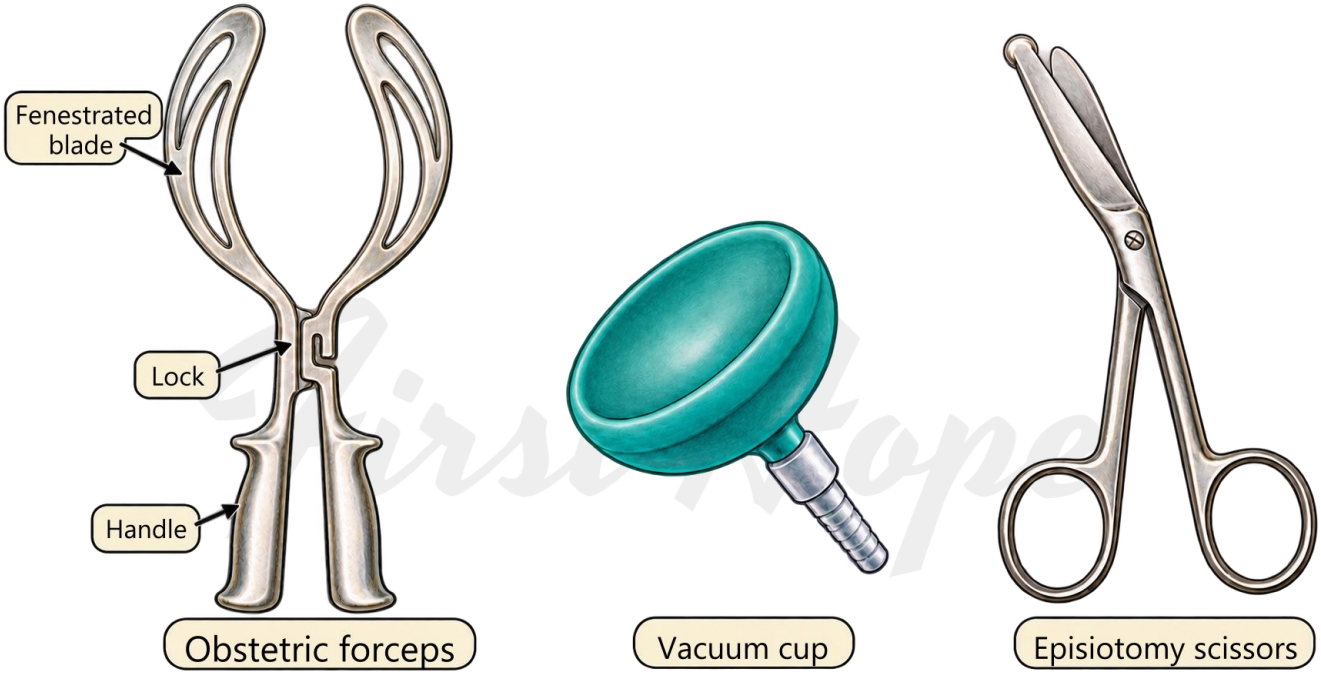
# Obstetrics & Gynaecology - Topic 15 - Operative obstetrics

## Principles of Operative Obstetrics

### Choosing and Preparing for a Procedure

- An obstetric procedure is chosen when its expected benefit for the woman or baby outweighs the risks of continuing without it.
- The decision depends on the indication, urgency, gestation, presentation, stage of labour, available expertise and the woman's informed preferences.
- A student must understand the reason, preparation, essential steps and complications while performing only the parts permitted under direct supervision.




*The illustrated forceps, vacuum cup and episiotomy scissors have different roles in selected assisted births*

### A Common Safety Sequence

- Confirm identity, the planned procedure, consent, allergies, relevant investigations and the availability of skilled assistance.
- Assess maternal circulation, fetal wellbeing, blood requirements, anaesthetic needs and the possibility that the initial plan may fail.
- Prepare sterile equipment, bladder care, infection prevention, neonatal support and a clear rescue plan before starting.
- Use a team briefing and procedural checklist, document findings and communicate any change in urgency immediately.
- Respect privacy and explain sensations and progress during the procedure whenever the woman is awake.

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# Episiotomy and Perineal Repair

## Indications and Technique

- An episiotomy is a deliberate incision of the vaginal wall and perineum to enlarge the outlet for a specific clinical reason.
- It is not required for every first birth and should not be performed routinely to prevent all tears.
- Possible indications include selected assisted vaginal births or a need to expedite birth when the perineum is limiting safe delivery.
- A mediolateral incision is directed away from the anal sphincter; a midline incision has a greater risk of extension into the sphincter.

### Supervised Procedural Steps

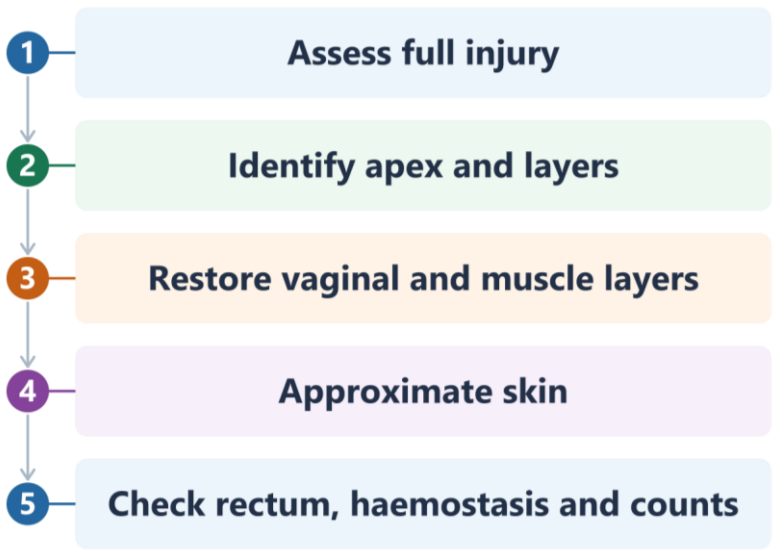
#### Consent, Analgesia and Incision

- Explain the reason, obtain consent where possible, check adequate analgesia and confirm that the head is at the appropriate stage of birth.
- Infiltrate local anaesthetic safely when regional analgesia is inadequate, using the prescribed maximum dose and checking before injection.
- The operator protects the fetal head and makes a controlled mediolateral incision at about **60 degrees from the midline when the perineum is distended**.
- The final repaired angle becomes smaller as the tissues relax, which is why the cutting angle matters.

#### Inspection and Tear Classification

- After birth, inspect the full length and depth of the wound in good light and assess for extension, bleeding and anal sphincter injury.
- Classify any additional tear correctly before repair, because third- or fourth-degree injury needs an appropriately trained operator and different management.

## Repair on a Simulation Model




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### Equipment and Layered Repair

- Prepare the needle holder, forceps, scissors, appropriate absorbable suture, lighting and a model that clearly shows vaginal mucosa, perineal muscle and skin.
- Identify the apex and place the first stitch beyond it so that a bleeding vessel at the upper end is not missed.
- Approximate the vaginal mucosa, restore the divided perineal muscles and close the skin using the supervised continuous or interrupted technique appropriate to each layer.
- Take balanced tissue bites without excessive tension, avoid dead space and check that the muscle layers have been restored rather than only the skin.

### Rectal Check, Counts and Documentation

- Keep the rectal mucosa free of sutures and perform the required rectal check after repair, followed by a change of gloves.
- Count swabs and sharps, assess haemostasis and document the repair, material and any extension.

## Complications and Aftercare

- Complications include pain, bleeding, haematoma, infection, wound breakdown, dyspareunia and extension into the anal sphincter or rectum.
- Provide suitable analgesia, hygiene advice and assessment of voiding, and explain when worsening pain, fever, discharge or wound separation needs review.
- After an anal sphincter injury, antibiotics, stool-softening treatment, specialist follow-up and pelvic-floor advice form part of the care plan.
- Persistent bowel-control symptoms require careful evaluation and should not be dismissed as a normal consequence of birth.

# Assisted Vaginal Birth

## Indications and Prerequisites

- Vacuum extraction and forceps may shorten the second stage for fetal compromise, prolonged progress or a maternal reason to limit pushing.
- They are appropriate only when vaginal birth is judged achievable and all safety prerequisites have been met.

### Before Applying an Instrument

#### Head Position, Engagement and Pelvic Assessment

- Confirm full cervical dilatation, ruptured membranes, an engaged head, accurately known position and station, and an adequate pelvis for the intended birth.
- Exclude a mechanical obstruction and consider ultrasound when examination does not establish the position confidently.

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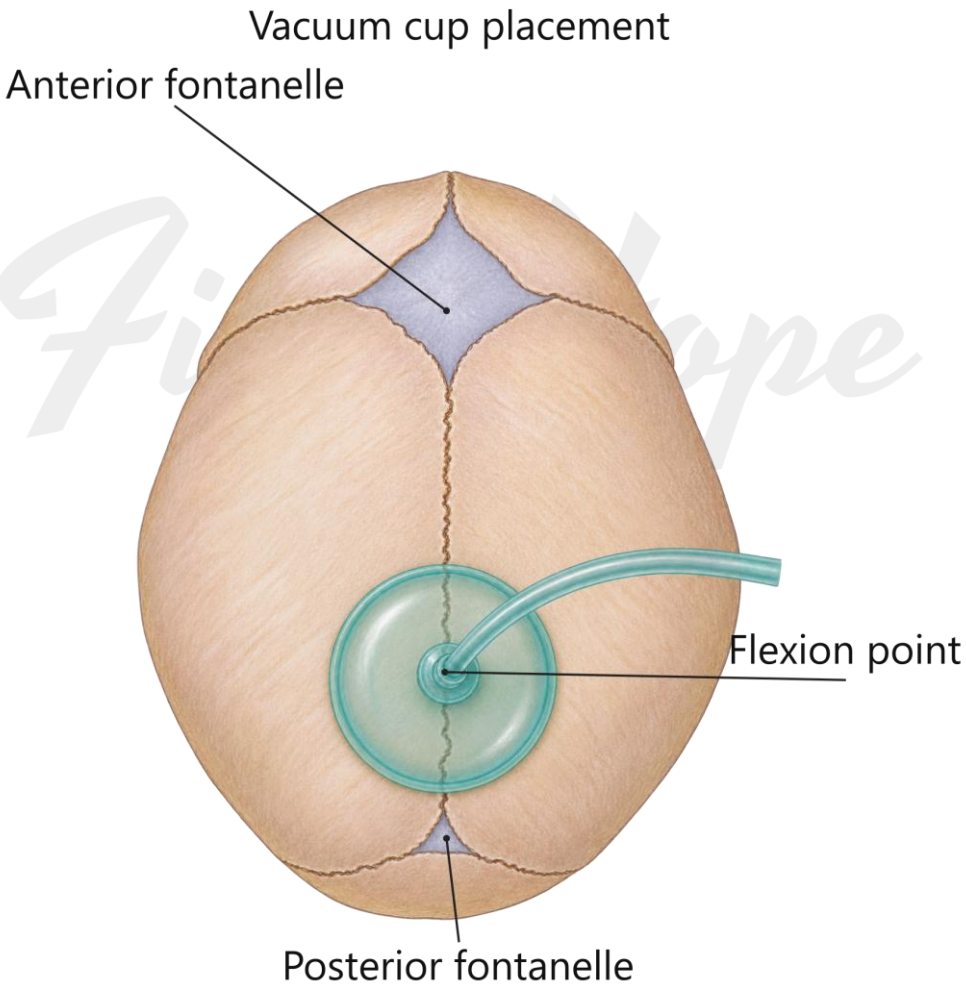
### Analgesia, Team and Safety Prerequisites

- Ensure adequate analgesia, an empty bladder, informed consent, an experienced operator and a plan for immediate caesarean birth if the attempt fails.
- Assess the fetal condition and inform the neonatal team when resuscitation or injury assessment may be needed.

### Instrument Level and Contraindications

- A low forceps birth means that the leading bony point is at least at +2 cm station but not yet on the pelvic floor, with the degree of rotation also specified.
- An unengaged head, incomplete cervical dilatation or unknown position makes routine assisted vaginal birth unsafe.

## Vacuum Extraction




*The vacuum cup is centred over the flexion point on the sagittal suture of the fetal head*

## Technique and Monitoring

### Cup Application and Controlled Traction

- The cup is placed over the flexion point on the sagittal suture, about 3 cm in front of the posterior fontanelle, to promote flexion and descent.

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- The operator checks that maternal tissue is not trapped under the cup before applying the prescribed vacuum.
- Traction follows the pelvic axis with contractions and maternal effort, while the other hand checks cup position and descent.
- The cup is not twisted to force rotation, and progressive descent should occur with correctly directed traction.

### Stopping Rules and Reassessment

- Failure of descent, repeated cup detachments, suspected injury or an unexpectedly difficult procedure requires stopping and reassessing promptly.
- Predetermined limits on pulls, detachments and duration follow the unit and device protocol; they are stopping limits, not targets to reach.

## When Vacuum Is Unsuitable

- Vacuum is unsuitable for face presentation, an unengaged head, suspected disproportion or important fetal bleeding or bone disorders.
- RCOG advises avoiding vacuum birth below 32 weeks and using caution at 32+0–36+0 weeks because of fetal head-injury risk; the selected device and local protocol may be more restrictive.
- Forceps may be preferred in some situations, but the choice still requires operator expertise and a full assessment.

## Complications

### Scalp Swelling and Haemorrhage

- The cup commonly causes temporary scalp swelling at the application site, called a chignon.
- A cephalhaematoma is limited by cranial sutures because it lies beneath the periosteum, whereas subgaleal bleeding can spread widely across suture lines.
- The larger potential subgaleal space explains why apparently local scalp swelling may accompany major neonatal blood loss.
- More serious complications include scalp injury, cephalhaematoma, subgaleal haemorrhage and rare intracranial bleeding.

### Warning Signs and Maternal Trauma

- A diffuse expanding scalp swelling with pallor, tachycardia or poor perfusion requires urgent neonatal assessment for subgaleal haemorrhage.
- Maternal trauma can occur, especially if tissue is trapped or an unsafe attempt is continued.

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