

Right Aortic Arch

What is right aortic arch?

Right aortic arch is a heart condition in which the aortic arch develops on the right side of the airway instead of the left side. The aorta is the large artery that carries oxygenated blood out of the heart. The aorta forms an aortic arch along the top of the heart as it travels to the body. The arch has three branches that carry blood to the upper portion of the body, including the head, neck and arms.

The development of the aortic arch happens as early as three to four weeks into the pregnancy. Initially, there are paired aortic arches, both right and left. The right aortic arch usually regresses to a smaller vessel supplying the right arm, leaving the left aortic arch as the main arch. If the process is reversed, the right aortic arch becomes the dominant arch. It is thought that 1 in every 1,000 people has a right aortic arch. With increased prenatal screening and advances in technology, it is believed it will become even more common.

Right aortic arch can be seen in conjunction with genetic abnormalities such as DiGeorge syndrome (22q11 deletion). It is also frequently seen in patients with Tetralogy of Fallot and Truncus Arteriosus.

An isolated right aortic arch often does not cause any symptoms on its own. In some situations, however, it can result in a vascular ring.

How is right aortic arch diagnosed and managed during pregnancy?

Right aortic arch can often be detected around the 20-week screening ultrasound during pregnancy. However, there are some cases in which it is not diagnosed until after delivery or even into adulthood. If there is a concern of a right aortic arch during the screening ultrasound, a fetal echocardiogram is often performed to confirm the diagnosis and evaluate for any other associated cardiac defects.

Babies with right aortic arch are typically born via vaginal delivery. As with any pregnancy, however, a mother or baby's unique situation is also important in determining the route of delivery.

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.

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How will right aortic arch impact my baby after delivery?

If your baby is diagnosed with right aortic arch before delivery, they will generally not have symptoms right after birth. Early in their life, they will be seen for a follow-up by pediatric cardiology as an outpatient. An echocardiogram (ECHO) is usually performed to confirm the right aortic arch; in some instances, additional imaging such as a CT may be obtained to evaluate for a vascular ring. The results of these studies will help determine the course of treatment for your baby.

No treatment is needed for children with isolated right aortic arch without a vascular ring. Your child's doctors will look for signs of a vascular ring in early childhood. Symptoms may include noisy breathing, poor feeding, poor weight gain, difficulty swallowing solid foods or frequent chest infections. If a vascular ring is found, it can be successfully repaired in childhood.

What can I expect when my baby is born with right aortic arch?

Typically, babies born with right aortic arch show no lasting effects of the condition. However, an SSM Health Cardinal Glennon Children's Hospital pediatric cardiologist will help you determine the best course of treatment for your little one after delivery.

We understand that a 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.
