PULMONARY FUNCTION TEST

**Definition:**
Lung function tests (also call pulmonary function test, or PFT) evaluate how well your lungs work. The tests determine how much air your lungs can hold, how quickly you can move air in and out of your lungs, and how well your lungs put oxygen into and remove carbon dioxide from your blood. The test can diagnose lung diseases, measure the severity of lung problems and check to see how well treatment for a lung disease is working. Other tests such as gas diffusion test, body plethysmography, and exercise PFT may also be done to determine lung function.

Different parts of the exam include:
- **Spirometry** is the first lung function test done. It measures how much and how quickly you can move air out of your lungs. For this test, you breath into a mouthpiece attached to a recording device (spirometer). The information collected by the spirometer may be printed out on a graph.
- **Forced vital capacity (FVC).** This measures the amount of air you can exhale with force after you inhale as deeply as possible.
- **Forced expiratory volume (FEV).** This measures the amount of air you can exhale with force in one breath.
- **Forced expiratory flow 25% to 75%**. This measures the air flow halfway through an exhale (FVC).
- **Peak expiratory flow (PEF).** This measures how quickly you can exhale. It is usually measured at the same time as your forced vital capacity (FVC).
- **Maximum voluntary ventilation (MVV).** This measures the greatest amount of air you can breathe in and out during one minute.
- **Slow vital capacity (SVC).** This measures the amount of air you can slowly exhale after you inhale as deeply as possible.
- **Total lung capacity (TLC)**. This measures the amount of air in your lungs after you inhale as deeply as possible.
- **Functional residual capacity (FRC).** This measures the amount of air in your lungs at the end of a normal exhaled breath.
- **Gas Diffusion tests:**
  - Gas diffusion tests measures the amount of oxygen and other gases that cross the lungs’ air sacs (alveoli) per minute. These tests evaluate how well gases are being absorbed into your blood from your lungs.
  - Gas diffusion tests may include:
    - **Arterial Blood Gases** which determine the amount of oxygen and carbon dioxide in your blood stream.
    - **Carbon monoxide diffusing capacity** (also called transfer factor, or TF), which measures how well your lungs transfer a small amount of carbon monoxide (CO) into the blood. Two different methods are used for this test. If the single-breath or breath-holding method is used, you will take a breath of air containing a very small amount of carbon monoxide from a
container while measurements are taken. In the steady-state method, you will breathe air containing a very small amount carbon monoxide from a container. The amount of carbon monoxide in the breath you exhale is then measured. Diffusing capacity provides an estimate of how well a gas is able to move from your lungs into your blood.

**Why is this test performed?**
Just to name a few: Asthma, Lung disease, COPD (Chronic Obstructive Pulmonary Disease), Shortness of Air, and Persistent Cough

**Risks:**
May have an allergic reaction to Albuterol

**How you prepare:**
- No inhalers:
  - Albuterol, Maxair, Xopenex, ProAir, Ventolin, Proventil
  - 8 hours prior to exam
  - Advair, Symbicort, Qvar
  - 48 hours prior to exam
  - Atrovent, Combivent, Duoneb, Dulera
  - 24 hours prior to exam
  - Spiriva
  - 72 hours prior to exam

- Please bring a list of all Medication currently taken
- You may eat and drink before the exam

**What you can expect:**
- Depending on what type of exam is ordered:
- You can expect the exam to last for 30 to 45 minutes
- You will be asked to sit in a glass booth with door open then closed
- You will be asked about your medications
- Do you usually have a cough?
  - Do you usually cough like this most days?
  - Do you cough up Phlegm/sputum and about how much?
- Do you have shortness of air at Rest?
- Do you have shortness of air with exertion?
- Have you ever smoked?
  - How long
  - Packs per day
  - Cigarettes, Cigars, Pipe
  - How long ago did you quit?
  - Occupational exposure to:
    - Coal Dust
    - Silica Dust
    - Cotton Dust
- Chlorine Gas fumes
- Asbestos Fiber
- Work in a Hair Salon

**Results:**
The numbers and graphs will be ready as soon as you complete the exam. A physician that is trained in reading the exam will generate a report. Then the physician that ordered the exam will receive a faxed copy of the report. A copy of the report may be obtained from Health Information Management phone 270-762-1182. Only the patient or guardian can sign for the report. Please bring a photo ID to pick up records.

**Billing:**
Murray-Calloway County Hospital will send a bill for performing the exam and the reading Physician will send a bill for reading the test.