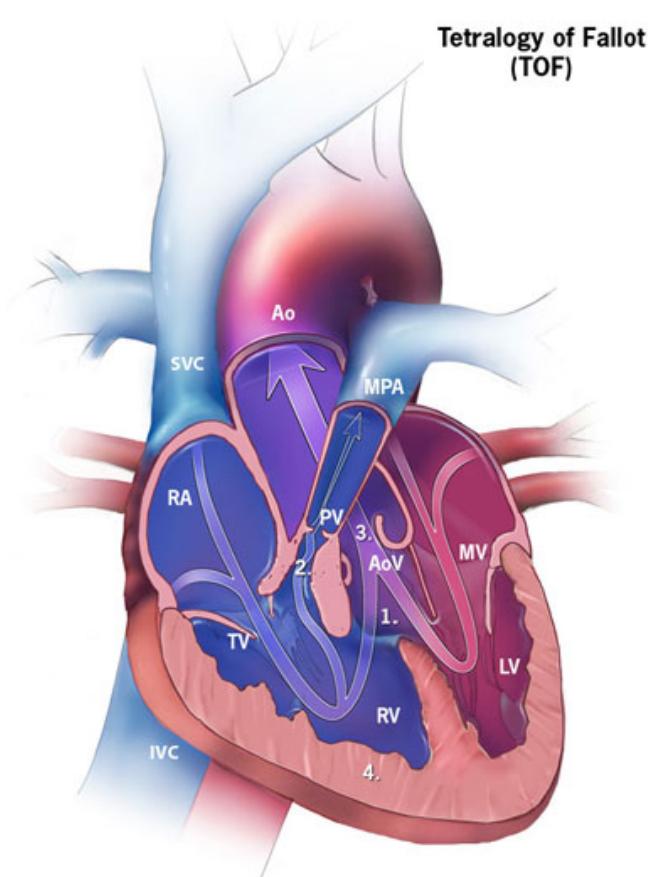


# Tetralogy of Fallot (TOF)

## What is it?

Tetralogy of Fallot (pronounced te-tral-uh-jee of Fal-oh) is a birth defect that affects the normal blood flow in the heart. **Tetralogy of Fallot (TOF)** consists of four defects:

- **Ventricular septal defect (VSD):** An opening in the wall between the two lower chambers.
- **Pulmonary stenosis:** A narrowing of the pulmonary valve and main pulmonary artery.
- The aorta is enlarged and may sit on top of the VSD.
- **Ventricular hypertrophy:** The muscular wall of the lower-right chamber of the heart is thicker than normal.



RA. Right Atrium  
RV. Right Ventricle  
LA. Left Atrium  
LV. Left Ventricle

SVC. Superior Vena Cava  
IVC. Inferior Vena Cava  
MPA. Main Pulmonary Artery  
Ao. Aorta

TV. Tricuspid Valve  
MV. Mitral Valve  
PV. Pulmonary Valve  
AoV. Aortic Valve

With TOF, the blood does not carry enough oxygen, so the body might not get the normal amount of oxygen. A baby with TOF will need surgery or other procedures soon after birth, so TOF is a **critical congenital heart defect**. **Congenital** means present at birth, and **critical congenital heart defects** can cause serious health problems or even death if left untreated.

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 2,518 babies is born with TOF. That's about 1,660 babies each year in the United States.

## What causes it?

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

## How is it diagnosed?

TOF can be diagnosed during pregnancy or after. During pregnancy screenings are done to check for birth defects. After birth a doctor will do a physical examination to see whether the 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 the baby's heart. If the doctor hears a heart murmur, or a "whooshing" sound, that can be a sign of a heart defect. A doctor also might see that a baby is having trouble breathing, a pounding heart, and poor feeding, all of which could be signs of a heart defect. Symptoms are often seen soon after birth in a baby with TOF. 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?

Treatment for a TOF usually requires surgery soon after birth to improve the blood flow to the lungs and the rest of the body. Your child's doctor should discuss treatment options with you. Regular visits to a **cardiologist**, a 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](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/tetralogyoffallot.html>

### National Heart, Lung, and Blood Institute

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

