

PPH · Postpartum Hemorrhage

A plain-English guide for you and your family

WHAT IS HAPPENING

After the baby is born, the uterus is supposed to squeeze down tight like a strong fist, pushing the placenta out and clamping shut all the open blood vessels where the placenta was attached. Once the placenta comes out, the uterus stays firm and hard, and the blood vessels close off so bleeding stops. This is called hemostasis — the normal job. Most of the time, the uterus does not squeeze hard enough, staying soft and baggy instead. That is called uterine atony, and it is the most common reason for too much bleeding after birth. Other causes include tears in the birth canal, pieces of placenta left stuck inside, or problems with the blood's ability to clot. When the uterus stays soft, blood keeps pouring out of those open vessels — sometimes more than 1000 mL, which is about four cups. Mom's body tries to keep up by making her heart beat faster and tightening smaller blood vessels, but that trick only buys a few minutes. If the bleeding is not stopped and blood is not replaced quickly with transfusions, her blood pressure drops, her organs do not get enough oxygen, and she can go into shock or die. The goal is to find the cause fast, make the uterus squeeze, fix any tears, remove leftover tissue, and give blood products to replace what was lost.

What you might feel

- Heavy bleeding that soaks one pad in under an hour or big clots the size of a lemon or larger
- A soft, puffy, or "boggy" uterus when the doctor or nurse presses on the belly
- Bright red blood that keeps flowing in a steady stream
- Fast heartbeat (tachycardia)
- Low blood pressure (hypotension)
- Feeling dizzy, weak, or light-headed
- Pale, cool, or clammy skin
- Visible tears in the vagina, cervix, or perineum (the area between the vagina and anus)
- Retained placenta or pieces of placenta still inside the uterus

Call the doctor right away if...

- Bleeding that soaks more than one pad per hour or produces clots bigger than a golf ball
- Blood pressure dropping below 90/60 or heart rate climbing above 110 beats per minute
- Confusion, severe dizziness, fainting, or trouble staying awake
- The uterus stays soft and will not firm up even with massage
- Signs of shock: cold clammy skin, rapid weak pulse, very pale face, gasping for air

What the care team will do

- Start two large-bore IV lines (18-gauge or bigger) and give lactated Ringer's or normal saline wide open.
- Perform firm continuous uterine massage by placing one hand on the lower belly and rubbing the uterus in circles until it feels hard like a grapefruit.
- Measure and record all blood loss by weighing pads and chux (1 gram equals 1 mL) and checking for pooled blood under the patient's bottom every 15 minutes.
- Give IV oxytocin (Pitocin) 10 units in 500 mL normal saline running fast, or 10 units IM if no IV yet.
- Continuously monitor vital signs every 5 to 15 minutes: blood pressure, heart rate, oxygen saturation, and skin color.
- Call for help immediately and notify the provider, anesthesia, and blood bank to activate the massive transfusion protocol if bleeding continues.
- Keep the patient flat or in Trendelenburg position (feet higher than head) if blood pressure drops below 90 systolic.
- Prepare for possible procedures: have a Foley catheter ready to empty the bladder, set up for bimanual compression, and gather the Bakri balloon kit.

Medicines you may be given — and why

Oxytocin

Oxytocin is a natural hormone that tells the muscle wall of the uterus to squeeze tight and stay tight. After birth, the uterus needs to clamp down hard to pinch off the open blood vessels where the placenta peeled away. If it stays soft and floppy, those vessels keep bleeding. Oxytocin binds to receptors on the smooth muscle cells in the uterus wall and triggers them to contract, shrinking the uterus and closing off the bleeding spots like tightening a drawstring on a bag.

Methylergonovine (Methergine)

Methylergonovine is a synthetic cousin of a natural fungus chemical. It makes the uterus squeeze even harder and for a longer time than oxytocin by locking onto different receptors on the muscle cells. It causes a sustained, powerful contraction that keeps the uterus firm and the bleeding vessels shut. Think of it as turning up the strength and duration of the squeeze.

Carboprost (Hemabate)

Carboprost is a lab-made version of prostaglandin F2-alpha, a natural signal that tells the uterus muscle to contract. It works on yet another set of receptors and causes very strong, rhythmic squeezing of the uterus. It is especially helpful when oxytocin alone is not enough. The uterus clamps down hard and stays tight, shutting off bleeding vessels.

Misoprostol (Cytotec)

Misoprostol is a synthetic prostaglandin E1 that makes the uterus contract by binding to prostaglandin E receptors on the muscle cells. It is often used when an IV line is not available or as an add-on when other drugs have not fully stopped the bleeding. It can be given by mouth, under the tongue, or rectally, making it flexible in an emergency.

Tranexamic acid (TXA)

Tranexamic acid does NOT make the uterus squeeze. Instead, it stops the body from dissolving clots too early. When you bleed, your body forms clots to plug the leak. But the body also releases plasmin, an enzyme that breaks down clots once healing starts. In heavy bleeding, too much plasmin can dissolve clots before the vessels are sealed, making bleeding worse. Tranexamic acid blocks plasmin, letting clots stay in place and giving the body time to heal the torn vessels.

Fibrinogen concentrate or cryoprecipitate

Fibrinogen is the raw material the body uses to build clots. When massive bleeding happens, fibrinogen levels drop because it gets used up faster than the liver can make new supply. Without enough fibrinogen, clots cannot form properly—like trying to build a wall without enough bricks. Giving fibrinogen concentrate or cryoprecipitate (frozen plasma rich in fibrinogen) restores the supply so the clotting system can work again.

Where this information comes from

- ACOG Practice Bulletin No. 183, 2017 (Postpartum Hemorrhage)
- WHO recommendations for prevention and treatment of postpartum hemorrhage, 2012
- FIGO Safe Motherhood and Newborn Health Committee guidelines
- American College of Nurse-Midwives (ACNM) clinical practice guideline

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