

PROTOCOL #4 - Maternal Fetal Medicine, University of New Mexico

NONSTRESS TEST (NST)

A. General

A Nonstress test is the first level of antenatal testing. It evaluates the fetal heart rate baseline in the absence of uterine activity. All NST tracings must be signed by an attending.

B. Indications

See Antenatal Testing – Suggested Guidelines (Protocol #39)

C. Contraindications - None

D. Procedure

1. The patient is placed in a supine position tilted slightly to the left or in a semi-Fowler's position, preferably after a meal.
2. Routine vital signs and FHTs are done.
3. An external fetal monitor, capable of simultaneous FHTs and uterine activity measurement, is placed.
4. Baseline FHTs are determined while spontaneous uterine activity is looked for.
5. The patient then indicates episodes of fetal activity or the personnel performing the NST indicates palpable fetal activity.
6. If no fetal heart rate accelerations with fetal activity are noted in 20 minute interval, the testing is continued an additional 20 minutes.
7. Alternative - if the fetus appears to be in a sleep state, acoustic stimulation via an artificial larynx may be used to change the fetal state from sleep to activity.

E. Interpretation and Management -

1. >32 wks gestation
 - a) **Reactive NST** - A tracing that has 2 fetal heart rate accelerations within a 20 minute interval peaking at least 15 beats per minute above the base line and lasting 15 seconds from base line to base line. Repeat NST twice weekly. A reactive test indicates that the fetus is well with no identifiable distress.
 - b) **Nonreactive NST** - no acceptable fetal heart rate accelerations in a 40-minute time period. A CST and/or biophysical profile should be done as soon as possible.

NOTE: 1) Moderate to severe variable decelerations may indicate oligohydramnios, even if the NST is reactive, and should be followed up with AFV assessment. 2) Fetal heart rate bradycardias of 90 beats per minute or a deceleration of 40 beats per minute for one minute or longer are considered ominous and should be investigated further with a CST or BPP.

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2. <32 wks gestation

- a) **Reassuring for gestational age** – A tracing that has 2 fetal heart rate accelerations within a 20 minute interval peaking at least 10 beats per minute above the base line and lasting 10 seconds from base line to base line.
- b) **Not reassuring for gestational age** – no acceptable fetal heart rate accelerations in a 40-minute time period. A biophysical profile should be done as soon as possible.

NOTE: 1) Mild variable decelerations are common and to be expected in gestations <32 wks. 2) Variable decelerations greater than 30 BPM below the baseline and lasting longer than 30 seconds may indicate oligohydramnios, even if the strip is reassuring for age, and should be followed up with AFV assessment.

CONSULTATION: Twenty-four hour consultation is available by calling the Maternal Fetal Medicine service at the University of New Mexico Hospital, 1-888-866-7257.