

Renal Agenesis

What is it?

Renal agenesis is when one or both kidneys does not develop. It can be **unilateral**, meaning one kidney is missing, or **bilateral**, meaning both kidneys are missing. In either condition, the kidney(s) did not develop during weeks 4-6 of pregnancy. Normally, the **kidneys** filter and remove waste from the blood, form urine, and maintain blood pressure. Babies with renal agenesis may have other associated birth defects and an increased risk of other kidney problems. If both kidneys are missing, then the baby cannot produce urine, which is necessary to form amniotic fluid later in pregnancy. **Amniotic fluid** is the fluid surrounding the baby in the womb, and it is needed for proper development of the baby's lungs. If amniotic fluid is not present, the baby's lungs cannot grow and develop properly. Because babies with bilateral renal agenesis have undeveloped lungs, they have a higher chance of early death.

How common is it?

About 1 out of every 1,000 babies born each year has **unilateral renal agenesis**. About 1 out of every 4,500 babies born each year has **bilateral renal agenesis**.

What causes it?

The exact cause of renal agenesis is not known. There may be many factors that cause it. More research is needed to understand the exact cause of renal agenesis.

How is it diagnosed?

It can be diagnosed during pregnancy or after birth. Bilateral renal agenesis is usually diagnosed during routine prenatal visits. Too little amniotic fluid may be noticed during those visits, prompting the doctor to look for renal agenesis. Images of the kidneys will be taken to confirm diagnosis. After birth, unilateral renal agenesis may be suspected when the one kidney is larger than normal. Tests may be done to look at the kidneys to confirm there is only one kidney.

How is it treated?

For babies with bilateral renal agenesis, there is no treatment that can help produce amniotic fluid or help the lungs develop. Most babies with unilateral renal agenesis, though, lead normal lives. Treatment will depend on other birth defects that may be present. Your child's doctor will discuss treatment options with you.



For more information:

Children's Hospital of Colorado
<https://www.childrenscolorado.org/conditions-and-advice/conditions-and-symptoms/conditions/renal-agenesis/>

Genetic and Rare Diseases Information Center
<https://rarediseases.info.nih.gov/diseases/9228/renal-agenesis>