



Clinical literature

NAVA, NIV NAVA
and Edi monitoring
for adult patients



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Year	Article title	Author	Patients	No	Modes	Link
2022	Neurally-Adjusted Ventilatory Assist Versus Pressure Support Ventilation During Noninvasive Ventilation	Weiyun	Mixed adults	615	NIV NAVA	
2022	Neurally Adjusted Ventilatory Assist vs. Conventional Mechanical Ventilation in Adults and Children With Acute Respiratory Failure: A Systematic Review and Meta-Analysis.	Wu	Mixed adults and children	926	NAVA NIV NAVA	
2021	Neurally adjusted ventilatory assist as a weaning mode for adults with invasive mechanical ventilation: a systematic review and meta-analysis.	Yuan	Mixed adults	693	NAVA	
2021	Comparison of advanced closed-loop ventilation modes with pressure support ventilation for weaning from mechanical ventilation in adults: A systematic review and meta-analysis.	Kampolis	Mixed adults	N/A	NAVA	
2019	Neurally adjusted ventilatory assist versus pressure support ventilation in patient-ventilator interaction and clinical outcomes: a meta-analyses of clinical trials.	Chen	Mixed adults	522	NAVA NIV NAVA	
2019	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.	Patthum	Mixed adults	331	NAVA	
2019	Effect of Neurally Adjusted Ventilatory Assist on Patient-Ventilator Interaction in Mechanically Ventilated Adults: A Systematic Review and Meta-Analyses.	Pettenuzzo	Mixed adults	398	NAVA NIV NAVA	
2018	Proportional modes versus pressure support ventilation: a systematic review and meta-analyses.	Kataoka	Mixed adults	668	NAVA	



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Year	Article title	Author	Patients	No	Modes	Link
2025	Application of neurally adjusted ventilatory assist (NAVA): a narrative review.	Tian	Adult/Pediatric	N/A	NAVA Edi mon	
2025	Proportional modes to hasten weaning.	Bosma	Mixed adults	N/A	NAVA	
2024	Neurally Adjusted Ventilatory Assist Versus Pressure Support Ventilation: A Comprehensive Review.	Mandyam	Mixed adults	N/A	NAVA	
2024	Advanced Respiratory Monitoring during Extracorporeal Membrane Oxygenation	Simonte	Mixed adults	N/A	Edi mon	
2022	Neurally Adjusted Ventilatory Assist in Acute Respiratory Failure – A Narrative Review.	Umbrello	Mixed adults	N/A	NAVA NIV NAVA	
2020	Proportional modes of ventilation: technology to assist physiology.	Jonkmann	Mixed adults	N/A	NAVA	
2020	NAVA and PAV+ for lung and diaphragm protection.	Vaporidi	Mixed adults	N/A	NAVA	



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Year	Article title	Author	Patients	No	Modes	Link
2025	Monitoring of invasive assisted mechanical ventilation: a good clinical practice document by SIAARTI.	Colombo	Mixed adults	N/A	Edi mon	

Health economy

Year	Article title	Author	Patients	No	Modes	Link
2016	Health economic modeling of the potential cost saving effects of Neurally Adjusted Ventilator Assist.	Hjelmgren	Mixed adults	N/A	NAVA	

Implementation science

Year	Article title	Author	Patients	No	Modes	Link
2021	Neurally Adjusted Ventilatory Assist (NAVA) Catheter Usage in a Tertiary Care Center - A 5 Year Experience.	Shyu	Mixed adults	135	NAVA Edi mon	
2020	Implementation of Neurally Adjusted Ventilatory Assist (NAVA): Patient characteristics and staff experiences.	Vahedi	Mixed adults	311	NAVA NIV NAVA	
2020	Factors affecting the use of neurally adjusted ventilatory assist in the adult critical care unit: a clinician survey.	Hadfield	Mixed adults	N/A	NAVA	



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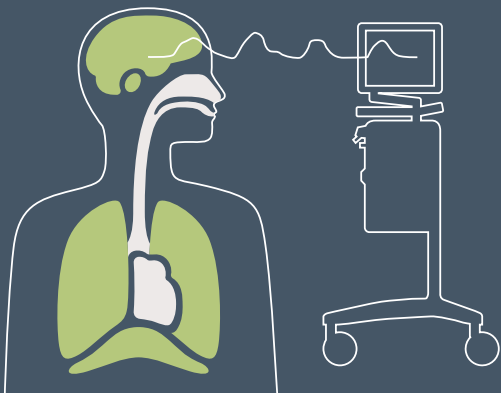
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Year	Article title	Author	Patients	No	Modes	Link
2025	Neurally adjusted ventilatory assisted ventilation compared to pressure support during post-operative weaning of hepatic patients undergoing major abdominal surgeries: a randomized control trial.	Ibrahim	Hepatic Post-op weaning	120	NAVA	📄
2022	Effects of Neurally Adjusted Ventilation Assist (NAVA) and conventional modes of mechanical ventilation on diaphragm functions: A randomized controlled trial.	Hadda	ARF	46	NAVA	📄
2020	Neurally adjusted ventilatory assist in acute respiratory failure: a randomized controlled trial.	Kacmarek	ARF (MV > 72 h)	306	NAVA	📄
2020	Neurally adjusted ventilatory assist versus pressure support ventilation: a randomized controlled feasibility trial performed in patients at risk of prolonged mechanical ventilation.	Hadfield	COPD/HF/ARDS Prolonged MV	78	NAVA	📄
2020	Neurally Adjusted Ventilatory Assist versus Pressure Support Ventilation in Difficult Weaning.	Liu	Difficult weaning	99	NAVA	📄
2020	Comparing Noninvasive Ventilation Delivered Using Neurally-Adjusted Ventilatory Assist or Pressure Support in Acute Respiratory Failure.	Prasad	ARF	100	NIV NAVA	📄
2019	Neurally-Adjusted Ventilatory Assist Versus Noninvasive Pressure Support Ventilation in COPD Exacerbation: The NAVA-NICE Trial.	Tajamul	COPD (AHRF)	40	NIV NAVA	📄
2016	Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.	Demoule	ARF	128	NAVA	📄
2016	A randomized clinical trial of neurally adjusted ventilatory assist versus conventional weaning mode in patients with COPD and prolonged mechanical ventilation.	Kuo	COPD Prolonged MV	33	NAVA	📄



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Year	Article title	Author	Patients	No	Modes	Link
2024	Post-insufflation diaphragm contractions in patients receiving various modes of mechanical ventilation.	Rodrigues	Mixed adults (IMV > 48h)	47	NAVA Edi mon	Link
2021	Duration of diaphragmatic inactivity after endotracheal intubation of critically ill patients.	Sklar	Mixed adults	69	Edi mon	Link
2021	Reverse Triggering Dyssynchrony 24 h after Initiation of Mechanical Ventilation.	Artigas	Mixed adults	39	Edi mon	Link
2020	Continuous assessment of neuro-ventilatory drive during 12 h of pressure support ventilation in critically ill patients.	Di Mussi	Mixed adults	16	Edi mon	Link
2017	Efficacy of ventilator waveform observation for detection of patient-ventilator asynchrony during NIV: a multicentre study.	Longhini	ARF	40	Edi mon	Link
2017	Prevalence and Prognosis Impact of Patient-Ventilator Asynchrony in Early Phase of Weaning according to Two Detection Methods.	Rolland-Debord	ARF	103	Edi mon NAVA	Link
2017	Detection of Ventilator Autotriggering by an Esophageal Catheter Used to Monitor the Neural Input and Diaphragm Excitation.	Sangha	Mixed adults	4	Edi mon	Link
2013	Mechanical ventilation-induced reverse-triggered breaths: a frequently unrecognized form of neuromechanical coupling.	Akoumianaki	ARDS	8	Edi mon	Link
2013	An automated and standardized neural index to quantify patient-ventilator interaction.	Sinderby	ARF	24	Edi mon	Link
2011	Efficacy of ventilator waveforms observation in detecting patient-ventilator asynchrony.	Colombo	ARF	24	Edi mon	Link



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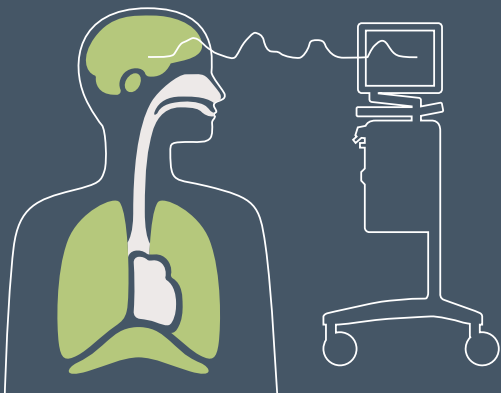
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2021	Duration of diaphragmatic inactivity after endotracheal intubation of critically ill patients.	Sklar	Mixed adults	69	Edi mon	📄
2017	Remifentanil effects on respiratory drive and timing during pressure support ventilation and neurally adjusted ventilatory assist.	Costa	Mixed adults	13	Edi mon NAVA	📄
2017	Effects of Propofol on Respiratory Drive and Patient-ventilator Synchrony during Pressure Support Ventilation in Postoperative Patients: A Prospective Study.	Liu	Post-operative	8	Edi mon NAVA	📄
2017	Partial Neuromuscular Blockade during Partial Ventilatory Support in Sedated Patients with High Tidal Volumes.	Doorduyn	ARDS (moderate to mild)	10	Edi mon NAVA	📄
2016	Effects of dexmedetomidine and propofol on patient-ventilator interaction in difficult-to-wean, mechanically ventilated patients: a prospective, open-label, randomised, multicentre study.	Conti	Difficult weaning	20	Edi mon NAVA	📄
2014	Effects of propofol on patient-ventilator synchrony and interaction during pressure support ventilation and neurally adjusted ventilatory assist.	Vaschetto	ARF	14	Edi mon NAVA	📄
2014	Effect of flumazenil on diaphragm electrical activation during weaning from mechanical ventilation after acute respiratory distress syndrome.	Roze	ARDS (moderate to mild)	13	Edi mon NAVA	📄



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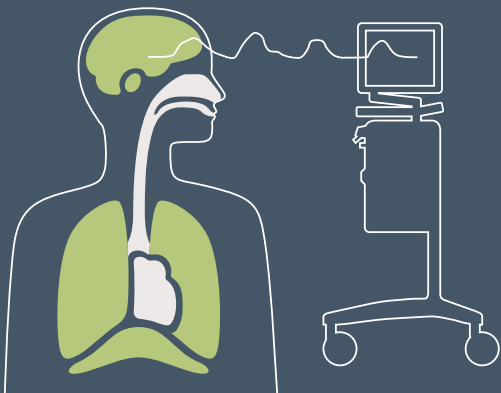
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Year	Article title	Author	Patients	No	Modes	Link
2024	Dyssynchronous diaphragm contractions impair diaphragm function in mechanically ventilated patients.	Coiffard	ABI, ARDS, Sepsis	45	Edi mon	📄
2024	Post-insufflation diaphragm contractions in patients receiving various modes of mechanical ventilation.	Rodrigues	Mixed adults (IMV > 48h)	47	NAVA Edi mon	📄
2019	Neurally adjusted ventilatory assist (NAVA) versus pressure support ventilation: patient-ventilator interaction during invasive ventilation delivered by tracheostomy.	Lamouret	Prolonged weaning (tracheostomy)	61	NAVA Edi mon	📄
2017	Neurally Adjusted Ventilatory Assist (NAVA) or Pressure Support Ventilation (PSV) during spontaneous breathing trials in critically ill patients: a crossover trial.	Ferreria	Mixed adults (first SBT)	20	NAVA Edi mon	📄
2017	New setting of neurally adjusted ventilatory assist for noninvasive ventilation by facial mask: a physiologic study.	Longhini	Mixed adults (IMV > 48 h)	14	NIV NAVA Edi mon	📄
2017	Effects of neurally adjusted ventilatory assist on air distribution and dead space in patients with acute exacerbation of chronic obstructive pulmonary disease.	Sun	AECOPD	15	NAVA Edi mon	📄
2016	Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.	Carteaux	ARF (recovery)	11	NAVA	📄
2016	Impact of prolonged assisted ventilation on diaphragmatic efficiency: NAVA versus PSV.	Di Mussi	ARF (CMV > 72 h)	25	NAVA Edi mon	📄
2015	Assisted Ventilation in Patients with Acute Respiratory Distress Syndrome: Lung-distending Pressure and Patient-Ventilator Interaction.	Doorduyn	ARDS (moderate to mild)	12	NAVA Edi mon	📄
2015	Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.	Schmidt	ARF (IMV > 48 h)	16	NAVA Edi mon	📄
2015	Patient-ventilator synchrony in Neurally Adjusted Ventilatory Assist (NAVA) and Pressure Support Ventilation (PSV): a prospective observational study.	Yonis	Difficult weaning	30	NAVA Edi mon	📄



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2014	Physiologic comparison of neurally adjusted ventilator assist, proportional assist and pressure support ventilation in critically ill patients.	Akoumianaki	Mixed adults	17	NAVA	📄
2014	Automated patient-ventilator interaction analyses during neurally adjusted non-invasive ventilation and pressure support ventilation in chronic obstructive pulmonary disease.	Doorduyn	COPD	12	NIV NAVA Edi mon	📄
2013	Neurally adjusted ventilatory assist vs pressure support ventilation for noninvasive ventilation during acute respiratory failure: a crossover physiologic study.	Bertrand	ARF	13	NAVA Edi mon	📄
2013	Physiologic response to various levels of pressure support and NAVA in prolonged weaning.	Vagheggini	Prolonged weaning (tracheostomy)	14	NAVA Edi mon	📄
2012	Neurally adjusted ventilatory assist (NAVA) improves patient-ventilator interaction during non-invasive ventilation delivered by face mask.	Piquilloud	ARF	13	NIV NAVA	📄
2012	Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.	Schmidt	ARF (NIV post-extubation)	17	NIV NAVA Edi mon	📄
2011	Noninvasive ventilation through a helmet in postextubation hypoxemic patients: physiologic comparison between neurally adjusted ventilatory assist and pressure support ventilation.	Camarotta	ARF (IMV > 48 h)	10	NIV NAVA Edi mon	📄
2011	Sleep quality in mechanically ventilated patients: comparison between NAVA and PSV modes.	Delisle	ARF (PSV > 24 h)	14	NAVA Edi mon	📄
2011	Neurally adjusted ventilatory assist improves patient-ventilator interaction.	Piquilloud	ARF (IMV by PSV)	25	NAVA Edi mon	📄
2010	Patient-ventilator interaction during pressure support ventilation and neurally adjusted ventilatory assist.	Spahija	ARF	14	NAVA Edi mon	📄
2010	Neurally adjusted ventilatory assist in patients recovering spontaneous breathing after acute respiratory distress syndrome: physiological evaluation.	Terzi	ARDS (severe to moderate)	11	NAVA	📄
2008	Physiologic response to varying levels of pressure support and neurally adjusted ventilatory assist in patients with acute respiratory failure.	Colombo	ARF (IMV by CSV)	14	NAVA Edi mon	📄



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2025	Double cycling with breath-stacking during partial support ventilation in ARDS: Just a feature of natural variability?	Brito	ARDS	20	NAVA	📄
2020	Neurally adjusted ventilatory assist preserves cerebral blood flow velocity in patients recovering from acute brain injury.	Cammarota	Acute brain injury (ABI)	15	NAVA	📄
2016	Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.	Carteaux	ARF (recovery)	11	NAVA	📄
2016	Impact of prolonged assisted ventilation on diaphragmatic efficiency: NAVA versus PSV.	Di Mussi	ARF (CMV > 72 h)	25	NAVA	📄
2015	Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.	Schmidt	ARF (IMV > 48 h)	16	NAVA	📄
2015	Patient-ventilator synchrony in Neurally Adjusted Ventilatory Assist (NAVA) and Pressure Support Ventilation (PSV): a prospective observational study.	Yonis	Difficult weaning	30	NAVA	📄
2014	Physiologic comparison of neurally adjusted ventilator assist, proportional assist and pressure support ventilation in critically ill patients.	Akoumianaki	Mixed adults	17	NAVA	📄
2013	Effect of ventilatory variability on occurrence of central apneas.	Delisle	ARF (PSV > 24 h)	14	NAVA	📄
2013	NAVA enhances tidal volume and diaphragmatic electromyographic activity matching: a Range90 analyses of supply and demand.	Moorhead	ARF (CSV by PSV)	22	NAVA	📄
2013	Physiologic response to various levels of pressure support and NAVA in prolonged weaning.	Vagheggini	Prolonged weaning (tracheostomy)	14	NAVA	📄
2012	Respiratory pattern during neurally adjusted ventilatory assist in acute respiratory failure patients.	Patroniti	ARF (IMV by CSV)	15	NAVA	📄
2010	Neurally adjusted ventilatory assist in critically ill postoperative patients: a crossover randomized study.	Coisel	Post-operative (PSV > 48 h)	12	NAVA	📄
2010	Neurally adjusted ventilatory assist increases respiratory variability and complexity in acute respiratory failure.	Schmidt	ARF (CSV by NAVA)	12	NAVA	📄
2009	Titration and implementation of neurally adjusted ventilatory assist in critically ill patients.	Brander	Mixed adults (P/F < 300)	15	NAVA	📄



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Year	Article title	Author	Patients	No	Modes	Link
2025	Lung-Distending Pressure During Spontaneous Breathing under Mechanical Ventilation Assessed Using Diaphragm Electrical Activity.	Lam	Mixed adults	45	Edi mon	📄
2025	Neurally adjusted ventilatory assist vs pressure support ventilation: short-term effects on shunt and dead space after cardiac surgery.	Martinsson	Cardiac post-operative	12	NAVA	📄
2024	Estimation of transpulmonary driving pressure using a lower assist maneuver (LAM) during synchronized ventilation in patients with ARF: a physiological study.	Liu	Mixed adults	10	NAVA	📄
2021	Pulmonary volume-feedback and ventilatory pattern after bilateral lung transplantation using NAVA ventilation.	Grasselli	Lung transplantation	30	NAVA	📄
2021	Neurally adjusted ventilatory assist after surgical treatment of intracerebral hemorrhage: a randomized crossover study.	Yu	ICH post-surgical	15	NAVA	📄
2021	Effects of Varying Levels of Inspiratory Assistance with Pressure Support Ventilation and NAVA on Driving Pressure in Patients Recovering from Hypoxemic Respiratory Failure.	Cammarota	AHRF	16	NAVA	📄
2020	Neurally adjusted ventilatory assist vs. pressure support to deliver protective mechanical ventilation in patients with acute respiratory distress syndrome: a randomized crossover trial.	Diniz-Silva	ARDS (severe to mild)	20	NAVA	📄
2019	Neurally adjusted ventilatory assist (NAVA) versus pressure support ventilation: patient-ventilator interaction during invasive ventilation delivered by tracheostomy.	Lamouret	Prolonged weaning (tracheostomy)	61	NAVA	📄
2017	Partial Neuromuscular Blockade during Partial Ventilatory Support in Sedated Patients with High Tidal Volumes.	Doorduyn	ARDS (moderate-mild)	10	NAVA	📄
2016	Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.	Carteaux	ARF (recovery)	11	NAVA	📄
2015	Assisted Ventilation in Patients with ARDS: Lung-distending Pressure and Patient-Ventilator Interaction.	Doorduyn	ARDS (moderate-mild)	12	NAVA	📄
2015	Assessment of patient-ventilator breath contribution during NAVA in patients with acute respiratory failure.	Liu	ARF (CMV by A/C)	12	NAVA	📄
2015	Relation between peak and integral of the diaphragm electromyographic activity at different levels of support during weaning from mechanical ventilation: a physiologic study.	Muttini	SBT candidates (IMV > 96 h)	18	NAVA	📄
2015	Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.	Schmidt	ARF (IMV > 48 h)	16	NAVA	📄

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2014	Increased diaphragmatic contribution to inspiratory effort during neurally adjusted ventilatory assistance versus pressure support: an electromyographic study.	Cecchini	ARF (IMV by PSV)	12	NAVA	📄
2013	Ventilation distribution measured with EIT at varying levels of pressure support and Neurally Adjusted Ventilatory Assist in patients with ALI.	Blankman	ALI (CSV by PSV)	10	NAVA Edi mon	📄
2013	Effects of Neurally Adjusted Ventilatory Assist (NAVA) levels in non-invasive ventilated patients: titrating NAVA levels with electric diaphragmatic activity and tidal volume matching.	Chiew	AECOPD (on NIV)	12	NIV NAVA	📄
2013	Physiologic response to various levels of pressure support and NAVA in prolonged weaning. (tracheostomy).	Vagheggin	Prolonged weaning	14	NAVA	📄
2012	Respiratory pattern during neurally adjusted ventilatory assist in acute respiratory failure patients.	Patroniti	ARF (IMV by CSV)	15	NAVA	📄
2012	Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic NI ventilation.	Schmidt	ARF (NIV post-ext.)	17	NIV NAVA	📄
2011	Neurally adjusted ventilatory assist vs. pressure support ventilation in critically ill patients: an observational study.	Barwing	Mixed adults (IMV > 24 h)	20	NAVA	📄
2011	Noninvasive ventilation through a helmet in postextubation hypoxemic patients: physiologic comparison between neurally adjusted ventilatory assist and pressure support ventilation.	Cammarota	ARF (IMV > 48 h)	10	NIV NAVA	📄
2011	Neurally adjusted ventilatory assist in patients with critical illness-associated polyneuromyopathy.	Tuchscherer	CIPM	15	NAVA	📄
2010	Neurally adjusted ventilatory assist in critically ill postoperative patients: a crossover randomized study.	Coisel	Post-op (PSV > 48 h)	12	NAVA	📄
2010	Physiologic response to changing positive end-expiratory pressure during neurally adjusted ventilatory assist in sedated, critically ill adults.	Passath	Mixed adults (IMV > 48 h on PSV)	20	NAVA Edi mon	📄
2010	Patient-ventilator interaction during pressure support ventilation and neurally adjusted ventilatory assist.	Spahija	ARF	9	NAVA	📄
2010	Neurally adjusted ventilatory assist increases respiratory variability and complexity in acute respiratory failure.	Schmidt	ARF (CSV by NAVA)	12	NAVA	📄
2010	Neurally adjusted ventilatory assist in patients recovering spontaneous breathing after ARDS: physiological evaluation.	Terzi	ARDS (sev. to mod.)	11	NAVA	📄
2009	Titration and implementation of neurally adjusted ventilatory assist in critically ill patients.	Brander	Mixed adults (P/F < 300)	15	NAVA	📄

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2025	Neurally adjusted ventilatory assist in critical care patients with and without obesity: a prospective randomized crossover study	Conseil	Obese (BMI > 30) vs. Non-obese	21	NAVA	📄
2020	Neurally adjusted ventilatory assist preserves cerebral blood flow velocity in patients recovering from acute brain injury.	Cammarota	Acute brain injury (ABI)	15	NAVA	📄
2017	Neurally Adjusted Ventilatory Assist (NAVA) or Pressure Support Ventilation (PSV) during spontaneous breathing trials in critically ill patients: a crossover trial.	Ferreira	Mixed adults (first SBT)	20	NAVA	📄
2017	New setting of neurally adjusted ventilatory assist for noninvasive ventilation by facial mask: a physiologic study.	Longhini	Mixed adults (IMV > 48 h)	14	NIV NAVA	📄
2017	Effects of neurally adjusted ventilatory assist on air distribution and dead space in patients with acute exacerbation of chronic obstructive pulmonary disease.	Sun	AECOPD	15	NAVA	📄
2016	Control of Respiratory Drive and Effort in Extracorporeal Membrane Oxygenation Patients Recovering from Severe Acute Respiratory Distress Syndrome.	Mauri	ARDS (severe)	8	NAVA Edi mon	📄
2015	Assisted Ventilation in Patients with Acute Respiratory Distress Syndrome: Lung-distending Pressure and Patient-Ventilator Interaction.	Doorduyn	ARDS (moderate to mild)	12	NAVA	📄
2015	Neurally adjusted ventilatory assist and proportional assist ventilation both improve patient-ventilator interaction.	Schmidt	ARF (IMV > 48 h)	16	NAVA	📄
2015	Patient-ventilator synchrony in Neurally Adjusted Ventilatory Assist (NAVA) and Pressure Support Ventilation (PSV): a prospective observational study.	Yonis	Difficult weaning	30	NAVA	📄
2014	Physiologic comparison of neurally adjusted ventilator assist, proportional assist and pressure support ventilation in critically ill patients.	Akoumianaki	Mixed adults	17	NAVA	📄
2014	Heart-lung interactions during neurally adjusted ventilatory assist.	Berger	Cardiac post-operative	10	NAVA	📄
2014	Automated patient-ventilator interaction analyses during neurally adjusted non-invasive ventilation and pressure support ventilation in chronic obstructive pulmonary disease.	Doorduyn	COPD	12	NIV NAVA	📄

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2013	Neurally adjusted ventilatory assist vs pressure support ventilation for noninvasive ventilation during acute respiratory failure: a crossover physiologic study.	Bertrand	ARF	13	NAVA	Link
2012	Neurally adjusted ventilatory assist (NAVA) improves patient-ventilator interaction during non-invasive ventilation delivered by face mask.	Piquilloud	ARF	13	NIV NAVA	Link
2011	Noninvasive ventilation through a helmet in postextubation hypoxemic patients: physiologic comparison between neurally adjusted ventilatory assist and pressure support ventilation.	Cammarota	ARF (IMV > 48 h)	10	NIV NAVA	Link
2011	Neurally adjusted ventilatory assist vs. pressure support ventilation in critically ill patients: an observational study.	Barwing	Mixed adults (IMV > 24 h on PSV)	20	NAVA	Link
2010	Neurally adjusted ventilatory assist in critically ill postoperative patients: a crossover randomized study.	Coisel	Post-op (PSV > 48 h)	12	NAVA	Link
2010	Patient-ventilator interaction during pressure support ventilation and neurally adjusted ventilatory assist.	Spahija	ARF	9	NAVA	Link
2010	Neurally adjusted ventilatory assist increases respiratory variability and complexity in acute respiratory failure.	Schmidt	ARF (CSV by NAVA)	12	NAVA	Link
2010	Neurally adjusted ventilatory assist in patients recovering spontaneous breathing after acute respiratory distress syndrome: physiological evaluation.	Terzi	ARDS (severe to moderate)	11	NAVA	Link
2009	Titration and implementation of neurally adjusted ventilatory assist in critically ill patients.	Brander	Mixed adults (P/F < 300)	15	NAVA	Link



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Year	Article title	Author	Patients	No	Modes	Link
2025	Effects of external diaphragmatic pacing with NAVA on diaphragm function in AECOPD patients	Sheng	AECOPD	60	NAVA	📄
2024	Dyssynchronous diaphragm contractions impair diaphragm function in mechanically ventilated patients.	Coiffard	ABI, ARDS, Sepsis	45	Edi mon	📄
2019	Information conveyed by electrical diaphragmatic activity during unstressed, stressed and assisted spontaneous breathing: a physiological study.	Piquilloud	Healthy volunteers	15	Edi mon NIV NAVA	📄
2018	Standardized Unloading of Respiratory Muscles during Neurally Adjusted Ventilatory Assist: A Randomized Crossover Pilot Study.	Campoccia-Jalde	Neurological	10	NAVA	📄
2018	Mechanical Ventilation-induced Diaphragm Atrophy Strongly Impacts Clinical Outcomes.	Goligher	Mixed adults	24	Edi mon	📄
2017	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.	Akoumianaki	Mixed adults (CSV by PSV)	4	NAVA	📄
2016	Impact of prolonged assisted ventilation on diaphragmatic efficiency: NAVA versus PSV.	Di Mussi	ARF (CMV > 72 h)	25	NAVA	📄
2016	Comparison Between Neurally Adjusted Ventilatory Assist and Pressure Support Ventilation Levels in Terms of Respiratory Effort.	Carteaux	ARDS (recovery)	11	NAVA	📄
2015	Assessment of patient-ventilator breath contribution during neurally adjusted ventilatory assist in patients with acute respiratory failure.	Liu	ARF (CMV by A/C)	12	NAVA	📄
2014	Increased diaphragmatic contribution to inspiratory effort during neurally adjusted ventilatory assistance versus pressure support: an electromyographic study.	Cecchini	ARF (IMV by PSV)	12	NAVA	📄
2014	Clinical assessment of auto-positive end-expiratory pressure by diaphragmatic electrical activity during pressure support and neurally adjusted ventilatory assist.	Bellani	Mixed adults (Auto-PEEP)	10	NAVA	📄
2013	Ventilation distribution measured with EIT at varying levels of pressure support and Neurally Adjusted Ventilatory Assist in patients with ALI.	Blankman	ALI (CSV by PSV)	10	NAVA Edi mon	📄
2010	Physiologic response to changing positive end-expiratory pressure during neurally adjusted ventilatory assist in sedated, critically ill adults.	Passath	Mixed adults (IMV > 48 h on PSV)	20	NAVA Edi mon	📄



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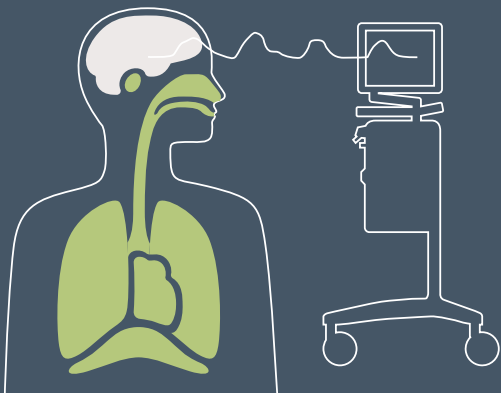
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Year	Article title	Author	Patients	No	Modes	Link
2020	Neurally adjusted ventilatory assist preserves cerebral blood flow velocity in patients recovering from acute brain injury.	Cammarota	Acute brain injury (ABI)	15	NAVA	Link
2020	Neurally adjusted ventilatory assist after surgical treatment of intracerebral hemorrhage: a randomized crossover study.	Yu	Neuro-surgical ICH	15	NAVA	Link
2020	Noninvasive Neurally Adjusted Ventilator Assist Ventilation in the Postoperative Period Produces Better Patient-Ventilator Synchrony but Not Comfort.	Harnisch	Post-operative	22	NIV NAVA	Link
2019	Neurally-Adjusted Ventilatory Assist for Noninvasive Ventilation via a Helmet in Subjects With COPD Exacerbation: A Physiologic Study.	Longhini	COPD	10	NIV NAVA	Link
2017	New setting of neurally adjusted ventilatory assist for noninvasive ventilation by facial mask: a physiologic study.	Longhini	Mixed adults (IMV > 48 h)	14	NIV NAVA	Link
2016	Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial.	Demoule	ARDS (recovery)	128	NAVA	Link
2014	Automated patient-ventilator interaction analyses during neurally adjusted non-invasive ventilation and pressure support ventilation in chronic obstructive pulmonary disease.	Doorduyn	COPD	12	NIV NAVA	Link
2013	Neurally adjusted ventilatory assist vs pressure support ventilation for noninvasive ventilation during acute respiratory failure: a crossover physiologic study.	Bertrand	ARF	13	NAVA	Link
2013	Effect of ventilatory variability on occurrence of central apneas.	Delisle	ARF (PSV > 24 h)	14	NAVA	Link
2012	Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.	Schmidt	ARF (NIV post-extubation)	17	NIV NAVA	Link



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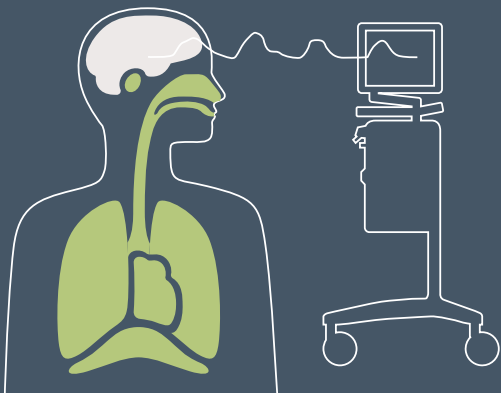
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Year	Article title	Author	Patients	No	Modes	Link
2024	Time course of EAdi in the peri extubation period and its role as predictor of extubation failure.	Parilla-Gomez	Difficult weaning	31	Edi mon	📄
2024	The predictive value of neurally adjusted ventilatory assist indexes for the prognosis of patients with severe cerebral hemorrhage.	Yao	Cerebral hemorrhage	90	NAVA Edi mon	📄
2024	The diaphragmatic electrical activity during spontaneous breathing trial in patients with mechanical ventilation: physiological description and clinical utility.	Diao	Mixed adults	35	Edi mon	📄
2024	Diaphragm Dysfunction Predicts Weaning Outcome after Bilateral Lung Transplant.	Boscolo	Bilateral Lung Transplant	44	Edi mon	📄
2024	A High Respiratory Drive Is Associated with Weaning Failure in Patients with COVID-19-Associated Acute Respiratory Distress Syndrome: The Role of the Electrical Activity of the Diaphragm.	Muttini	ARDS (Covid-19)	20	Edi mon	📄
2023	Predicting extubation in patients with traumatic cervical spinal cord injury using the diaphragm electrical activity during a single maximal maneuver.	Zhang	CSCI	107	Edi mon	📄
2021	Duration of diaphragmatic inactivity after endotracheal intubation of critically ill patients.	Sklar	Mixed adults	69	Edi mon	📄
2018	Standardized Unloading of Respiratory Muscles during Neurally Adjusted Ventilatory Assist: A Randomized Crossover Pilot Study.	Campoccia-Jalde	Neurological	10	NAVA	📄
2018	High-flow nasal cannula oxygen therapy decreases postextubation neuroventilatory drive and work of breathing in patients with chronic obstructive pulmonary disease.	Di Mussi	COPD (AHRF)	14	Edi mon	📄
2018	Respiratory Muscle Effort during Expiration in Successful and Failed Weaning from Mechanical Ventilation.	Doorduyn	SBT (IMV > 72 h)	20	Edi mon	📄
2018	Mechanical Ventilation-induced Diaphragm Atrophy Strongly Impacts Clinical Outcomes.	Goligher	Mixed adults	24	Edi mon	📄
2017	Neurally Adjusted Ventilatory Assist (NAVA) or Pressure Support Ventilation (PSV) during spontaneous breathing trials in critically ill patients: a crossover trial.	Ferreria	Mixed adults (first SBT)	20	NAVA	📄



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Year	Article title	Author	Patients	No	Modes	Link
2017	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.	Trapp	Neurological Prolonged weaning	29	Edi mon	📄
2015	Relation between peak and integral of the diaphragm electromyographic activity at different levels of support during weaning from mechanical ventilation: a physiologic study.	Muttini	SBT candidates (IMV > 96 h)	18	NAVA	📄
2014	Clinical assessment of auto-positive end-expiratory pressure by diaphragmatic electrical activity during pressure support and neurally adjusted ventilatory assist.	Bellani	Mixed adults (Auto-PEEP)	10	NAVA	📄
2013	Electrical activity of the diaphragm (EAdi) as a monitoring parameter in difficult weaning from respirator: a pilot study.	Barwing	Difficult weaning SBT ready	18	Edi mon	📄
2013	Estimation of patient's inspiratory effort from the electrical activity of the diaphragm.	Bellani	Mixed adults (CSV on PSV/ NAVA)	10	Edi mon	📄
2013	Neuro-ventilatory efficiency during weaning from mechanical ventilation using neurally adjusted ventilatory assist.	Roze	ARDS/ COPD (IMV > 96 h)	12	NAVA Edi mon	📄
2012	Diaphragm electromyographic activity as a predictor of weaning failure.	Dres	Mixed adults SBT ready	57	Edi mon	📄
2012	Neuroventilatory efficiency and extubation readiness in critically ill patients.	Liu	Mixed adults SBT ready	33	Edi mon	📄
2012	Neurally adjusted ventilatory assist improves patient-ventilator interaction during postextubation prophylactic noninvasive ventilation.	Schmidt	ARF (NIV post-extubation)	17	NIV NAVA	📄
2011	Daily titration of neurally adjusted ventilatory assist using the diaphragm electrical activity.	Roze	Mixed adults (IMV > 96 h)	15	NAVA Edi mon	📄

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Year	Article title	Author	Patients	No	Modes	Link
2025	Clinical Guideline for treating acute respiratory insufficiency with invasive ventilation and ECMO: Updated evidence-based recommendations for choosing modes and setting parameters of MV.	Hohmann	ARF/ARDS	N/A	NAVA	📄
2024	ECMO-weaning facilitated by neurally adjusted ventilatory assist (NAVA): a case for principal clarification.	Heinold	ARDS (severe)	1	NAVA	📄
2019	Control of respiratory drive by extracorporeal CO ₂ removal in acute exacerbation of COPD breathing on non-invasive NAVA.	Karagiannidis	AECOPD	20	NIV NAVA	📄
2017	Severe Acute Respiratory Distress Syndrome Using Electrical Activity of the Diaphragm on Weaning from Extracorporeal Membrane Oxygenation.	Okahara	ARDS (severe)	1	Edi mon	📄
2016	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.	Goto	ARDS (severe)	1	NAVA	📄
2016	Control of Respiratory Drive and Effort in Extracorporeal Membrane Oxygenation Patients Recovering from Severe Acute Respiratory Distress Syndrome.	Mauri	ARDS (severe)	8	NAVA EDI mon	📄
2013	Patient-ventilator interaction in ARDS patients with extremely low compliance undergoing ECMO: a novel approach based on diaphragm electrical activity.	Mauri	ARDS (severe)	10	Edi mon NAVA	📄
2010	Autoregulation of ventilation with neurally adjusted ventilatory assist on extracorporeal lung support.	Karagiannidis	ARDS (severe)	6	NAVA	📄



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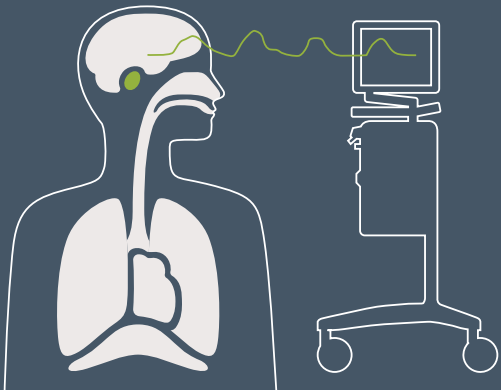
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Year	Article title	Author	Patients	No	Modes	Link
2017	Monitoring the electric activity of the diaphragm during noninvasive positive pressure ventilation: a case report.	Diniz-Silva	COPD (post-extubation)	1	Edi mon	
2015	Neurally Adjusted Ventilatory Assist During Weaning From Respiratory Support in a Case of Guillain-Barré Syndrome.	Dugernier	CIPM GBS	1	Edi mon NAVA	



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Abbreviation	Meaning
ABI	Acute brain injury
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
ICH	Intracerebral hemorrhage
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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