

**NORMAL RESULTS**

**Definition:** All measured parameters are within the normal range and FEV<sub>1</sub>/FVC ratio is > 0.70

**Report:** Spirometry is within normal limits.

**Possible Intervention:**

1. Review patient in 12 months following repeat spirometry

**OBSTRUCTIVE PATTERN**

**Definition:** FEV<sub>1</sub>/FVC ratio is ≤ 0.70

Severity based on post-FEV<sub>1</sub> percent predicted  
(as per ATS/ERS guidelines)

Mild	> 70%
Moderate	60 – 69%
Moderately severe	50 – 59%
Severe	35 – 49%
Very severe	≤ 34%

**Report:** Spirometry reflects a <severity> obstructive abnormality. COPD or chronic asthma should be considered given the correct clinical context.

**Possible Interventions:**

1. Consider bronchodilator therapy
2. Review patient in 3 months following repeat flow volume loop
3. If no improvement and/or symptoms persist – consider referral to Respiratory Physician and/or full lung function testing

**RESTRICTIVE PATTERN**

**Definition:** FEV<sub>1</sub>/FVC ratio is within normal range (or elevated) with FVC < LLN

Severity based on FVC percent predicted  
(adapted from ATS/ERS guidelines)

Mild	70% - LLN
Moderate	60 – 69%
Moderately severe	50 – 59%
Severe	≤ 49%

**Report:** Spirometry reflects a <severity> restrictive abnormality. An interstitial or extra-thoracic pathology should be considered given the correct clinical context. Full lung function testing recommended.

**Possible Interventions:**

1. Consider further investigation such as chest imaging (CXR or CT chest)
2. Review patient in 3-6 months following repeat spirometry
3. If no improvement and/or symptoms persist – consider referral to Respiratory Physician and/or full lung function testing to confirm restrictive abnormality

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**IF FEV<sub>1</sub> & FVC ARE WITHIN NORMAL RANGE BUT FEF<sub>25-75</sub> OR FEF<sub>50</sub> ≤ LLN**

**Report:** FEV<sub>1</sub> and FVC within normal range, but with a non-specific small airway abnormality.

**Possible Interventions:**

1. Consider bronchodilator therapy if symptomatic and/or respiratory risk factors present
2. Consider investigation for asthma e.g. mannitol challenge test
3. Review patient in 6-12 months following repeat spirometry
4. If no improvement and/or symptoms persist – consider referral to Respiratory Physician and/or full lung function testing

**BRONCHODILATOR RESPONSE FOLLOWING SALBUTAMOL (10 MINUTES BETWEEN PRE- AND POST-MEASUREMENTS)**

**Definition:** If FEV<sub>1</sub> and/or FVC increase ≥ 12% and ≥ 200ml following bronchodilator

(as per ATS/ERS guidelines, GOLD and COPD-X)

**Report:** Significant response following bronchodilator, suggestive of asthma.

**Possible Interventions:**

1. Prescribe inhaled therapy
2. Review patient in 3 months following repeat spirometry
3. If no improvement and/or symptoms persist – consider referral to Respiratory Physician

If these thresholds are not met:

**Report:** No significant response following bronchodilator.

**Abbreviations**

FEV <sub>1</sub>	Forced Expiratory Volume in 1 second
FVC	Forced Vital Capacity
LLN	Lower Limit of Normal
FEF	Forced Expiratory Flow (between 25 and 75% of vital capacity or at 50% vital capacity)
ERS	European Respiratory Society
ATS	American Thoracic Society
GOLD	Global Initiative for Chronic Obstructive Lung Disease

**References**

1. Pellegrino, R. *et al.* Interpretative strategies for lung function tests. *Eur Respir J* 2005; 26: 948–968
2. Decramer, M. *et al.* Global Initiative for Chronic Obstructive Lung Disease 2015
3. Abramson M, *et al.* COPD-X Concise Guide for Primary Care. Brisbane. Lung Foundation Australia. 2014

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