

QUAD SCREEN

A screening test has been developed to help identify pregnant women who are at increased risk for having a baby with Down syndrome (trisomy 21), spina bifida (open neural tube defects), and Edwards syndrome (trisomy 18). The QUAD screen is a blood test that measures the pregnant woman's level of four proteins: HCG (human chorionic gonadotropin), AFP (alpha-fetoprotein), estriol (a form of estrogen), and DIA (dimeric inhibin A). The determination of these levels combined with clinical information about the pregnant woman such as her weight, race, and whether she takes insulin can help identify a woman who has a higher risk of having a baby with spina bifida or these two chromosomal abnormalities (trisomy 21, trisomy 18).

The QUAD screen does not diagnose these conditions, it only identifies pregnancies in which they are more likely. The result is given as a risk ratio. If the pregnancy is at increased risk, further testing will be discussed. Amniocentesis is the only test that provides a definitive diagnosis of both chromosomal abnormalities and spina bifida, and ultrasound adds additional information about the baby's anatomy and development.

A normal test result (low risk ratio) reduces the likelihood of a baby having an open neural tube defect, trisomy 18, or Down syndrome; however, it cannot completely rule out the possibility of these problems. About 80% of spina bifida, 75% of Down syndrome, and 60% of trisomy 18 pregnancies will be detected. There is also a false positive rate of about 10% (meaning the test result is abnormal but the pregnancy is not).

This test is offered to pregnant women of all ages. Those age 35 and older can proceed with invasive genetic testing (CVS and amniocentesis) directly for diagnosis or use the QUAD screen as a screening tool.

Please be aware that some insurance companies may not cover the additional expense of a QUAD screen. In that case, you will be responsible for the added expense. Our business office can give you additional information about the cost of this laboratory test if you wish