

PRENATAL ULTRASOUND FINDINGS

Mild Ventriculomegaly

Ultrasounds are routinely done during pregnancy to provide information about your developing baby. However, sometimes the ultrasound finds something a little different than usual in the baby. This fact sheet will give you information about a finding known as **mild ventriculomegaly**.

What is mild ventriculomegaly?

Ultrasound is used to measure many parts of the developing baby. During the second trimester of pregnancy, measurements are routinely taken of the fluid-filled spaces located in the baby's brain. These spaces are called ventricles. There is one pair of ventricles, near the center of the brain, called the lateral ventricles. The lateral ventricles usually measure less than 10 mm (about ½ inch) each.

Mild ventriculomegaly means that one or both of the baby's lateral ventricles are slightly larger than usual. Ventricles measuring between 10 to 15 mm are labeled as mild ventriculomegaly. It is important to point out that this is different from severe ventriculomegaly, sometimes called hydrocephalus. About 1 in every 1000 babies will have mild ventriculomegaly. In most cases, babies with this ultrasound finding are born healthy.

What causes mild ventriculomegaly?

For some babies the size of the ventricles is just naturally a little larger, so there is room for more brain fluid (cerebrospinal fluid) than usual. Less often, ventriculomegaly can be due to changes in the normal flow of brain fluid or changes in the development of the brain.

The ventricles are connected to the spinal cord and the covering of the brain. These connections allow the fluid to flow through the baby's brain and spine. Sometimes the fluid is not flowing in the usual way, causing a build-up of fluid in the ventricles. In other cases, a problem in the way the brain formed leaves extra space for the fluid in the ventricles. Most of the time, the exact cause of ventriculomegaly cannot be found.

Can mild ventriculomegaly cause problems for the baby?

Most babies with mild ventriculomegaly will not have problems; however, as the ventricle size gets larger, the chance for problems in the baby increases. The types of problems found in some babies with mild ventriculomegaly may include physical birth defects, chromosome abnormalities, prenatal infections, genetic syndromes, and brain development problems.

Birth defects: Babies with mild ventriculomegaly are more likely to have physical birth defects, such as heart, kidney, or spine abnormalities. Finding any physical birth defect adds concern for a possible chromosome abnormality or genetic syndrome in the baby.

Chromosome abnormalities: About 1 out of every 25 babies with mild ventriculomegaly (about 4%) has a chromosome abnormality. This means that most babies with mild ventriculomegaly (more than 95%) have normal chromosomes.

Chromosomes are the packages of genetic information found in the cells of the body. Normally, there is a set of 46 chromosomes in every cell. Extra or missing chromosome material almost always causes mental retardation and physical differences. There are many different chromosome abnormalities, which range in severity from relatively mild to very severe. Down syndrome is the most common chromosome abnormality.

Infections: A few infections during pregnancy can interfere with the baby's brain development. Cytomegalovirus (CMV) and toxoplasmosis are the most common ones related to ventriculomegaly. Infections can affect the baby even without obvious symptoms of illness in the pregnant woman.

Genetic syndromes: There are many different genetic syndromes that can lead to large ventricles. Most of these conditions are very rare and are often difficult to diagnose before a baby is born.

Brain development problems (learning problems): In some babies, the ventricle enlargement is a sign of general problems with brain development. This may affect how the brain works. Normal learning and development is seen in most babies with mild ventriculomegaly. However, babies with ventriculomegaly have a higher chance for delays in learning, ranging from mild learning disabilities to severe mental retardation. There is more concern for this type of problem when the ventricles measure larger than 12 mm.

Will I be offered special testing?

When ventriculomegaly is seen during the second trimester of pregnancy, further testing is offered.

Ultrasound: A high resolution (level II) ultrasound is recommended. This ultrasound carefully looks at the baby for any other ultrasound findings or birth defects. Ultrasound is able to find some birth defects, but not all birth defects can be seen during pregnancy, even with a high resolution ultrasound.

Amniocentesis: Another test that may be offered is amniocentesis. Amniocentesis is done by using a thin needle to remove a small amount of the amniotic fluid surrounding the baby. This fluid is tested for chromosome abnormalities and prenatal infections. There is a small risk for miscarriage with this test.

Fetal MRI: Magnetic resonance imaging (MRI) is being studied as a different way to look at the baby's brain before birth. This test is not yet routinely available. Researchers are still looking at the possible benefits of using fetal MRI for babies with ventriculomegaly.

Will ventriculomegaly go away? In most babies, the ventricle size either stays the same or gets smaller later in pregnancy. Sometimes the ventricles even return to a normal size. About 1 in 10 babies with mild ventriculomegaly (ten percent) have the ventricles get larger, which increases the concern for related problems.

What if all the test results are reassuring? There are so many different reasons for large ventricles, that normal testing during pregnancy cannot guarantee your baby will be healthy at birth. However, most babies with mild ventriculomegaly and normal test results will be born healthy.

Where can I get more information?

Your genetic counselor or medical geneticist can answer additional questions you may have about this ultrasound finding.

Kaiser Genetics Departments

Fresno	(559) 324-5330
Oakland	(510) 752-6298
Sacramento	(916) 614-4075
San Francisco	(415) 833-2998
San Jose	(408) 972-3300