



- Induction = starting; augmentation = acceleration
- Why do we induce or augment labour?
  - To save the life of the mother, the life of the fetus, or both without causing harm to anyone of them.
- Notice that the success of any decision taken by a doctor depends on planning a healthy environment which allows implication of that decision. You must always inform the patient about any procedures that will be done for her. In addition, you must always ask for permission.
- What are the indications which allow us to induce labour?
  - **Intra-Uterine Growth Restriction (IUGR):** in which the environment inside the mother is unsafe for the growth of the baby.
  - **Uncontrolled hypertension/ diabetes.**
  - **Post-term pregnancy (> 40 weeks).**
  - **Premature rupture of membranes** (we need to avoid the occurrence of chorioamnionitis).
- How are you going to induce labour?
  - **Pharmacological:**
    - ✓ Prostaglandin E<sub>2</sub> (PGE<sub>2</sub>): it is the most commonly used pharmacological agent which can be administered as a vaginal tablet or vaginal gel. It is approved to be very safe and outcomes are excellent when using it. PGE<sub>2</sub> might cause hyperstimulation of the uterus thus compromising blood flow and causing fetal distress (once you administer PGE<sub>2</sub> you must monitor the patient under CTG).
    - ✓ Notice that before you induce labour, you must take history of the patient (why?) → to know what is her indication for induction.
    - ✓ Then, physical and obstetric examinations must be done:
      - ❖ *It is important to know the presentation and lie of the baby (why?)* → because induction of labour is only done for cephalic presentation.
      - ❖ *You must also check for the bioavailability of the baby by CTG (Cardiotocography: a technique which records fetal heartbeat and uterine contraction during pregnancy).*
    - ✓ After that, you move to pelvic examination where you need to know Bishop's score of the patient:
      - ❖ *It is a pre-labour scoring system to assess if induction of labour is required.*
      - ❖ *The total score is achieved by assessing the following five components on vaginal examination:*
        - Cervical dilation.
        - Cervical Effacement.
        - Cervical consistency.
        - Cervical position.
        - Fetal station.
      - ❖ *A score of 5 or less suggests that labour is unlikely to start without induction. A score of 9 or more indicates that labour will most likely commence spontaneously.*
    - ✓ Misoprostol: it is a synthetic PGE<sub>1</sub> which was developed as a cheap medication for peptic ulcer. Accidentally, doctors found out that some women had abortion when used this drug. Therefore, they started to use the drug for termination of pregnancy. Pay attention to administer a low dose (25 µg) through the vagina.



- ✓ Before 1980's, oxytocin was used to induce labour in a very natural way (similar to what is happening in the body). High doses of oxytocin can cause:
  - ❖ Placental abruption.
  - ❖ Uterine contractions.
  - ❖ Fetal distress.
  - ❖ Water and electrolyte reabsorption → cerebral edema → coma and death.

- **Mechanical:**

- ✓ Inserting a balloon and inflating it inside the cervix to cause a local release of prostaglandin which will induce labour.
- ✓ Artificial rupture of membranes (amniotomy). Risks for this procedure are: cord compression and chorioamnionitis.
- ✓ Extra-amniotic saline infusion
- ✓ Hysteroscopic dilation of the cervix (although it is not recommended).

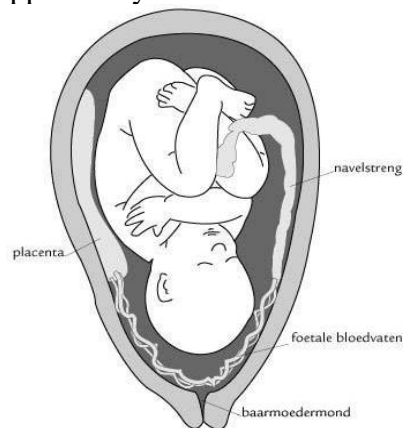
- What are the contraindications for induction of labour?

- **Maternal:**

- ✓ Malpresentation of the fetus (not being in cephalic presentation).
- ✓ Placenta previa.
- ✓ Cephalo-pelvic disproportion: usually found with short ladies or those with African origin (where the pelvis is heart-shaped instead of being oval). Sometimes, the fetus might be big (> 4kg).

- **Fetal:**

- ✓ Fetal distress.
- ✓ Vasa previa: fetal blood vessels cross or run near the internal orifice of the uterus. These vessels are at risk of rupture when the supporting membranes rupture as they are unsupported by the umbilical cord or placental tissue



- ✓ Hydrocephaly: it is a medical condition in which there is an abnormal accumulation of cerebrospinal fluid (CSF) in the brain. This causes increased intracranial pressure inside the skull and may cause progressive enlargement of the head if it occurs in childhood, potentially causing convulsion, tunnel vision and mental disability.
- ✓ Unfavorable CTG.

- Augmentation of labour refers to stimulation of spontaneous contractions that are considered in adequate because of failed cervical dilation and fetal decent.