## HACKETTSTOWN REGIONAL MEDICAL CENTER CARDIO PULMONARY POLICY MANUAL EXERCISE STRESS TEST

Effective Date: February 2000	Policy No: 8B.004
Cross Referenced:	Origin: Cardio Pulmonary
Reviewed Date: 02/16	Authority: Cardio/Pulmonary Manager
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Purpose: An exercise stress test is ordered by the physician to evaluate the blood flow of the heart when it is required to work under stress.

### Resources:

- 1. GE Case V 6.01 Exercise Testing System (Stress Computer)
- 2. Electrodes
- 3. Alcohol Wipes
- 4. Rescue Kit
- 5. Skin Prep with abrasion pad
- 6. Consent Form
- 7. Blood Pressure machine and stethoscope
- 8. MUSE Cardiology Information System

### Personnel:

- 1. Cardiology Technician
- 2. Attending Cardiologist to be determined by the ordering physician

### Contraindications:

- 1. Patients with the following:
  - o recent (1 week) myocardial infarction
  - o unstable angina
  - o significant aortic stenosis
  - o obstructive cardiomyopathy
  - o atrial tachyarhythmias with uncontrolled ventricular response
  - o history of ventricular tachycardia
  - o uncontrolled hypertension
  - o thoracic aortic aneurysm
  - o left bundle branch block

Procedure: The following is done by the cardiology technician:

- 1. Introduce yourself to the patient and confirm patient by asking for two identifiers i.e.: first and last name, spelling of the last name, and date of birth.
- 2. Confirm written order is correct.
- 3. Obtain written consent from the patient.
- 4. Obtain the patient's medical history, height, weight, and list of current medications.
- 5. After patient's privacy is secured, prep the chest using the following technique:
  - Shave any hair present
  - Clean area using alcohol wipes
  - Rub abrasive pad over area
- 6. Apply ten (10) disposable electrodes with ten (10) wires connected to those electrodes to the chest of the patient in the following areas:
  - 1. One on each clavicle area (LA and RA).
  - 2. One on each lower ribcage area (LL and RL).
  - 3. V1 placed at the right border of the sternum at the  $4^{th}$  intercostal space.
  - 4. V2 placed at the left border of the sternum at the 4<sup>th</sup> intercostal space.
  - 5. V3 midway between V2 and V4.

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- 6. V4 placed at the intersection of the mid-clavicular line and the 5<sup>th</sup> intercostal space.
- 7. Midway between V4 and V6.
- 8. V6 placed at the anterior axillary line on the same horizontal level as V4.
- 7. Enter patient data into the CASE stress computer including all of the following information: patient name, ID number (Medical Record #-- 9 digits), date of birth, Gender, height, weight, past medical history, test indication, ordering physician, attending physician, technician initials and MUSE logon number, Order # (9 digits—for example 0234567891, current medications, test to be performed and Bruce test protocol.
- 8. Obtain a resting blood pressure.
- 9. Notify the attending cardiologist that the patient is ready for the test.
- 10. On the CASE stress computer, press "Pretest".
- 11. Press "Enter BP" and enter the resting blood pressure.
- 12. Press "12-lead". The supine EKG will print.
- 13. Assist the patient to a standing position. Press "Pretest".
- 14. Press "12-lead". The standing EKG will print.
- 15. Instruct the patient to hyperventilate for ten seconds. Press "Pretest".
- 16. Press "12-lead". The hyperventilate EKG will print.
- 17. When the attending cardiologist arrives, assist the patient onto the treadmill. Obtain the cardiologist's signature on the informed consent.
- 18. When instructed by the cardiologist, press "exercise" and "start". Bruce protocol will begin.
- 19. Obtain the patient's blood pressure one and a half minutes into each stage of exercise. Enter the blood pressure into the CASE stress computer each time the prompt to do so appears.
- 20. When instructed by the cardiologist to end the test, press "recovery".
- 21. When the treadmill is no longer inclined (flat on the floor), press "stop".
- 22. Monitor the patient's EKG tracing, heart rate and blood pressure until all are within normal limits or close to the patient's resting baseline. At this time, press "test end".
- 23. Disconnect all leads and remove electrodes from the patient.
- 24. Completed consent (ensuring each signature is dated and timed using military time) is placed in the patient's chart (for inpatients) or sent to Medical Records (for outpatients). A copy of the patient's face sheet is put in the EKG room with the name of the test done and attending cardiologist's name at the top.

### Transfer test to MUSE

- 1. When all stress tests are completed for the day, return to initial screen in CASE.
- 2. Click on "Local Database".
- 3. Click on the blue "Examinations" box.
- 4. Click "Select Today's Date". The remaining list of patients will be the tests done that day.
- 5. Click the first name listed. Hold the shift key down and click the last name listed. All the names should turn blue.
- 6. Click "Transfer to MUSE".
- 7. Click "Save".
- 8. Click "Initial Screen".
- 9. Click "End Program". The CASE stress computer will shut down.

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Editing test in MUSE

- 1. Log into the MUSE Cardiology Information System.
- 2. Click on "Stress Tests".
- 3. Chose the desired stress to be edited by double clicking on the patient's name.
- 4. Review all demographic information. Edit as needed.
- 5. Select the overreader (the cardiologist who attended the stress test).
- 6. Click on "Demographic Complete/Send to Inbasket" (Icon of a doctor and a check mark).