

Chapter 5: Clinical Exercise Testing

1. What are standard graded exercise tests used for?
2. Diagnostic exercise tests are best used for whom?
3. How long before exercise testing after a MI?
4. Name some exercise test modalities.
5. In regards to testing to return to work, what should you discuss with the patient?
6. What should you measure during an exercise test?
7. Describe the subjective rating scales used during exercise testing.
8. What are the 2 most common pharmacologic stress tests?
9. Who can supervise exercise testing?

Standard Graded Exercise Tests

Standard graded exercise tests (GXT) are used clinically to assess a patient's ability to tolerate increasing intensities of aerobic exercise. Responses are monitored during the test to look for signs or manifestations of CV issues such as myocardial ischemia. People with CHF or other respiratory conditions may also be monitored with ventilator expired gas analysis.

Indications and Purposes

GXT are used for diagnostic, prognostic and therapeutic purposes. The GXTs can also be used to develop individualized exercise programs. The purpose of the GXT can mean that the recommendations for conducting the tests are different due to the different data that is needed to be gathered.

Diagnostic Exercise Testing

Diagnostic GXT has the greatest use in patients with an intermediate pretest probability of angiographically significant CVD. This is because of the impact that exercise has on posttest probability of disease. A positive GXT improves the probability of angiographically significant CVD to the greatest level in the subject with intermediate pretest likelihood. In patients with chronic conditions such as CHF, exercise testing can prove to be valuable in guiding treatment decisions.

Exercise Testing After MI

Exercise testing after MI can be performed before or soon after hospital discharge for prognostic assessment, Ex Rx, and evaluation of medical therapy. Sub-maximal exercise tests are recommended to be conducted before hospital discharge at 4-6 days after MI.

Functional Exercise Testing

Exercise testing is useful to determine functional capacity. This is useful information for physical activity counseling, Ex Rx, disability assessment and to help with estimates of prognosis. Exercise testing can also help with return to work evaluations in patients whose work requires aerobic capacity.

Functional capacity can either be evaluated based on a patient's percentile ranking, which is based on healthy men and women, or by comparing the patients percentage of MET's for age using a nomogram with 100% considered normal. Each 1 MET increase in aerobic capacity reflects a 13% decrease in overall mortality.