

PPROM · Pprom

PPROM means the bag of water around the baby breaks too early — before 37 weeks and before labor even begins. The mother goes straight to the hospital. Doctors give antibiotics to prevent infection and steroids to help the baby's lungs grow faster. They watch closely for signs of infection in the womb. If all stays calm, delivery happens at 34 weeks; if infection shows up, the baby comes out sooner to stay safe.

THE ONE-LINE TRUTH

The bag of water breaks before 37 weeks and before labor starts.

The chain — how it unfolds

1. The amniotic sac tears or develops a hole before 37 weeks. — why: Infection releases enzymes that digest the collagen holding the membrane together, inflammation thins the layers, or mechanical stress (twins, too much fluid, a weak cervix) rips the already-fragile sac.
2. Amniotic fluid leaks out through the vagina — the mother feels a sudden gush or steady trickle of clear or pale fluid that she cannot control. — why: Once the seal breaks, fluid inside the uterus flows down through the cervix and out, because there is no barrier holding it in anymore.
3. The cushion around the baby shrinks (oligohydramnios), and the uterus presses closer to the baby's body. — why: With less fluid, the baby loses the cushion that prevents the umbilical cord and the baby's body from being squeezed by the uterine wall.
4. The umbilical cord can slip down past the baby's head (cord prolapse) or get compressed against the baby, cutting off oxygen. — why: Without fluid to hold the cord floating, gravity or uterine pressure can push the cord down into the cervix or trap it between the baby and the uterus, blocking blood flow and oxygen to the baby.
5. Bacteria from the vagina and cervix climb up through the open hole in the membranes and infect the amniotic fluid and the membranes themselves (chorioamnionitis). — why: The intact sac was a germ barrier; once broken, the path from the outside world to the baby's environment is wide open, and bacteria migrate upward into the warm, nutrient-rich fluid.

6. The mother's body mounts an immune response — fever (over 100.4°F), fast heart rate (tachycardia over 100 bpm), and rising white blood cell count — and the uterus may become tender. — why: The immune system detects the bacterial invasion and releases cytokines (inflammatory signals) that raise body temperature to fight infection, speed up the heart to deliver more immune cells, and flood the area with white blood cells.
7. The baby's heart rate climbs (fetal a fast heart rate (tachycardia) over 160 bpm), signaling that infection or stress has reached the baby. — why: The baby's body responds to infection, low oxygen from cord compression, or the inflammatory chemicals crossing the placenta by speeding up the heart, trying to pump more blood and oxygen to vital organs.
8. If infection is not stopped, the baby can develop sepsis (infection in the bloodstream), pneumonia, or meningitis, and the mother can develop sepsis or a uterine infection (endometritis) after delivery. — why: Bacteria multiply in the amniotic fluid and invade the baby's lungs (as the baby breathes fluid in and out) and bloodstream, and they also burrow into the uterine lining, spreading infection throughout both bodies if delivery does not happen soon.

Spot it — what you see, and why

- A sudden gush or steady trickle of clear or pale-yellow fluid from the vagina: The amniotic sac (the water-filled bag that cushions the baby) has torn before labor starts, so the fluid inside leaks out through the cervix (the opening to the womb).
- Feeling wet underwear or needing to change pads often: Amniotic fluid keeps leaking slowly after the sac breaks, so it soaks through clothing — it is different from normal vaginal discharge because it is thinner and keeps coming.
- The fluid does not smell like urine: Amniotic fluid is mostly water with baby's urine and proteins; it usually has a mild, sweet, or no smell, which helps tell it apart from a leak of the mother's own urine.
- Positive nitrazine test (the paper strip turns dark blue): Amniotic fluid is more alkaline (less acidic) than normal vaginal fluid, so special pH paper (nitrazine paper) changes color when it touches the leak, confirming it is amniotic fluid.
- Positive fern test (dried fluid looks like fern leaves under a microscope): Amniotic fluid has salts and proteins that form a feathery, fern-like crystal pattern when a drop dries on a glass slide, proving the bag of waters has broken.
- Decreased feeling of the baby moving: With less amniotic fluid around the baby, there is less cushion and space, so the baby may move less or the mother may feel movements differently.

Red flags — act now

- Fever above 100.4°F (38°C) or feeling very warm and sweaty
- Fast heartbeat in the baby (over 160 beats per minute) or a pattern that looks worrying on the monitor
- Green, brown, or foul-smelling fluid leaking (may mean infection or the baby passed stool inside)
- Strong, regular contractions or constant belly pain (sign of early labor or placental abruption)
- Decreased or no baby movement for several hours

Treat it — in this order

1. Admit to the hospital and start continuous fetal heart rate monitoring with cardiotocography → Catches baby heart rate changes and contractions early, so you can spot infection or cord compression before the baby gets badly hurt. Lets doctors know if the baby is in trouble right now.
2. Give corticosteroids (betamethasone 12 mg IM two doses 24 hours apart, or dexamethasone 6 mg IM every 12 hours for four doses) if less than 34 weeks gestation → Speeds up the baby's lung development so the air sacs can make surfactant (the slippery coating that keeps lungs from collapsing). Cuts serious breathing problems in half and lowers the chance of bleeding in the brain.
3. Start antibiotics: ampicillin 2 grams IV every 6 hours plus azithromycin 1 gram by mouth once, then switch to amoxicillin 500 mg by mouth every 8 hours for 5 days total → Kills bacteria (especially Group B streptococcus and E. coli) that climb up from the vagina into the leaking amniotic sac. Stops chorioamnionitis before it harms the baby or forces very early delivery.
4. Give magnesium sulfate 4 to 6 grams IV loading dose, then 1 to 2 grams per hour infusion if less than 32 weeks gestation and delivery is expected within 24 hours → Protects the baby's developing brain from injury if early delivery or low oxygen happens. Cuts the risk of cerebral palsy (a brain movement disorder) by about one-third.
5. Watch closely for signs of chorioamnionitis: fever over 100.4°F (38°C), maternal heart rate over 100, uterine tenderness when you press on the belly, or fetal heart rate over 160 → Catching infection early means you can start stronger antibiotics and deliver the baby before infection spreads to the bloodstream and makes both mother and baby very sick.

Your top priorities at the bedside

1. Place patient on continuous cardiotocography (electronic fetal monitor) and check tracing every 30 minutes — why: The baby loses fluid cushion around the umbilical cord so the cord can get compressed and cut off oxygen shown by heart rate drops on the monitor
2. Take temperature every 4 hours and report immediately if 100.4 degrees Fahrenheit or higher — why: Broken membranes create a pathway for bacteria to reach the baby and cause chorioamnionitis infection which raises maternal temperature and can lead to sepsis
3. Count and record fetal kick counts every shift and report if fewer than 10 movements in 2 hours — why: Decreased movement signals baby distress from infection or cord problems because healthy babies with good oxygen move regularl