

## Atrial Septal Defect: What You Need to Know

**An atrial septal defect (ASD) is a hole in the wall that separates the smaller upper chambers of the heart. In this handout, you will learn about atrial septal defects, including causes and symptoms. You will also learn how doctors diagnose and treat atrial septal defects.**

### WHAT IS ATRIAL SEPTAL DEFECT?

An **atrial septal defect (ASD)** is a hole in the wall that separates the **atria** (the smaller upper chambers) of the heart. The wall that separates the atria is called the **septum**. The hole can make the right side of the heart work harder than usual.

### WHAT CAUSES AN ASD?

In most cases, there is no clear cause of an ASD. ASDs often happen at random. It is not anyone's fault.

### HOW CAN AN ASD AFFECT MY CHILD'S HEALTH?

The ASD allows for extra blood flow to the lungs. In most cases, there may be no symptoms. But the extra blood flow can damage the lungs and make the heart grow larger than usual.

If left untreated, lung damage can become permanent and life-threatening. Some children can also develop pneumonia (build-up of fluid in the lungs) or have asthma-like breathing problems

### ARE ALL ASDS THE SAME?

There are 4 types of ASD. Some of these defects can involve other heart structures:

- **Ostium secundum ASD** is the most common type. This is when the septum does not close completely while the heart is developing.
- **Ostium primum ASD** is a defect in the lower part of the atrial septum. It is accompanied by a defect in one of the valves (openings that lets blood in and out).
- **Sinus venosus ASD** is a hole between the atria and involves an abnormal drainage of a vein to the right atrium.
- **Coronary sinus ASD** is very rare. It is when there is a hole in the **coronary sinus** (a part of the heart that carries blood from the heart's main vein into the right side of the heart).

### WHAT ARE THE SYMPTOMS OF ASD?

Most babies and children who have an ASD might not have any symptoms. In fact, many babies grow normally.

In others, common symptoms of ASDs include:

- Heart murmur (an extra sound when listening to the heart with a stethoscope)
- Breathing faster than usual and fatigue with increased activity
- Frequent lung infections (like pneumonia)
- Breathing problems such as asthma

## HOW DO DOCTORS TEST FOR AN ASD?

In addition to listening to the heart, the doctor might use one or more of the following tests for ASD:

- **Electrocardiogram (EKG).** An EKG helps doctors learn more about the heart's rate and rhythm.
- **Echocardiogram (echo).** An echo is ultrasound of the heart. If the results from the echocardiogram are not clear, your child might need a **magnetic resonance imaging (MRI)**

## HOW DO DOCTORS TREAT AN ASD?

Treatment depends on the size of the ASD and whether your child has symptoms. The care team will talk with you about a treatment plan for your child's needs and symptoms.

- **If the ASD is small,** your child might not need treatment. Sometimes, a small ASD will close on its own over time. If it does not close, it usually does not cause any problems.
- **If the ASD is medium or large,** surgery or a cardiac catheterization can help close the hole.

## WILL MY CHILD NEED FOLLOW-UP CARE FOR AN ASD?

Your child will follow up with the Pediatric Cardiology team to guide you through the specific plan of care.

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