

## Atrioventricular (AV) Canal

### Normal Heart

The heart has four chambers. The two top chambers receive blood from the body and lungs. These chambers are called the atria. The two bottom chambers pump blood to the body and lungs. These are called the ventricles. These chambers are separated by walls known as the atrial septum and ventricular septum. In between the atria and ventricles are valves. On the right side is the tricuspid valve. On the left side is the mitral valve.

An AV canal is a heart defect present at birth. In this condition there is no wall between the chambers of the heart. The middle part of the heart did not form correctly in the womb.

There are two types of AV canal, complete and partial. In a complete AV canal, there is an atrial septal defect (ASD) and ventricular septal defect (VSD). There is one common AV valve instead of two valves. In a partial AV canal only an ASD is present. There are two valves but often the mitral valve has an opening in it (cleft).

The cause of AV canal is unknown. It is often seen with Down syndrome but can occur in children who do not have Down syndrome.

The lack of a wall between the two sides of the heart can cause extra blood to flow to the lungs.

### Signs and Symptoms

In an infant, symptoms include:

- Tiring easily
- Not eating or growing well
- Frequent pneumonia
- Rapid breathing
- Sweating

Older children may have trouble growing or tire easily. Your health care provider may hear an abnormal heart sound when listening with a stethoscope.

### Testing

- A complete exam and a health history.
- An ultrasound of the heart, an echocardiogram. This is done to confirm a defect is there.
- An ECG, electrocardiogram, may be done to look at the heart's electrical activity.

### Treatment

Surgery is often needed at some point with both complete and partial AV canal defects. Medicines may be used to help control the effects of an AV canal before surgery. Your cardiologist will discuss the options for treatment.

### Who to Call

Pediatric Cardiology  
**(608) 263-6420**

Adult Congenital Heart Disease  
**(608) 890-5700**