Alpha-Fetoprotein Screening

What is Alpha-Fetoprotein screening?
Alpha-Fetoprotein screening is a blood test for pregnant women. It shows when a serious abnormality might be present in the spine of the developing baby or when certain other conditions may be present. For example, you may be pregnant with more than one baby.

The test measures the level of a protein called alpha-fetoprotein (AFP) in your blood. Your unborn baby’s liver normally produces this protein, and some of it passes into your bloodstream. High or low levels are found when babies are abnormal and occasionally when babies are normal. Because the test is not completely accurate, your doctor will usually order other tests if the blood test shows abnormal levels.

How is the test performed?
A small amount of blood is taken from your arm between the 15th and 20th week of pregnancy. For the test to be interpreted properly, you and your doctor need to be sure of your due date. Alpha-fetoprotein levels peak between 15 and 20 weeks of pregnancy and then slowly decrease.

The timing of the test is important because if the AFP level is higher or lower than normal, enough time must remain in your pregnancy for further steps. These steps might include counseling, ultrasound exams, and amniocentesis.

What does the test indicate?
A high level of AFP may indicate a brain or spinal cord defect. Examples of such defects are spina bifida (the spine has not closed normally) or anencephaly (the brain is either missing or incomplete). Also, it may indicate a failure in your baby’s abdomen to close properly or a defect in the esophagus (food pipe).

A low level of the protein may indicate Down’s syndrome. Other possible causes of abnormal levels include an incorrect due date, the presence of more than one baby, miscarriage, a pulling away of the placenta from the uterus, and a baby who is smaller than usual.

How accurate is the test?
The test is not completely accurate. A baby may have a defect even though AFP levels are normal. Or, a baby may be quite normal even though AFP levels are abnormal. Usually, if the first blood test shows normal levels, no further test are done.

For every 1,000 women tested, about 50 have abnormal test results. Of these 50, only one or two with high AFP levels are carrying abnormal babies. The test identifies 90% of babies with anencephaly and 75% with spina bifida.
**Who should have this test?**
All pregnant women should be offered AFP screening. Any pregnant woman with a family history of positive neural tube defects should have the test.

Remember that abnormal results indicate the need for further tests, such as ultrasonography and amniocentesis. In some cases the results are abnormal for no known reason.

If the results of this test and follow-up tests show that the baby has a serious defect, you may want to terminate the pregnancy. However, if you plan to continue the pregnancy regardless of test results, it is still good to have the test because it helps your doctor manage your pregnancy.

**What are the risks?**
AFP screening is a noninvasive test that carries virtually no risk. However, amniocentesis, test that may be performed if the AFP results are abnormal, has a very small risk of causing miscarriage.

**What are the benefits?**
Most often, the test provides reassurance that your baby probably does not have a serious defect.

Abnormal results can help you and your doctor manage your pregnancy more effectively. For example, if the test detects twins, your doctor can start providing the special prenatal care you need for a multiple pregnancy.

When a brain or spinal defect is diagnosed, you and your doctor can decide whether you want to continue the pregnancy. If you decide to continue it, your doctor will be able to plan your delivery in a center equipped to deal with these defects, possibly improving the outlook for your baby.