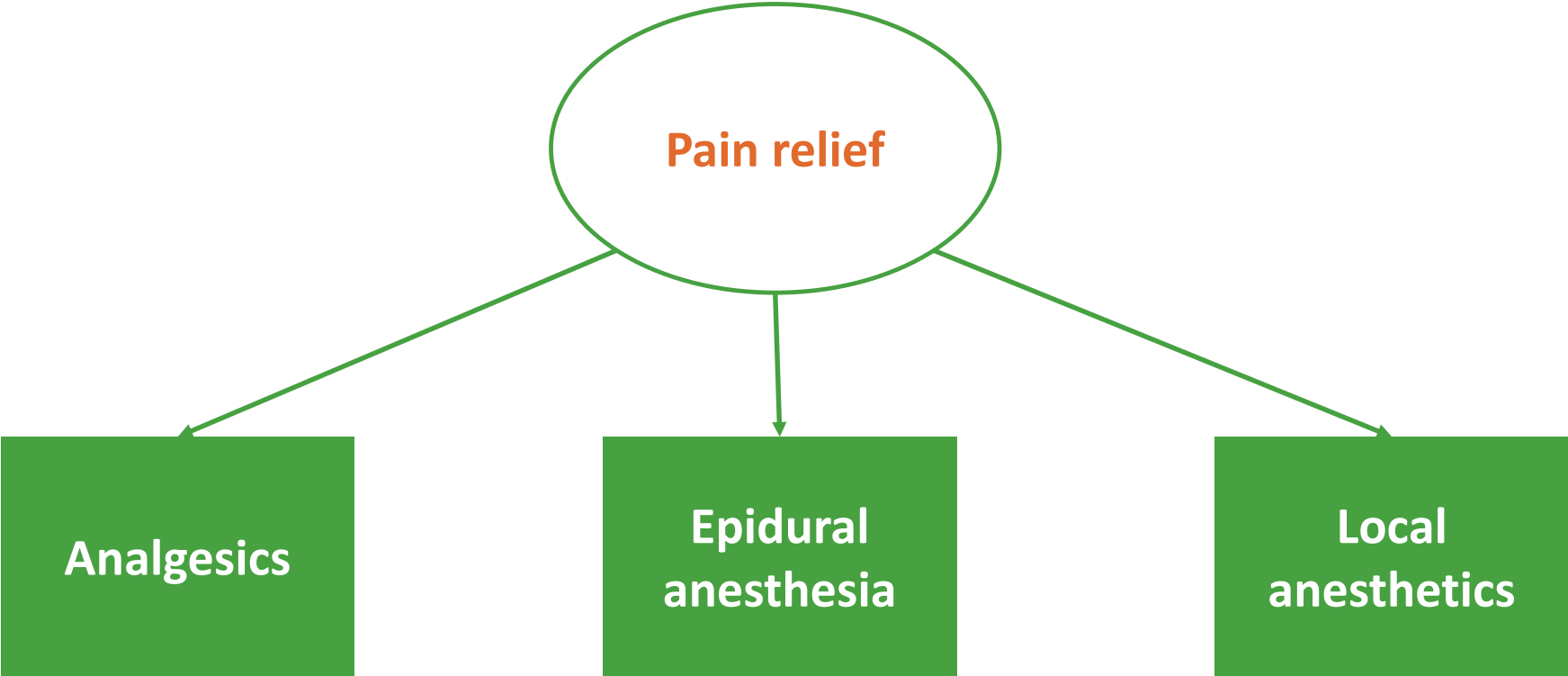
- ❖ **Vacuum extractor**

- Mom: extended lacerations or complications from episiotomy
- Baby: scalp lacerations or hematomas

- ❖ **Forceps**

- Mom: extended lacerations or complications from episiotomy
- Baby: facial bruising or lacerations

Medical Pain Relief



Medication Side Effects

- ❖ Unwanted reactions and consequences
- ❖ Vary for each patient, depending on how much medication is given, the size of patient, the absorption and metabolism of the drugs inside the body
- ❖ It doesn't mean that all the medication side effects would occur.



Analgesics

Medication

- ❖ Stadol, Fentanyl, Nubain, or Morphine

How it works

- ❖ To reduce pain
- ❖ Short acting and lasting from 30 minutes to 2 hours
- ❖ Do not take all the pain away
- ❖ Still experience contraction and pressure pain
- ❖ Doesn't cause numbness
- ❖ Doesn't block the nerve
- ❖ Change the way your brain receives pain signals

Analgesics (Cont.)

Administration

- ❖ **Medication is delivered**
 - Through IV
 - Injected into your thigh or hip

Side effects

- ❖ **Mom**
 - Drop in blood pressure
 - Nausea or vomiting
 - Dizziness, drowsiness, or slowing of breathing
- ❖ **Baby**
 - Slow frequency of breathing
 - Sleepiness
 - Difficulty in initiating breastfeeding

Epidural Anesthesia

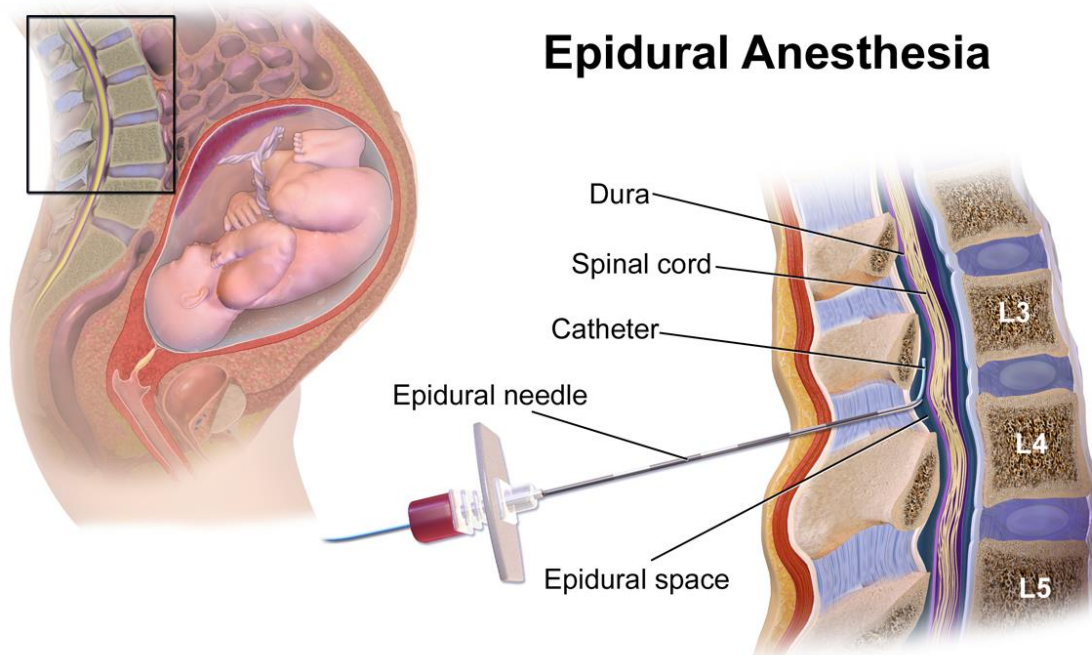
Medication

- ❖ Fentanyl, Morphine

How it works

- ❖ Regional anesthetic
- ❖ Blocking nerves to the lower part of your body
- ❖ Doesn't affect your conscious mental state
- ❖ May be able to feel pressure from the contractions and on the pelvic floor
- ❖ The dosage can be adjusted.
- ❖ Cause complete numbness in your lower extremities
- ❖ Need a foley catheter placed into your bladder to drain the urine
- ❖ The patient is restricted to stay in bed.

Epidural Anesthesia (Cont.)



Administration

- ❖ A catheter put into epidural space
- ❖ Medication will be continuously injected into your body via the small, soft, plastic catheter.
- ❖ Need to discuss with your doctor at what time in labor you can have an epidural

Epidural Anesthesia (Cont.)

Side effects

- ❖ Immediate drop to your blood pressure which lead to drop your baby's heartbeat
- ❖ Shivering, itching, or nausea
- ❖ Back pain and soreness where the needle and the catheter were placed

Who cannot have an epidural

- ❖ Taking certain medication
- ❖ Low platelet count
- ❖ Having infection on the back
- ❖ Unable to find the epidural space
- ❖ No anesthesiologist

Local Anesthetics

Medication

- ❖ Lidocaine

How it works

- ❖ Numb a small area of the perineum
- ❖ Can be injected
 - Before delivery of the baby
 - Before a second stage intervention
 - Before repair of the laceration



Thank you.