## When urinary catheter is needed and associated risks

### What a urinary catheter does in birth care

A urinary catheter drains urine from the bladder through a soft tube. In maternity care, the aim is usually short-term bladder management rather than long-term catheterization. The bladder sits close to the uterus, cervix, vagina, and pelvic floor. When it becomes overdistended, it may increase discomfort, interfere with fetal descent, make examinations or procedures more difficult, and contribute to postpartum bladder dysfunction.

Clinicians may recommend catheterization when someone cannot urinate naturally, when the bladder needs to stay empty during surgery, or when urine output must be measured precisely. The need is not a judgment about how well someone is coping in labor; it is a clinical response to anatomy, anesthesia, hydration, medications, and the pace of birth.

There are two broad approaches. Intermittent catheterization means a catheter is inserted briefly to drain the bladder and then removed. An indwelling catheter remains in place, with urine draining continuously into a collection bag. A Foley catheter, commonly used for indwelling drainage, has a small balloon that helps keep it inside the bladder. In some non-birth settings, a suprapubic catheter may be placed through the lower abdomen, but this is not

the usual first-line option in routine maternity care.

**When a catheter may be needed during labor**

During labor, the ability to empty the bladder can be affected by pain, immobility, intravenous fluids, fetal position, pelvic pressure, and medications. Epidural or spinal analgesia can reduce bladder sensation, so a person may not feel fullness even when the bladder is distended. In this setting, the care team may check bladder volume clinically or with ultrasound and recommend intermittent drainage or an indwelling catheter depending on mobility, local protocol, and how labor is progressing.

A catheter may be considered if there is urinary retention, inability to pass urine despite trying, a very full bladder, or concern that bladder distension is affecting labor progress. It may also be used when frequent position changes are limited, when continuous monitoring is needed, or when the person is unwell and urine output is an important marker of circulation and kidney perfusion.

In vaginal birth, especially if the second stage is prolonged, bladder emptying may help create space in the pelvis. Before an assisted vaginal delivery, the bladder is often emptied to reduce the risk of injury and improve access for forceps or vacuum placement. This is usually a brief, purposeful intervention, and many people do not need the catheter to remain in place afterward.

**Catheter use for cesarean section and operative birth**

A catheter is commonly used for cesarean section because regional anesthesia reduces bladder sensation and mobility, and an empty bladder helps reduce the chance of bladder injury during surgery. It also allows the team to monitor urine output during and after the operation, which can be important if there is bleeding, low blood pressure, preeclampsia, infection, or other medical complexity.

For a planned cesarean section, the catheter may be placed after anesthesia has started so placement is less uncomfortable, although practices vary. In an emergency C-section during labor, timing depends on urgency, anesthesia, and safety priorities. The catheter is usually removed once it is safe to mobilize and bladder function is expected to return, but timing may differ by hospital

protocol and individual clinical factors.

Catheterization may also be used around operative vaginal birth. If forceps, vacuum, or manual procedures are needed, an empty bladder reduces the risk of accidental trauma. After a difficult birth, severe perineal swelling, extensive tears, or significant pain can make urination difficult; temporary catheter drainage may prevent overdistension while tissues recover.

**Postpartum urinary retention and monitoring urine output**

Postpartum urinary retention means difficulty emptying the bladder after birth. It can be obvious, such as being unable to pass urine, or covert, where someone urinates but leaves a large residual volume in the bladder. Risk factors can include epidural analgesia, prolonged labor, assisted birth, perineal trauma, significant swelling, cesarean birth, high fluid intake through an IV, and pain that makes relaxing the pelvic floor difficult.

If retention is suspected, clinicians may use a bladder scan and recommend intermittent catheterization or a temporary indwelling catheter. The goal is to prevent excessive stretching of the detrusor muscle, which may worsen bladder function. This can be emotionally frustrating after birth, especially when you are also feeding and caring for a newborn, but early management usually aims to protect recovery rather than prolong hospitalization unnecessarily.

Urine output monitoring may also be needed when the birthing parent is medically unstable. Low urine output can be an early sign of dehydration, blood loss, low blood pressure, kidney stress, or severe infection. In these situations, a catheter is not only about bladder emptying; it gives the team minute-to-hour information that may guide fluid resuscitation, medication decisions, and escalation of care.

**Short-term versus long-term catheterization**

Most catheter use around birth is short term. A catheter may be inserted once, used for several hours, or kept overnight after surgery. Shorter duration generally lowers infection risk, so clinicians often reassess whether it is still needed. Removal should be balanced against safety: taking it out too early in someone with ongoing numbness, immobility, or retention may lead to

repeated catheterizations.

Long-term catheterization is different. It may be required for chronic urinary retention, some neurological conditions, severe bladder dysfunction, or complex injuries, but this is uncommon in routine birth care. Longer use increases the importance of catheter care, hydration advice if appropriate, drainage bag positioning, skin protection, and planned review. Encrustation, blockage, bypassing of urine around the catheter, bladder spasms, and recurrent infection become more relevant when a catheter remains in place for days to weeks or longer.

People with pre-existing bladder disorders, spinal cord conditions, multiple sclerosis, prior pelvic surgery, or known urinary retention should discuss a bladder plan before birth when possible. A planned approach can reduce rushed decisions and clarify whether intermittent catheterization, an indwelling catheter, or specialist input is most appropriate.

**Risks and complications to understand**

The most common concern is catheter-associated urinary tract infection. A catheter can allow bacteria to enter the urinary tract, and the risk rises with longer duration. Symptoms may include burning after removal, pelvic discomfort, fever, chills, cloudy or foul-smelling urine, urgency, or flank pain. In postpartum care, fever can have several causes, so it should be assessed rather than assumed to be urinary.

Bladder irritation is also possible. Some people feel cramping, urgency, or a sensation of needing to urinate despite the catheter draining. Bladder spasms can cause discomfort or leakage around the tube. Catheters may occasionally become blocked by blood, sediment, mucus, or encrustation, leading to reduced drainage, suprapubic pain, or bypassing.

Insertion can cause urethral discomfort, minor bleeding, or, rarely, urethral trauma. The risk may be higher when anatomy is swollen after labor, when insertion is technically difficult, or when a catheter is pulled accidentally. Very rarely, untreated obstruction or infection can affect the kidneys. These risks are why sterile insertion, securement, unobstructed drainage, and timely removal matter.

There are also practical and emotional burdens. A catheter can limit movement, affect privacy, complicate early newborn care, and feel like another loss of control during birth. Compassionate communication helps: you have the right to ask why it is needed, whether there are alternatives, how long it is expected to remain, and what signs would prompt removal or reassessment.

**Reducing risk and advocating for safe catheter care**

Risk reduction starts with clear indication. If a catheter is recommended, it is reasonable to ask what clinical problem it addresses. For example, is it for anesthesia, urinary retention, surgery, accurate urine output, or protection during a procedure? Understanding the reason can make the intervention feel less alarming and help you participate in decisions.

Good catheter care includes sterile or aseptic insertion, hand hygiene before handling the tube or bag, keeping the drainage bag below bladder level, avoiding kinks or tension, and ensuring the system drains freely. The catheter should be secured so it is not tugged during position changes, transfer from bed to chair, skin-to-skin contact, or walking after birth.

After removal, the team may ask you to pass urine within a certain timeframe and may measure the amount or scan the bladder. Report difficulty starting urine, weak flow, severe burning, inability to feel bladder fullness, increasing lower abdominal pain, fever, or persistent leakage. These symptoms do not always mean something serious, but they deserve timely assessment.

If you are preparing for birth, consider adding bladder-related questions to your plan: how catheter use is handled with epidural anesthesia, what happens during cesarean section, how postpartum urinary retention is screened, and when a urology referral is considered. Supportive care means using the catheter when it improves safety, while also respecting comfort, dignity, mobility, and informed consent whenever possible.