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Fetal Non-Stress Test (NST)

The Fetal Non-Stress test is a simple, non-invasive test performed in pregnancies over 28 weeks gestation. The test is named “non-stress” because no stress is placed on the fetus during the test.

How is a NST Performed?

The test involves attaching one belt to the mother’s abdomen to measure fetal heart rate and another belt to measure contractions. Movement, heart rate and “reactivity” of heart rate to movement is measured for 20–30 minutes. If the baby does not move, it does not necessarily indicate that there is a problem; the baby could just be asleep. A nurse may use a small “buzzer” to wake the baby for the remainder of the test.

Why would a NST be performed?

A NST may be performed if:

You sense that the baby is not moving as frequently as usual

You are overdue

There is any reason to suspect that the placenta is not functioning adequately

You are high risk for any other reason

The test can indicate if the baby is not receiving enough oxygen because of placental or umbilical cord problems; it can also indicate other types of fetal distress.

What are the risks and side effects to the mother or baby?

A NST is a noninvasive test that poses no known risks or side effects to mother or baby.

When is a NST performed?

NSTs are generally performed after 28 weeks of gestation. Before 28 weeks, the fetus is not developed enough to respond to the test protocol.

What does the NST look for?

The primary goal of the test is to measure the heart rate of the fetus in response to its own movements. Healthy babies will respond with an increased heart rate during times of movement, and the heart rate will decrease at rest. The concept behind a non-stress test is that adequate oxygen is required for fetal activity and heart rate to be within normal ranges. When oxygen levels are low, the fetus may not respond normally. Low oxygen levels can often be caused by problems with the placenta or umbilical cord.

What do the NST results mean and what are the reasons for further testing?

A reactive non-stress result indicates that blood flow (and oxygen) to the fetus is adequate. A nonreactive non-stress result requires additional testing to determine whether the result is truly due to poor oxygenation, or whether there are other reasons for fetal nonreactivity (i.e. sleep patterns, certain maternal prescription or nonprescription drugs).

Compiled using information from the following sources:

WebMD, <http://www.webmd.com>

American College of Obstetricians and Gynecologists, Special Tests for Monitoring Fetal Health,, Medem Medical Library, <http://www.medem.com>

New Hanover Health Network, "What is a Non-stress Test" , <http://www.nhn.org>

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