Fetal Monitoring - Umbilical Artery Doppler Velocimetry
(How Your Baby Is Doing)

Umbilical artery doppler velocimetry evaluates the blood flow through the umbilical cord. The reason for monitoring your baby before birth is to identify and correct any problems before they occur. Monitoring can prevent serious problems from developing with 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:

- **Fetal movement assessment (FMA)**. This test 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 monitor 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.
- **Modified biophysical profile (MBPP)**. This measures the volume of fluid in different parts of the amniotic sac (*amniotic fluid index*) and the results of the nonstress test.

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 test and what it means for you and your baby. It is your responsibility to obtain the results of your test.

BEFORE THE PROCEDURE:

- **Do not** take medications that may increase or decrease the baby's heart rate and/or movements.
- Eat 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 over-the-counter and prescription drugs, herbs, eye drops and creams.
- If you have fever.
- If you have an infection.
- If you are sick.

RISKS AND COMPLICATIONS

There are no risks or complications to the mother or the fetus from this procedure.

UMBILICAL ARTERY DOPPLER VELOCIMETRY

- Doppler ultrasonography is a monitoring procedure that is noninvasive. It can be done with an abdominal or vaginal ultrasound. It is a test that uses sound waves that tell the caregiver about the amount and speed of blood flow in the umbilical cord, as well as the speed and amount of blood flow from the mother to the baby through the umbilical arteries. It also evaluates the condition of the baby in high risk pregnancies.
- Doppler velocimetry is used mainly in IUGR (*intrauterine growth restriction*) pregnancies. When used in this manner, decisions on how to treat the pregnancy should be done with consideration of the findings of the other tests of fetal well-being.
- Your caregiver will help you understand this test and what it means for you and your baby.

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 your prenatal appointments.

SEEK MEDICAL CARE IF:

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

SEEK IMMEDIATE MEDICAL CARE IF:

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

Document Released: 12/08/2003 Document Re-Released: 03/14/2011
ExitCare® Patient Information ©2011 ExitCare, LLC.