

Section: Division of Nursing
 Approval: _____

 * PROCEDURE *

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HACKETTSTOWN COMMUNITY HOSPITAL

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MATERNAL SERVICES
 (Scope)

TITLE: NON-STRESS TEST PROCEDURE

PURPOSE: To outline the steps for a preliminary assessment of fetal well-being. Criteria applies to fetuses following the 28th week of gestation.

- SUPPORTIVE DATA:**
- Optimal fetal well-being is dependent upon optimal placental function.
 - A correlation between fetal activity, fetal heart rate and placental function has been established.
 - NST can be used as a primary screening tool and/or as part of on-going prenatal care for patients with risk factors (i.e., reported decreased fetal movement, PIH, gestational diabetes, post-datism.)
 - A reactive NST presumes fetal well-being for a 24-48 hr. window.
 - There are no contraindications for this procedure.
 - The fetus sleeps for approximately 20-40 minute cycles. Therefore, the test may take up to 80 minutes; an awake fetus is more likely to be reactive.
 - The fetus may be stimulated by movement of the maternal abdomen, maternal position change, a maternal ingestion of a glucose containing solution or vibratory acoustic stimulator applied to maternal abdomen.
 - Fetal movement may occur without fetal heart rate accelerating and vice a versa. A reactive NST must include FHR accelerations

INTERPRETATION CRITERIA:

	<u>Baseline Heart Rate</u>	<u>Baseline Variability</u>	<u>Fetal Movements</u>	<u>Accelerations</u>	
				<u>Amplitude</u>	<u>Duration</u>
Reactive	110-160 BPM	5-15 BPM	2/10 minutes or 4/20 minutes Observed over at least 40 minutes	> 15 BPM	> 15 sec
Non-reactive	110-160 BPM	< 5 BPM	< 2/10 minutes	< 15 BPM	< 15 sec
Sinusoidal	110-160 BPM	Absent	Absent	Absent	

In addition, this pattern displays baseline oscillations with an amplitude of 5-15 BPM and duration of 2-6 BPM.

- EQUIPMENT:**
- Electronic Fetal Monitor
 - Fetal acoustic stimulator

CONTENT: PROCEDURE STEPS:

- Introduce yourself to the patient. Discuss purpose of test. Place patient's name in CPN system.
- Place order for Nonstress Test in Cerner system. Obtain specimen labels for unrinalysis.
- Instruct patient to provide a urine specimen.

KEY POINTS:

Transfer name back to undelivered hold upon patients discharge from unit.

Apply label to cup and send urine to lab for U/A. Document in CPN. May defer if patient provided specimen in clinic or office or within 24 hrs and was WNL.

4. Explain procedure to patient. Place EFM per procedure with patient in semi-Fowler's position with left or right tilt maintained with pillow wedge to hip, or in recliner chair. Cover patient at appropriate for privacy.
5. Obtain maternal blood pressure and record in QS. Obtain temperature depending on reason for testing (i.e. illness, increased FHR baseline).
6. Obtain patient history and document on NST form in CPN Assess patient for oral intake as well as usual periods of fetal activity. If patient has not eaten within the last two hours, provide a drink and a high-protein snack for her to increase the possibility of a reactive tracing test.
7. Instruct the patient in the use of the remote marker. When she feels fetal movement, she should depress the button, which causes a mark to be placed on the fetal monitor tracing. Explain what this shows and why: i.e., rationale for test. Assess patient understanding of the procedure and anxiety level. Teach to patient needs. An important part of testing is to provide reassurance to the patient of fetal well-being. Patient should be reassured with questions answered.
8. Following 20-30 minutes of a continuous tracing, interpret the tracing using a systematic review, following the criteria listed. It may be necessary to handhold monitors to obtain accurate, continuous tracings. An unsatisfactory test is one in which the quality of the tracing is not adequate for interpretation.
9. If NST is reactive, fax Clinical Guidelines for NST Outpatient Procedure to providers office indicating interpretive criteria is reactive. If NST is nonreactive, consult provider for further instruction. A sample of the tracing may be faxed to office. NST is a preliminary assessment tool. Further testing may be ordered, i.e., fetal acoustic stimulation test, biophysical profile, etc. Explain everything that is happening to the patient in a positive frame work.
10. Patient may be discharged home as outpatient per provider's orders. Schedule for further testing per provider's orders prior to patient's leaving the unit. Instruct her regarding dates and time, etc. for further tests. The NST of the non-compromised preterm fetus (24-28 weeks gestation) is frequently nonreactive and up to 50% of NSTs may not be reactive from 28-32 weeks gestation.
11. It may be necessary to reference prenatal history if available. Return to prenatal books upon patients discharge.

- DOCUMENTATION:
1. Document on the beginning of tracing in CPN:
 - a. Patient's age, EDC, Gravida, Parity, Provider
 - b. Reason for testing
 2. Document initiation of test in CPN NST annotation. Return to that form when test is completed to finish documentation. To maintain thorough documentation
 3. Document fetal activity - FHR response, etc. per EFM procedure into CPN. Also note provider notification/communication/orders.
 4. Apply patient id stickers to Clinical Guideline and charge form. Complete Obstetrical Charge Form. Indicate NST and place in box. Also apply one sticker in Unit Admissions Log book along with nst information.
 5. Document NST reason and test results in clinic chart if patient belongs to Healthstart. Enter note in the progress note section.

REFERENCES:

Bonnie F. Chez, Carol J. Harvey, Michelle Murray, Critical Concepts in Fetal Heart Rate Monitoring, Baltimore; Williams, and Wilkins.

AWHONN Perinatal Nursing, 4nd. Edition, Simpson and Creehan (2008).