

## The Quad Screen

**What is the Quad Screen?** The Quad Screen is a test that checks the level of certain hormones and proteins in your blood. These hormones and proteins can be useful in screening for Down Syndrome, Trisomy 18, and Open Neural Tube Defects (NTDs) such as Spina Bifida. The Quad Screen is most accurate between 16 and 18 weeks of pregnancy, but it can be done as early as 14 weeks and as late as 22 weeks.

**How does the test work?** The baby makes certain proteins and hormones, which cross the placenta and circulate in your blood. The Quad Screen compares the levels of these substances in your blood to a standard for someone your age, weight and race. This test is a screening test, not a diagnostic test. This means that it tells you if you are at an increased risk of having a baby with Down Syndrome, Trisomy 18, or an NTD, not that your baby actually has one of these disorders. In order to diagnose a fetal anomaly, another test, such as an amniocentesis, would have to be performed.

**How accurate is the Quad Screen?** The Quad Screen gives you your odds of having a baby with Down Syndrome, Trisomy 18, or an NTD. If you “screen positive” for any one of these tests it means that your odds are higher than those of other women who are similar to you in terms of age, weight, race, etc. Your odds ratio will read something like 1/400, meaning that there is a 1 in 400 chance that your baby has Down Syndrome, for example. The Quad Screen detects about 75% of babies with an NTD, 80% of babies with Down Syndrome, and 60% of babies with Trisomy 18. The Quad Screen will not detect about 5-10% of babies with anencephaly, 20-25% of babies with Spina Bifida, 20-25% of babies with Down Syndrome, and 20-40% of babies with Trisomy 18.

About 1-2% (1 to 2 in 100) of all women will “screen positive” for an NTD; about 5% (5 in 100) of all pregnant women tested will “screen positive” for Down Syndrome; and about 0.5% (1 in 200) of all pregnant women tested will “screen positive” for Trisomy 18. Follow-up testing will determine that almost all of these women actually have normal babies.

**What happens if I “screen positive”?** What happens next is up to you and your partner. If you want further testing, we will refer you to a genetic counselor. The only diagnostic test is an amniocentesis, although often a high-level ultrasound can also help to rule out possible malformations. If your baby does have an NTD, Down Syndrome or Trisomy 18, you can see the genetic counselor again to help you make decisions about whether or not you want to continue the pregnancy. Some women decide that they do not want to do any follow-up after a “screen positive.”

**Why would I take this test?** The Quad Screen may give you some information about the health of your baby before birth, without any physical risk to the baby. In addition, as you get older there is an increased chance of having a baby with a chromosomal defect. This information could be important in helping you prepare for the birth of your baby by doing additional research, finding resources, and making decisions about continued healthcare for your baby. This information could also help you decide whether or not you want to continue the pregnancy.

**Why do some people NOT take the Quad Screen?** As detailed above, this test has both a high false positive and high false negative rate. Getting an abnormal result and deciding whether or not to have more tests causes many people a lot of stress. If you feel that you would not want to do further testing or that you would never end a pregnancy under any circumstances, the quad screen might not be right for you.

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