

Exercise stress testing is indicated to aid in the diagnosis of coronary artery disease, assess therapeutic interventions (medications, surgery or angioplasty), or to estimate the prognosis in patients with recent myocardial infarctions, valvular pathologies, or congestive heart failure. While the indications continue to evolve, the American College of Cardiology (ACC) and the American Heart Association (AHA) Exercise Task Force have determined several categories of test indications from a large body of published literature (1). Anesthesiologists can benefit from knowing these indications when they consider further evaluation of a patient, discuss a patient with a cardiology colleague, or interpret the results of such testing.

#### Class I (Clear indication)

Patients with suspected or proven coronary artery disease:

1. Diagnosis: patients with exercise related complaints of palpitations, dizziness, or syncope
2. Diagnosis: men with atypical symptoms
3. Prognostic assessment and functional capacity evaluation in patients with chronic stable angina or post-myocardial infarction
4. Symptomatic recurrent exercise-induced arrhythmias
5. Evaluation after revascularization procedure

#### Class 2 (Test may be indicated)

1. Diagnosis: women with typical or atypical angina pectoris
2. Functional capacity evaluation to monitor cardiovascular therapy in patients with CAD or heart failure
3. Evaluation of patients with variant angina
4. Follow-up of patients with known CAD
5. Evaluation of asymptomatic men over 40 who are in special occupations (pilots, firefighters, police officers, bus or truck drivers, and railroad engineers), or who have two or more atherosclerotic risk factors or who plan to enter a vigorous exercise program

#### Class 3 (Test probably not indicated)

1. Evaluation of patients with isolated premature ventricular beats and no evidence of CAD
2. Multiple serial testing during the course of cardiac rehabilitation program
3. Diagnosis of CAD in patients, who have preexcitation syndrome or complete left bundle branch block or are on digitalis therapy
4. Evaluation of young or middle-aged asymptomatic men or women, who have no atherosclerotic risk factors or who have noncardiac chest discomfort

Indications for exercise testing in patients with valvular disease or hypertension

1. Evaluation of functional capacity in selected patients with valvular heart disease
2. Evaluation of blood pressure of hypertensive patients who wish to engage in vigorous dynamic or static exercise.