

Umbilical Catheters (UAC and UVC)

What is an umbilical catheter?

An **umbilical** [uhm-BIL-i-kuh] **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 frequent blood samples
- Continuously monitor the baby's blood pressure
- Do blood gas sampling, which shows how well the baby's lungs are working

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 strong medicines with less irritation to your baby's blood vessels than if given by **IV** (intravenous line)

Why is an umbilical catheter needed?

Both types of catheters are used with sick newborns, especially "preemies" (those born prematurely), who need special medicine, fluids, nutrition, frequent blood testing, or monitoring. Umbilical catheters limit the number of needle sticks for your baby.

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



Umbilical catheters may help the medical team monitor and treat your newborn in the hospital.

How is a UAC or UVC placed?

A healthcare provider with special training will place the UAC or UVC, which generally takes 1 to 2 hours.

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

- **Before.** A provider will use a special soap 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 abdominal area. 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 thread the catheter into it.
 - 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 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.



Questions for my baby's doctor

Your baby's providers can tell you what to expect from this or any other aspect of your baby's hospital care. **Please ask.**

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 — a baby with an umbilical catheter can be held. However, every situation is different, and the decision depends on your baby's condition and other treatments. Ask your baby's providers if it's okay to hold your baby.

How long will my baby have a UAC or UVC?

How long the catheter stays in varies from a few days to 1 to 2 weeks, depending on the reason the catheter was placed, how a baby responds to treatment, and other factors.

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.

Potential benefits	Risks and potential complications	Alternatives
<p>Depending on why your provider recommends the catheter for your baby, benefits may include:</p> <ul style="list-style-type: none"> • Less need to handle the baby, which may be important for a premature or sick baby • Fewer needle sticks • Better delivery of important nutrients, fluids, or medicines • Ability to continuously monitor the baby's blood pressure • Easier sampling of the baby's blood gases 	<ul style="list-style-type: none"> • Reduced blood flow to an organ (intestines, kidneys, liver) or to a limb. • Blood clot. • Infection. • The catheter moves beyond where it should be, which is referred to as line migration. • (With UAC) The artery tightens around the catheter (referred to as artery spasm), which can make the toes, feet, or legs change color. • Fluid gathers in the sac around the heart, which is referred to as cardiac tamponade [tam-puh-NEYD]. 	<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> <p>In other cases, options may include:</p> <ul style="list-style-type: none"> • Peripheral arterial line • Peripherally inserted central catheter (PICC)

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