

How an Epidural Block is Given

By Penny Simkin, PT (@1991)

The following is a general description of the step-by-step procedure:

1. The care provider orders the epidural and the anesthesiologist is called. A nurse remains throughout the procedure and afterward until optimal anesthesia has been achieved and all vital signs are stable. She remains close by thereafter.
2. A bolus (1 liter) of intravenous fluids is quickly administered to the mother to increase her blood volume and reduce the likelihood of a dangerous drop in her blood pressure.
3. The anesthesiologist obtains informed consent from the laboring woman after explaining the risks and benefits of the procedure.
4. An electronic fetal monitor is used to help document fetal and uterine response to the epidural.
5. The mother's blood pressure, respiration, and pulse are observed to provide a baseline for assessing effects of the epidural; these will be checked frequently.
6. The mother's partner is sometimes asked to leave by the anesthesiologist, who may find his presence stressful.
7. The mother is asked to sit up, rounding her back, or to curl up on her left side, close to the edge of the bed, and remain very still.
8. The anesthesiologist:
 - a. Locates the desired vertebral space in the low back;
 - b. Scrubs the area with antiseptic
 - c. Injects a local anesthetic to numb the skin;
 - d. Inserts the epidural needle slowly and carefully to locate the epidural space;
 - e. Draws back on the syringe, to check for blood or cerebrospinal fluid; if either is found, the anesthesiologist relocates the needle or starts over again.
 - f. May place a pulse meter on the mother's finger or earlobe;
 - g. May administer a test dose of local anesthetic with or without epinephrine to detect any adverse effects of the medication and to act as a safeguard against injecting into a blood vessel.
 - h. Threads a thin Teflon catheter through the needle into the epidural space. The mother may feel pressure and occasionally a shooting pain or shock sensation down one leg.
 - i. Tapes the catheter to the mother's back, extending it to her shoulder. The catheter is either topped up every one to three hours or attached to an infusion pump that drips concentrations of medication for more consistent pain relief;

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j. Observes fetal heart rate, maternal blood pressure and pulse, and if necessary, gives oxygen to the mother, changes her position, or administers intravenous medications to raise her blood pressure;

k. Tests the area for loss of sensation or pain relief with a series of touches with a cold swab, pinpricks, or pinches over her trunk;

l. Returns periodically to add medication or to check the infusion pump and the mother's comfort;

m. Can increase the level and depth of anesthesia for a cesarean delivery, if necessary, and monitor maternal well-being during the surgery.

9. Pain relief begins within 5 to 10 minutes. The area affected may range from a band around the mother's trunk or a larger area from nipples to toes, depending on the concentration of the drug and the number of spinal segments in contact with the medication.

10. A bladder catheter may be placed once the epidural has taken effect, since the sensations of a full bladder and the ability to urinate are reduced.

11. The nurse continues to check vital signs and the contraction pattern, and takes appropriate action if problems arise.

12. The mother usually has marked reduction in pain and some loss of control of the muscles in her trunk and legs, without any mental effects.