

Intestinal Atresia

What is intestinal atresia?

Intestinal atresia refers to a part of the fetal bowel that is not developed, and the intestinal tract becomes partially or completely blocked (bowel obstruction). This condition can occur anywhere in the intestinal tract. Intestinal atresia generally refers to blockages of the small intestine—the most common. Blockages of the large intestine are called colonic atresias.

Blockages that occur in the first portion of the intestine, immediately after the stomach, are called duodenal atresias and present differently. Read more here.

Atresias can also occur in other hollow organs, such as the esophagus. Esophageal atresia is a common defect in fetuses, but it's not often diagnosed before birth. Read more here.

How common is it?

Intestinal atresia occurs in between one in 1,000 and 5,000 live births. The only treatment is surgery, no matter where the atresia is located. The baby will remain in the hospital for several weeks while the bowel heals and function is restored.

How is it diagnosed?

The effects of intestinal atresia, such as a dilated bowel or an excess of amniotic fluid, are visible through routine prenatal ultrasound, alerting us to the condition. Usually, however, providers cannot determine the reason for the blockage through ultrasound alone. Other prenatal tests may be necessary. Amniocentesis may be recommended to look for chromosomal abnormalities or other genetic conditions that can be related to bowel obstructions, as well as serial level II ultrasound to closely monitor the level of amniotic fluid and the growth of the baby.

What can happen before birth?

When the blockage occurs high in the intestines, the fetus can't absorb all of the amniotic fluid that is swallowed. This excess of amniotic fluid is called "polyhydramnios." Severe polyhydramnios may increase the risk of premature delivery.

When the blockage is farther down the intestinal tract, the preceding loops of bowel dilate and fill with fluid. Usually, dilated bowel loops are not a threat to the fetus. In rare cases, the bowel can twist and cut off its own blood supply.

What can be done before birth?

It is difficult to predict whether a bowel will twist, and if diagnosed, it may be too late to repair. Because of this and the risk to the fetus, it is generally not recommended to intervene before birth.

What are my delivery options?

Unless there are signs that the fetus is in trouble, pre-term delivery or Cesarean section is not necessary. Cesarean section may be necessary for obstetrical reasons, however. It is recommended that mothers deliver in a hospital that has immediate access to a specialized neonatal intensive care unit (NICU), with a pediatric surgical specialist present.

What will happen at birth?

Most babies with intestinal atresia do not have immediate problems at birth. The mother will most likely be able to hold the baby after delivery. Neonatologists will be present to assess the baby and start treatment if necessary, or bring him or her to the NICU.

Once the doctors have fully assessed the baby (and have determined where the blockage is), one of the pediatric surgeons will perform an operation to correct the intestinal atresia. The goal of this surgery is to remove the bowel obstruction and allow the digestive tract to function. The type and number of operations depend on the location of the obstruction and the condition of the intestine, and can only be determined during the initial operation.

While the baby recovers, he or she will receive nutrition and calories intravenously. This allows for normal growth until the baby can attempt feeding by mouth, which happens when there are signs of good bowel function. This may take days or weeks, depending on the type of intestinal atresia and the operation. The intestinal tract usually takes about two to three weeks to fully function.

After bowel function is restored, it will take some time before the baby can handle enough breast milk or formula for proper nourishment. He or she may be in the hospital for several weeks or longer, depending on the degree of prematurity and the condition of the bowel.

What is the long-term outcome?

The long-term outcome for most intestinal atresias is excellent. Infants typically experience minor intestinal problems in the first few weeks after birth, but recover fully. If the baby is missing a large amount of small intestine—either because too little developed during pregnancy or because it had to be removed during surgery—he or she may have trouble absorbing enough nutrients and may continue to receive nutrients intravenously for a longer period of time.

The long-term outcome may depend on associated conditions. Some conditions, such as cystic fibrosis, can be the underlying cause of intestinal atresia. Geneticists and other pediatric specialists will work together to help treat the baby. 

