



TESTS OF FETAL WELL-BEING

Under some circumstances, the physician may recommend one of several tests that can assess fetal health (fetal well being) during the pregnancy. These tests are designed to evaluate the status of the afterbirth (placenta) and whether or not oxygen and nutrition transferred to the fetus are being affected. These tests are in addition to the routine prenatal care that is recommended for all pregnant women.

NON-STRESS TEST (NST)

The NST measures the fetal heart rate during normal activity. This may last 20 to 40 minutes, during which time the mother is in bed with a fetal monitor strap on her abdomen that detects the fetal heart tones. During the test, as the baby moves, the heart rate should increase in response to the movement. Occasionally, the fetus may not move for extended periods of time, in which case it is likely sleeping or resting. In these cases, if the mother eats or drinks something or if the baby is stimulated with a buzzer, the fetal activity may resume.

The monitor tracing is interpreted by the physician to determine whether or not further testing is necessary. For example, if the heart rate does not increase after the baby moves, another test may be ordered to determine whether or not the NST is correct. It is possible that the test suggests that there is a problem with the pregnancy when actually the fetus is having no problems.

CONTRACTION STRESS TEST (CST)

The purpose of the CST is to measure the pattern of the baby's heart during the stress of a contraction. Mild contractions can be brought on either through the use of an intravenous solution or through gentle stimulation of the nipple. When a mild contraction occurs, the blood flow to the placenta and uterus decreases briefly. If the heart rate of the fetus also decreases after a contraction, this suggests that the fetus is not getting enough oxygen at that time. In a normal test, the heart rate does not decrease in response to a contraction.

Sometimes there are sufficient contractions that occur spontaneously so that neither intravenous solution nor nipple stimulation is necessary to generate the mild contractions of the uterus. At the end of the test, additional contractions may continue to occur. The monitor may be left in place to evaluate for continued contractions. The test is done much less commonly now than in the past, and has most often been replaced by the Bio-Physical Profile.

BIO-PHYSICAL PROFILE (BPP)

BPP utilizes ultrasound technology to visualize the baby and to evaluate its movements. The movements of the arms and legs, breathing, and stretching motions are evaluated for 10 to 30 minutes. The amount of activity is a measurement of the health of the baby. The amount of amniotic fluid is also an important factor. The total score of the BPP is determined by the sum of the scores given for each of the five factors: heart rate, breathing, body movement, muscle tone, and amount of amniotic fluid.

SUMMARY

The tests of fetal well being mentioned here may be ordered by the doctor as an additional check for the health of the fetus. If a test suggests that there might be a problem, this is not always necessarily found to be the case. Further testing will be done to determine whether or not intervention is needed. The goal is for both mother and baby to be healthy, and these tests are just one part of the overall treatment plan available to the physician.

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Date Published: 2004-03-10

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