

SPIROMETRY INTERPRETATION HELP SHEET 1

STEP 1 Is it an accurate spirometry;
Check details, reproducibility and for any errors

STEP 2 Is there obstruction? Look at the ratio

Is FEV1/FVC < 0.7 (70%)?
(If FEV1/VC is smaller then use this value)

NO

Not obstructed
Look at the other chart

YES

STEP 3 Why is it obstructed? Look at reversibility

Is it asthma (reversible) or COPD (fixed):

1. Look at history
2. Do PEFr chart or reversibility

Is there evidence of reversibility?

YES

Asthma

NO

COPD

STEP 4 How severe is the COPD? Look at FEV1% predicted

FEV1 ≥ 80%: Mild COPD
 FEV1: 50 – 79%: Moderate COPD
 FEV1: 30 – 49%: Severe COPD
 FEV1 < 30%: Very Severe COPD



STEP 5 Is there any restriction? Look at FVC % predicted (or the VC whichever is larger)

FVC % predicted < 80	FVC predicted % > 80
COMBINED OBSTRUCTION AND RESTRICTION	Pure OBSTRUCTION

If combine restriction and obstruction it maybe either:

1. Short blow – look at technique
2. Obstruction + obesity – look at BMI
3. Severe COPD
4. Obstruction + true restrictive disorder

If unsure:

- > Look at history and examination
- > Order CXR
- > Order full lung function tests

STEP 1

Look at the ratio

FEV1/FVC > 0.7 (70%)

YES

STEP 2

Are the lung volumes small?

FVC < 80% of predicted

NO

Normal

YES

THIS IS RESTRICTION

CAUSES

Extra pulmonary

- Thoracic cage deformity
- Obesity
- Pregnancy
- Neuromuscular disorders
- Fibrothorax

Pulmonary

- Fibrosing lung diseases
- Pneumoconioses
- Pulmonary oedema
- Parenchymal lung tumors
- Lobectomy or pneumonectomy

STEP 3

What's caused the restriction?

Look for common causes such as obesity and skeletal abnormalities.

Patient will need

- CXR
- Full lung function test including TLC and DLco to work out if there may be a interstitial lung disease
- HRCT may be needed