

Common complications and safety of assisted birth



When assisted birth is considered and what makes it safe

Assisted birth is usually considered during the second stage of labour, when the cervix is fully dilated and the baby has descended into the pelvis but birth is not progressing adequately. Common indications include prolonged or ineffective pushing, maternal exhaustion, and a non-reassuring fetal heart-rate pattern. It may also be used when prolonged pushing could pose particular risks, such as in some maternal cardiac, respiratory, or neurological conditions. The purpose is not simply to speed up birth; it is to achieve a safe vaginal delivery when the baby is low enough and the circumstances are suitable.

Before applying an instrument, the clinician assesses fetal position, station, head flexion, pelvic anatomy, cervical dilatation, membrane status, and the likelihood of successful birth. The bladder is generally emptied, adequate analgesia is provided, and the operator explains the reason for intervention and the possible alternatives. These alternatives may include continuing to push briefly, changing maternal position, or performing a caesarean birth, depending on the urgency and the baby's position.

Vacuum extraction applies a cup to the baby's scalp and uses traction during

contractions and pushing. Forceps are curved instruments placed around the baby's head to guide or assist delivery. Neither method is universally safer: the best option depends on gestational age, fetal position, urgency, and the clinician's experience. A theatre team and neonatal clinician may be alerted when the procedure is technically difficult or when there is a meaningful possibility of caesarean birth or newborn resuscitation.

Common maternal complications

The most frequent maternal effects involve soft-tissue injury. Assisted birth can cause small vaginal or cervical abrasions, labial tears, episiotomy-related discomfort, or a deeper perineal tear. Forceps, particularly when used with an episiotomy, are associated with a greater risk of significant perineal trauma than vacuum in many clinical settings. The phrase perineal trauma after assisted birth includes injuries ranging from superficial skin disruption to tears involving the anal sphincter complex.

Obstetric anal sphincter injuries are clinically important because they can contribute to persistent perineal pain, dyspareunia, flatus or faecal incontinence, and psychological distress if not recognized and managed. A careful examination after birth is therefore essential. When a third- or fourth-degree tear is identified, specialist repair, documentation, and structured follow-up may be offered. Symptoms that develop later should be discussed with a midwife, obstetrician, pelvic-floor physiotherapist, or other appropriate professional rather than dismissed as an inevitable consequence of childbirth.

Bleeding is another possible complication. Vaginal or perineal lacerations, uterine atony, retained placental tissue, or a combination of factors can contribute to postpartum haemorrhage. Most bleeding is recognized promptly in the birth setting, where clinicians can assess uterine tone, inspect for trauma, and provide emergency treatment if needed. Assisted birth itself does not mean that a serious haemorrhage will occur, but the team will generally remain alert to this possibility.

Short-term effects can include swelling, bruising, difficulty passing urine, and pain when sitting or walking. These problems often improve during recovery, although the time course varies. Analgesia, wound care, bladder assessment, and

individualized pelvic-floor advice may be appropriate. A person who experiences escalating pain, heavy bleeding, fever, wound separation, urinary retention, or new bowel-control problems should seek prompt clinical assessment.

Common effects on the newborn

Newborn effects are often visible but minor and temporary. Vacuum extraction may leave a circular mark, scalp swelling, or bruising where the cup was attached. Forceps may cause superficial facial marks, small cuts, or bruising on the cheeks or scalp. These findings commonly fade over several days, but the baby should still receive routine examination and observation, particularly if the delivery was difficult or the newborn appears unwell.

A localized collection of blood beneath the periosteum, called a cephalohaematoma, can occur after birth trauma. It is usually limited by the boundaries of an individual skull bone and may become more apparent during the first hours or days. Most resolve without invasive treatment, but breakdown of the blood collection can contribute to neonatal jaundice, so clinicians may monitor the baby's colour and bilirubin level when indicated. Parents should follow the newborn team's advice about feeding, observation, and review.

Vacuum delivery can also be associated with scalp laceration or, rarely, more extensive bleeding beneath the scalp. Such bleeding may be difficult to detect early and can cause pallor, increasing head circumference, lethargy, poor feeding, tachycardia, or circulatory instability. These signs require urgent medical attention. Retinal haemorrhage and intracranial haemorrhage are uncommon, but they are recognized complications discussed in clinical reviews. The absolute risk is low, and the presence of an assisted birth does not by itself indicate that neurological injury has occurred.

Some babies need brief respiratory support or additional assessment after any complicated labour. This may reflect the underlying reason for the intervention, such as fetal compromise, rather than the instrument alone. Neonatal staff evaluate breathing, circulation, tone, feeding, and neurological status, and they decide whether observation in a routine postnatal area or a higher-acuity setting is appropriate.

Rare but serious complications and limits of the procedure

Serious complications are uncommon, but safe practice requires that clinicians anticipate them. Maternal risks include extensive vaginal or perineal tears, significant bleeding, infection, urinary problems, and, less commonly, longer-term pelvic-floor dysfunction. The risk profile is influenced by parity, fetal size and position, duration of labour, epidural analgesia, episiotomy, and whether the procedure is performed urgently.

For the newborn, rare complications include substantial scalp haemorrhage, skull fracture, facial nerve injury, seizures, retinal haemorrhage, and cerebral haemorrhage. These outcomes can be associated with difficult or repeated traction, prematurity, abnormal fetal position, or underlying vulnerability. Clinical teams reduce risk by confirming eligibility, limiting the number and duration of traction attempts, stopping when the cup repeatedly detaches or descent does not occur, and ensuring that neonatal assessment is available.

Vacuum extraction should be avoided or used with particular caution in situations such as very early gestation, suspected bleeding disorders, certain fetal or maternal conditions, or when the fetal head is not engaged or its position is uncertain. Exact contraindications and precautions depend on local guidance and the clinical situation. Sequential use of vacuum followed by forceps is generally discouraged because combined attempts are associated with higher rates of maternal and neonatal trauma. If an assisted birth is not progressing, the safest course may be to abandon the attempt and proceed to caesarean birth.

A failed assisted birth is not necessarily a preventable failure or a sign that anyone made a wrong decision. Labour is dynamic, and the initial assessment may not predict how the baby will respond to traction. What matters is recognizing lack of descent or other warning signs promptly, communicating the change in plan, and transferring care efficiently when another method is safer.

How clinicians balance benefits and risks

The central safety question is comparative: what is the risk of assisted vaginal birth compared with continuing labour or performing a caesarean birth at that point? If the fetal heart-rate pattern is concerning and the baby is

already low in the pelvis, a prompt assisted birth may avoid a more complex second-stage caesarean and shorten exposure to reduced oxygenation. Conversely, if the head is high, the position is uncertain, or the procedure is unlikely to succeed, attempting an instrument may increase harm and delay definitive birth.

Consent should include the indication, the proposed instrument, likely benefits, common side effects, serious but rare complications, pain-relief options, and the possibility of episiotomy, caesarean birth, or newborn support. In an immediate emergency, clinicians may need to act rapidly, but they should still provide the clearest explanation possible and involve the birthing person or support person where circumstances allow.

Technical safety measures include using the correct application point, synchronizing traction with contractions and maternal effort, avoiding excessive force, and reassessing after each pull. Continuous fetal monitoring is commonly used when fetal compromise is suspected. A clinician experienced in operative vaginal birth should perform or supervise the procedure, and the setting should permit rapid escalation to theatre if the attempt fails. These safeguards do not eliminate risk, but they help ensure that intervention is proportionate and timely.

Recovery, follow-up, and when to seek help

After assisted birth, both parent and baby benefit from a structured review. The parent may need assessment of perineal injury, pain, bladder function, blood loss, mobility, and emotional wellbeing. The newborn may be examined for scalp or facial injury, jaundice, feeding difficulty, neurological concerns, and signs of bleeding. Most minor injuries improve with time, but follow-up should be individualized according to the degree of trauma and the condition of the baby.

Urgent review is warranted for heavy or increasing vaginal bleeding, faintness, severe or worsening perineal pain, fever, foul-smelling discharge, inability to urinate, wound breakdown, chest pain, or shortness of breath. For the newborn, urgent assessment is needed for marked sleepiness, poor feeding, repeated vomiting, seizures, breathing difficulty, pallor, rapidly increasing scalp swelling, unusual irritability, or reduced responsiveness. These signs are not specific to assisted birth, but they should never be ignored.

Emotional recovery also matters. An assisted delivery can be experienced as frightening, disappointing, or traumatic, even when parent and baby are physically well. A postpartum debrief with the maternity team can clarify why assistance was recommended, what happened during the procedure, and what was found afterward. Support from a primary-care clinician, perinatal mental-health service, counsellor, or trusted birth professional may help when distress, intrusive memories, anxiety, or low mood persist.

For a broader discussion of forceps or vacuum birth recovery, parents can ask their maternity service about wound care, pelvic-floor rehabilitation, sexual health, contraception, and planning for a future pregnancy. A previous assisted birth does not automatically determine the mode of a later birth; future decisions are based on the circumstances of that pregnancy and the individual's preferences and clinical history.