

Standardisation of spirometry – 2005 criteria

from European Respiratory Journal 2005;26:319-338.

Please note this replaces Table 8 of the 1994 ATS criteria

Summary of within- and between-manoevre acceptability criteria

Within-manoevre criteria

Individual spirograms are acceptable if

1. They are free from artefacts:

- Cough during the first second of exhalation
- Glottis closure that influences the measurement
- Early termination or cut-off
- Effort that is not maximal throughout
- Leak
- Obstructed mouthpiece

2. They have good starts

- Extrapolated volume, 5% of FVC or 0.15 L, whichever is greater

3. They show satisfactory exhalation

- Duration of 6 s (3 s for children) or a plateau in the volume-time curve or
- If the subject cannot or should not continue to exhale

Between-manoevre criteria

After three acceptable spirograms have been obtained, apply the following tests

The two largest values of FVC must be within 0.150 L of each other

The two largest values of FEV1 must be within 0.150 L of each other

If both of these criteria are **met**, the test session may be concluded

If both of these criteria are **not met**, continue testing until

Both of the criteria are met with analysis of additional acceptable spirograms

Or

A total of eight tests have been performed (optional)

Or

The patient/subject cannot or should not continue

Save, as a minimum, the three satisfactory manoeuvres

FVC: forced vital capacity; FEV1: forced expiratory volume in one second.

Spirometry Steps

from Ferguson GT, Enright PL, Buist AS, Higgins MW. Office Spirometry for Lung Health Assessment in Adults: A Consensus Statement from the National Lung Health Education Program. Respiratory Care 2000;45(5):513-530.

1. Measure standing height in stocking feet.
2. Record age, gender, height, and ethnicity.
3. Explain and demonstrate the correct maneuver.
4. Coach and watch the patient perform each maneuver.
5. Repeat until two acceptable and matching manoeuvres are obtained.