

Meconium Aspiration



What is meconium aspiration?

Meconium aspiration is when a newborn breathes in a mixture of meconium and amniotic fluid. Amniotic fluid is the liquid that surrounds the baby in the womb. Meconium is the baby's first stool, or poop. It is sticky, thick, and dark green. It is typically passed in the womb during early pregnancy and again in the first few days after birth.

What causes meconium aspiration?

Healthcare providers don't fully understand why babies release stool before they are born. It may be a natural event. Or it may be caused by stress. Not all babies who have meconium-stained amniotic fluid at birth actually breathe in meconium. Meconium aspiration only happens in a small number of births.

Who is at risk for meconium aspiration?

Meconium aspiration is most common in babies who are born:

- Full-term (between 37 to 41 weeks) who are small for gestational age
- Postterm (after 42 weeks)
- To mothers with high blood pressure, diabetes, or a history of smoking
- Via a difficult delivery, such as having problems with the umbilical cord

What are the symptoms of meconium aspiration?

Meconium gives the amniotic fluid a greenish color. This is called meconium staining. If meconium has been in the amniotic fluid for a long time, your baby may have yellowed skin and nails.

Your baby may also have symptoms, such as:

- Rapid breathing
- Muscles of the ribs pulling in toward the chest when the child breathes
- Grunting sounds with breathing
- Bluish skin color
- An enlarged or bloated chest because of trapped air

The symptoms of meconium aspiration may look like other health conditions.

How is meconium aspiration diagnosed?

Your child's healthcare provider will check the amniotic fluid for meconium at the time of birth. Your baby's healthcare provider will do a physical exam. They look specifically at the Apgar score, vital signs, and the heart and lungs. They may also recommend a blood gas test to look at the amount of oxygen in your baby's blood. They may also do a chest X-ray to check for problems in your baby's lungs.

How is meconium aspiration treated?

Treatment will depend on your child's symptoms, age, and general health. It will also depend on how severe the condition is. Your baby's healthcare provider will likely recommend treatment for meconium aspiration if your baby is having difficulty breathing after birth.

At birth, treatment may include:

- Suctioning of the upper airways, including the nose, mouth, and throat
- Suctioning of the lower airways through an endotracheal tube placed in the windpipe. This is no longer done routinely. It may be done if a blockage affects breathing.
- Oxygen given by face mask or mechanical ventilator
- Antibiotics, if the provider is concerned about pneumonia
- Surfactant medicine given directly to the lungs by a breathing tube or thin catheter. This is to help replace some of the natural surfactant that was inactivated by the meconium. This can help your baby's breathing.

What are possible complications of meconium aspiration?

When babies take their first breaths at birth, bits of meconium can enter the airway. They can then be inhaled deep into the lungs. The meconium may stick to the air sacs (alveoli). This makes it hard for your baby to take in oxygen. It may also trap air in the baby's lungs. It may also make some of the natural substances in the lungs that help breathing, like surfactant, wash away or become inactive.

It can also cause an infection, such as pneumonia. Most babies generally get better within a few days. But severe cases of meconium aspiration may lead to death in a small number of babies.

Key points about meconium aspiration

- Meconium aspiration happens when a newborn breathes in a mixture of meconium and amniotic fluid.
- Healthcare providers don't fully understand why babies release stool before they are born. Only a small percentage of babies actually do breathe in the meconium.
- It is most common in babies born full-term (between 37 to 41 weeks) who are small for their gestational age. It is also most common in babies who are born postterm (after 42 weeks).
- Your healthcare provider will check the amniotic fluid for meconium at the time of birth.
- Most babies generally get better within a few days, but the condition can become life-threatening.

Next steps

Tips to help you get the most from a visit to your child's healthcare provider:

- Know the reason for the visit and what you want to happen.
- Before your visit, write down questions you want answered.
- At the visit, write down the name of a new diagnosis and any new medicines, treatments, or tests. Also write down any new instructions your provider gives you for your child.
- Know why a new medicine or treatment is prescribed and how it will help your child. Also know what the side effects are.
- Ask if your child's condition can be treated in other ways.
- Know why a test or procedure is recommended and what the results could mean.
- Know what to expect if your child does not take the medicine or have the test or procedure.
- If your child has a follow-up appointment, write down the date, time, and purpose for that visit.
- Know how you can contact your child's healthcare provider after office hours, and on weekends and holidays. This is important if your child becomes ill and you have questions or need advice.

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