



NUCLEAR MEDICINE MYOCARDIAL PERFUSION STUDY

1. Your doctor has ordered a Nuclear Medicine Myocardial stress test to evaluate your heart function. This enables your doctor to determine the function of your heart during rest and stress.
2. This is being done to detect the possible presence of heart disease and to determine an appropriate plan of medical treatment if needed.
3. **The test takes approximately 3-4 hours.** Through an IV you will receive an injection that enables us to image the heart. After the injection you will wait for at least 30 minutes before a series of pictures is taken. These pictures take about 30 minutes. After these pictures you will be taken back into the treadmill room where you will be prepared for the stress portion of this test. During the stress portion a physician will continually monitor your pulse, blood pressure and electrocardiogram. Approximately 30 minutes after the stress the last series of pictures will be taken.
4. There exists the possibility of certain changes occurring during the stress test. They include shortness of breath, chest pain, abnormal blood pressure, change in heart rhythm and in very rare instances a heart attack. Every effort will be made to minimize them by the preliminary examination and physician monitoring during the test.
5. **Do not have any food or drink after midnight before the test. Absolutely NO CAFFIENE 24 HOURS BEFORE THE TEST, this includes coffee, decaf coffee, pop, tea or chocolate.**
As for dress, it is recommended to wear comfortable, loose fitting clothing, tennis/walking shoes. Please wear short sleeved shirt/blouse.
6. Please bring a list of your medications. If you are currently taking an inhaler please bring them with you to your test.
7. **Your doctor would like you to hold the following medications 24 hours before the test: Metoprolol, Carvedilol, Atenolol. If you have questions regarding your medications please contact your physician.**
8. Your test is scheduled for _____ at _____.
Please check in at the front desk and then to the radiology department.
9. **If you are unable to keep your appointment** please contact the radiology department at 970-463-6262 or 970-463-6192. On weekends please call 970-474-3323 and have the nursing staff contact the on-call technologist to let them know that you are canceling, as we are charged a fee if we do not cancel the isotope that has been ordered for the test.

Myocardial Perfusion Imaging

Indications:

- Detection of coronary artery disease
- Documentation of myocardial perfusion abnormalities before and after interventional therapy
- Evaluation of the success of Coronary Angioplasty (PTCA)
- Evaluation of the success of Coronary Bypass Surgery (CABG)
- Chest pain
- Family history

Patient Prep:

- Ensure patient is not pregnant or breastfeeding
- NPO for 4 hours prior to the exam (patient is allowed water)
- **No caffeine or caffeine containing medications 24 hours prior to exam** (*page 5-7*)
 - **No coffee, decaf coffee, tea, herbal tea, soft drinks, or chocolate**
 - NOTE: Caffeine-free and de-caffeinated beverages/products also contain small amounts of caffeine. If consumed, this could void your test or alter results.
- No Theophylline for 48 hours prior to exam
- No Aggrenox or Persantine for 72 hours prior to exam
- No beta blockers for 24 hours prior to exam (*Page 5*)
- Wear comfortable clothes and shoes with no metal on the shirt
- **If patient uses inhalers, they should bring them to the stress test.**

Absolute Contraindications:

- High-risk unstable angina. However, patients with chest pain syndromes at presentation, who are otherwise stable and pain-free, can undergo exercise stress testing.
- Decompensated or inadequately controlled congestive heart failure
- Uncontrolled hypertension (blood pressure >200/110mmHg)
- Uncontrolled cardiac arrhythmias (causing symptoms or hemodynamic compromise)
- Severe symptomatic aortic stenosis
- Acute pulmonary embolism
- Acute myocarditis or pericarditis
- Acute aortic dissection
- Severe pulmonary hypertension
- Acute myocardial infarction (<4 days)

- Acutely ill for any reason

Relative Contraindications:

- Known left main coronary artery stenosis
- Moderate aortic stenosis
- Hypertrophic obstructive cardiomyopathy or other forms of outflow tract obstruction
- Significant tachyarrhythmia or bradyarrhythmia
- High-degree atrioventricular (AV) block
- Electrolyte abnormalities
- Mental or physical impairment leading to inability to exercise adequately
- If combined with imaging, patients with complete left bundle branch block (LBBB), permanent pacemakers, and ventricular pre-excitation (Wolff-Parkinson-White syndrome) should preferentially undergo pharmacologic vasodilator stress test (not dobutamine stress test.)

Exam Time: 3-4 hours

Isotope: Technetium 99^m/Cardiolite (Sestamibi)

Overview:

- Check-in at front reception desk – they will direct you to Radiology after check-in
- When patient arrives to Radiology department, a technologist/nurse will take patient to start an IV that will remain in patient throughout duration of the test.
- A Nuclear Medicine Technologist will then meet with patient, explain procedure and gather clinical history, then give an injection of Cardiolite (Sestamibi). The patient will then wait for approximately 30 minutes before they are taken for 1st set of pictures (resting images) which lasts approximately 12-30 minutes.
- The patient is then taken to waiting room.
- Stress staff will get the patient when they are ready – patient is then taken to Treadmill Room in the Radiology Department where the stress portion of the test will be performed.
- Patient is then hooked up to an EKG, pulse oximeter (oxygen saturation monitor), and blood pressure cuff placed
- The doctor, nuclear medicine technologist, and stress staff will all come into the room at this time and begin stress test.

- When the stress is finished the patient is monitored and EKG's are taken.
- After the monitoring is complete the patient will then wait in the waiting room for approximately 30 minutes before the patient is taken for the stress imaging portion (which takes approximately 12-30 minutes.)
- The nuclear medicine technologist will then remove IV and any EKG patches after imaging and patient is then free to go home and continue their daily activities without restrictions.

TYPES OF STRESS TESTS

Treadmill Stress: The patient walks on the treadmill. The speed and incline grade will increase every 3 minutes.

Lexiscan (Regadenoson) Stress: The patient lays or sits while the stress agents are given over a 1-minute time frame.

Adenosine Stress: The patient lays or sits while the stress agents are given over a 6-minute time frame.

Dobutamine Stress: The patient lays or sits while the stress agents are given over a 10-15-minute time frame.

ACE Inhibitors:

Accupril	Accuretic	Aceon	Altace
Benazepril	Capoten	Capozide	Captopril
Captoten	Cozar	Enalapril	Fosinopril
Hyzar	Lexxel	Lisinopril	Losartan
Lotensin	Lotrel	Mavik	Moexipril
Monopril	Perindopril	Prinivil	Prinizide
Quinapril	Ramipril	Tarka	Teczem
Trandolapril	Uniretic	Univasc	Vaseretic
Vasotec	Zestoretic	Zestril	

Angiotensin II Receptor Blockers (ARB's):

Atacand	Avalide	Avapro	Benicar
Candesartan	Cozaar	Diovan	Eprosartan
Hyzaar	Irebsartan	Losartan	Micardis
Olmesartan	Tasosartan	Telmisartan	Teveten
Valsartan	Verdia		

Beta Blockers:

Acebutolol	Atenolol	Betagan	Betapace
Betaxolol	Betimol	Betoptic	Bisoprolol
Blocardren	Brevibloc	Bystolic	Cartelolo
Cartrol	Carvedilol	Coreg	Corgard
Esmolol	Inderal	Inderide	InnoPran XL
Istalol	Kerlone	Labetalol	Levatol
Levobunolol	Lopressor	Metoprolol	Metipranolol
Nadolol	Nebivolol	Normodyne	Ocupress
OptiPranolol	Penbutolol	Pindolol	Propranolol
Sectral	Sorine	Sotalol	Tenoretic
Tenormin	Timolide	Timolol	Timoptic
Toprol	Trandate	Visken	
Zebeta	Ziac		

Caffeine containing prescribed drugs:

Cafergot	Darvon	Esgic	Fioricet
Fiorinal	Norgesic	Norphadrine	Synaigos
Triaminicin	Wigraine		

Caffeine containing over-the-counter drugs:

Actamin	Anacin	Bayer	Distran
Goody's	Midol	NoDoz	Excedrin
Vivarin			Vanquish

Calcium Channel Blockers:

Adalat	Amlodipine	Azor	Bepridil
Calan	Cardene	Cardizem	Clevidipine
Cleviprex	Covera	Diacor	Diltia
Diltiazem	DynaCirc	Exforge	Felodipine
Isoptin	Isradipine	Lexxel	Nicardipine
Nifedipine	Nimodipine	Nimotop	Nisoldipine
Norvasc	Plendil	Procardia	Sular
Tarka	Teczem	Tiamet	Tiazac
Vasocor	Verapamil	Verelan	

Diuretics:

Aldactone	Aldactazide	Amilamont	Amiloride
Aprinox	Aquatensen	Benroluazide	Bendroflumethiazide
Benzthiazide	Bumetanide	Burinez	Capozide
Chlorothalidone	Chlorothiazide	Chlortalidone	Clorpres
Cyclophenthiazide	Demadox	Diucardin	Diurese
Diurexan	Durigen	Duril	Dytac
Dyazide	Eide	Eidrix	Ena
Enduron	Ethacrynic acid	Furosemide	Hydrochlorothiazide
Hydrodiuril	Hydroflumethiazide	Hydromax	Hydro-Par
Hygroton	Hyzaar	Indapamide	Indapanamide
Lasix	Lopressor	Lozol	Maxzide
Metahydrin	Metenix 5	Methychothiazide	Metolazone
Microzide	Mykrox	Naqua	Natrilix
Naturetin	Navidrex	Oretic	Polythiazid
Prinzide	Quinethazone	Renese	Saluron
Spironolactone	Tenoretic	Thalitone	Torasemide
Torem	Triamterene	Trichlormethiazide	Xipamide
Zaroxolyn	Zytanix		

Narcotics:

Alfentanil	Allylprodine	Alphamethylfentanyl	Bezitramide
Buprenorphine	Butorphanol	Butrans	Carfentanyl
Codeine	Darvocet	Demerol	Dezocine
Difenoxin	Dihydroetorphine	Dilaudid	Diphenoxylate
Dipipanone	Duragesic	Endocet	Etorphine
Exalgo	Fentanyl	Hydrocodone	Hyromorphone
Ketobemidone	Lefetamine	Levomethorphan	Levorphanol
Loperamide	Lortab	Meperidine	Meptazinol
Methadone	Methyldesorphine	Morphine	MS Contin
Nalbuphine	Nalmefene	Naloxone	Naltrexone
Ohmefentanyl	Opana	Oripavine	Oxycodone
OxyContin	Oxymorphone	Pentazocine	Percocet
Percodan	Pethidine	Phenazocine	Piritramide
Prodine	Propoxyphene	Remifentanyl	Roxicet
Sufentanil	Tapentadol	Thebaine	Tilidine
Tramadol	Tylenol with Codeine	Vicodin	

Theophylline containing prescription medications:

Accurbron	Aerolate	Aquaphyllin	Asbron
Bronkodyl	Constant-T	Durphyl	Elixicon
Elixomin	Elixophyllin	Labid	Lanophyllin
Primatene	Quibron	Respbid	Slo-Bid
Slo-Phyllin	Somophyllin	Sustaire	Synophyllate
Tedral-SA	Theo-24	Theobid	Theochron
Theoclear	Theo-Dur	Theolair	Theolixir
Theo-Organidin	Theophyl	Theophylline	Theo-Sav
Theospan-SR	Theo-Stat	Theovent	Theo-X
T-Phyll	Uni-Dur	Uniphyll	