

# Clinical literature

NAVA, NIV NAVA  
and Edi monitoring  
for adult patients



→ **Meta-analyses & Systematic reviews**

→ **Randomized controlled trials**

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Promoting weaning & extubation

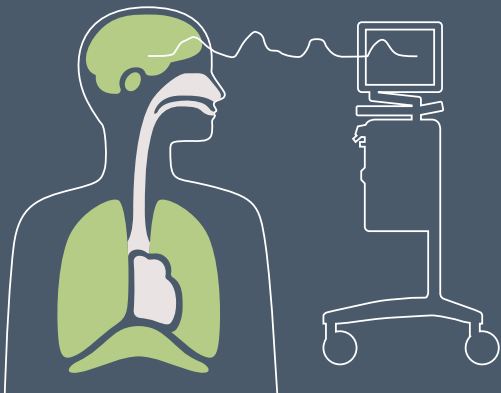
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# Meta-analyses & systematic reviews

Year	Article title	Author	Patients	No	Modes
2019	<a href="#">Neurally adjusted ventilatory assist versus pressure support ventilation in patient-ventilator interaction and clinical outcomes: A meta-analyses of clinical trials.</a>	Chen	Mixed adults	522	NAVA NIV NAVA
2019	<a href="#">The Effectiveness and Safety of Neurally Adjusted Ventilatory Assist Mechanical Ventilation Compared to Pressure Support Ventilation in Optimizing Patient Ventilator Synchrony in Critically ill Patients: a Systematic Review and Meta-Analyses.</a>	Patthum	Mixed adults	331	NAVA
2019	<a href="#">Effect of Neurally Adjusted Ventilatory Assist on Patient-Ventilator Interaction in Mechanically Ventilated Adults: A Systematic Review and Meta-Analyses.</a>	Pettenuzzo	Mixed adults	398	NAVA NIV NAVA
2018	<a href="#">Proportional modes versus pressure support ventilation: A systematic review and meta-analyses.</a>	Kataoka	Mixed adults	668	NAVA

# Randomized controlled trials

Year	Article title	Author	Patients	No	Modes
2019	<a href="#">Neurally-Adjusted Ventilatory Assist Versus Noninvasive Pressure Support Ventilation in COPD Exacerbation: The NAVA-NICE Trial.</a>	Tajamul	COPD (AHRF)	40	NIV NAVA
2019	<a href="#">Control of respiratory drive by extracorporeal CO<sub>2</sub> removal in acute exacerbation of COPD breathing on non-invasive NAVA.</a>	Karagiannidis	AECOPD	20	NIV NAVA
2016	<a href="#">Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.</a>	Demoule	ARF	128	NAVA
2016	<a href="#">A randomized clinical trial of neurally adjusted ventilatory assist versus conventional weaning mode in patients with COPD and prolonged mechanical ventilation.</a>	Kuo	COPD Prolonged MV	33	NAVA



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# Health economy

Year	Article title	Author	Patients	No	Modes
2016	<a href="#">Health economic modeling of the potential cost saving effects of Neurally Adjusted Ventilator Assist.</a>	Hjelmgren	Mixed adults	–	NAVA

# Detecting asynchrony

Year	Article title	Author	Patients	No	Modes
2017	<a href="#">Efficacy of ventilator waveform observation for detection of patient-ventilator asynchrony during NIV: a multicentre study.</a>	Longhini	ARF	40	Edi mon
2017	<a href="#">Prevalence and Prognosis Impact of Patient-Ventilator Asynchrony in Early Phase of Weaning according to Two Detection Methods.</a>	Rolland-Debord	ARF	103	Edi mon NAVA
2017	<a href="#">Detection of Ventilator Autotriggering by an Esophageal Catheter Used to Monitor the Neural Input and Diaphragm Excitation.</a>	Sangha	Mixed adults	4	Edi mon
2013	<a href="#">Mechanical ventilation-induced reverse-triggered breaths: a frequently unrecognized form of neuromechanical coupling.</a>	Akoumianaki	ARDS	8	Edi mon
2013	<a href="#">Patient-ventilator interaction in ARDS patients with extremely low compliance undergoing ECMO: a novel approach based on diaphragm electrical activity.</a>	Mauri	ARDS (severe)	10	Edi mon NAVA
2013	<a href="#">An automated and standardized neural index to quantify patient-ventilator interaction.</a>	Sinderby	ARF	24	Edi mon
2011	<a href="#">Efficacy of ventilator waveforms observation in detecting patient-ventilator asynchrony.</a>	Colombo	ARF	24	Edi mon



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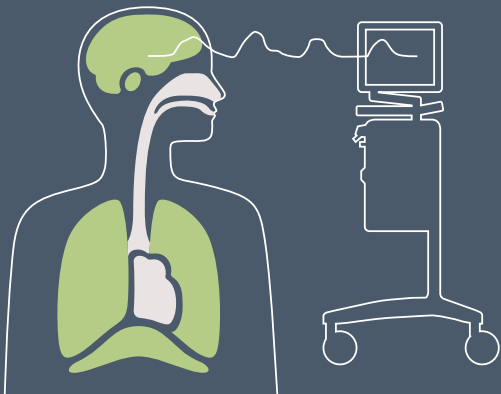
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2017	<a href="#">Remifentanyl effects on respiratory drive and timing during pressure support ventilation and neurally adjusted ventilatory assist.</a>	Costa	Mixed adults	13	Edi mon NAVA
2017	<a href="#">Effects of Propofol on Respiratory Drive and Patient-ventilator Synchrony during Pressure Support Ventilation in Postoperative Patients: A Prospective Study.</a>	Liu	Post-operative	8	Edi mon NAVA
2017	<a href="#">Partial Neuromuscular Blockade during Partial Ventilatory Support in Sedated Patients with High Tidal Volumes.</a>	Doorduyn	ARDS (moderate to mild)	10	Edi mon NAVA
2016	<a href="#">Effects of dexmedetomidine and propofol on patient-ventilator interaction in difficult-to-wean, mechanically ventilated patients: a prospective, open-label, randomised, multicentre study.</a>	Conti	Difficult weaning	20	Edi mon NAVA
2014	<a href="#">Effects of propofol on patient-ventilator synchrony and interaction during pressure support ventilation and neurally adjusted ventilatory assist.</a>	Vaschetto	ARF	14	Edi mon NAVA
2014	<a href="#">Effect of flumazenil on diaphragm electrical activation during weaning from mechanical ventilation after acute respiratory distress syndrome.</a>	Roze	ARDS (moderate to mild)	13	Edi mon NAVA



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Year	Article title	Author	Patients	No	Modes
2019	<a href="#">Neurally adjusted ventilatory assist (NAVA) versus pressure support ventilation: patient-ventilator interaction during invasive ventilation delivered by tracheostomy.</a>	Lamouret	Prolonged weaning (tracheostomy)	61	Edi mon NAVA
2019	<a href="#">Neurally-Adjusted Ventilatory Assist Versus Noninvasive Pressure Support Ventilation in COPD Exacerbation: The NAVA-NICE Trial.</a>	Tajamul	COPD (AHRF)	40	NIV NAVA Edi mon
2017	<a href="#">Neurally Adjusted Ventilatory Assist (NAVA) or Pressure Support Ventilation (PSV) during spontaneous breathing trials in critically ill patients: a crossover trial.</a>	Ferreria	Mixed adults (first SBT)	20	NAVA Edi mon
2017	<a href="#">New setting of neurally adjusted ventilatory assist for noninvasive ventilation by facial mask: A physiologic study.</a>	Longhini	Mixed adults (IMV > 48 h)	14	NIV NAVA Edi mon
2017	<a href="#">Effects of neurally adjusted ventilatory assist on air distribution and dead space in patients with acute exacerbation of chronic obstructive pulmonary disease.</a>	Sun	AECOPD	15	NAVA Edi mon
2016	<a href="#">Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.</a>	Carteaux	ARF (recovery)	11	NAVA
2016	<a href="#">Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.</a>	Demoule	ARF (recovery)	128	NAVA
2016	<a href="#">Impact of prolonged assisted ventilation on diaphragmatic efficiency: NAVA versus PSV.</a>	Di Mussi	ARF (CMV > 72 h)	25	NAVA Edi mon
2016	<a href="#">A randomized clinical trial of neurally adjusted ventilatory assist versus conventional weaning mode in patients with COPD and prolonged mechanical ventilation.</a>	Kuo	COPD Prolonged MV	33	NIV
2015	<a href="#">Assisted Ventilation in Patients with Acute Respiratory Distress Syndrome: Lung-distending Pressure and Patient-Ventilator Interaction.</a>	Doorduyn	ARDS (moderate to mild)	12	NAVA Edi mon
2015	<a href="#">Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.</a>	Schmidt	ARF (IMV > 48 h)	16	NAVA Edi mon
2015	<a href="#">Patient-ventilator synchrony in Neurally Adjusted Ventilatory Assist (NAVA) and Pressure Support Ventilation (PSV): A prospective observational study.</a>	Yonis	Difficult weaning	30	NAVA Edi mon

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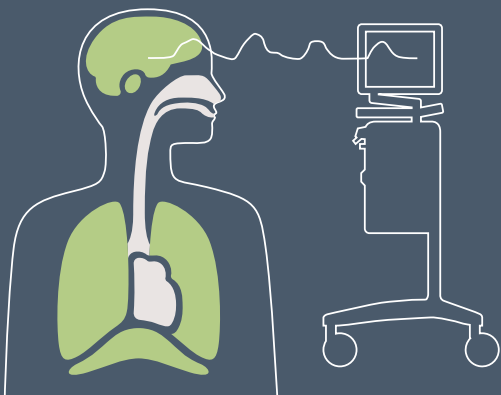
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Year	Article title	Author	Patients	No	Modes
2014	<a href="#">Physiologic comparison of neurally adjusted ventilator assist, proportional assist and pressure support ventilation in critically ill patients.</a>	Akoumianaki	Mixed adults	17	NAVA
2014	<a href="#">Automated patient-ventilator interaction analyses during neurally adjusted non-invasive ventilation and pressure support ventilation in chronic obstructive pulmonary disease.</a>	Doorduyn	COPD	12	NIV NAVA Edi mon
2013	<a href="#">Neurally adjusted ventilatory assist vs pressure support ventilation for noninvasive ventilation during acute respiratory failure: a crossover physiologic study.</a>	Bertrand	ARF	13	NAVA Edi mon
2013	<a href="#">Physiologic response to various levels of pressure support and NAVA in prolonged weaning.</a>	Vagheggini	Prolonged weaning (tracheostomy)	14	NAVA Edi mon
2012	<a href="#">Neurally adjusted ventilatory assist (NAVA) improves patient-ventilator interaction during non-invasive ventilation delivered by face mask.</a>	Piquilloud	ARF	13	NIV NAVA
2012	<a href="#">Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.</a>	Schmidt	ARF (NIV post-extubation)	17	NIV NAVA Edi mon
2011	<a href="#">Noninvasive ventilation through a helmet in postextubation hypoxemic patients: physiologic comparison between neurally adjusted ventilatory assist and pressure support ventilation.</a>	Camarotta	ARF (IMV > 48 h)	10	NIV NAVA Edi mon
2011	<a href="#">Sleep quality in mechanically ventilated patients: comparison between NAVA and PSV modes.</a>	Delisle	ARF (PSV > 24 h)	14	NAVA Edi mon
2011	<a href="#">Neurally adjusted ventilatory assist improves patient-ventilator interaction.</a>	Piquilloud	ARF (IMV by PSV)	25	NAVA Edi mon
2010	<a href="#">Patient-ventilator interaction during pressure support ventilation and neurally adjusted ventilatory assist.</a>	Spahija	ARF	14	NAVA Edi mon
2010	<a href="#">Neurally adjusted ventilatory assist in patients recovering spontaneous breathing after acute respiratory distress syndrome: physiological evaluation.</a>	Terzi	ARDS (severe to moderate)	11	NAVA
2008	<a href="#">Physiologic response to varying levels of pressure support and neurally adjusted ventilatory assist in patients with acute respiratory failure.</a>	Colombo	ARF (IMV by CSV)	14	NAVA Edi mon

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Year	Article title	Author	Patients	No	Modes
2016	<a href="#">Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.</a>	Carteaux	ARF (recovery)	11	NAVA
2016	<a href="#">Impact of prolonged assisted ventilation on diaphragmatic efficiency: NAVA versus PSV.</a>	Di Mussi	ARF (CMV > 72 h)	25	NAVA
2015	<a href="#">Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.</a>	Schmidt	ARF (IMV > 48 h)	16	NAVA
2015	<a href="#">Patient-ventilator synchrony in Neurally Adjusted Ventilatory Assist (NAVA) and Pressure Support Ventilation (PSV): a prospective observational study.</a>	Yonis	Difficult weaning	30	NAVA
2014	<a href="#">Physiologic comparison of neurally adjusted ventilator assist, proportional assist and pressure support ventilation in critically ill patients.</a>	Akoumianaki	Mixed adults	17	NAVA
2013	<a href="#">Effect of ventilatory variability on occurrence of central apneas.</a>	Delisle	ARF (PSV > 24 h)	14	NAVA
2013	<a href="#">NAVA enhances tidal volume and diaphragmatic electro-myographic activity matching: a Range90 analyses of supply and demand.</a>	Moorhead	ARF (CSV by PSV)	22	NAVA
2013	<a href="#">Physiologic response to various levels of pressure support and NAVA in prolonged weaning.</a>	Vaghegini	Prolonged weaning (tracheostomy)	14	NAVA
2012	<a href="#">Respiratory pattern during neurally adjusted ventilatory assist in acute respiratory failure patients.</a>	Patroniti	ARF (IMV by CSV)	15	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist in critically ill postoperative patients: a crossover randomized study.</a>	Coisel	Post-operative (PSV > 48 h)	12	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist increases respiratory variability and complexity in acute respiratory failure.</a>	Schmidt	ARF (CSV by NAVA)	12	NAVA
2009	<a href="#">Titration and implementation of neurally adjusted ventilatory assist in critically ill patients</a>	Brander	Mixed adults (P/F < 300)	15	NAVA



# Lung-protective ventilation

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Year	Article title	Author	Patients	No	Modes
2019	<a href="#">Neurally adjusted ventilatory assist (NAVA) versus pressure support ventilation: patient-ventilator interaction during invasive ventilation delivered by tracheostomy.</a>	Lamouret	Prolonged weaning (tracheostomy)	61	NAVA
2017	<a href="#">Partial Neuromuscular Blockade during Partial Ventilatory Support in Sedated Patients with High Tidal Volumes.</a>	Doorduyn	ARDS (moderate to mild)	10	NAVA
2016	<a href="#">Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.</a>	Carteaux	ARF (recovery)	11	NAVA
2015	<a href="#">Assisted Ventilation in Patients with Acute Respiratory Distress Syndrome: Lung-distending Pressure and Patient-Ventilator Interaction.</a>	Doorduyn	ARDS (moderate to mild)	12	NAVA
2015	<a href="#">Assessment of patient-ventilator breath contribution during neurally adjusted ventilatory assist in patients with acute respiratory failure.</a>	Liu	ARF (CMV by A/C)	12	NAVA
2015	<a href="#">Relation between peak and integral of the diaphragm electromyographic activity at different levels of support during weaning from mechanical ventilation: a physiologic study.</a>	Muttini	SBT candidates (IMV > 96 h)	18	NAVA
2015	<a href="#">Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.</a>	Schmidt	ARF (IMV > 48 h)	16	NAVA
2014	<a href="#">Heart-lung interactions during neurally adjusted ventilatory assist.</a>	Berger	Cardiac post-operative	10	NAVA
2014	<a href="#">Increased diaphragmatic contribution to inspiratory effort during neurally adjusted ventilatory assistance versus pressure support: An electromyographic study.</a>	Cecchini	ARF (IMV by PSV)	12	NAVA
2013	<a href="#">Ventilation distribution measured with EIT at varying levels of pressure support and Neurally Adjusted Ventilatory Assist in patients with ALI.</a>	Blankman	ALI (CSV by PSV)	10	NAVA Edi mon
2013	<a href="#">Effects of Neurally Adjusted Ventilatory Assist (NAVA) levels in non-invasive ventilated patients: titrating NAVA levels with electric diaphragmatic activity and tidal volume matching.</a>	Chiew	AECOPD (on NIV)	12	NIV NAVA
2010	<a href="#">Autoregulation of ventilation with neurally adjusted ventilatory assist on extracorporeal lung support.</a>	Karagiannidis	ARDS (severe)	6	NAVA

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Year	Article title	Author	Patients	No	Modes
2013	<a href="#">Physiologic response to various levels of pressure support and NAVA in prolonged weaning.</a>	Vagheggin	Prolonged weaning (tracheostomy)	14	NAVA
2012	<a href="#">Respiratory pattern during neurally adjusted ventilatory assist in acute respiratory failure patients.</a>	Patroniti	ARF (IMV by CSV)	15	NAVA
2012	<a href="#">Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.</a>	Schmidt	ARF (NIV post-extubation)	17	NIV NAVA
2011	<a href="#">Neurally adjusted ventilatory assist vs. pressure support ventilation in critically ill patients: an observational study.</a>	Barwing	Mixed adults (IMV > 24 h on PSV)	20	NAVA
2011	<a href="#">Noninvasive ventilation through a helmet in postextubation hypoxemic patients: physiologic comparison between neurally adjusted ventilatory assist and pressure support ventilation.</a>	Cammarota	ARF (IMV > 48 h)	10	NIV NAVA
2011	<a href="#">Neurally adjusted ventilatory assist in patients with critical illness-associated polyneuromyopathy.</a>	Tuchscherer	CIPM	15	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist in critically ill postoperative patients: a crossover randomized study.</a>	Coisel	Post-op (PSV > 48 h)	12	NAVA
2010	<a href="#">Physiologic response to changing positive end-expiratory pressure during neurally adjusted ventilatory assist in sedated, critically ill adults.</a>	Passath	Mixed adults (IMV > 48 h on PSV)	20	NAVA Edi mon
2010	<a href="#">Patient-ventilator interaction during pressure support ventilation and neurally adjusted ventilatory assist.</a>	Spahija	ARF	9	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist increases respiratory variability and complexity in acute respiratory failure.</a>	Schmidt	ARF (CSV by NAVA)	12	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist in patients recovering spontaneous breathing after acute respiratory distress syndrome: physiological evaluation.</a>	Terzi	ARDS (severe to moderate)	11	NAVA
2009	<a href="#">Titration and implementation of neurally adjusted ventilatory assist in critically ill patients.</a>	Brander	Mixed adults (P/F < 300)	15	NAVA

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Year	Article title	Author	Patients	No	Modes
2017	<a href="#">Neurally Adjusted Ventilatory Assist (NAVA) or Pressure Support Ventilation (PSV) during spontaneous breathing trials in critically ill patients: a crossover trial.</a>	Ferreira	Mixed adults (first SBT)	20	NAVA
2017	<a href="#">New setting of neurally adjusted ventilatory assist for noninvasive ventilation by facial mask: A physiologic study.</a>	Longhini	Mixed adults (IMV > 48 h)	14	NIV NAVA
2017	<a href="#">Effects of neurally adjusted ventilatory assist on air distribution and dead space in patients with acute exacerbation of chronic obstructive pulmonary disease.</a>	Sun	AECOPD	15	NAVA
2016	<a href="#">Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.</a>	Demoule	ARF	128	NAVA
2016	<a href="#">Control of Respiratory Drive and Effort in Extracorporeal Membrane Oxygenation Patients Recovering from Severe Acute Respiratory Distress Syndrome.</a>	Mauri	ARDS (severe)	8	NAVA Edi mon
2015	<a href="#">Assisted Ventilation in Patients with Acute Respiratory Distress Syndrome: Lung-distending Pressure and Patient-Ventilator Interaction.</a>	Doorduyn	ARDS (moderate to mild)	12	NAVA
2015	<a href="#">Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.</a>	Schmidt	ARF (IMV > 48 h)	16	NAVA
2015	<a href="#">Patient-ventilator synchrony in Neurally Adjusted Ventilatory Assist (NAVA) and Pressure Support Ventilation (PSV): a prospective observational study.</a>	Yonis	Difficult weaning	30	NAVA
2014	<a href="#">Physiologic comparison of neurally adjusted ventilator assist, proportional assist and pressure support ventilation in critically ill patients.</a>	Akoumianaki	Mixed adults	17	NAVA
2014	<a href="#">Heart-lung interactions during neurally adjusted ventilatory assist.</a>	Berger	Cardiac post-operative	10	NAVA
2014	<a href="#">Automated patient-ventilator interaction analyses during neurally adjusted non-invasive ventilation and pressure support ventilation in chronic obstructive pulmonary disease.</a>	Doorduyn	COPD	12	NIV NAVA
2013	<a href="#">Neurally adjusted ventilatory assist vs pressure support ventilation for noninvasive ventilation during acute respiratory failure: A crossover physiologic study.</a>	Bertrand	ARF	13	NAVA

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Year	Article title	Author	Patients	No	Modes
2012	<a href="#">Neurally adjusted ventilatory assist (NAVA) improves patient-ventilator interaction during non-invasive ventilation delivered by face mask.</a>	Piquilloud	ARF	13	NIV NAVA
2011	<a href="#">Noninvasive ventilation through a helmet in postextubation hypoxemic patients: physiologic comparison between neurally adjusted ventilatory assist and pressure support ventilation.</a>	Cammarota	ARF (IMV > 48 h)	10	NIV NAVA
2011	<a href="#">Neurally adjusted ventilatory assist vs. pressure support ventilation in critically ill patients: An observational study.</a>	Barwing	Mixed adults (IMV > 24 h on PSV)	20	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist in critically ill postoperative patients: A crossover randomized study.</a>	Coisel	Post-op (PSV > 48 h)	12	NAVA
2010	<a href="#">Patient-ventilator interaction during pressure support ventilation and neurally adjusted ventilatory assist.</a>	Spahija	ARF	9	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist increases respiratory variability and complexity in acute respiratory failure.</a>	Schmidt	ARF (CSV by NAVA)	12	NAVA
2010	<a href="#">Neurally adjusted ventilatory assist in patients recovering spontaneous breathing after acute respiratory distress syndrome: physiological evaluation.</a>	Terzi	ARDS (severe to moderate)	11	NAVA
2009	<a href="#">Titration and implementation of neurally adjusted ventilatory assist in critically ill patients.</a>	Brander	Mixed adults (P/F < 300)	15	NAVA

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Year	Article title	Author	Patients	No	Modes
2019	<a href="#">NAVA and PAV for lung and diaphragm protection.</a>	Vaporidi	–	–	NAVA
2019	<a href="#">Information conveyed by electrical diaphragmatic activity during unstressed, stressed and assisted spontaneous breathing: A physiological study.</a>	Piquilloud	Healthy volunteers	15	Edi mon NIV NAVA
2018	<a href="#">Standardized Unloading of Respiratory Muscles during Neurally Adjusted Ventilatory Assist: A Randomized Crossover Pilot Study.</a>	Campoccia-Jalde	Neurological	10	NAVA
2018	<a href="#">Mechanical Ventilation-induced Diaphragm Atrophy Strongly Impacts Clinical Outcomes.</a>	Goligher	Mixed adults	24	Edi mon
2017	<a href="#">Can proportional ventilation modes facilitate exercise in critically ill patients? A physiological cross-over study: Pressure support versus proportional ventilation during lower limb exercise in ventilated critically ill patients.</a>	Akoumianaki	Mixed adults (CSV by PSV)	4	NAVA
2016	<a href="#">Impact of prolonged assisted ventilation on diaphragmatic efficiency: NAVA versus PSV.</a>	Di Mussi	ARF (CMV > 72 h)	25	NAVA
2016	<a href="#">Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.</a>	Carteaux	ARDS (recovery)	11	NAVA
2015	<a href="#">Assessment of patient-ventilator breath contribution during neurally adjusted ventilatory assist in patients with acute respiratory failure.</a>	Liu	ARF (CMV by A/C)	12	NAVA
2014	<a href="#">Increased diaphragmatic contribution to inspiratory effort during neurally adjusted ventilatory assistance versus pressure support: An electromyographic study.</a>	Cecchini	ARF (IMV by PSV)	12	NAVA
2014	<a href="#">Clinical assessment of auto-positive end-expiratory pressure by diaphragmatic electrical activity during pressure support and neurally adjusted ventilatory assist.</a>	Bellani	Mixed adults (Auto-PEEP)	10	NAVA
2013	<a href="#">Ventilation distribution measured with EIT at varying levels of pressure support and Neurally Adjusted Ventilatory Assist in patients with ALI.</a>	Blankman	ALI (CSV by PSV)	10	NAVA Edi mon
2010	<a href="#">Physiologic response to changing positive end-expiratory pressure during neurally adjusted ventilatory assist in sedated, critically ill adults.</a>	Passath	Mixed adults (IMV > 48 h on PSV)	20	NAVA Edi mon



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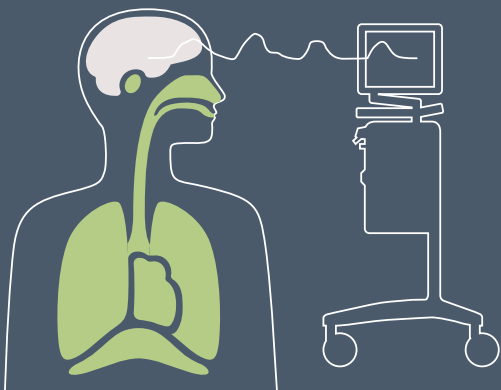
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Year	Article title	Author	Patients	No	Modes
2019	<a href="#">Neurally-Adjusted Ventilatory Assist for Noninvasive Ventilation via a Helmet in Subjects With COPD Exacerbation: A Physiologic Study.</a>	Longhini	COPD	10	NIV NAVA
2017	<a href="#">New setting of neurally adjusted ventilatory assist for noninvasive ventilation by facial mask: a physiologic study.</a>	Longhini	Mixed adults (IMV > 48 h)	14	NIV NAVA
2016	<a href="#">Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.</a>	Demoule	ARDS (recovery)	128	NAVA
2014	<a href="#">Automated patient-ventilator interaction analyses during neurally adjusted non-invasive ventilation and pressure support ventilation in chronic obstructive pulmonary disease.</a>	Doorduyn	COPD	12	NIV NAVA
2013	<a href="#">Neurally adjusted ventilatory assist vs pressure support ventilation for noninvasive ventilation during acute respiratory failure: A crossover physiologic study.</a>	Bertrand	ARF	13	NAVA
2013	<a href="#">Effect of ventilatory variability on occurrence of central apneas.</a>	Delisle	ARF (PSV > 24 h)	14	NAVA
2012	<a href="#">Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.</a>	Schmidt	ARF (NIV post-extubation)	17	NIV NAVA



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Year	Article title	Author	Patients	No	Modes
2018	<a href="#">Standardized Unloading of Respiratory Muscles during Neurally Adjusted Ventilatory Assist: A Randomized Crossover Pilot Study.</a>	Campoccia-Jalde	Neurological	10	NAVA
2018	<a href="#">High-flow nasal cannula oxygen therapy decreases postextubation neuroventilatory drive and work of breathing in patients with chronic obstructive pulmonary disease.</a>	Di Mussi	COPD (AHRF)	14	Edi mon
2018	<a href="#">Respiratory Muscle Effort during Expiration in Successful and Failed Weaning from Mechanical Ventilation.</a>	Doorduyn	SBT (IMV > 72 h)	20	Edi mon
2018	<a href="#">Mechanical Ventilation-induced Diaphragm Atrophy Strongly Impacts Clinical Outcomes.</a>	Goligher	Mixed adults	24	Edi mon
2017	<a href="#">Monitoring the electric activity of the diaphragm during noninvasive positive pressure ventilation: a case report.</a>	Diniz-Silva	COPD (post-extubation)	1	Edi mon
2017	<a href="#">Neurally Adjusted Ventilatory Assist (NAVA) or Pressure Support Ventilation (PSV) during spontaneous breathing trials in critically ill patients: a crossover trial.</a>	Ferreria	Mixed adults (first SBT)	20	NAVA
2017	<a href="#">Severe Acute Respiratory Distress Syndrome Using Electrical Activity of the Diaphragm on Weaning from Extracorporeal Membrane Oxygenation.</a>	Okahara	ARDS (severe)	1	Edi mon
2017	<a href="#">Monitoring of Electrical Activity of the Diaphragm Shows Failure of T-Piece Trial Earlier than Protocol-Based Parameters in Prolonged Weaning in Non-communicative Neurological Patients.</a>	Trapp	Neurological Prolonged weaning	29	Edi mon
2016	<a href="#">Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.</a>	Demoule	ARF (recovery)	128	NAVA
2016	<a href="#">Roles of neurally adjusted ventilatory assist in improving gas exchange in a severe acute respiratory distress syndrome patient after weaning from extracorporeal membrane oxygenation: A case report.</a>	Goto	ARDS (severe)	1	NAVA
2016	<a href="#">Control of Respiratory Drive and Effort in Extracorporeal Membrane Oxygenation Patients Recovering from Severe Acute Respiratory Distress Syndrome.</a>	Mauri	ARDS (severe)	8	NAVA EDI mon

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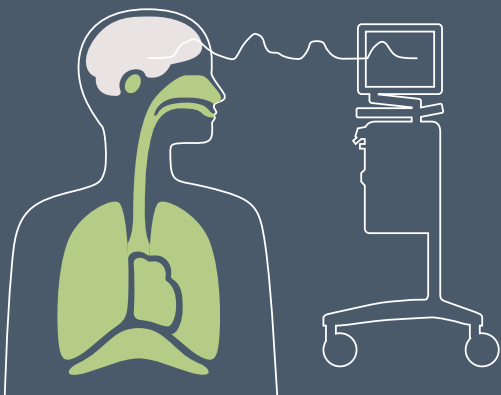
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Abbreviations



# Promoting weaning & extubation

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Year	Article title	Author	Patients	No	Modes
2016	<a href="#">A randomized clinical trial of neurally adjusted ventilatory assist versus conventional weaning mode in patients with COPD and prolonged mechanical ventilation.</a>	Kuo	COPD Prolonged weaning	33	NAVA
2015	<a href="#">Neurally Adjusted Ventilatory Assist During Weaning From Respiratory Support in a Case of Guillain-Barré Syndrome.</a>	Dugernier	CIPM GBS	1	Edi mon NAVA
2015	<a href="#">Relation between peak and integral of the diaphragm electromyographic activity at different levels of support during weaning from mechanical ventilation: a physiologic study.</a>	Muttini	SBT candidates (IMV > 96 h)	18	NAVA
2014	<a href="#">Clinical assessment of auto-positive end-expiratory pressure by diaphragmatic electrical activity during pressure support and neurally adjusted ventilatory assist.</a>	Bellani	Mixed adults (Auto-PEEP)	10	NAVA
2013	<a href="#">Electrical activity of the diaphragm (EAdi) as a monitoring parameter in difficult weaning from respirator: a pilot study.</a>	Barwing	Difficult weaning SBT ready	18	Edi mon
2013	<a href="#">Estimation of patient's inspiratory effort from the electrical activity of the diaphragm.</a>	Bellani	Mixed adults (CSV on PSV/ NAVA)	10	Edi mon
2013	<a href="#">Neuro-ventilatory efficiency during weaning from mechanical ventilation using neurally adjusted ventilatory assist.</a>	Roze	ARDS/ COPD (IMV > 96 h)	12	NAVA Edi mon
2012	<a href="#">Diaphragm electromyographic activity as a predictor of weaning failure.</a>	Dres	Mixed adults SBT ready	57	Edi mon
2012	<a href="#">Neuroventilatory efficiency and extubation readiness in critically ill patients.</a>	Liu	Mixed adults SBT ready	33	Edi mon
2012	<a href="#">Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.</a>	Schmidt	ARF (NIV post- extubation)	17	NIV NAVA
2011	<a href="#">Daily titration of neurally adjusted ventilatory assist using the diaphragm electrical activity.</a>	Roze	Mixed adults (IMV > 96 h)	15	NAVA Edi mon

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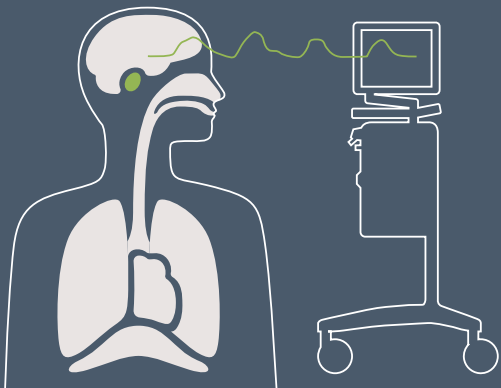
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→ **Abbreviations**

# Abbreviations

Abbreviation	Meaning
AECOPD	Acute exacerbation of chronic obstructive pulmonary disease
ALI	Acute lung injury
AHRF	Acute hypercapnic respiratory failure
ARDS	Acute respiratory distress syndrome
ARF	Acute respiratory failure
A/C	Assist/control ventilation
CIPM	Critical illness polyneuromyopathy
COPD	Chronic obstructive pulmonary disease
CMV	Controlled mechanical ventilation
CSV	Continuous spontaneous ventilation
Edi	Electrical activity of the diaphragm
Edi mon	Edi monitoring
IMV	Invasive mechanical ventilation
NAVA	Neurally adjusted ventilatory assist
NIV	Non-invasive ventilation
NIV NAVA	Non-invasive Neurally adjusted ventilatory assist
PEEP	Positive end-expiratory pressure
P/F	Ratio of arterial oxygen partial pressure to fractional inspired oxygen
PSV	Pressure support ventilation
SBT	Spontaneous breathing trial





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