

## BIRTH DEFECT RESEARCH FOR CHILDREN



## What is VATER Association?

An "association" is a related group of abnormalities that occur more often than can be explained by chance. Each letter in the term VATER represents a different part of the body that may be affected. A child must have three or more of the VATER category birth defects to be diagnosed with VATER Association.



## VATER Association



**V--Vertebrae** (spinal bones). Examples are abnormally formed vertebrae and extra ribs.

**A--Anus**. An example is an imperforate anus (no anal opening).

**T--Trachea** (windpipe). An example is tracheoesophageal fistula (connection between the trachea and esophagus).

**E--Esophagus** (tube from mouth to stomach). An example is esophageal atresia (part of the esophagus is missing).

**R--Renal** (kidney) and/or Radius (bone on the thumb side of forearm). Examples are missing, multiple, or horseshoe kidneys and missing arm bones.

Sometimes the terms VACTEL and VACTERL are used with the additional letters representing:

**C--Cardiac** (heart). Examples are a hole in the heart and missing arteries.

**L--Limb** (arm, hand, leg, or foot). Examples are missing fingers, missing bones in the limbs, and shortened limbs.

How many children have VATER Association?

Among approximately 10 million infants born from 1978 until 1991, 286 were documented with VATER Association. Medical references suggest that VATER Association has been underdiagnosed since some children diagnosed with "multiple abnormalities" could have VATER Association.

How do you know if your child has VATER Association?

Three or more VATER abnormalities are present at birth. Some of the problems can be detected by ultrasound as early as 18 weeks into the pregnancy. Two-thirds of the problems usually occur in the lower body while the remaining problems are in the upper body. The average number of abnormalities per patient is seven to eight.

What causes VATER Association?

In most situations, an incidence of VATER Association is isolated, with the exact cause of the association

being unknown. In the few cases where VATER Association has been reported in families, genetic counseling is suggested.

How Can You Help A Child With VATER Association?

The severity of VATER Association varies from child to child. A child may need several different specialists for treatment. Some anatomical defects can be corrected or improved with surgery, either immediately after birth or later as the child develops. Other problems can be treated with medications or other therapies.

What's in the future for a child with VATER Association?

The prognosis for a child with VATER Association depends on the combination and severity of problems and the surgical corrections and medical therapies available to treat the problems. The child's individual specialists can help with prognosis. Some children with VATER may experience delayed growth and development, but most have normal intelligence.

## Fact Sheet by:

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