Interpretation of Cardio Pulmonary Exercise Testing
In Healthy and Subjects with Respiratory Diseases

**Healthy**

Assessment of the theoretically possible minute ventilation
\( \text{VE}_{\text{theo}} = \text{FEV}_1 \times 35 \)

- **VE** in normal range
- **VE** is clearly decreased

**Airway Obstruction**

Assessment of the theoretically possible minute ventilation
\( \text{VE}_{\text{theo}} = \text{FEV}_1 \times 35 \)

- **VE** is clearly decreased

**Parameter Definition:**

- **VC**: Vital Capacity
- **FEV**<sub>1</sub>: Forced Expiratory Volume after 1 s
- **FEF**<sub>50</sub>: Forced Expiratory Flow after 50% of VC
- **VE**<sub>theo</sub>: Theoretically Possible Minute Ventilation (VE)
- **VE**: Minute Ventilation
- **RER**: Respiratory Exchange Rate (VO/VO)
- **EQO**: Breathing Equivalent for O<sub>2</sub>
- **EQCO**: Breathing Equivalent for CO<sub>2</sub>
- **AT**: Anaerobic Threshold
- **HR**: Heart Rate
- **VO**<sub>2</sub>/kg: VO<sub>2</sub> per kg Body Weight
- **MET**: Metabolic Unit (1 MET = 3.5 ml/min/kg)
- **HR/VO**: Heart Rate Reserve (Pred HR - HR)<sub>1</sub>
- **dO/dHR**: Increase in Oxygen in Relation to Heart Rate
- **Lactate**: Salt of Lactic Acid, End Product of the Anaerobic Glycolysis

**Performance Assessment in Healthy**

- Sports: Normal exercise
- Normal exercise
- VO<sub>2</sub> and VE within normal range
- VO<sub>2</sub> and VE within normal range

**Performance Assessment in Subjects with Airway Obstruction**

- Reduced exercise
- VO<sub>2</sub> and VE clearly decreased
- Limited gas exchange