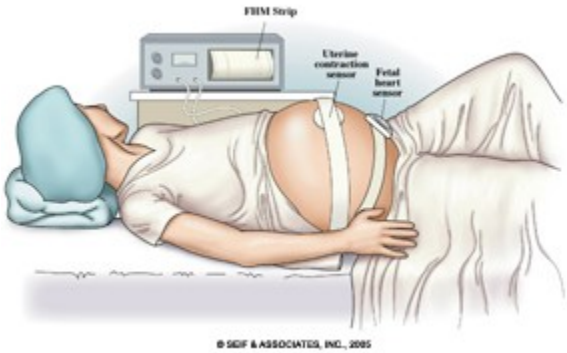
Fetal Monitoring - Modified Biophysical Profile
(How Your Baby Is Doing)

This measures the volume of fluid in different parts of the amniotic sac (*amniotic fluid index*) and the results of the nonstress test. The reason to monitor your baby before birth is to see problems in advance. Monitoring can identify and correct serious problems from developing in the fetus including fetal loss. Some pregnancies are complicated by the mother's medical problems. Some of these problems are type 1 diabetes mellitus, high blood pressure and other chronic medical illnesses. This is why it is important to monitor the baby before birth.



OTHER TECHNIQUES OF MONITORING YOUR BABY BEFORE BIRTH

Several fetal observation tests are in use. These include:

- **Fetal movement assessment (FMA)**. This is done by the pregnant woman herself by counting and recording the baby's movements over a certain time period.
- **Nonstress test (NST)**. This test monitors the baby's heart rate when the baby moves.
- **Contraction stress test (CST)**. This test monitors the baby's heart rate during a contraction of the uterus.
- **Fetal biophysical profile (BPP)**. This measures and evaluates 5 observations of the baby:
  - The nonstress test.
  - The baby's breathing.
  - The baby's movements.
  - The baby's muscle tone.
  - The amount of amniotic fluid.
- **Umbilical artery doppler velocimetry**. This evaluates the blood flow through the umbilical cord.

There are several very serious problems that cannot be predicted or detected with any of the fetal monitoring procedures. These problems include separation (*abruption*) of the placenta or when the fetus chokes on the umbilical cord (*umbilical cord accident*).

Your caregiver will help you understand the tests and what they mean for you and your baby. It is your responsibility to obtain the results of your test.

PREPARATION FOR THE TEST

- **Do not** take medications that might increase or decrease the baby's heart rate and/or movements.
- Have a full meal at least 2 hours before the test.
- **Do not** smoke if you are pregnant. If you smoke, stop at least 2 days before the test. It is best not to smoke at all when you are pregnant.

LET YOUR CAREGIVER KNOW ABOUT:

- Any medications you are taking including prescription and over-the-counter drugs, herbs, eye drops and creams.
- If you have a fever.
- If you have an infection.
- If you are sick.

RISKS AND COMPLICATIONS

There are no risks or complications to the mother or baby with the modified BPP test.

MODIFIED BIOPHYSICAL PROFILE

In the late second or third trimester, amniotic fluid can show fetal urine production. A problem with the working of the placenta may result in less fetal urination. This leads to less amniotic fluid, which the baby floats in within the womb. Determining the amount of amniotic fluid can be used to evaluate long-term uteroplacental function. This test is called the "modified BPP."

The modified BPP combines the nonstress test (with the option of acoustic stimulation), with the amniotic fluid index (AFI). AFI is an indicator of long-term placental function. Acoustic stimulation is a loud noise sounded over the abdomen into the uterus to stimulate or wake up the fetus. The loud noise is applied for 1 to 2 seconds, 3 to 4 times, to speed up the baby's heart rate. An AFI greater than 5 cm generally is considered to represent an adequate volume of amniotic fluid. Thus, the modified BPP is considered:

- Normal if the NST is reactive and the AFI is more than 5 cm
- Abnormal if either the NST is nonreactive or the AFI is 5 cm or less.

AFTER THE PROCEDURE

You may go home and resume your usual activities, or as directed by your caregiver.

HOME CARE INSTRUCTIONS

- Follow your caregiver's advice and recommendations.
- Be aware of your baby's movements. Are they normal, less than usual or more than usual?
- Make and keep the rest of you prenatal appointments.

SEEK MEDICAL CARE IF:

- You develop a temperature of 100º F (37.8º C) or higher.
- You have a bloody mucus discharge from the vagina (a *bloody show*).

SEEK IMMEDIATE MEDICAL CARE IF:

- You do not feel the baby move.
- You think the baby's movements have been too little or too much.
- You develop contractions.
- You develop vaginal bleeding.
- You develop belly (*abdominal*) pain.
- You have leaking or a gush of fluid from the vagina.

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