Pulmonary Function Test (PFT) Interpretation Chart

Patient information	
Name:	**Date of birth:**
Ethnicity:	**Gender:**
Height:	**Weight:**
Contact information:	**Date of assessment:**

Key spirometry measurements	
Forced Vital Capacity (FVC)	Total air exhaled forcefully after a deep breath.
Forced Expiratory Volume in 1 Second (FEV1)	Volume of air forcibly exhaled in the first second.
FEV1/FVC Ratio	Assesses obstructive vs. restrictive patterns.

Decision flowchart

Confirm validity (consistent, reproducible effort and flow loops)

FEV_1/FVC
Adults: < LLN (ATS criteria)
or < 70% (GOLD criteria)*
5 to 18 years of age:
< 85% of predicted

Yes

FVC
Adults: < LLN
5 to 18 years of age:
< 80% of predicted

No

Obstructive defect
Grade severity

Yes

Mixed pattern
Grade severity

Bronchodilator therapy
Increase in FEV_1 or FVC:
Adults: > 12% and > 200 mL
5 to 18 years of age: > 12%

Bronchodilator therapy
Increase in FVC:
Adults: > LLN of predicted
5 to 18 years of age:
> 80% of predicted

No

Yes **No**

Reversible obstruction (asthma)

Irreversible obstruction

Yes

Pure obstruction with air trapping is likely chronic obstructive pulmonary disease

Consider differential diagnosis

No

FVC
Adults: < LLN
5 to 18 years of age:
< 80% of predicted

Yes **No**

Restrictive pattern
Grade severity

Normal
If there is still concern for asthma, order bronchoprovocation

Confirm restrictive defect through full pulmonary function tests with DLCO

Consider differential diagnosis

Consider differential diagnosis

NOTE: *A tool to calculate the LLN in adults up to 75 years of age is available at http://hankconsulting.com/RefCal.html.*

*—The 70% criteria should be used only for patients 65 years and older who have respiratory symptoms and are at risk of chronic obstructive pulmonary disease (i.e., current or previous smoker).

Stepwise interpretation

Step 1: Obstruction

Patient's FEV1/FVC ratio:

☐ Normal (≥ LLN or ≥ 0.70) → No obstruction.

☐ Low (< LLN or < 0.70) → Obstructive defect (e.g., COPD, asthma).

Step 2: Restriction

Patient's FVC:

☐ Normal (≥ 80%) → No restriction.

☐ Low (< LLN or < 80%) → Suspected restrictive defect → Confirm with full PFTs (TLC).

Step 3: Severity grading (obstruction or restriction)

FEV1% predicted:

☐ Mild (> 70%)

☐ Moderate (60–69%)

☐ Moderately severe (50–59%)

☐ Severe (35–49%)

☐ Very severe (< 35%)

Step 4: Reversibility (Post-bronchodilator)

FEV1/FVC or FEV1 improvement:

☐ No improvement

☐ Improvement > 12% and > 200 mL → Reversible obstruction (e.g., asthma).

Additional testing

DLCO (Diffusion capacity):

☐ Low → Consider interstitial lung disease, emphysema, or pulmonary vascular disease.

☐ High → Consider asthma, pulmonary hemorrhage, or polycythemia.

Bronchoprovocation testing: Indicated   Not indicated

Results:

Overall interpretation

Diagnosis (check all that apply):

☐ Normal

☐ Obstructive defect → Likely:

☐ Restrictive defect → Confirmed with TLC?　　Yes　　No

☐ Mixed defect

Clinical notes and recommendations:

Notes for use

- Ensure demographic adjustments are applied. The Global Lung Function Initiative has a calculator that takes different ethnicities into consideration, which you can access here: https://gli-calculator.ersnet.org/index.html
- Severity classifications should guide but not dictate treatment—consider clinical context.
- Always confirm results with clinical history and additional tests as necessary.

Additional notes

Healthcare professional information

Name:	License ID number:
Signature:	Date of assessment:

References:

Barreiro, T. J., & Perillo, I. (2004). An approach to interpreting spirometry. *American Family Physician, 69*(5), 1107–1115. https://www.aafp.org/pubs/afp/issues/2004/0301/p1107.html

Johnson, J. D., & Theurer, W. M. (2014). A stepwise approach to the interpretation of pulmonary function tests. *American Family Physician, 89*(5), 359–366. https://www.aafp.org/pubs/afp/issues/2014/0301/p359.html