Why Spirometry is not enough

Measurement of the rate of lung volume changes during forced breathing is Forced Vital Capacity (FVC). Typically referred to as Spirometry, FVC is the most commonly performed pulmonary function test. While it is highly sensitive to the presence and severity of disease, not all symptomatic patients present with a clear cut FVC response to a bronchodilator (see Figure A). Therefore, further pulmonary function tests are essential for the diagnosis and management of lung disease.

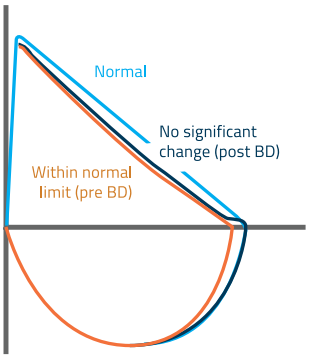

Figure A Flow Volume Loop

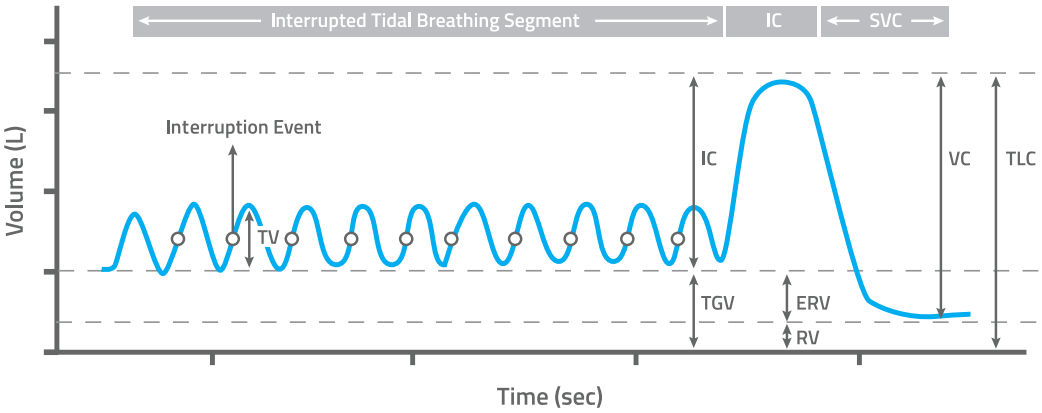

Figure B MiniBox+ Lung Volume Measurement

SOME THINGS TO CONSIDER FOR BETTER DIAGNOSIS AND MONITORING

1. With Forced Expiratory Volume in 1 second (FEV1) and the FEV1/FVC ratio borderline or within normal limits, lung volume measurements (Figure B) can determine if RV has expanded, and whether TLC has increased or remained the same. If the IC or VC decreases while the TLC remains the same, this could indicate an obstructive impairment of the small airways.

2. If the FEV1/FVC ratio is borderline or within normal limits, lung volume measurements can determine if the TLC is reduced, suggesting restrictive disease. Furthermore, if single-breath diffusion is also reduced, this could suggest early interstitial lung disease.

3. Lung volume measurements that show a decrease in TLC in patients with evidence of airway obstruction via spirometry is suggestive of mixed obstructive-restrictive lung disease.

4. The diagnosis of a restrictive lung disease process cannot be made without direct measure of TLC via lung volume measurements.

5. Identifying the presence of early lung disease with the MiniBox+ can facilitate earlier and more effective therapy such as phosphodiesterase-4 inhibitors for chronic obstructive pulmonary disease.

6. Diffusion capacity, which measures the transfer of gas from air in the lung to the red blood cells, can further help determine the severity of lung disease.

PUO-DOC20014 REV.01

Distributed by:

CLARION®

1.800.668.5236 | www.clarionmedical.com | info@clarionmedical.com

PulmOne
Advancing Pulmonary Function Testing

MiniBox+

Complete Pulmonary Function Testing

Expand your practice with complete pulmonary function testing capabilities.

With the MiniBox+, you can:

✔ Perform same day lung volumes & DLCO ✔ Grow the economic potential of your office

TESTIMONIALS

"The MiniBox transforms the capacity of the allergy office to more accurately diagnose, monitor and treat various types of lung disease."

Marc E. Rothenberg MD, PhD, Professor of Pediatrics, Director, Division of Allergy and Immunology Director, Cincinnati Center for Eosinophilic Disorders, Cincinnati Children's Hospital Medical Center

"The MiniBox allows further clarification of spirometry, which often provides mixed obstructive/restrictive findings. Having lung volumes has been very useful for clarifying the pulmonary pathology and making more specific diagnoses. Its ease of use does not interfere with the normal operations of our office."

Jonathan Bernstein, MD Bernstein Allergy Group, Cincinnati, OH

"MiniBox is a user-friendly, cost-effective option to provide lung volumes and spirometry in the office setting."

Robert Anolik, MD, President and Founding Partner, Allergy & Asthma Specialists, PC Director of Clinical Research, Allergy & Asthma Specialists, PC Clinical Associate Professor of Pediatrics, Drexel University School of Medicine, Adjunct Associate Professor, Department of Oral Medicine, University of Pennsylvania

"I find the MiniBox + to be both patient- and physician-friendly. It allows for an uncumbersome and rapid comprehensive pulmonary evaluation in your office. I am extremely pleased with the MiniBox+ and enthusiastically recommend it to all respiratory specialists."

Alan Kaufman, MD Allergist & Immunologist, NY, NY

Contact us for user reference information.

Distributed by:

CLARION®

1.800.668.5236 | www.clarionmedical.com | info@clarionmedical.com

PulmOne

Advancing Pulmonary Function Testing