

# Umbilical Catheters (UAC and UVC)

## What is an umbilical catheter?

An **umbilical** [uhm-BIL-i-kuh-l] **catheter** [KATH-i-ter] is a thin, flexible tube that is placed in a blood vessel located in the stump of a newborn's umbilical cord (the part that sticks up out of the baby's belly button).

There are 2 types of umbilical catheters that your provider might recommend:

**1 A UAC (umbilical artery catheter)** goes into 1 of the 2 **arteries** (blood vessels that carry blood away from the heart) in the umbilical cord. **The UAC is used to:**

- Draw blood samples as needed
- Continuously monitor the baby's blood pressure

**2 A UVC (umbilical venous catheter)** goes into the **vein** (blood vessel that carries blood toward the heart) of the umbilical cord.

**The UVC is used to:**

- Ensure your baby gets needed fluid and nutrition
- Deliver medicines to your baby with less irritation to their blood vessels than when given in a smaller vein

## Why does my baby need an umbilical catheter?

Both types of catheters are used with sick newborns but more often in those born prematurely. **UVCs** deliver fluids, nutrition, and medications, while **UACs** are used to monitor your baby's blood pressure and obtain blood samples to monitor your baby's condition.

Your baby's provider can tell you why a UAC or UVC might be recommended for your baby and how long they might need to have the catheter. The provider can also explain potential benefits, risks, and alternatives (see [page 2](#)).



## How is a UAC or UVC placed?

A healthcare provider with special training will place the catheter(s). This generally takes 30 to 60 minutes.

Here's what happens before, during, and after the procedure.

- **Before.** A provider will use a special cleaning solution to clean the area around your baby's belly button. The provider will also place a towel or drape to isolate the cord stump from the rest of the abdominal area (belly). These steps help lower the chance of infection by keeping the area completely clean (sterile).
- **During.** Your child's provider will do these things:
  - Locate the blood vessel (artery or vein) in the umbilical cord, then carefully insert the catheter.
  - Order an x-ray to make sure the catheter is in the right place.
  - Use a stitch to secure the catheter to your baby's umbilical cord stump.
  - Tape the catheter to your baby's belly to help make sure the line stays in the right place.
- **After.** Your baby's care team will regularly inspect the catheter site to check for complications and help ensure the line stays in the right place.

## Does having a UAC or UVC hurt?

No. Since your baby can't feel any pain in the umbilical cord, placing or having a UAC or UVC won't hurt. In fact, having an umbilical catheter usually means your baby needs fewer needles sticks, which do hurt, during treatment.

## Can I hold my baby?

Generally, yes — unless your baby has a UAC. A UAC is placed in an artery. If the line come loose, your baby can bleed quickly from the artery. Due to this risk, holding a baby with a UAC is not advised. The nursing staff will show you how to safely touch and use your hands to hug your baby until the line is removed.

## How long will my baby have a UAC or UVC?

The catheter will stay in place for a few days, up to 1 to 2 weeks. This will depend on the reason the catheter was placed, how a baby responds to treatment, and other things.

### Questions for my doctor

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## Talking with your baby's provider about umbilical catheters (UAC and UVC)

The table below lists the most common potential benefits, risks, and alternatives for this treatment. Other benefits and risks may apply in your baby's unique situation. Talking with your baby's providers is the most important part of learning about these risks and benefits. If you have questions, be sure to ask.

Possible benefits	Risks and possible complications	Alternatives
<p>Depending on why your provider recommends the catheter for your baby, benefits may include:</p> <ul style="list-style-type: none"><li>• Less need for care staff to handle your baby, which may be important for a premature or sick baby</li><li>• Fewer needle sticks</li><li>• Better delivery of important nutrients, fluids, or medicines</li><li>• Ability to continuously monitor the baby's blood pressure</li><li>• Easier blood gas sampling in order to check lung function</li></ul>	<ul style="list-style-type: none"><li>• Reduced blood flow to an organ (intestines, kidneys, liver) or to a limb.</li><li>• Blood clot.</li><li>• Infection.</li><li>• The catheter moves beyond where it should be, which is referred to as line migration.</li><li>• (With UAC) The artery tightens around the catheter (referred to as artery spasm), which can make the toes, feet, or legs change color.</li><li>• Fluid gathers in the sac around the heart, which is referred to as cardiac tamponade [tam-puh-NEYD].</li></ul>	<p>Depending on your baby's condition and the treatment plan, there may be no other way to monitor your baby or provide needed fluids or medicines.</p> <ul style="list-style-type: none"><li>• In other cases, options may include:</li><li>• Peripheral arterial line</li><li>• Peripherally inserted central catheter (PICC)</li></ul>

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