

## CARDIAC STRESS TESTING GUIDANCE

Please be aware you MAY get a request to change ordered testing from exercise to pharmacological or vice versa. Exercise testing is informative and typically better tolerated, but if there are contraindications or the exercise target is not possible, our cardiac testing triage team will ask you to substitute a pharmacological test. You may be called to approve such a change for your patient. We ask that you inform the patient and obtain consent for this change.

### **Exercise Tolerance Test (AKA non imaging stress test, exercise treadmill test)**

Best for: patient can exercise

Do not order if patient has:

- Left Bundle Branch Block
- Pacemaker
- Baseline ST changes on EKG
- WPW syndrome
- Digoxin treatment
- LVH on EKG

NOTE: Hold beta blocker before the test, except if you are testing whether current treatment for coronary disease or angina is adequate.

### **SPECT Nuclear Stress Tests**

Best for: older people with higher risk of coronary disease

Do NOT order for:

- Young patients who have a low pretest likelihood of coronary disease
- Pregnant patients (radiation)
- Preoperative evaluation for asymptomatic patients before low-risk surgery

Two types:

- Exercise SPECT – able to exercise, without LBBB or pacemaker
- Pharmacological SPECT (with Regadenoson) -cannot walk on a treadmill at normal walking pace for a least 3 minutes, or if patient has LBBB or a pacemaker

NOTE: For both exercise and pharmacologic SPECT, hold theophylline-containing medications (eg Theo-Dur), pentoxifylline (Trental), and ASA-dipyridamole (Aggrenox) for 3 days prior to test. Hold Caffeine for 12 hours prior to test.

### **PET Nuclear Stress Test (always pharmacological)**

Best for:

- Older, higher-risk patients who cannot exercise or have LBBB or pacemaker
- Patients with BMI of > 30, who cannot exercise (Insurance coverage often limited to patients with high BMI (>30 or >35 kg/m<sup>2</sup> who can't exercise)

- Evaluation of microvascular coronary disease or a high suspicion of diffuse coronary disease

NOTE: Hold theophylline-containing medications (eg Theo-Dur), pentoxifylline (Trental), and ASA-dipyridamole (Aggrenox) for 3 days prior to test. Hold Caffeine for 12 hours prior to test.

You can choose to add on a test for coronary calcium score in patients without known coronary disease.

### **Exercise Echocardiogram Stress Test**

Best for:

- Evaluation for coronary ischemia in intermediate risk patients who can exercise
- Evaluation for dyspnea on exertion because we can also evaluate pulmonary pressures and diastolic function in many cases

Do not order for: Patients with LBBB as it will impede the interpretation of the echo images

NOTE: In case of difficult echo image quality, patients may need echo contrast or study may need to be rescheduled as another modality.

### **Pharmacologic Echocardiogram Stress Test (aka Dobutamine Echocardiogram)**

Best for evaluation of:

- Aortic stenosis when there is a question of severity
- Myocardial viability when a nuclear viability study is not desired or not feasible
- CAD for patients who cannot exercise and have a contraindication to regadenoson, eg active COPD with wheezing

NOTE: Stop beta blockers 1-2 days prior to the test as dobutamine action is inhibited by beta blockers.