

Gastroschisis

What is gastroschisis?

Gastroschisis is a condition in which loops of intestines (and sometimes parts of the stomach, liver and other organs) protrude from the fetus' body through a hole in the abdominal wall. Gastroschisis is similar to another abdominal wall condition called omphalocele; however, in gastroschisis the hole is located to the side (usually the left) of the umbilical cord, and in omphalocele it is at the belly button.

How common is it?

Gastroschisis occurs in approximately one in 2,000 births, making it relatively common among congenital anomalies.

How is it diagnosed?

Gastroschisis can be detected through ultrasound from 14 weeks of gestation; however, it is easier to diagnose as the pregnancy progresses and loops of intestine can be seen outside the abdomen "floating" into the amniotic cavity.

What can happen before birth?

Many babies with gastroschisis have what appears to be a damaged bowel, with very thick, rigid loops of intestines known as a "peel." We're not sure what causes this peel or why some babies have little or no peel at all. Some believe that prolonged exposure of the bowel to amniotic fluid causes progressive damage; however, many infants with gastroschisis who remain in the womb until term have little or no peel, while others who are born prematurely have significant peel. If the exposed bowel becomes so damaged that function is impaired, the baby may need extended time in the neonatal intensive care unit (NICU) after birth.

What can be done before birth?

Gastroschisis is best treated after birth because fetal intervention poses too many risks for the mother and fetus.

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. After birth the baby's intestines are exposed to direct trauma, dehydration and infection, so it is recommended that mothers deliver in a hospital that has immediate access to a specialized NICU, with a pediatric surgical specialist present. If this is not possible, the intestines must be protected with a sterile, waterproof wrap, to prevent them from drying out and becoming more damaged.

What will happen at birth?

In the presence of neonatologists, the mother will deliver her baby and, in most cases, be able to see and hold her baby immediately. The baby will then go to the NICU for assessment and treatment. Because the intestines are exposed, the baby is likely to lose a lot of fluid by evaporation and to cool off more rapidly. He or she will receive an intravenous line for fluids and be placed under a warmer, with the loops of bowel carefully wrapped to protect them from the outside. If the baby shows signs of distress, it is possible that he or she will be intubated and placed on a respirator to aid breathing.

Once it is clear there are no major problems, the baby will undergo surgery to place the intestines and organs back in the abdomen and close the abdominal wall. The type of procedure depends on the size of the baby and how much of the intestines and other organs are exposed.

Often, too much of the intestines protrudes and cannot be placed in the abdomen in a single procedure. In the meantime, a “silo” (a clear plastic or silicone pouch) is placed over the intestines to shield them from trauma, infection and dehydration. This can be done at the bedside in the NICU or in the operating room. Once the swelling has gone down and the abdomen has become used to the presence of more bowel, the silo can be removed and the abdomen closed over the intestines. This typically takes a few days to a week.

If a thick peel is present on the bowel loops, intestinal function is likely to be impaired for some time, typically a few weeks. However, once the intestines are back in the abdomen and the abdominal wall is repaired, the peel will begin to heal on its own, allowing the intestines to recover.

What is the long-term outcome?

Because the fetal intestines have suffered during pregnancy, they need time to recover after birth. It may take two to three weeks before the baby’s intestinal tract functions properly and much longer before the baby can tolerate full feedings. Most babies require intravenous feedings to ensure that they receive enough nutrients. A baby with gastroschisis is likely to stay in the hospital for at least one month, and, depending on the degree of prematurity and the condition of the bowel, may stay much longer. The surgery to close the hole in the abdominal wall may affect the shape of the bellybutton, but scarring should be minimal. However, the overall outcome of gastroschisis repair is very good. 

