

Ectopic Pregnancy

A plain-English guide for you and your family

WHAT IS HAPPENING

Normally, after an egg is fertilized in the fallopian tube (the narrow tunnel connecting the ovary to the uterus), tiny hair-like fingers called cilia sweep the fertilized egg down the tube and into the uterus over about five days, where it nestles into the thick, spongy lining and grows safely. In an ectopic pregnancy, something stops that trip—often the cilia are damaged by old infection (like chlamydia or gonorrhea), past surgery, or endometriosis (where uterus lining grows in the wrong places), so the embryo gets stuck in the tube and plants itself there instead. Once it digs in, it starts sending out roots like a plant, eating into the tube wall and opening blood vessels. The tube is narrow—about as thick as a pencil—and cannot stretch like the uterus can, so as the embryo grows, pressure builds. Eventually the tube can tear or burst, spilling blood into the belly. Blood in the belly irritates the lining (the peritoneum), causing sharp pain on one side; if blood pools up under the diaphragm (the breathing muscle at the top of your belly), it presses on the phrenic nerve and tricks your brain into feeling pain at the tip of your shoulder. You may also see dark vaginal bleeding as the uterus sheds some lining because hormone signals are confused. If the tube bursts wide open, blood floods the belly fast, blood pressure drops, and the person goes into shock—pale, dizzy, heart racing—which can be deadly without emergency surgery. Every one of these signs—the one-sided pain, the shoulder ache, the bleeding, the shock—flows directly from that single upstream problem: an embryo growing in a tube that cannot hold it.

What you might feel

- Missed period with a positive pregnancy test
- Sharp or cramping pain on one side of the belly or pelvis
- Vaginal bleeding or spotting (often lighter or darker than a normal period)
- Shoulder or neck pain that seems unrelated
- Dizziness, fainting, or feeling like you might pass out
- Severe, sudden belly pain that gets worse quickly
- An empty uterus on ultrasound even though the pregnancy test is positive

- Pregnancy hormone (hCG) level rises more slowly than expected

Call the doctor right away if...

- Sudden severe belly pain with dizziness or fainting (suggests rupture and internal bleeding)
- Shoulder or neck pain along with belly pain and a positive pregnancy test (blood irritating the diaphragm)
- Low blood pressure, fast heart rate, or pale/clammy skin (signs of shock from blood loss)
- Severe pain that keeps getting worse despite rest (the ectopic site may be tearing)
- Positive pregnancy test but no visible pregnancy in the uterus on ultrasound and hCG above the level where you should see something (discriminatory zone ~1500–2000 mIU/mL)

What the care team will do

- Establish large-bore IV access with two 18-gauge or larger catheters and start normal saline wide open if systolic BP is below 90 or heart rate is above 110
- Type and crossmatch blood for at least 2 units of packed red blood cells and notify the blood bank that this is a potential emergency release
- Measure vital signs every 5 to 15 minutes and watch for systolic BP dropping below 90, heart rate climbing above 110, or new confusion and pale cool skin
- Keep the patient NPO (nothing by mouth) and call the OR and surgeon immediately if rupture is suspected based on pain plus unstable vitals plus positive pregnancy test
- Draw blood for serial quantitative bHCG (beta human chorionic gonadotropin hormone), hemoglobin, hematocrit, and check the patient's blood type and Rh status
- Position the patient flat or in Trendelenburg (head down, feet up 15 to 30 degrees) if BP drops, and give high-flow oxygen by non-rebreather mask at 15 liters per minute
- Prepare methotrexate (single intramuscular injection at 50 mg per square meter of body surface area) if the patient is stable, ectopic mass is smaller than 3.5 centimeters, bHCG is below 5000, and ultrasound shows no rupture or fetal heartbeat
- Administer RhoGAM 300 micrograms intramuscularly within 72 hours if the patient is Rh-negative and the father is Rh-positive or unknown

Medicines you may be given — and why

Methotrexate

Methotrexate stops rapidly dividing cells from making DNA, so they cannot grow or multiply. In an ectopic pregnancy, it targets the fast-growing cells of the pregnancy tissue (the

trophoblast), causing the tissue to break down and be absorbed by the body over time. This avoids surgery when the pregnancy is caught early and the tube has not burst.

Anti-D immune globulin (RhoGAM)

If the mother is Rh-negative and the pregnancy tissue might be Rh-positive, tiny amounts of fetal blood can mix with hers during the ectopic pregnancy or its treatment. Her immune system could see the Rh-positive cells as foreign and make antibodies against them. Those antibodies can attack the red blood cells of future Rh-positive babies, causing severe anemia or even death. Anti-D immune globulin coats any Rh-positive fetal cells in the mother's blood so her immune system does NOT recognize them and does NOT make lasting antibodies.

Intravenous crystalloid fluids (normal saline or lactated Ringer's)

When an ectopic pregnancy ruptures, blood pours into the belly. The circulating blood volume drops, blood pressure falls, and organs do not get enough oxygen. IV crystalloid floods the bloodstream with salt water that matches the body's natural fluid, pushing blood pressure back up and keeping the heart, brain, and kidneys supplied until the bleeding is stopped (usually with surgery) or until blood transfusion arrives.

Packed red blood cells (PRBCs)

When a ruptured ectopic pregnancy causes heavy bleeding, the body loses red blood cells—the oxygen carriers. Without enough red cells, organs suffocate. Transfusing packed red blood cells delivers a concentrate of healthy red cells directly into the bloodstream, restoring the blood's ability to carry oxygen and preventing shock and organ failure.

Where this information comes from

- ACOG Practice Bulletin No. 193: Tubal Ectopic Pregnancy, 2018
- American College of Emergency Physicians (ACEP) Clinical Policy on Early Pregnancy
- Cochrane Review: Medical treatment for ectopic pregnancy
- CDC: Ectopic Pregnancy Surveillance

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