

Spina Bifida

Spina bifida is a birth defect that affects the bones of the spine

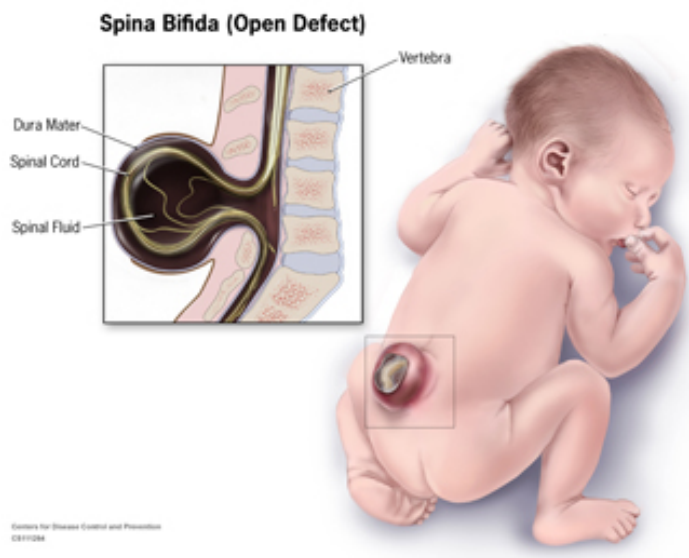
What is spina bifida?

Spina bifida is a birth defect that happens when the bones in your baby's spine do not form correctly during early pregnancy. There are different kinds of spina bifida. Some are "closed", which means the defect is covered and protected by skin. Some are "open", which means there is no skin to protect the defect. The defect is exposed to the amniotic fluid which can damage the spinal cord and nerves. Spina bifida can also cause problems in the brain, most commonly with the back of the brain (called a Chiari malformation) and increased fluid in the brain (called hydrocephalus).

When people talk about spina bifida, they are usually talking about a **myelomeningocele (MMC)**. MMC is the most serious type of open spina bifida. In MMC, the covering around the spinal cord (meninges) forms a fluid-filled sac on your baby's back. Part of the spinal cord also sticks out into the sac, which damages the nerves. There are other forms of spina bifida. A **meningocele** happens when the meninges form a sac on your baby's back, but the spinal cord does not stick out into the sac. A **myelocele** happens when the spinal cord sticks out directly into the amniotic fluid without being covered by the meninges. You might also hear about other forms of spina bifida that are milder, but we will not talk about these mild forms in this note.

What causes spina bifida?

In most cases, there is nothing you did or did not do to cause your baby's spina bifida. There are many things that can increase the risk to have a baby with spina bifida, like low vitamin B or certain medicines. It is caused by a genetic condition 10-15% of the time. You are more likely to have a baby with spina bifida if someone in your family was born with it. Your genetic counselor can help you understand your family's risk for having another baby with spina bifida in the future.



Credit: Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities



How is spina bifida diagnosed?

There are several tests that can help to diagnose spina bifida:

- Blood test: you may have a blood test to look for alpha fetoprotein (AFP) during your second trimester. A high AFP level is a sign of spina bifida in your baby.
- Ultrasound: your doctor may see a defect in your baby's spine and changes to your baby's brain
- Fetal echocardiogram: an ultrasound of your baby's heart
- MRI: will give the doctors a better picture of your baby's brain and spine

How is spina bifida treated?

Your baby will need surgery for the spina bifida. This surgery will close the opening on your baby's back. The surgery will leave a scar on your baby's back.

Some babies can have their spina bifida surgery before they are born. There are two different types of surgeries that may be offered. Either surgery would need to take place before the 26th week of your pregnancy. Your doctor will explain your choices. Some babies have their spina bifida surgery after they are born, usually within the first few days of life. Your baby's doctors will decide the best time to do this surgery.

What does this mean for my pregnancy?

If the MMC is closed before your baby is born:

- You will need to move to Cincinnati for the rest of your pregnancy
- You will have frequent visits with the Cincinnati Fetal Center doctors
- We will watch you closely for signs of premature labor or leaking of fluid
- You will deliver your baby at one of the following hospitals: Cincinnati Children's Hospital Medical Center, Good Samaritan Hospital, or University Hospital Medical Center

If the MMC is closed after your baby is born:

- You should plan to deliver in a hospital with a special unit that takes care of high risk babies right after birth

What else do I need to know?

Your baby will be in the Neonatal Intensive Care Unit (NICU) after birth. Your baby's doctors will talk with you about how long they will be in the NICU. Your baby will need extra care for their spina bifida throughout their life. Some issues that need lifelong care include walking and bowel/bladder care. The Center for Spina Bifida Care at Cincinnati Children's can care for your baby as they grows up with spina bifida. If you do not live near Cincinnati, we can help find similar care near your home.