

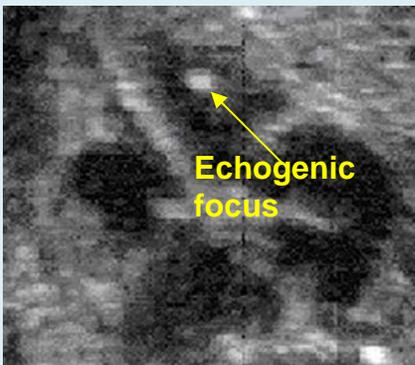
PRENATAL ULTRASOUND FINDINGS

What is an Echogenic Intracardiac Focus?

Echogenic Intracardiac Focus (EIF)

During a second trimester ultrasound, the fetal heart is routinely examined. The exam looks at the four chambers of the fetal heart; the right atrium, left atrium, right ventricle, and left ventricle. Sometimes, one or more small bright spots are seen in the heart. Often these are seen in the muscles of the ventricles, which are the pumping chambers of the heart. There are many different terms that have been used to describe a bright spot in the heart; intracardiac echogenic focus, echogenic focus, cardiac echogenic focus, and echogenic intracardiac focus. If there is more than one bright spot, they are called echogenic foci. This common ultrasound finding is seen in about 1 out of every 20 or 30 pregnancies (~3-5%). An echogenic intracardiac focus (EIF) does not affect health of the baby or how the baby's heart works. This finding is generally considered a normal variation.

**Four chamber view
of the fetal heart**



What causes an EIF?

No one knows for sure why this is seen in some babies and not others. It is thought that the bright spot is due to an area of the heart muscle where there is a little more calcium than average. Calcium is a natural mineral found in the body. Areas in the body with more calcium, like bones and muscles, look brighter on the ultrasound screen.

Who is at risk for an EIF?

EIF is often seen in babies whose mothers have Asian ancestry. However, EIF can be seen in any pregnancy, regardless of the ancestry of the parents.

Can an EIF cause problems for the baby?

An EIF is considered a normal variation in fetal development. It has not been found to have any long term health problems or heart problems for the baby.

Most of the time, EIF is seen during the routine prenatal ultrasound done around 18 to 20 weeks in pregnancy. If there are no other ultrasound findings, the EIF is considered an "isolated" finding. While it is impossible to be completely certain that no birth defects are present in the baby, most pregnancies with isolated EIF result in a healthy baby.

Will the EIF go away?

Most EIF seen in the middle of the pregnancy will not go away before delivery. Since they do not cause problems for the baby, there is no special concern if they are still visible at a later time. For this reason, no ultrasound follow-up is needed to watch for changes in the EIF.

Could an EIF mean the baby has Down syndrome?

Some studies raised concerns about a small risk for Down syndrome with this ultrasound finding. However, most studies do not find a higher risk for Down syndrome when an EIF is the only ultrasound finding. Blood tests or amniocentesis are a better way to look for Down syndrome during pregnancy.

Are additional tests needed?

There is no special testing recommended for pregnancies found to have an isolated EIF. However, routine prenatal testing is available to all pregnant women.

Prenatal screening tests, like Integrated Screening and cell-free DNA screening (also called non-invasive prenatal testing or NIPT), include blood tests that help find out if there is a higher or lower chance of having a baby with certain problems, including Down syndrome.

A test called amniocentesis can accurately diagnose Down syndrome and other chromosome conditions during pregnancy. This is an optional test for women of all ages. Amniocentesis is usually done until about 22 weeks of pregnancy. This procedure has a very small risk for miscarriage (1 in 500 or less).

It is important to remember that prenatal tests will not test for all birth defects. Detailed information about routine prenatal testing options is available on the Kaiser Genetics website: <http://genetics.kp.org>

Where can I get more information?

You can speak with your OB provider or a genetic counselor if you have additional questions about this ultrasound finding.

Kaiser Genetics Departments

Fresno	(559) 324-5330
Modesto	(866) 916-4075
Oakland	(510) 752-6298
Sacramento	(916) 614-4075
San Francisco	(415) 833-2998
San Jose	(408) 972-3300