

Tricuspid Atresia

What is it?

Tricuspid atresia (pronounced try-CUSP-id uh-TREE-zuh) is a birth defect of the heart. The **tricuspid valve** controls the blood flow from the right upper chamber to the right lower chamber of the heart. **Tricuspid atresia** occurs when the tricuspid valve does not form, preventing blood from flowing from the right upper chamber to the right lower chamber and out to the lungs for oxygen. The right lower chamber may be underdeveloped, and the main blood vessel carrying blood to the lungs may be small. This allows very little blood to flow to the lungs. Because the blood cannot flow correctly, it will use other ways to get around the missing valve. Babies with tricuspid atresia often have an atrial septal defect and/or a ventricular septal defect. An **atrial septal defect** is a hole between the right and left upper chambers of the heart, while a **ventricular septal defect** is a hole between the right and left lower chambers of the heart. These defects let oxygen-rich blood mix with oxygen-poor blood and let oxygen-rich blood get to the rest of the body. A baby with tricuspid atresia may also have **transposition of great arteries (TGA)**. In transposition of great arteries, the two blood vessels carrying blood out from the heart are switched. When a baby has both TGA and tricuspid atresia, blood can get to the lungs but not the body. A baby with tricuspid atresia will need surgery or other procedures soon after birth. Because of that, tricuspid atresia is a **critical congenital heart defect**. **Congenital** means present at birth, and these defects can cause serious health problems or even death if left untreated.

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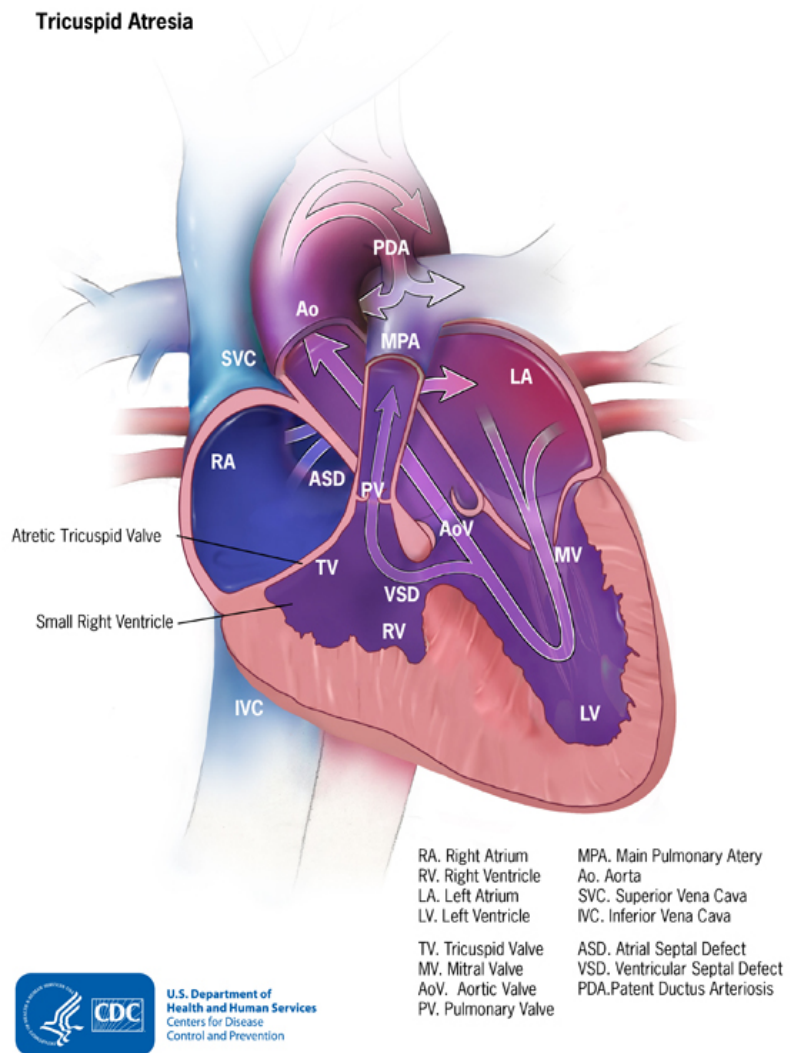


Image courtesy of the Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities



How common is it?

About 1 in every 10,000 babies are born with tricuspid atresia.

What causes it?

The cause of tricuspid atresia for most babies is unknown. There may be many factors that cause it, but more research is needed to understand the exact cause.

How is it diagnosed?

Tricuspid atresia can be diagnosed during pregnancy or after. Screenings are done to check for birth defects during pregnancy. After the baby is born, a doctor will do a physical examination and note whether a baby has blue-colored skin and lips, called **cyanosis**. This can be a sign of low levels of oxygen in the blood. The doctor also will listen to a baby's heart. If the doctor hears a heart murmur, or a "whooshing" sound, that can be a sign of a heart defect. A baby with a heart defect also might have trouble breathing, poor feeding, and excessive tiredness. A screening test called a **pulse oximetry screen** is done shortly after birth to check for critical congenital heart defects. A pulse oximeter is a tool that detects oxygen levels in blood. Low levels of oxygen in the blood could mean there is a heart defect. If a baby fails the screening, then the doctor should perform a diagnostic test called an **echocardiogram** to check for defects in the heart.

How is it treated?

While babies are developing, they have a blood vessel called a **ductus arteriosus** that allows blood to move around their lungs before birth. Doctors might want to keep this open to allow blood to get to the lungs for oxygen. Medicine will be given to keep the ductus arteriosus open and might be needed to strengthen the heart muscle, lower a baby's blood pressure, and get rid of extra fluid from the body. Surgery is usually required soon after birth to improve the blood flow to the lungs and the rest of the body. Regular visits to a **cardiologist**, doctor who specializes in the heart, will be necessary to avoid problems and watch for any other health conditions.

For more information:

American Heart Association

http://www.heart.org/HEARTORG/Conditions/CongenitalHeartDefects/AboutCongenitalHeartDefects/About-Congenital-Heart-Defects_UCM_001217_Article.jsp#.Wv2YtPnwbc

Centers for Disease Control and Prevention

<https://www.cdc.gov/ncbddd/heartdefects/tricuspid-atresia.html>

National Heart, Lung, and Blood Institute

<https://www.nhlbi.nih.gov/health-topics/congenital-heart-defects>

