

## Pain management and anesthesia in assisted birth



### Why assisted birth changes analgesia needs

Assisted birth usually refers to an assisted vaginal birth in which forceps or a vacuum device is used to help guide the baby through the birth canal. It is generally considered when vaginal birth is close, but additional help is needed because pushing is prolonged, maternal effort is limited, or there are concerns about the baby. Pain management needs can change quickly because the procedure involves the perineum, pelvic floor, lower vagina, and often a repair afterward.

The pain profile is different from ordinary contractions alone. During forceps delivery, for example, tissue stretch and pressure may be more intense, and the clinician may need more space to rotate or guide the fetal head. Vacuum birth may involve less internal manipulation than forceps in some cases, but contractions, crowning, perineal stretching, and possible episiotomy or tearing can still be painful. Good anesthesia should reduce suffering while allowing enough awareness and motor participation to push when asked.

The goal is not a completely identical experience for everyone. Some people prioritize maximal numbness; others want to preserve mobility or sensation. A birth pain management strategy works best when it is flexible, documented, and discussed with the obstetric and anesthesia teams before decisions become

urgent.

## **Neuraxial analgesia: epidural, spinal, and combined techniques**

Neuraxial analgesia means medication is delivered near the spinal nerves, most commonly through an epidural catheter. Epidural analgesia is widely used because it can provide strong pain relief during labor and can often be topped up if assisted delivery interventions or cesarean birth become necessary.

Reviews of labor analgesia consistently describe neuraxial methods as the most effective pharmacologic option for labor pain relief.

An epidural catheter can be adjusted with dilute local anesthetic and opioid combinations to balance pain relief with the ability to move, sense pressure, and push. A combined spinal-epidural may provide faster onset because a small intrathecal dose is given first, followed by an epidural catheter for ongoing dosing. A dural puncture epidural is another technique used in some settings to improve spread while keeping the medication epidural. The choice depends on timing, local protocols, anatomy, prior spine procedures, platelet count or anticoagulant use, urgency, and patient preference.

For assisted birth, an existing well-functioning epidural is often valuable. It may be strengthened before forceps or vacuum application, perineal repair, or possible move to the operating room. However, an epidural that was comfortable for contractions may still be inadequate for operative vaginal birth. People should be encouraged to report sharp pain, one-sided block, rectal pressure that feels unmanageable, or return of sensation before the procedure begins.

## **When neuraxial analgesia is not enough or not available**

Neuraxial analgesia is not always possible. It may be contraindicated because of certain bleeding risks, infection at the insertion site, severe untreated low blood pressure, some neurologic concerns, or anticoagulant timing. It may also be unavailable because labor is moving too quickly, anesthesia staff are responding to emergencies, or the person chooses another method. In assisted birth, the clinical team then considers the safest realistic alternative for the procedure and repair.

A pudendal nerve block is an important option for operative vaginal delivery.

It involves local anesthetic placed near the pudendal nerves, which supply much of the perineum, vulva, and lower vagina. It does not remove contraction pain or deeper pelvic pressure, but it can reduce pain from forceps or vacuum application, crowning, episiotomy, and suturing. Regional anesthesia reviews note that pudendal block should be considered for operative vaginal delivery when neuraxial analgesia is contraindicated.

Local infiltration may also be used for episiotomy or laceration repair, especially when pain is localized to the perineal tissues. This approach is more limited than neuraxial anesthesia or pudendal block, but it can be effective for targeted tissue repair. If analgesia is inadequate, it is reasonable to pause when clinically possible and ask for reassessment rather than silently enduring severe procedural pain.

### **Nitrous oxide, systemic opioids, and non-drug support**

Nitrous oxide is an inhaled analgesic that the laboring person self-administers through a mask or mouthpiece. It has rapid onset and offset, which can make it appealing for people who want a noninvasive option and a sense of control. Evidence suggests it may improve coping and satisfaction even when pain scores are variably affected. For assisted birth, however, nitrous oxide is usually not enough as the only method if forceps, vacuum, episiotomy, or complex repair is expected.

Systemic opioids can be given intravenously, intramuscularly, or through patient-controlled systems in some units. They may reduce pain perception and distress, but they are generally less effective than neuraxial analgesia and can cause sedation, nausea, dizziness, respiratory depression, and fetal or neonatal effects depending on medication, dose, timing, and monitoring. The specific drug choice must follow local safety protocols and the clinical context.

Nonpharmacologic support remains meaningful even during medicalized birth. Continuous labor support, upright positioning earlier in labor when safe, coached breathing, counterpressure, explanation before touch, and calm sequencing of instructions can reduce fear and improve the sense of control. These tools do not replace anesthesia for operative pain, but they make care more humane and can help the person stay oriented during a fast-changing birth.

## **Consent, communication, and patient participation**

Pain care during assisted birth should include communication as deliberately as it includes medication. Informed consent for assisted delivery should cover why assistance is being recommended, which instrument is proposed, expected benefits, key risks, alternatives such as continued pushing or cesarean birth when applicable, and what will happen if the attempt is not successful. When time is limited, the explanation may be brief, but it should still be understandable.

Clinicians can support participation by naming each step: examination, bladder emptying if needed, anesthesia assessment, instrument placement, traction during contractions, and repair. The birthing person can be told what sensations are expected, such as pressure or stretching, and what should be reported, such as sharp pain, panic, difficulty breathing, or feeling unable to continue. This matters because satisfaction with childbirth is strongly linked to feeling empowered and involved, not simply to the intensity of pain.

Labor pain management preferences should be respected without treating the birth plan as a contract. A person who hoped to avoid epidural analgesia may still choose it if labor becomes prolonged. Someone with epidural analgesia planning may still need a pudendal block or local infiltration if the block is patchy. The ethical center is shared decision-making: honest options, timely reassessment, and no shame attached to changing course.

## **After birth: repair, recovery, and ongoing pain control**

Pain management does not end when the baby is born. Assisted vaginal birth may be followed by perineal assessment, suturing, catheter care, swelling, bruising, and monitoring for bleeding or urinary retention. If there is perineal trauma after assisted birth, adequate anesthesia for repair is essential. This may involve topping up an epidural, using local anesthetic, adding a pudendal block, or moving to an operating room if the repair is extensive or pain control is inadequate.

Postpartum pain plans are usually multimodal, meaning several approaches are combined to reduce reliance on any single medication. Depending on individual

factors and clinician advice, this may include cold packs, positioning, stool-softening strategies, pelvic floor guidance, non-opioid analgesics, and carefully selected stronger medication when needed. People with opioid use disorder, chronic pain, medication allergies, hypertensive disorders, renal disease, liver disease, or anticoagulant use need individualized planning rather than routine assumptions.

Emotional recovery also belongs in the pain conversation. Assisted birth can feel like a relief, a shock, or both. A debrief with the obstetric team can clarify why decisions were made, what anesthesia was used, whether any complications occurred, and what symptoms should prompt urgent review. Good follow-up validates both physical healing and the memory of being cared for during an intense event.