**Mohamed Musse, Pytetska N.**

**THE USE OF SPIROMETRY IN THE DIAGNOSIS OF LUNG DISEASESKharkiv National Medical University**

Spirometry is the measuring lung function, specifically the amount (volume) and/or speed (flow) of air that can be inhaled and exhaled. Spirometry may also be used periodically to check whether a treatment for a chronic lung condition is helping you breathe better. For this test, you breathe into a mouthpiece attached to a recording device (spirometer). The information collected by the spirometer may be printed out on a chart called a spirogram.

Spirometry is generally a safe test. You may feel short of breath or dizzy for a moment after you perform the test.

Key spirometry measurements include the following:

* Forced vital capacity (FVC). This is the largest amount of air that you can forcefully exhale after breathing in as deeply as you can. A lower than normal FVC reading indicates restricted breathing.
* Forced expiratory volume (FEV-1). This is how much air you can force from your lungs in one second. This reading helps your doctor assess the severity of your breathing problems. Lower FEV-1 readings indicate more significant obstruction.

Indications for spirometry:

Spirometer is an integral part of the evaluation, diagnosis and management of patients with respiratory disorders. The main indications are:

* Evaluation a case with respiratory symptoms.

• Assessment of severity of respiratory disorder.

* Assessment of response to therapy.

Per-operative evaluation of respiratory system.

## Contraindications for spirometry:

Absolute contraindication for spirometry include recent myocardial infarction ie less than one month old. Relative contraindications to performing spirometry are:

* Hemoptysis of unknown origin (forced expiratory maneuver may aggravate the underlying condition).
* Pneumothorax.
* Unstable cardiovascular status (forced expiratory maneuver may worsen angina or cause changes in blood pressure) or recent myocardial infarction or pulmonary embolus.
* Thoracic, abdominal, or cerebral aneurysms (danger of rupture due to increased thoracic pressure).
* Recent eye surgery (eg, cataract).
* Presence of an acute disease process that might interfere with test performance (eg, nausea, vomiting).
* Recent surgery of thorax or abdomen.

## Hazards and complications of spirometry:

* Hazards of spirometry though rare include:
* Pneumothorax.
* Increased intracranial pressure.
* Syncope, dizziness, light-headedness.
* Chest pain.
* Paroxysmal coughing.
* Contraction of nosocomial infections.
* Oxygen desaturation due to interruption of oxygen therapy.
* Bronchospasm.