

AFP & Triple Marker Screen

The AFP / triple marker screening test is used to identify babies with a spina bifida and other defects. Spina Bifida is a type of neural tube defect which occurs when the fetus's spinal cord does not close properly. The defect may lead to various physical problems ranging from needing braces to walk, to severe handicaps including the inability to walk, as well as developmental problems and even death. The triple screen measures not only AFP, but hCG and estriol as well. This new test can also screen for Down's Syndrome, placental complications, low birth weight, abdominal wall defects, esophageal and duodenal atresia, renal and urinary tract anomalies, and Turner Syndrome.

Risks of Defects

In this country, one in two thousand live births have spina bifida. The risk increases if you, the baby's father, or any relatives have had a child with spina bifida or you or the baby's father actually have spina bifida. You should notify your physician if anyone in your family, including yourself, the baby's father, or other children have had spine defects. Remember, if you have had a child with anencephaly (where the brain and scalp do not develop normally), this is considered a type of spinal defect and should be reported to your physician. Even though there is an increased risk of having a baby with a spine defect because of a family history, most of the babies with spine defects are born to couples without a family history of such defects.

Timing

The triple screen involves a simple blood test, with blood taken from an arm vein at sixteen to eighteen weeks of pregnancy. When the test detects abnormal AFP levels, the doctor may perform more invasive diagnostic tests such as amniocentesis. If there is a history (either in the family, a previous pregnancy, or the parents) of a spine or other defect, you may want to skip the screening test, which only predicts the fetus's risk for certain problems, and have genetic amniocentesis, which is definitive.

The test is most accurate early in pregnancy and cannot predict the risk of spinal defects after twenty-two weeks of pregnancy. Early testing also allows for counseling and decision-making before the pregnancy is advanced. These decisions may include planning which hospital and medical staff will be needed for the pregnancy and delivery, or having an invasive diagnostic test at the appropriate juncture.

Interpreting the Results

A poor screening test result may not mean your baby has a defect. Other conditions can cause an abnormal result, including twins, improper pregnancy dating, or individual variation. Your doctor will explain the possible meaning of the abnormal test result and order further tests which may include a repeat AFP, ultrasonography and/or an amniocentesis to help discover the cause of the abnormal alpha-fetoprotein / triple screen test. The decision of having these other tests done should be yours alone.

Rarely, the test result can be normal even though you may be carrying a baby with a spine or other defect. AFP detects eight percent of all spine defects. Coupled with a complete ultrasound, AFP can detect ninety or ninety-five percent of all spine defects. The triple screen can detect up to sixty-percent of fetuses with Down's Syndrome.

