

## VFS / FAA Specifications for Maximal Treadmill Stress Tests

All stress testing, including nuclear studies, **must achieve 100% of predicted maximal heart rate** unless medically contraindicated or prevented either by symptoms or medications. Beta blockers and calcium channel blockers (specifically diltizem and verapamil), or digitalis preparations should be discontinued for 48 hours prior to testing (if not contraindicated) in order to obtain maximum heart rate and only with consent of the treating physician. An applicant will be expected to demonstrate a minimum functional capacity by achieving a double product of 25,000 (maximum rate X maximum systolic pressure) and completing stage 3 of the Bruce protocol or 10 METs on other protocols. (Failure to achieve these levels is not necessarily disqualifying but will have to be considered on an individual basis.) The worksheet with blood pressure /pulse recordings at various stages, interpretive report, and copies of actual ECG tracings must be submitted. Tracings must include a rhythm strip, a full 12-lead ECG recorded at rest (supine and standing) and during hyperventilation while standing, one or more times during each stage of exercise, at the end of each stage, at peak exercise, and every minute during recovery for at least five minutes or until the tracings return to baseline level. Computer generated, sample-cycle ECG tracings are unacceptable in lieu of standard tracings and if submitted alone may result in deferment until this requirement is met.

Also note the following:

- Pharmacological stress testing such as with dobutamine (Dobutrex), dipyridamole (Persantine), adenosine (Adenoscan), and arbutamine (GenESA) is discouraged by the FAA and requires a provider statement addressing why the applicant was unable to perform standard treadmill stress testing.
- Bundle branch blocks, LVH, or diffuse ST/T wave changes at rest may require stress echocardiography or nuclear stress testing.
- Radionuclide stress testing such as Thallium/Cardiolite/Sestimibi requires both ECG and nuclear scan reports, full ECG tracings, and full radionuclide images.
  - Images should be color or gray scale (Xerox copies are unacceptable) – see below for example of images.
  - Ejection fractions of 40% or less will require further clarification.
  - Images are preferable in hard copy (see example below). If images are provided on CD-ROM, viewer software must be provided so that images can be read from the CD (The FAA typically will not accept CD-ROMs that require the uploading of viewing software to the FAA computer system).

