Noninvasive Mechanical Ventilation
Noninvasive Mechanical Ventilation

Theory, Equipment, and Clinical Applications

Springer
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| Abbreviation | Description |
|--------------|-------------|
| ACPE         | Acute cardiogenic pulmonary edema |
| AHI          | Apnea hypopnea index |
| AHRF         | Acute hypercapnic respiratory failure |
| ALI          | Acute lung injury |
| ALS          | Amyotrophic lateral sclerosis |
| ARDS         | Acute respiratory distress syndrome |
| ARF          | Acute respiratory failure |
| ASV          | Adaptive servo-ventilation |
| BiPAP        | Bi-level positive airway pressure |
| BNP          | Brain natriuretic peptide |
| BPD          | Bronchopulmonary dysplasia |
| CAD          | Coronary artery disease |
| CCHS         | Congenital central hypoventilation syndrome |
| CF           | Cystic fibrosis |
| CHF          | Congestive heart failure |
| CHRF         | Chronic hypercapnic respiratory failure |
| CO₂          | Carbon dioxide |
| COPD         | Chronic obstructive pulmonary disease |
| CPAP         | Continuous positive airway pressure |
| CPE          | Cardiogenic pulmonary edema |
| CPF          | Cough peak flows |
| CRF          | Chronic respiratory failure |
| CSA          | Central sleep apnea |
| CSR          | Cheyne stokes respiration |
| CSR-CSA      | Cheyne-stokes respiration with central sleep apnea |
| DMD          | Duchenne muscular dystrophy |
| DR           | Delivery room |
| ED           | Emergency department |
| EELV         | End expiratory lung volume |
| EPAP         | Expiratory positive airway pressure |
| ETCO₂        | CO₂ at the end of expiration |
| Abbreviation | Definition |
|--------------|------------|
| ETI          | Endotracheal intubation |
| ETO₂         | End-tidal O₂ |
| EV           | Exhaust vent |
| f            | Respiratory rate |
| f/V          | Respiratory frequency/tidal volume |
| FAO₂         | Alveolar fraction of oxygen |
| FiCO₂        | CO₂ inspired fraction |
| FiO₂         | Inspired fraction of oxygen |
| FRC          | Functional residual capacity |
| F<sub>tot</sub> | Total gas flow passing through the helmet |
| FVC          | Forced vital capacity |
| GPB          | Glossopharyngeal breathing |
| hCO₂         | Mean carbon dioxide concentration inside the helmet |
| HTN          | Hypertension |
| HVC          | Home ventilation circuits |
| ICU          | Intensive care unit |
| IMT          | Intima media thickness |
| IPAP         | Inspiratory positive airway pressure |
| IPPV         | Intermittent positive pressure ventilation |
| ITE          | Inspiratory triggering efforts |
| Leak<sub>i</sub> | Different definitions of air leakage (i=1,2,3) |
| LVEF         | Left ventricular ejection fraction |
| MAC          | Mechanically assisted coughing |
| MEP          | Maximal expiratory pressure |
| MIC          | Maximum insufflation capacity |
| MIP          | Maximal inspiratory pressure |
| MMRC         | Modified medical research concil |
| MRSA         | Methicillin resistant Staphylococcus aureus |
| MV           | Mechanical ventilation |
| MWD          | 6-minute walking distance |
| N            | Nasal |
| NIMV         | Noninvasive mechanical ventilation |
| NIPPV        | Noninvasive positive pressure ventilation |
| NIPSV        | Noninvasive pressure support ventilation |
| NIV          | Noninvasive ventilation |
| NMD          | Neuromuscular weakness |
| NNPV         | Noninvasive positive pressure |
| NO           | Nasal oral |
| NPPV         | Noninvasive positive pressure ventilation |
| NPSV         | Noninvasive pressure support ventilation |
| ON           | Oronasal |
| OLTx         | Liver transplantation |
| OSA          | Obstructive sleep apnea |
| P[A = a]O₂   | Arterial oxygen pressure gradient |
| Abbreviation | Definition |
|--------------|------------|
| PaCO₂        | Carbon dioxide tension |
| PaO₂         | Arterial pressure of oxygen |
| PAP          | Positive airway pressure |
| PAV          | Proportional assist ventilation |
| PCV          | Pressure controlled ventilation |
| PEEP         | Positive end expiratory pressure |
| PPO          | Potentially pathogenic organism |
| PSV          | Pressure support ventilation |
| PTP          | Di pressure time product |
| RASS Score   | Richmond agitation sedation scale score |
| R<sub>CPAP</sub> | Resistance of the CPAP interface |
| RCTs         | Randomized controlled trials |
| RDI          | Respiratory disturbance index |
| RDS          | Respiratory distress syndrome |
| REM          | Rapid eye movement |
| R<sub>Leak</sub> | Air leakage resistance |
| RR           | Respiratory rate |
| SBT          | Spontaneous breathing trial |
| SCI          | Spinal cord injury |
| SDB          | Sleep disordered breathing |
| SGRQ         | St. George’s respiratory questionnaire |
| SINP         | Sniff nasal inspiratory pressure |
| SMA1         | Spinal muscular atrophy type 1 |
| SMT          | Standard medical treatment |
| SNIPPV       | Synchronized nasal intermittent positive pressure ventilation |
| SpO₂         | Oxygen hemoglobin saturation |
| T<sub>exp</sub> | Expiratory time |
| TFM          | Total face mask |
| T<sub>i</sub>  | Inspiratory time |
| T<sub>i</sub>/T<sub>tot</sub> | Inspiratory time/total time |
| T<sub>i</sub>  | Inspiratory time |
| T<sub>insp</sub> | Inspiratory time |
| TNi          | Treatment with nasal insufflation |
| TPPV         | Tracheostomy positive pressure ventilation |
| TV           | Tidal volume |
| V<sub>insp</sub> | Inspired volume |
| VAP          | Ventilation-associated pneumonia |
| V/C₀<sub>₂</sub> | Patient’s carbon dioxide metabolic production |
| V/Q          | Ventilation/perfusion ratio |
| VC           | Vital capacity |
| VD/Vₜ        | Vital volume ratio |
| V<sub>exp</sub> | Expired volume |
| VFBA         | Ventilator-free breathing ability |
| VFBT         | Ventilator free breathing time |
| Vₜ           | Tidal volume |
| Abbreviation      | Description                                      |
|------------------|--------------------------------------------------|
| $\dot{V}_{\text{pat}}$ | airflow of the patient                           |
| $\dot{V}_{\text{meas}}$ | flow measured by the flow sensor                 |
| $\dot{V}_{\text{Leak}}$ | leakage flow                                     |
| $\dot{V}_{E}$     | minute ventilation                               |
| $\delta \dot{V}_{\text{exp}}$ | volume error of the displayed expiratory volume |
| $\max \dot{V}_{\text{CPAP}}$ | maximal CPAP flow                               |
| $\dot{V}_{\text{Pat, means}}$ | measured patient flow                            |
| QOL              | quality of life                                  |
| WOB              | work of breathing                                |