**Indications for Cardiopulmonary Exercise Testing and Methodology**

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 Cardiopulmonary exercise testing provides a global assessment of the integrative exercise responses involving the pulmonary, cardiovascular, hematopoietic, neuropsychological, and skeletal muscle systems, which are not adequately reflected through the measurement of individual organ system function. This relatively noninvasive, dynamic physiologic overview permits the evaluation of both submaximal and peak exercise responses, providing the physician with relevant information for clinical decision making. In practice, CPET is considered when specific questions persist after consideration of basic clinical data, including history, physical examination, chest X-ray, pulmonary function tests , and resting electrocardiogram . the most common indications are: Evaluation of Exercise Intolerance, Unexplained Dyspnea, Evaluation of Patients with Cardiovascular Disease, Evaluation of Patients with Respiratory Disease, Preoperative Evaluation, Exercise Prescription for Pulmonary Rehabilitation, Evaluation of Impairment/Disability. Two modes of exercise are commonly employed in cardiopulmonary exercise tests: treadmill and cycle ergometer. Treadmill exercise testing has several advantages over cycle ergometry. For most individuals, treadmill walking is a more familiar activity than cycling. Walking on the treadmill, however, is more complex than ordinary walking, as evidenced by differences in 6MWT distance results among subjects performing on a treadmill versus walking. The cycle ergometer is generally less expensive and requires less space than the treadmill. It is also less prone to introduce movement or noise artifacts into measurements . The principal advantage, however, is that the rate at which external work is performed is easily quantitated.