



# Maternal Serum Quad Screen

You have the choice of having a blood test called the Maternal Serum Quad Screen (MSQS) which estimates the possibility that your fetus may have certain birth defects. Because the MSQS test is a screening test, if your results indicate a higher-than-normal possibility, your next decision will be whether to have further diagnostic testing done, such as an ultrasound, amniocentesis, or other bloodtests.

## What should I do if my MSQS test is abnormal?

- 1** Genetic counseling – The purpose of genetic consulting a genetic counselor is to review your pregnancy and family history, to discuss the meaning of an abnormal test, to answer your questions and to explain your options for further testing.
- 2** Ultrasound – An ultrasound is important to determine how far along you are in your pregnancy, evaluate if you are carrying twins and whether there is an obvious abnormality present. This is a painless procedure using sound waves to see your baby. Often the “abnormal” test result can be explained by the fact that you are further along or not as far along in the pregnancy as originally thought.
- 3** Cell-free DNA testing – This is a blood test used to evaluate the fetal chromosomes.
- 4** Amniocentesis – This is done if there is no explanation for the abnormal blood test results. By passing a very thin needle into the bag of water, some amniotic fluid is removed and tested for chromosomal abnormalities, or for other substances that might indicate a neural tube defect. (Note: You may not need all of these tests.)

### Do I have to have the MSQS test?

No! The MSQS test is offered because it may detect the defects described above. Many patients choose not to have the test done because they would not choose to terminate the pregnancy if a defect was found. Others choose to have the test done even though they would not choose to terminate the pregnancy if the result was abnormal. This simply gives them time to prepare. It is your choice. We want you to understand what tests are available so you can make the best decision for you and your family.

If you have question about this test or other testing, please discuss your questions with us.

### What is the Maternal Serum Quad Screen?

This blood test measures the amounts of four substances in a pregnant woman's blood:

- o alpha-fetoprotein (AFP)
- o human chorionic gonadotropin (HCG)
- o estriol (uE3)
- o inhibin A

The levels of these substances help estimate the risk that a fetus may have certain congenital defects. The test results are computed based on multiple factors, some of which include the woman's age, weight, race, and how far along the pregnancy is. The test is generally done between the 16 th and 18 th weeks of pregnancy. It is a simple blood test, requiring a small sample of blood taken from your arm.

### What birth defect does the MSQS screen for?

There are three major types of birth defects which may be detected by MSQS testing. Chromosome abnormalities, such as Down Syndrome, where the baby has too many chromosomes and is mentally impaired. Neural tube defects, such as Spina Bifida, where the spine and/or brain are abnormally formed which may cause physical handicaps or even death. Abdominal wall defects, where the internal organs are not covered normally by the skin. Other rare problems, with the kidneys, other organs or the placenta, might be detected by abnormal lab values.

### Does an abnormal result mean my baby is abnormal?

No! The MSQS only determines the risk of an abnormality being present. It does not make a diagnosis. The test gives a risk number (such as one in two hundred) of there being a problem. We can then discuss with you if any additional testing is needed to make a certain diagnosis.

### If the MSQS test is normal, does that mean my baby is normal?

The MSQS assess the risk and does not make a diagnosis. Therefore, it is possible for some babies with a birth defect to have a normal lab result.

**PAYSON**  
15 S 1000 E Suite 125  
Payson, Utah 84651  
Phone : 801-465-2559

**SPANISH FORK**  
325 W Center  
Spanish Fork, Utah 84660  
Phone : 801-465-2559

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