

Chapter 7

Nursing Management of Pain

During Labor and Birth

Education for Childbearing

- **Ideally, educational preparation for childbirth begins prior to conception**



Types of Classes Available

- **Gestational diabetes mellitus**
- **Early pregnancy**
- **Exercise for pregnant women**
- **Infant care**
- **Breastfeeding**
- **Sibling**
- **Grandparent**
- **Adolescent childbirth**

Variations of Basic Childbirth Preparation Classes

- Refresher
- Cesarean birth
- Vaginal birth after cesarean
- Adolescent



Content of Childbirth Preparation Classes

- **Changes of pregnancy**
- **Fetal development**
- **Prenatal care**
- **Hazardous substances to avoid**
- **Nutrition**
- **Common discomforts**
- **Work, benefits of exercise**
- **Coping with labor and delivery**

Childbirth and Pain

- **How childbirth pain differs from other pain**
 - **Part of a normal birth process**
 - **Pain is different for each individual and need to assess if patient is in pain look for things like facial grimacing**
 - **Woman has several months to prepare for pain management**
 - **When does not have any preparation or prenatal classes chances are they will have a problem with pain related to uterine contractions**

Childbirth and Pain

- **How childbirth pain differs from other pain**
 - **Is self-limiting and rapidly declines after birth**
 - **Position changes can help with pain and descent of fetus**
 - ***Remember that culture can influence how a woman will individualize her pain.*****

Factors that Influence Labor Pain

- **Pain threshold-** is the least amount of sensation that one perceives as pain
- **Pain tolerance-** is the amount of pain one is willing to endure

Physical factors that contribute to pain during labor:

- dilation and stretching of the cervix
- reduced uterine blood supply during contractions
- pressure of the fetus on pelvic structures
- stretching of the vagina and perineum

Factors That Modify Pain

- **Central nervous system factors**
 - **Gate control theory-** stimulating large diameter nerve fibers-massage is excellent example of how to use the large nerve fibers; use of hot and cold applications
- **Endorphins**
 - natural body substances that are similar to morphine

Factors that Influence Labor Pain

- **Maternal conditions**
 - **Cervical readiness**- ncould end up with cervical laceration
 - **Pelvis**- size and shape so fetus can descend
 - **Labor intensity**- short, intense brings more pain; contractions can come too fast
 - **Fatigue**- reduces the pain tolerance and affects her coping skills
- **Fetal presentation and position-remember that occipital presentation will put pressure on sacral area**

Nonpharmacological Pain Management

- **Advantages**

- Nonpharmacological methods do not harm the mother or fetus
- They do not interfere with the excitement of the birthing process
- They do not slow labor if they provide adequate pain control
- They carry no risk for allergy or adverse drug effects
- They do not have to be delayed until labor is established

Methods of Childbirth Preparation

- **Dick-Read method-** the use of relaxation techniques to reduce the discomforts of labor
- **Bradley method-** emphasizes slow abdominal breathing and relaxation techniques; first to include father as part of the labor
- **Lamaze method-** uses mental techniques that condition the woman to respond to contractions with relaxation rather than tension-respirations no lower than $\frac{1}{2}$ of normal rate

Nonpharmacological Pain Relief Measures

- **Relaxation techniques**-techniques require concentration, thus occupying the mind while reducing muscle tension
- **Skin stimulation**-variations of massage
- **Effleurage**- a technique that stimulates the large-diameter nerve fibers; done by stroking abdomen in circular motions during contractions
- **Sacral pressure**-apply pressure firmly to lower back

Nonpharmacological Pain Relief Measures

- **Sacral pressure**-apply pressure firmly to lower back
- **Thermal stimulation**-hot and cold applications
- **Positioning**- relieves muscle fatigue and strain and promotes normal mechanisms of labor
- **Diversion and distraction**-stimulate the woman's brain, thus limiting her ability to perceive sensations as painful
- **Breathing**-should not use them until she needs them

Breathing

- **First stage/Abdominal breathing**
 - Slow-paced-begins and ends with a cleansing breath with slow breathing between
 - Modified-paced-begins and ends with a cleansing breath with rapid breathing between
 - **Patterned-paced**
 - Constant pattern-Pant-pant-pant-blow, pant-pant-pant-blow, and so on.
 - Stairstep pattern-Pant-blow, pant-pant-blow, pant-pant-pant-blow, pant-pant-pant-pant-blow
- **Second stage**
 - Used when pushing-takes a cleansing breath, then deep breath, and then pushes down while counting to 10 then blows out

How to Recognize and Correct Hyperventilation

- **Signs and symptoms**

- Dizziness
- Tingling of hands and feet
- Cramps and muscle spasms of hands
- Numbness around nose and mouth
- Blurring of vision



- **Corrective measures**

- Breathe slowly, especially when exhaling
- Breathe into cupped hands
- Place a moist washcloth over the mouth and nose while breathing
- Hold breath for a few seconds before exhaling

Nursing Tip

- If a woman is successfully using a safe, nonpharmacological pain control technique, do not interfere



The Nurse's Role In Nonpharmacological Techniques

- **Determine if attended childbirth preparation classes**
 - Aids in developing appropriate nursing care plan
- **Identify signs of tension**
 - Aids in determining appropriate relaxation techniques
- **Minimize environmental irritants**
 - Keeping her clean and dry helps her to relax and focus

Pharmacological Pain Management

- **Analgesics**
 - Systemic
- **Adjunctive drugs to improve effectiveness or counteract side effects**
- **Anesthetics**
 - Regional: loss of sensation
 - General: loss of consciousness and sensation

Physiology of Relationship of Pregnancy to Analgesia and Anesthesia

- Pregnant woman at higher risk for hypoxia**
- Sluggish GI tract can result in increased risk of vomiting and aspiration**
- Aortocaval compression increases risk of hypotension and shock**
- Effect on fetus must be considered**
- The goal of pain relief is to provide maximum comfort to the woman with minimum effect on the developing fetus.**

Pharmacological Methods

- **Advantages**

- Using medications during labor allows the mother to be more comfortable and relaxed.
- Increased relaxation will aid in her ability to work through contractions.
- Lessens “stress response” which, if not controlled, could lead to fetal acidosis.

Pharmacological Methods

- **Limitations**

- **Important factor to consider—two people are being medicated, mother and fetus**
- **Any medication used must be considered for its potential impact on the condition of the fetus**
- **Can slow labor if given too early**

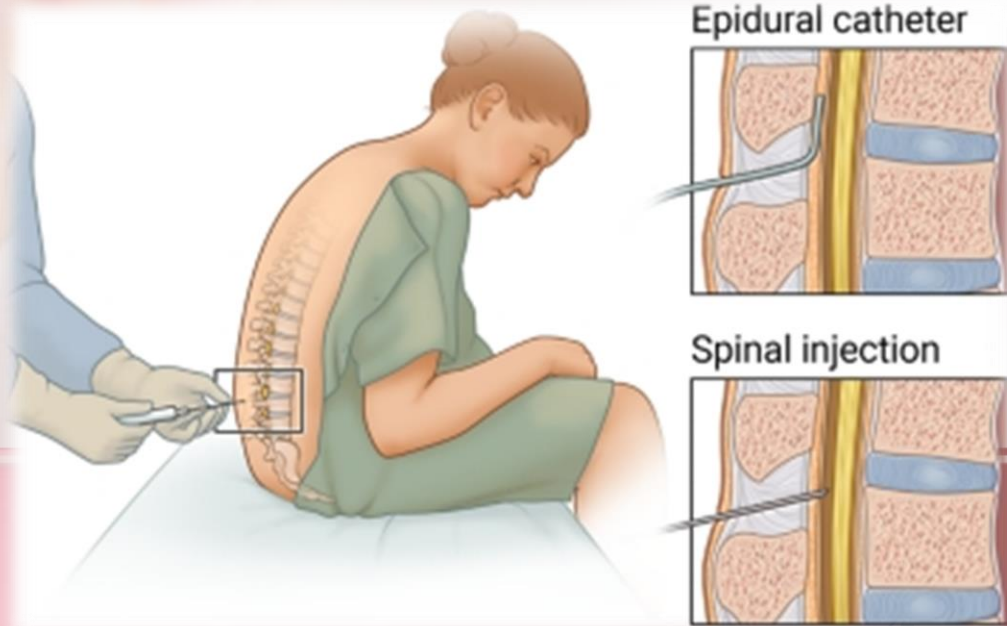
Analgesics and Adjunctive Drugs

- **Narcotic (opioid) analgesics**
 - **Avoid if birth anticipated within 1 hour-because can cause respiratory depression in the fetus**
 - **Meperidine (Demerol)**
 - **Fentanyl (Sublimaze)-rapid onset, short duration; can cause respiratory depression**
- **Narcotic antagonist: reverses respiratory depression-naloxone (Narcan)-caused by opioids**
- **Adjunctive drugs: relieves nausea/vomiting**

***All obstetric anesthesia must be supervised by a registered nurse who is prepared to manage unexpected responses in the mother or newborn.**

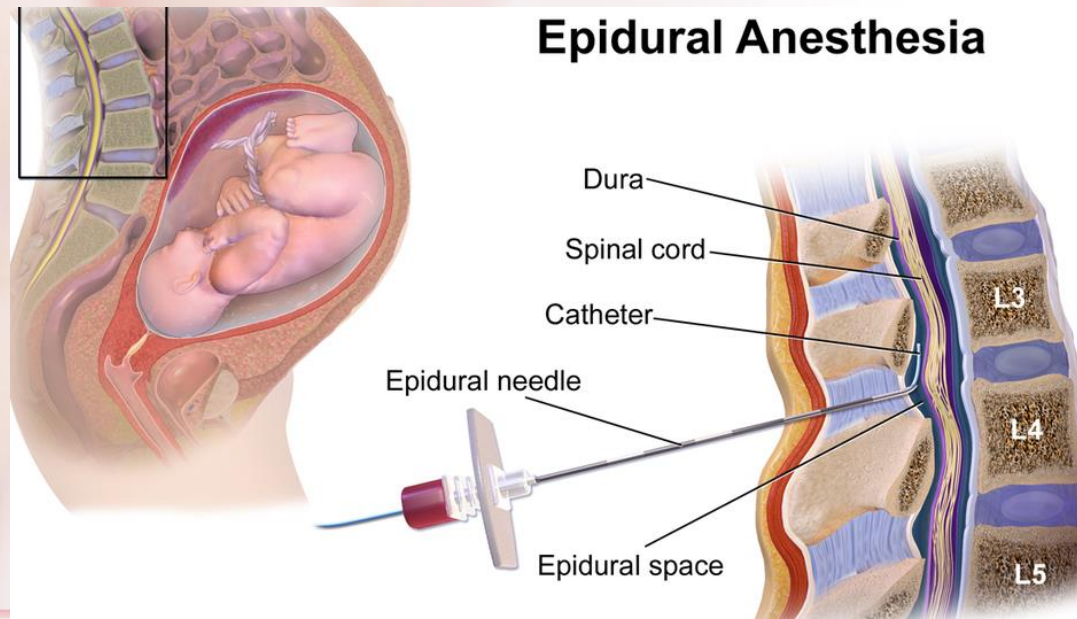
Regional Analgesics and Anesthetics

- Regional anesthesia usually involves placement of anesthetic in epidural or subarachnoid space
- The meninges around the spinal cord
 - Dura mater
 - Arachnoid mater
 - Pia mater



Difference Between Analgesic and Anesthetic

- Analgesic blocks pain
- Anesthetic blocks both pain and motor responses

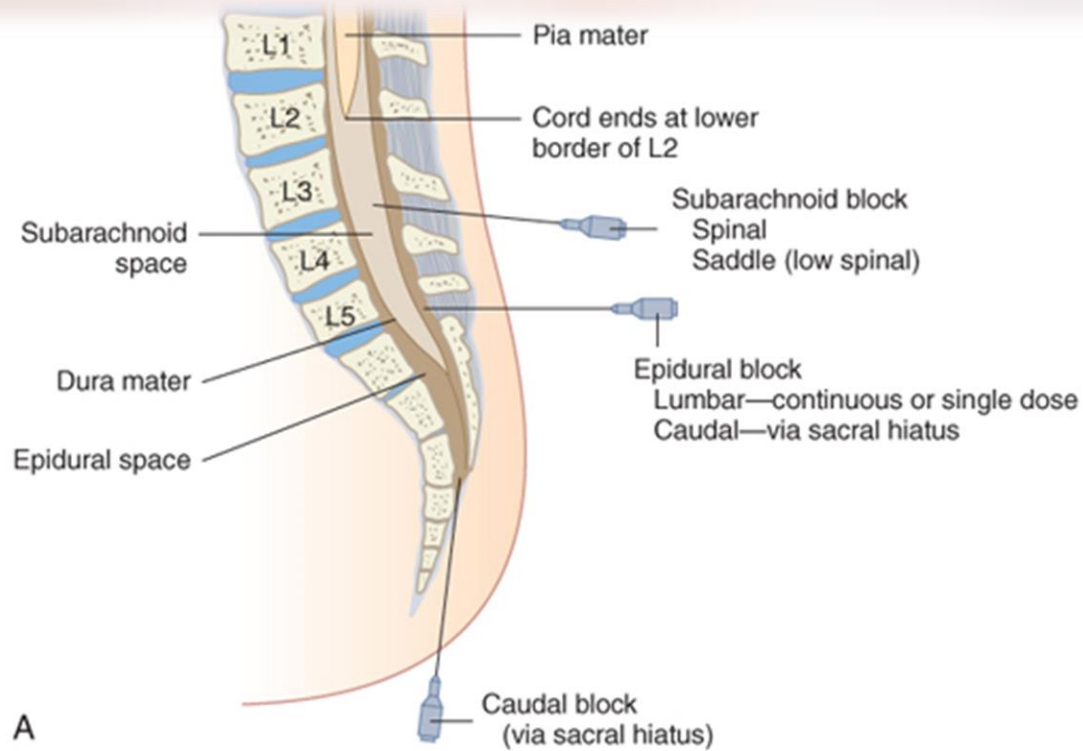


Types of Anesthesia for Childbirth

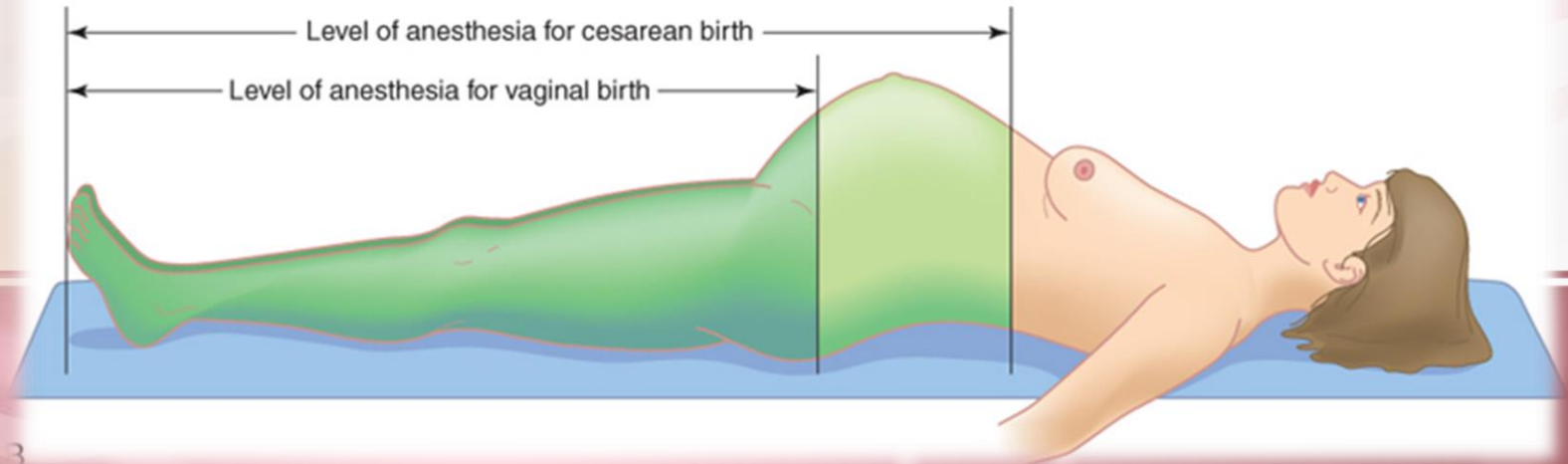
- **Anesthetic method**
- **Local infiltration-** of perineal area for episiotomy
- **Pudendal block-** blocks pain in perineal area does not have effect on pain from contractions; vaginal hematoma or possible abscess
- **Epidural block-** most common side effects is maternal hypotension & urinary retention; What are some limitations in using and epidural block?
- **Subarachnoid (spinal) block-** most common hypotension and urinary retention; care of patient after block –postspinal headache- blood patch
- **General anesthesia-** used for C-sections either in emergency or woman who refuses or has contraindication to epidural or subarachnoid; major risk-regurgitation with aspiration

***** Always be sure to assess the ability of moving legs and the sensation prior to ambulation takes place. Also assess for signs of impending birth*****

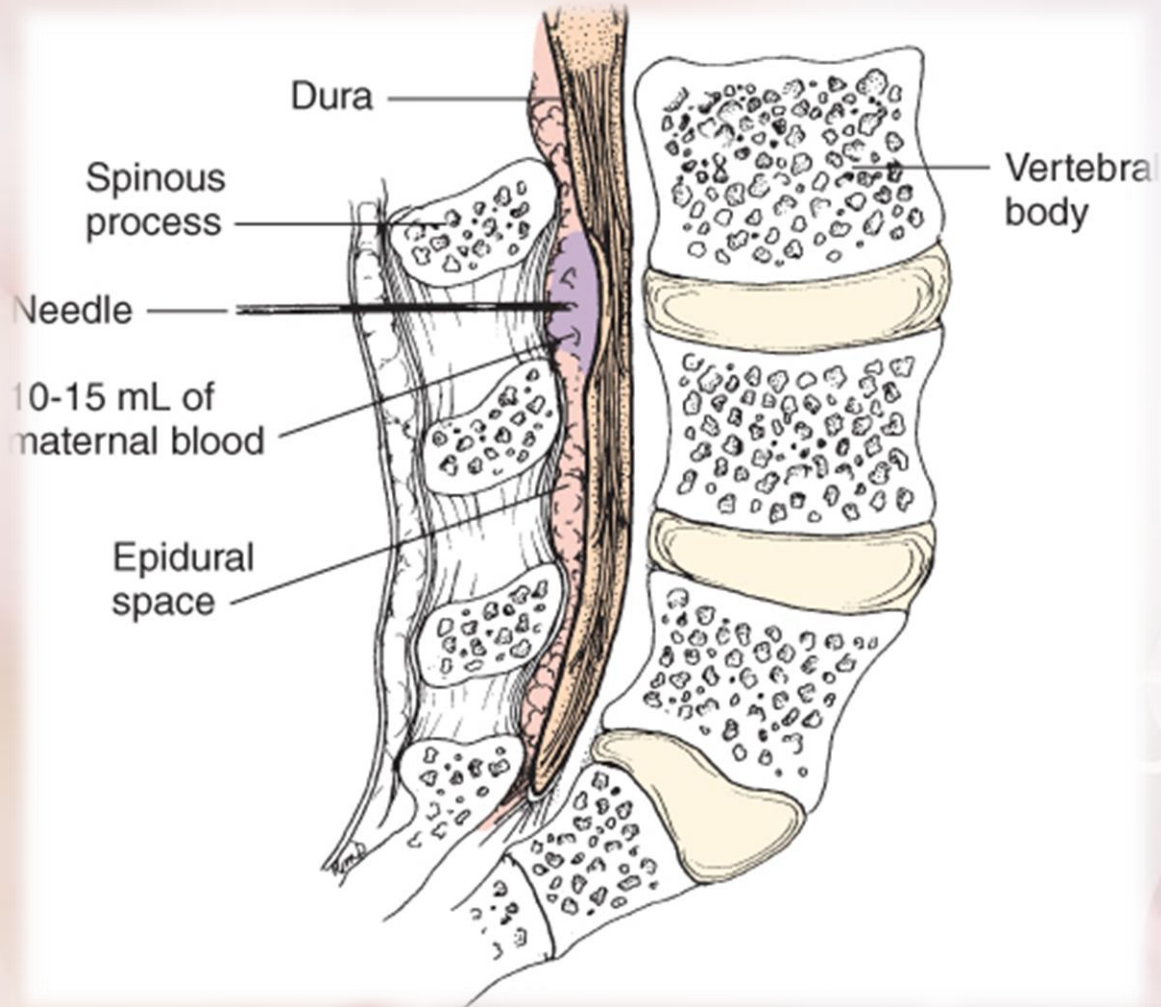
Epidural and Spinal Anesthesia



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Epidural Blood Patch



General Anesthesia

- **May be necessary in the following circumstances:**
 - **Emergency cesarean birth: not enough time to establish a block**
 - **Cesarean birth in woman who refuses or has a contraindication to block**

General Anesthesia

- **Adverse effects in the mother**
 - Regurgitation or vomit with aspiration of gastric contents Can result in chemical injury to lungs
- **Adverse effects in the neonate**
 - Respiratory depression
 - Aggressive resuscitation may be necessary

Pharmacological Techniques

- **The nurse's role**
 - **Begins at admission**
 - **Woman's preference for pain relief**
 - **Keep side rails up**
 - **Provide education regarding procedures and expected effects**
 - **Observe for hypotension and respiratory depression**
 - **Document interventions and assessments**