

**THIS SHEET IS INTENDED TO BE A REFERENCE ONLY.
MUST HAVE A SIGNED ELECTRONIC ORDER BY A PHYSICIAN FOR MEDICATIONS.**

CARDIAC – DOBUTAMINE ECHOCARDIOGRAM STRESS TEST PROTOCOL

Pre-Test:

- Establish patients Target Heart Rate (Target Heart rate = $[220 - \text{Age (Yr)}] \times 0.85$)
 - To be documented by Cardio Fellow on dobutamine order
- Obtain INT access
- Flush INT with Normal Saline
- Connect 12 lead EKG and record baseline and record at the end of each stage

Vital Signs:

- Document vital signs every 3 minutes and as needed throughout the test

Sonographer will capture images:

- *Pre-Stress*
- *Low Dose Dobutamine (5 mcg/kg/min & 10 mcg/kg/min)*
- *When target heart rate is reached*
- *Post-Stress*

Contrast:

- May use contrast if needed: sulfur hexafluoride (Lumason) 0.5 mL IVPush (no maximum dose) as needed for image enhancement. To be administered by qualified personnel.

The test may be stopped at the discretion of the exercise physiologist in the event of:

- Uncontrolled Hypertension (blood pressure greater than or equal to 250/116 mmHg)
- Chest Pain
- Abnormal Rhythm such as heart blocks, V-tach, etc.
- Positive test – any ST elevation/depression or ischemia

Dobutamine Infusion Regimen:

- Dobutamine infusion will be given as follows in 3 minutes stages, and will continue until patients target heart rate is achieved or until max doses of dobutamine and/or atropine are given.
- Dobutamine is to be discontinued when target heart rate is achieved and peak images are complete.
 - Atropine 0.25 mg IVPush every 1 minute as needed for the exam, **IF ORDERED**. Do not exceed 2 mg total dose. Administer if heart rate is less than 100 bpm and/or as needed to achieve target heart rate with Dobutamine stages.

Dobutamine Stages:

If pre-test regional wall motion abnormalities (pre-infusion echo images), start **dobutamine** at 5 mcg/kg/min then initiate stage 1.

- Stage 1: **dobutamine** 10 mcg/kg/min IV x3min
- Stage 2: **dobutamine** 20 mcg/kg/min IV x3min
- Stage 3: **dobutamine** 30 mcg/kg/min IV x3min
- Stage 4: **dobutamine** 40 mcg/kg/min IV x3min

NOTE: Max dose of dobutamine is 40 mcg/kg/min

Recovery Period:

- Recovery period, vital signs every 5 min x3, then every 15 minutes until the patient's baseline heart rate and hemodynamic parameters are reached.
- To assist the patient's return to baseline heart rate the following may be used **IF ORDERED:**
 - **metoprolol** 5 mg IVPush every 2 min as needed for tachycardia x 3 doses. If metoprolol contraindicated or ineffective, may use diltiazem.
 - **diltiazem** 5 mg IVPush every 15 min as needed for tachycardia x 3 doses. Administer over 2 min.
- Source: Dr. Scott Shurmur, Kevin Darville Version: 1 Reviewed: May 6, 2019