

Vascular Ring

What is a Vascular Ring?

To understand a Vascular Ring, it is important to know a few things about the heart's structure. First, at the top of the heart is the aorta, the large artery that carries oxygenated blood out of the heart. As your baby's heart develops, an aortic arch forms on the top of the aorta. This arch has three branches that carry blood to the upper portion of the body including the head, neck, and arms.

A Vascular Ring happens during development when the aortic arch or its branches wrap around the baby's trachea, the esophagus or both. The trachea transports air to the lungs, and the esophagus is the tube that leads from your baby's mouth to its stomach.

In most cases, Vascular Rings merge or dissolve during development. However, if the Vascular Ring is still there when the baby is born, it can cause difficulty breathing and eating. Some babies with a congenital heart defect may be more likely to have a Vascular Ring, but they can develop in any baby. It is not known what causes Vascular Rings.

The most common types of Vascular Rings are a double aortic arch, where the aorta divides into two arches, and a right aortic arch, where the aorta develops on the right side instead of the left.

What are the symptoms of a Vascular Ring, and how is it diagnosed?

If the Vascular Ring does not squeeze the esophagus or trachea, your baby may not have any symptoms. But, if the ring compresses the trachea or esophagus, it can lead to breathing and digestive challenges.

Signs of a Vascular Ring after delivery and into childhood include:

- » Wheezing
- » Coughing
- » Dysphagia, this is when it feels like something is stuck in the throat or a choking feeling when eating.
- » Acid reflux or GERD
- » Difficulty eating and swallowing
- » Poor weight gain

Symptoms may occur soon after birth or years later.

A Cardinal Glennon St. Louis Fetal Care Institute nurse is available 24 hours a day, seven days a week to discuss referrals with physicians and potential families by calling 314-268-4037, option 2.

Phone **314-268-4037, option 2**
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If a Vascular Ring is suspected, a pediatric cardiologist will likely recommend a series of tests to confirm the diagnosis and learn more about your baby's heart. This may include:

- » A chest x-ray, a photo of the inside of the chest
- » An echocardiogram (ECHO), an ultrasound of the heart that measures movements
- » A Cardiac CT
- » A barium swallow, an imaging test that shows the esophagus working
- » A bronchoscopy, a test to see the inside of the trachea
- » An endoscopy, a test to see the inside of the esophagus

In some cases, a Vascular Ring can be diagnosed via ultrasound and Fetal ECHO before delivery.

What care will my baby need if they have a Vascular Ring?

Babies with a Vascular Ring will meet with a team of pediatric specialists, including:

- » Cardiologists, who specialize in the heart
- » Pulmonologists, who specialize in lungs and breathing
- » Gastroenterologists, who specialize in the digestive system
- » Ear, nose and throat (ENT) specialists

This team will work together to ensure the overall well-being of your baby as they grow into childhood and beyond.

How is a Vascular Ring treated?

A Vascular Ring that causes symptoms will require surgery. During the operation, your baby will be sleeping under anesthesia. The surgeon will make a small incision (cut) in the left side of your baby's chest to access the Vascular Ring through the ribs, where they will divide it to release the pressure on the trachea and esophagus.

After surgery, your baby may have noisy breathing for a few months as the trachea and esophagus transition to their normal shape. But, most babies do well after surgery and will not require any additional operations for the Vascular Ring.

What is the long-term prognosis for a baby with a Vascular Ring?

Overall, the long-term prognosis for children with a Vascular Ring is good. Most babies will not require any additional surgeries for the Vascular Ring. Our team of pediatric cardiologists will monitor your child to ensure their heart stays healthy as they develop.

We understand that Vascular Ring can be a scary diagnosis. That's why we're available to help 24 hours a day, 7 days a week. For more information or to schedule an appointment, call us at 314-268-4037, opt. 2 or toll free at 877-SSM-FETL (877-776-3385).

While we can't change the diagnosis, we can provide you expert care and support, helping your baby get the most out of treatment - and life.
