

PULMONARY FUNCTION TESTING

DETAILS AND OBJECTIVES

DETAILS:

- Includes conventional pulmonary functions (spirometry and plethysmography), diffusion capacity and washout determinations, airway provocation (methacholine, exercise, cold air), exercise testing, exhaled nitric oxide, and measurement of respiratory muscle strength (maximal inspiratory and expiratory pressures, peak cough flow).
- (Patient volume)
- (RTs, #s)

OBJECTIVES:

- Interpret simple spirometry to differentiate normal from abnormal results; differentiate restrictive from obstructive defects.

Depending on level of training and specific interest in pulmonary function, additional objectives may include:

- a. Describing the techniques used for determining airflow and lung volumes: spirometry and plethysmography.
- b. Describing changes in airflow post-bronchodilator or with time, which would be considered clinically significant.
- c. Describing the expected changes in pulmonary function studies in the following conditions:
 - Asthma
 - Cystic Fibrosis
 - Neuromuscular weakness
 - Poor co-operation
 - Graft vs host disease
- d. Differentiating extrathoracic from intrathoracic airways disease.
- e. Listing ancillary tests done in the Pulmonary Diagnostic Lab and their indications:
 - Maximum inspiratory and expiratory power

- Oximetry or home overnight studies in infants or children with chronic illness
 - End tidal CO₂
 - Bronchoprovocation studies-exercise, histamine, lung sounds
 - Infant tests-airway resistance
- f. Describing pulmonary mechanical aberrations and pathophysiologic changes, which will be reflected in abnormal PFT's.