When Your Water Breaks Too Early: Previable and Periviable PPROM



PATIENT EDUCATION SERIES

During pregnancy, the fetus develops in the **amniotic sac** inside the uterus. This sac has a thin membrane and is filled with **amniotic fluid;** many refer to this as the "**bag of waters.**" The amniotic sac usually ruptures at the end of pregnancy during labor (your "water breaks"). Sometimes, the membranes may leak only a small amount of fluid, which may be felt as a slow trickle rather than a gush. If the waters break or leak before labor starts, it's called **prelabor rupture of membranes** (**PROM**). If this happens before 37 weeks of pregnancy, it's called **preterm PROM** (**PPROM**).

This fact sheet focuses on PPROM that occurs earlier in pregnancy, when the fetus would not survive outside the uterus (**previable PPROM**) or may survive only with life support (**periviable PPROM**). In addition to risks for the fetus, it can cause serious and sometimes life-threatening complications for the pregnant person.

What are previable and periviable PPROM?

The word "viable" is used to describe the time in pregnancy when a fetus would be able to survive outside of the uterus. The chance a fetus can survive outside the uterus depends on several factors, including the **gestational age** when delivery occurs, the fetus's weight, overall fetal health, and any other pregnancy complications.

- The **previable period** (pre-viable, meaning *before* viability) is the time in pregnancy when a fetus would not survive outside the **uterus**.
- The **periviable period** (peri-viable, meaning *around* viability) is the time in pregnancy when a fetus might survive outside the uterus with life-supporting medical help, but with a high risk of death, disability, or severe medical problems. In general, the periviable period is between 22 and 25 weeks of pregnancy.

What are the risks for a pregnant person with previable or periviable PPROM?

PPROM that occurs during the previable or periviable periods of pregnancy can cause serious health problems for a pregnant person. Some of these health problems include:

- Infection of the amniotic fluid and membranes (chorioamnionitis)
- **Sepsis**, a life-threatening condition that occurs when the body's immune system overreacts to an infection.
- **Placental abruption,** where the placenta separates from the wall of the uterus before delivery.
- **Hemorrhage**, heavy bleeding that may require a blood **transfusion** or immediate delivery.

Health risks for the fetus include infection, **stillbirth** (the fetus dies in the uterus), or neonatal death (the baby dies after birth). If the baby survives, they may have serious health

	Definition	Gestational Stage
Preterm prelabor rupture of membranes (PPROM)	Membrane rupture (your water breaks) before 37 weeks of pregnancy	Before 37 weeks
Previable PPROM	PPROM that happens when a fetus would not survive outside the uterus	Varies; around 20 to 22 weeks
Periviable PPROM	PPROM that happens when a fetus may survive outside the uterus with life-sustaining medical help, but with a high risk of death or severe medical problems	Varies; around 22 to 25 weeks

problems from developing without enough amniotic fluid, having an infection, or being born very preterm. The most common complications are:

- Breathing problems due to underdeveloped lungs
- Poorly developed bones
- Swelling of the intestines
- Sepsis
- Neurological problems, including blindness, deafness, developmental delays, and cerebral palsy

Many of these health problems can lead to lifelong disease or disabilities for the child. In some cases, these serious medical complications can lead to the baby dying after birth.

What are the management options for previable and periviable PPROM?

Two options are available: (1) continuing the pregnancy with close monitoring (**expectant management, or** "watch and wait") or (2) ending the pregnancy, either by inducing labor or having a procedure.

What is expectant management?

Expectant management, or "watch and wait," involves waiting to reach a gestational age when the baby has better odds of survival with life-saving care after birth. It may be an option for you if there are no other complications, such as infection or heavy bleeding. If you choose expectant management:

- You will be monitored for signs of infection and heavy bleeding. If these occur, expectant management is no longer an option, as continuing to wait is a serious threat to your health.
- You may go into labor before you reach a gestational age where the baby can survive after birth.

During expectant management, certain medications may be considered to improve the baby's chances of survival and reduce health risks. For example, **antibiotics** may help prevent infection and extend the pregnancy. In some cases, a **steroid** can be given to the pregnant person to help the fetus's lungs and

other organs mature in preparation for a premature delivery. A medication called **magnesium sulfate** may be recommended to help protect the fetal brain from complications of prematurity. Whether you receive these medications and the timing of when they are given depend on how far along you are in pregnancy and your medical situation.

What are the risks of expectant management for previable and periviable PPROM?

For the pregnant person, expectant management increases the risk of infection and hemorrhage; these conditions can be mild or they can be serious. In rare cases, infection or hemorrhage may lead to urgent surgeries, require admission to an intensive care unit (ICU), or may cause death. At the time of delivery, the chances of needing a **cesarean delivery** are also increased. Even after delivery, patients are at risk of future health complications.

The goal of expectant management for the fetus is a live birth, far enough along in the pregnancy that the baby has a better chance of long-term survival.

Often, a pregnant person who chooses expectant management of previable or periviable PPROM is monitored for some time in the hospital for signs of infection, bleeding, or labor. If your team decides it is safe for you to be monitored from home, you will need to watch carefully for changes in your temperature, vaginal discharge, belly pain, or bleeding. It is very important that you come back to the hospital if you do not feel well, even if the changes you notice are mild. Serious complications can develop quickly.

How many people who undergo expectant management for previable or periviable PPROM go home with a surviving infant?

About a quarter to one-third of infants born because of the waters breaking before 24 weeks of gestation survive and are eventually able to go home. One study looked at what happened when pregnancies with PPROM before 24 weeks were managed expectantly and reported the following results:

Outcomes After Expectant Management of PROM at Less Than 24 Weeks of Pregnancy Out of 100 pregnancies

The baby survives, and the pregnant person experiences no serious health problems

The baby survives, and the pregnant person experiences serious health problems

The baby does not survive, and the pregnant person experiences no serious health problems

The baby does not survive, and the pregnant person experiences serious health problems



In this study, the most common outcome of expectant management was that the baby did not survive, and the pregnant person experienced a major medical complication. Only 39 out of 100 babies survived PPROM before 24 weeks.

What are the methods for ending a pregnancy in these situations?

Ending the pregnancy involves taking medication to induce (start) labor or having a procedure to remove the pregnancy. The approach is based on patient preference, safety, availability, and gestational age. Although ending the pregnancy is safe and medically supported, it may not always be available because of state laws or other barriers.

What are the risks of ending the pregnancy after previable or periviable PPROM?

Risks of ending the pregnancy include hemorrhage, infection, and **placental abruption**. The rates of these complications are lower for ending the pregnancy compared with expectant management. One study found that compared with expectant management, patients who ended their pregnancy for previable or periviable PPROM had:

- Almost half of the medical complications
- One-third of the serious infections
- Half of the hemorrhages

How will I decide between treatment options?

If facing this decision, it's essential to talk with your care team as you consider your options. Your healthcare providers should review all treatment options that fit your medical situation and discuss the risks and benefits of each. You should be encouraged to discuss your personal preferences, beliefs, and wishes for yourself and your family. The discussion should include a realistic estimate of health risks for you, the chances of the fetus surviving to birth, and how long the baby may live even with life-saving intervention. If the baby does survive, you and your family need to think about the long-term health problems that your baby may face for the rest of their life.

Can previable or periviable PPROM be prevented in future pregnancies?

If you've had previable or periviable PPROM, your risk of preterm birth in a future pregnancy is nearly 50% higher, although the preterm birth may be later in pregnancy than when your PPROM occurred. If you are thinking about another pregnancy, it's a good idea to schedule a pre-pregnancy healthcare visit with a **maternal-fetal medicine specialist**. At this visit, the doctor will review your medical history and go over what happened in your previous pregnancy. If you become pregnant again, steps may be taken to reduce your risk of another preterm birth. These may include extra ultrasound exams, certain medications, and more frequent prenatal care visits. Your maternal fetal medicine specialist will determine which of these is right for you.

Quick Facts:

- Preterm prelabor rupture of membranes (PPROM) occurs when your water breaks too early, before 37 weeks' gestation.
- In previable PPROM, the fetus is not expected to survive outside of the uterus but may survive if delivered at a later gestational age.
- In periviable PPROM, the fetus may survive after birth with life-saving medical care but faces a high risk of death or serious health problems.
- Previable and periviable PPROM increase the pregnant person's risk of infection, bleeding, cesarean delivery, and, in rare cases, death.
- Expectant management and ending the pregnancy are two options for periviable and previable PROM.
- You and your care team will make treatment decisions together by discussing the risks, benefits, and likely outcomes of each treatment option based on your medical situation, while also considering your values and preferences.

Glossary:

Abortion: Taking medications or having a medical procedure to end a pregnancy so that it does not result in a live birth.

Amniotic fluid: The fluid surrounding the fetus in the uterus that is essential for the fetus's growth and development.

Amniotic sac: The "bag of waters" that surrounds the fetus during pregnancy.

Antibiotics: Drugs used to treat or prevent infections

Cesarean delivery: Surgery in which a baby is delivered through a cut (incision) in the mother's uterus.

Endometritis: Infection of the lining of the uterus.

Expectant management: A course of care in which the healthcare provider closely monitors a patient's condition without immediately intervening with active treatment.

Fetus: The unborn offspring of a human that develops in the uterus; the fetal stage lasts from nine weeks to birth.

Gestational age: The age of a pregnancy, usually given in weeks. A pregnancy is dated from the first day of the last menstrual period. The standard length of pregnancy is 40 weeks.

Hemorrhage: Very heavy bleeding that can be lifethreatening.

Periviable: The period of pregnancy when the fetus may survive outside the uterus with medical intervention, generally between 22 and 25 weeks of gestation.

Placental abruption: A serious complication of pregnancy in which the placenta separates too early from the uterus. It usually occurs in the third trimester or during childbirth. Symptoms include pain in the abdomen and vaginal bleeding.

Preterm: Delivery of a baby before 37 weeks of pregnancy.

Preterm prelabor rupture of membranes (PPROM): A complication of pregnancy in which the amniotic sac breaks before 37 weeks of pregnancy.

Previable: The period of pregnancy when the fetus would not survive outside the uterus.

Sepsis: A life-threatening condition caused by the body's extreme response to an infection, which can lead to organ damage.

Steroid: Medication that can help a fetus's lungs and other organs mature, usually given if a preterm delivery is anticipated within the next 7 days.

Stillbirth: Death of a fetus prior to delivery.

Uterine rupture: A serious complication in which the uterus tears open during pregnancy or labor.

Uterus: The organ in which the fetus develops during pregnancy.

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