Supplemental Material: Excluded Studies with Reason

| **Bibliography** | **Exclusion Reason** |
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| Abd El-Rahman A M, Othman A H, El Sherif F A, Mostafa M F, Taha O: Comparison of three different doses sugammadex based on ideal body weight for reversal of moderate rocuronium-induced neuromuscular blockade in laparoscopic bariatric surgery. Minerva Anestesiol 2017; 83:138-44 | No relevant comparators |
| Abdulatif M, Al-Ghamdi A, Al-Sanabary M, Abdel-Gaffar M E: Edrophonium antagonism of intense mivacurium-induced neuromuscular block in children. Br J Anaesth 1996; 76:239-44 | No relevant comparators |
| Abdulatif M, El-Sanabary M: Edrophonium antagonism of cisatracurium-induced neuromuscular block: dose requirements in children and adults. Anaesth Intensive Care 2001; 29:364-70 | No relevant comparators |
| Abdulatif M, Naguib M: Neostigmine and edrophonium for reversal of pipecuronium neuromuscular blockade. Can J Anaesth 1991; 38:159-63 | No relevant outcomes reported |
| Abdulatif M: Recovery characteristics after early administration of anticholinesterases during intense mivacurium-induced neuromuscular block. Br J Anaesth 1995; 74:20-5 | No relevant outcomes reported |
| Adams D R, Tollinche L E, Yeoh C B, Artman J, Mehta M, Phillips D, Fischer G W, Quinlan J J, Sakai T: Short-term safety and effectiveness of sugammadex for surgical patients with end-stage renal disease: a two-centre retrospective study. Anaesthesia 2020; 75:348-52 | No relevant comparators |
| Aggarwal P: Risk of bronchospasm and coronary arteriospasm with sugammadex use: a post marketing analysis. Ther Adv Drug Saf 2019; 10:2042098619869070 | Not relevant study design |
| Ahn E K, Bai S J, Cho B J, Shin Y S: The infusion rate of mivacurium and its spontaneous neuromuscular recovery in magnesium-treated parturients. Anesth Analg 1998; 86:523-6 | No relevant outcomes reported |
| Altunbay R A, Sinikoglu N, Bagci M: Train-of-four guard-controlled sugammadex reversal in patients with multiple sclerosis. Niger J Clin Pract 2018; 21:870-4 | Not relevant patient population |
| An J, Lee J H, Kim E, Woo K, Kim H, Lee D: Comparison of sugammadex and pyridostigmine bromide for reversal of rocuronium-induced neuromuscular blockade in short-term pediatric surgery: A prospective randomized study. Medicine (Baltimore) 2020; 99:e19130 | Other exclusions |
| Ansermino J M, Sanderson P M, Bevan J C, Bevan D R: Acceleromyography improves detection of residual neuromuscular blockade in children. Can J Anaesth 1996; 43:589-94 | No relevant outcomes reported |
| Ariza F, Dorado F, Enrique L E, González V, Gómez J M, Chaparro-Mendoza K, Marulanda Ã, Durán D, Carvajal R, Castro-Gómez A H, Figueroa P, Medina H: Postoperative residual curarization at the post-anesthetic care unit of a university hospital: A cross-sectional study. Rev Colom Anestesiol 2017; 45:15-21 | Foreign language article |
| Arnberger M, Stadelmann K, Alischer P, Ponert R, Melber A, Greif R: Monitoring of neuromuscular blockade at the P6 acupuncture point reduces the incidence of postoperative nausea and vomiting. Anesthesiology 2007; 107:903-8 | Not relevant clinical question |
| Atallah M M, Daif A A, Saied M M, Sonbul Z M: Neuromuscular blocking activity of tubocurarine in patients with diabetes mellitus. Br J Anaesth 1992; 68:567-9 | Not relevant interventions |
| Aytac I, Postaci A, Aytac B, Sacan O, Alay G H, Celik B, Kahveci K, Dikmen B: Survey of postoperative residual curarization, acute respiratory events and approach of anesthesiologists. Braz J Anesthesiol 2016; 66:55-62 | Not relevant study design |
| Baillard C, Bourdiau S, Le Toumelin P, Ait Kaci F, Riou B, Cupa M, Samama C M: Assessing residual neuromuscular blockade using acceleromyography can be deceptive in postoperative awake patients. Anesth Analg 2004; 98:854-7 | Not relevant clinical question |
| Baldo B A, McDonnell N J: Sugammadex and anaphylaxis in the operating theater. Rev Esp Anestesiol Reanim 2014; 61:239-45 | Not relevant publication |
| Baraka A: Neostigmine versus sugammadex for reversal of neuromuscular block. Middle East J Anesthesiol 2016; 23:507-8 | Not relevant publication |
| Bartlett E, Urman R D, Urits I, Kaye A D, Viswanath O: Is sugammadex superior to neostigmine in reversing rocuronium-induced neuromuscular blockade?. J Clin Anesth 2021; #volume#:110288 | Other exclusions |
| Baumüller E, Schaller S J, Chiquito Lama Y, Frick C G, Bauhofer T, Eikermann M, Fink H, Blobner M: Postoperative impairment of motor function at train-of-four ratio ≥0.9 cannot be improved by sugammadex (1 mg kg-1). Br J Anaesth 2015; 114:785-93 | Not relevant interventions |
| Baurain M J, Hennart D A, Godschalx A, Huybrechts I, Nasrallah G, d'Hollander A A, Cantraine F: Visual evaluation of residual curarization in anesthetized patients using one hundred-hertz, five-second tetanic stimulation at the adductor pollicis muscle. Anesth Analg 1998; 87:185-9 | No relevant outcomes reported |
| Baurain M J, Hoton F, Dernovoi B S, d'Hollander A A: Influence and relative sensitivities of 50-Hz and 100-Hz tetanic stimuli on subsequent tetanic fade ratios in patients receiving vecuronium. Anesth Analg 1996; 82:139-42 | No relevant outcomes reported |
| Baykara N, Solak M, Toker K: Predicting recovery from deep neuromuscular block by rocuronium in the elderly. J Clin Anesth 2003; 15:328-33 | No relevant outcomes reported |
| Beemer G H, Bjorksten A R, Dawson P J, Dawson R J, Heenan P J, Robertson B A: Determinants of the reversal time of competitive neuromuscular block by anticholinesterases. Br J Anaesth 1991; 66:469-75 | No relevant outcomes reported |
| Belcher A W, Leung S, Cohen B, Yang D, Mascha E J, Turan A, Saager L, Ruetzler K: Incidence of complications in the post-anesthesia care unit and associated healthcare utilization in patients undergoing non-cardiac surgery requiring neuromuscular blockade 2005-2013: A single center study. J Clin Anesth 2017; 43:33-8 | Not relevant study design |
| Berg H: Is residual neuromuscular block following pancuronium a risk factor for postoperative pulmonary complications?. Acta Anaesth Scand Suppl 1997; 110:156-8 | No relevant comparators |
| Betz M, Aguirre J, Schubert M, Gõtschi T, Huber B, Schüpbach R, Brada M, Spirig J M, Farshad M: Hand or foot train-of-four tests and surgical site muscle relaxation assessed with multiple motor evoked potentials: A prospective observational study. Eur J Anaesthesiol 2020; #volume#:#pages# | No relevant outcomes reported |
| Bevan D R, Kahwaji R, Ansermino J M, Reimer E, Smith M F, O'Connor G A, Bevan J C: Residual block after mivacurium with or without edrophonium reversal in adults and children. Anesthesiology 1996; 84:362-7 | No relevant comparators |
| Bevan D R: Recovery from neuromuscular block and its assessment. Anesth Analg 2000; 90:S7-13 | Not relevant publication |
| Bevan J C, Purday J P, Reimer E J, Bevan D R: Reversal of doxacurium and pancuronium neuromuscular blockade with neostigmine in children. Can J Anaesth 1994; 41:1074-80 | Not relevant clinical question |
| Bevan J C, Tousignant C, Stephenson C, Blackman L, Reimer E, Smith M F, Bevan D R: Dose responses for neostigmine and edrophonium as antagonists of mivacurium in adults and children. Anesthesiology 1996; 84:354-61 | No relevant comparators |
| Bhananker S M, Treggiari M M, Sellers B A, Cain K C, Ramaiah R, Thilen S R: Comparison of train-of-four count by anesthesia providers versus TOF-WatchÂ® SX: a prospective cohort study. Can J Anaesth 2015; 62:1089-96 | No relevant outcomes reported |
| Bougouma C T H W P, Demeere J L M: Dosage of sugammadex according to the calculated lean body mass in obese female patients: Time to reverse moderate neuromuscular blockade induced by rocuronium. Southern African J Anaesth Analg 2019; 25:12-6 | Not relevant study design |
| Bowdle A, Bussey L, Michaelsen K, Jelacic S, Nair B, Togashi K, Hulvershorn J: Counting train-of-four twitch response: comparison of palpation to mechanomyography, acceleromyography, and electromyography. Br J Anaesth 2020; 124:712-717 | No relevant outcomes reported |
| Brandom B W, Taiwo O O, Woelfel S K, Schön H, Gronert B J, Cook D R: Spontaneous versus edrophonium-induced recovery from paralysis with mivacurium. Anesth Analg 1996; 82:999-1002 | No relevant comparators |
| Bray J P, Adams D R, Phadke A S, Adams P S: Sugammadex Neuromuscular Blockade Reversal Associated With Lower Postoperative Arterial Carbon Dioxide Levels After Congenital Cardiac Surgery. J Cardiothorac Vasc Anesth 2021; 35:154-61 | No relevant outcomes reported |
| Bronsert M R, Henderson W G, Monk T G, Richman J S, Nguyen J D, Sum-Ping J T, Mangione M P, Higley B, Hammermeister K E: Intermediate-Acting Nondepolarizing Neuromuscular Blocking Agents and Risk of Postoperative 30-Day Morbidity and Mortality, and Long-term Survival. Anesth Analg 2017; 124:1476-83 | No relevant comparators |
| Brull S J, Silverman D G: Real time versus slow-motion train-of-four monitoring: a theory to explain the inaccuracy of visual assessment. Anesth Analg 1995; 80:548-51 | Not relevant clinical question |
| Brull S J, Silverman D G: Visual assessment of train-of-four and double burst-induced fade at submaximal stimulating currents. Anesth Analg 1991; 73:627-32 | Not relevant clinical question |
| Caldwell J E: Reversal of residual neuromuscular block with neostigmine at one to four hours after a single intubating dose of vecuronium. Anesth Analg 1995; 80:1168-74 | No relevant comparators |
| Carlos R V, de Boer H D, Torres M L, Carmona M J: The effect of prior tetanic stimulation on train-of-four monitoring in paediatric patients: A randomised open-label controlled trial. Eur J Anaesthesiol 2017; 34:163-8 | Not relevant interventions |
| Carron M, Bertini D, Prandini T, Fanton F, Foletto M, Ori C, Perissinotto E, Simioni P: Effect of sugammadex on coagulation as detected by rotational thromboelastometry in morbidly obese patients. Minerva Anestesiol 2018; 84:178-88 | No relevant comparators |
| Carvalho H, Verdonck M, Berghmans J, Poelaert J: Development and validation of an android-based application for anaesthesia neuromuscular monitoring. J Clin Monit Comput 2019; 33:863-70 | No relevant comparators |
| Cashman J N, Luke J J, Jones R M: Neuromuscular block with doxacurium (BW A938U) in patients with normal or absent renal function. Br J Anaesth 1990; 64:186-92 | No relevant outcomes reported |
| Chetty S, Hassim S, Perrie H, Scribante J, Parker M: Unrecognised postoperative residual curarisation in developing countries remains a common problem. S Afr Med J 2020; 110:1134-8 | Not relevant study design |
| Claudius C, Skovgaard L T, Viby-Mogensen J: Acceleromyography and mechanomyography for establishing potency of neuromuscular blocking agents: a randomized-controlled trial. Acta Anaesthesiol Scand 2009; 53:449-54 | No relevant outcomes reported |
| Claudius C, Skovgaard L T, Viby-Mogensen J: Arm-to-arm variation when evaluating neuromuscular block: an analysis of the precision and the bias and agreement between arms when using mechanomyography or acceleromyography. Br J Anaesth 2010; 105 | No relevant outcomes reported |
| Connolly F M, Mirakhur R K, Loan P B, McCoy E P, Symington M, Kumar N: Antagonism of mivacurium block with edrophonium from various degrees of spontaneous recovery. Br J Anaesth 1995; 74:229-30 | No relevant outcomes reported |
| Cooper R, Maddineni V R, Mirakhur R K: Clinical study of interaction between rocuronium and some commonly used antimicrobial agents. Eur J Anaesthesiol 1993; 10:331-5 | No relevant outcomes reported |
| Dahaba A A, Bornemann H, Holst B, Wilfinger G, Metzler H: Comparison of a new neuromuscular transmission monitor compressomyograph with mechanomyograph. Br J Anaesth 2008; 100:344-50 | No relevant comparators |
| Dahaba A A, Suljevic I, Xiao Z Y, Wang K: Mindray 3-directional NMT Module (a new generation "Tri-axial" neuromuscular monitor) versus the Relaxometer mechanomyograph and versus the TOF-Watch SX acceleromyograph. J Clin Monit Comput 2019; 33:853-62 | No relevant outcomes reported |
| Davis L, Jayarajah M J, Toner C C, Flynn P J: Evaluation of neuromuscular effects and antagonism of rocuronium bromide: a preliminary report. Eur J Anaesthesiol Suppl 1995; 11:65-8 | Other exclusions |
| de Gouw N E, Crul J F, Vandermeersch E, Mulier J P, van Egmond J, Van Aken H: Interaction of antibiotics on pipecuronium-induced neuromuscular blockade. J Clin Anesth 1993; 5:212-5 | Other exclusions |
| de Kam P J, Nolte H, Good S, Yunan M, Williams-Herman D E, Burggraaf J, Kluft C, Adkinson N F, Cullen C, Skov P S, Levy J H, van den Dobbelsteen D J, van Heumen E L G M,van Meel F C M, Glassner D, Woo T, Min K C, Peeters P A M: Sugammadex hypersensitivity and underlying mechanisms: a randomised study of healthy non-anaesthetised volunteers. Br J Anaesth 2018; 121:758-67 | Not relevant patient population |
| de Rossi L, Fritz H, Klein U: Comparison of cisatracurium-induced neuromuscular block at the masseter and adductor pollicis muscle. Eur J Anaesthesiol 2000; 17:583-6 | No relevant outcomes reported |
| de Souza C M, Romero F E, Tardelli M A: Assessment of neuromuscular blockade in children at the time of block reversal and the removal of the endotracheal tube. Rev Bras Anestesiol 2011; 61:145-9 | No relevant comparators |
| Debaene B, Meistelman C, Beaussier M, Lienhart A: Visual estimation of train-of-four responses at the orbicularis oculi and posttetanic count at the adductor pollicis during intense neuromuscular block. Anesth Analg 1994; 78:697-700 | No relevant outcomes reported |
| Dernovoi B S: Antagonism of vecuronium paralysis: comparison between edrophonium and neostigmine. Acta Anaesthesiol Belg 1991; 42:65-71 | No relevant outcomes reported |
| Derrington M C, Hindocha N: Comparison of neuromuscular block in the diaphragm and hand after administration of tubocurarine, pancuronium and alcuronium. Br J Anaesth 1990; 64:294-9 | No relevant outcomes reported |
| Devcic A, Munshi C A, Gandhi S K, Kampine J P: Antagonism of mivacurium neuromuscular block: neostigmine versus edrophonium. Anesth Analg 1995; 81:1005-9 | No relevant outcomes reported |
| Devlin J C, Head-Rapson A G, Parker C J, Hunter J M: Pharmacodynamics of mivacurium chloride in patients with hepatic cirrhosis. Br J Anaesth 1993; 71:227-31 | No relevant outcomes reported |
| Dhonneur G, Kirov K, Motamed C, Amathieu R, Kamoun W, Slavov V, Ndoko S K: Post-tetanic count at adductor pollicis is a better indicator of early diaphragmatic recovery than train-of-four count at corrugator supercilii. Br J Anaesth 2007; 99:376-9 | No relevant outcomes reported |
| Dhonneur G, Rebaine C, Slavov V, Ruggier R, De Chaubry V, Duvaldestin P: Neostigmine reversal of vecuronium neuromuscular block and the influence of renal failure. Anesth Analg 1996; 82:134-8 | No relevant outcomes reported |
| Diefenbach C, Mellinghoff H, Lynch J, Buzello W: Mivacurium: dose-response relationship and administration by repeated injection or infusion. Anesth Analg 1992; 74:420-3 | Not relevant interventions |
| Dogan E, Akdemir M S, Guzel A, Yildirim M B, Yildirim Z B, Kuyumcu M, Gümüş A, Akelma H: A miracle that accelerates operating room functionality: sugammadex. Biomed Res Int 2014; 2014:945310 | No relevant outcomes reported |
| Donati F, Meistelman C, Plaud B: Vecuronium neuromuscular blockade at the adductor muscles of the larynx and adductor pollicis. Anesthesiology 1991; 74:833-7 | No relevant comparators |
| Donati F, Meistelman C, Plaud B: Vecuronium neuromuscular blockade at the diaphragm, the orbicularis oculi, and adductor pollicis muscles. Anesthesiology 1990; 73:870-5 | No relevant outcomes reported |
| Driessen J J, Robertson E N, Booij L H: Acceleromyography in neonates and small infants: baseline calibration and recovery of the responses after neuromuscular blockade with rocuronium. Eur J Anaesthesiol 2005; 22:5-11 | No relevant comparators |
| Duarte N M D C, Caetano A M, Neto S D, Arouca G D O, Campos J M: Sugammadex by ideal body weight versus 20% and 40% corrected weight in bariatric surgery - double-blind randomized clinical trial. Braz J Anesthesiol 2018; 68:219-24 | Foreign language article |
| Dubois P E, De Bel M, Jamart J, Mitchell J, Gourdin M, Dransart C, d'Hollander A: Performance of acceleromyography with a short and light TOF-tube compared with mechanomyography: a clinical comparison. Eur J Anaesthesiol 2014; 31:404-10 | No relevant outcomes reported |
| Dubois P E, Mitchell J, Regnier M, Passeraub P A, Moreillon F, d’Hollander A A: The interest of 100 versus 200 Hz tetanic stimulations to quantify low levels of residual neuromuscular blockade with mechanomyography: a pilot study. J Clinc Monit Comput 2021 | Not relevant clinical question |
| Dullenkopf A, Horn K, Steurer M P, Hess F, Welter J: Placement of TOF-CuffÂ® on the lower leg for neuromuscular and blood pressure monitoring during anesthetic induction for shoulder surgeries. J Anesth 2020; 34:79-85 | No relevant outcomes reported |
| Dupuis J Y, Martin R, Tessonnier J M, Tétrault J P: Clinical assessment of the muscular response to tetanic nerve stimulation. Can J Anaesth 1990; 37:397-400 | No relevant outcomes reported |
| Echeverry G, Polskin L, Tollinche L E, Seier K, Tan K S, McCormick P J, Fischer G W, Grant F M: Routine use of sugammadex does not shorten PACU length of stay: a prospective double-blinded randomized controlled trial. Perioper Care Oper Room Manag 2021; 24 | No relevant outcomes reported |
| Edwards L A, Ly N, Shinefeld J: Universal quantitative neuromuscular blockade monitoring at an academic medical center: A multimodal analysis of the potential impact on clinical outcomes and total cost of care. Periop Care Oper Room Manag 2021; 24:#pages# | No relevant outcomes reported |
| Engbaek J, Ostergaard D, Skovgaard L T, Viby-Mogensen J: Reversal of intense neuromuscular blockade following infusion of atracurium. Anesthesiology 1990; 72:803-6 | No relevant comparators |
| Engbaek J, Roed J, Hangaard N, Viby-Mogensen J: The agreement between adductor pollicis mechanomyogram and first dorsal interosseous electromyogram. A pharmacodynamic study of rocuronium and vecuronium. Acta Anaesthesiol Scand 1994; 38:869-78 | Not relevant clinical question |
| Engbaek J, Roed J: Differential effect of pancuronium at the adductor pollicis, the first dorsal interosseous and the hypothenar muscles. An electromyographic and mechanomyographic dose-response study. Acta Anaesthesiol Scand 1992; 36:664-9 | No relevant outcomes reported |
| Engbaek J: Monitoring of neuromuscular transmission by electromyography during anaesthesia. A comparison with mechanomyography in cat and man. Dan Med Bull 1996; 43:301-16 | No relevant outcomes reported |
| Eriksson L I, Lennmarken C, Staun P, Viby-Mogensen J: Use of post-tetanic count in assessment of a repetitive vecuronium-induced neuromuscular block. Br J Anaesth 1990; 65:487-93 | Not relevant interventions |
| Eriksson L I: Recovery from neuromuscular block and vital function testing. Acta Anaesthesiol Belg 1997; 48:45-8 | Not relevant publication |
| Errando C L, Mazzinari G, Díaz-Cambronero O: Residual neuromuscular blockade in the postanesthesia care unit. A secondary analysis of the ReCuSS. Observational cross-sectional study of a multicenter cohort. Rev Esp Anestesiol Reanim (English Edition) 2017; 64:419-22 | Not relevant publication |
| Ersoy Ö, Demiraran Y, Sezen G, Karagõz İ, İskender A, Cangür Ş: Reversal effects of sugammadex in diabetic patients having neuromuscular block with rocuronium. Rokuronyumla nöromusküler blok sağlanan diyabetik hastalarda sugammadeks'in nöromusküler derlenme üzerine etkileri 2015; 35:36-42 | Foreign language article |
| Esteves S, Martins M, Barros F, Barros F, Canas M, Vitor P, Seabra M, Castro M M, Bastardo I: Incidence of postoperative residual neuromuscular blockade in the postanaesthesia care unit: an observational multicentre study in Portugal. Eur J Anaesthesiol 2013; 30:243-9 | Not relevant study design |
| Fezing A K, d'Hollander A, Boogaerts J G: Assessment of the postoperative residual curarisation using the train of four stimulation with acceleromyography. Acta Anaesthesiol Belg 1999; 50:83-6 | No relevant outcomes reported |
| Fortier L P, McKeen D, Turner K, de Médicis, É, Warriner B, Jones P M, Chaput A, Pouliot J F, Galarneau A: The RECITE Study: A Canadian Prospective, Multicenter Study of the Incidence and Severity of Residual Neuromuscular Blockade. Anesth Analg 2015; 121:366-72 | No relevant comparators |
| Franz A M, Chiem J, Martin L D, Rampersad S, Phillips J, Grigg E B: Case series of 331 cases of sugammadex compared to neostigmine in patients under 2 years of age. Paediatr Anaesth 2019; 29:591-6 | No relevant outcomes reported |
| Fu S, Lin W, Zhao X, Ge S, Xue Z: Quantitative Relationships between Pulmonary Function and Residual Neuromuscular Blockade. Biomed Res Int 2018; 2018:9491750 | Not relevant clinical question |
| Fuchs-Buder T, Wilder-Smith O H, Borgeat A, Tassonyi E: Interaction of magnesium sulphate with vecuronium-induced neuromuscular block. Br J Anaesth 1995; 74:405-9 | No relevant outcomes reported |
| Gätke M R, Larsen P B, Engbaek J, Fredensborg B B, Berg H, Viby-Mogensen J: Acceleromyography of the orbicularis oculi muscle I: significance of the electrode position. Acta Anaesthesiol Scand 2002; 46:1124-30 | No relevant outcomes reported |
| Güzelce, D., Kendigelen, P., Tütüncü, A. Ç, Kaya, G., Altıntaş, F: Comparison of sugammadex and neostigmine in terms of time to extubation in pediatrics. Haseki Tip Bulteni 2016; 54:207-11 | Foreign language article |
| Garutti I, Errando C L, Mazzinari G, Diaz-Cambronero O, Ferrando C, i Prove network: Spontaneous recovery of neuromuscular blockade is an independent risk factor for postoperative pulmonary complications after abdominal surgery: A secondary analysis. Eur J Anaesthesiol 2020; 37:203-11 | No relevant comparators |
| Gaszyński T, Szlachciński L, Jakubiak J, Gaszyński, W: Reversal from non-depolarising neuromuscular blockade in the postoperative period. Anestezjologia intensywna terapia 2009; 41:9-12:44816 | Foreign language article |
| Gavrancic B, Lolis A, Beric A: Train-of-four test in intraoperative neurophysiologic monitoring: differences between hand and foot train-of-four. J Clin Neurophysiol 2014; 31:575-9 | No relevant outcomes reported |
| Gavrancic B, Lolis A, Beric A: Train-of-four test in intraoperative neurophysiologic monitoring: differences between hand and foot train-of-four. J Clin Neurophysiol 2014; 31:575-9 | No relevant outcomes reported |
| Goldhill D R, Whitehead J P, Emmott R S, Griffith A P, Bracey B J, Flynn P J: Neuromuscular and clinical effects of mivacurium chloride in healthy adult patients during nitrous oxide-enflurane anaesthesia. Br J Anaesth 1991; 67:289-95 | No relevant comparators |
| González-Cárdenas V H, Salazar-Ramírez K J, Coral-Sánchez G T: Postoperative residual paralysis in patients aged over 65 years old at the Post-Anesthesia Care Unit. Rev Colomb de Anestesiol 2016; 44:211-17 | Foreign language article |
| Grabitz S D, Rajaratnam N, Chhagani K, Thevathasan T, Teja B J, Deng H, Eikermann M, Kelly B J: The Effects of Postoperative Residual Neuromuscular Blockade on Hospital Costs and Intensive Care Unit Admission: A Population-Based Cohort Study. Anesth Analg 2019; 128:1129-36 | No relevant outcomes reported |
| Grivoyannis A D, Tangel V, Lien C A: Vigilance: the behavioral impact of quantitative monitoring on administration and antagonism of neuromuscular blocking agents. J Clin Monitor Comput 2021; #volume#:#pages# | No relevant comparators |
| Gyermek L, Berman N: "Train-of-four" fade during clinical nondepolarizing neuromuscular block. Int J Clin Pharmacol Ther Toxicol 1992; 30:122-7 | Not relevant clinical question |
| Hänzi P, Leibundgut D, Wessendorf R, Lauber R, Zbinden A M: Clinical validation of electromyography and acceleromyography as sensors for muscle relaxation. Eur J Anaesthesiol 2007; 24:882-8 | Not relevant clinical question |
| Hans G A, Bosenge B, Bonhomme V L, Brichant J F, Venneman I M, Hans P C: Intravenous magnesium re-establishes neuromuscular block after spontaneous recovery from an intubating dose of rocuronium: a randomised controlled trial. Eur J Anaesthesiol 2012; 29:95-9 | Not relevant clinical question |
| Hans P, Ledoux D, Bonhomme V, Brichant J F: Effect of plasma anticonvulsant level on pipecuronium-induced neuromuscular blockade: preliminary results. J Neurosurg Anesthesiol 1995; 7:254-8 | No relevant outcomes reported |
| Hardesty G A: Neuromuscular blockade: electromyographic and mechanical versus visual interpretation. AANA J 1991; 59:82-90 | No relevant outcomes reported |
| Hattori H, Saitoh Y, Nakajima H, Sanbe N, Akatu M, Murakawa M: Visual evaluation of fade in response to facial nerve stimulation at the eyelid. J Clin Anesth 2005; 17:276-80 | Other exclusions |
| Heier T, Caldwell J E, Eriksson L I, Sessler D I, Miller R D: The effect of hypothermia on adductor pollicis twitch tension during continuous infusion of vecuronium in isoflurane-anesthetized humans. Anesth Analg 1994; 78:312-7 | Not relevant patient population |
| Heier T, Caldwell J E, Sessler D I, Miller R D: Mild intraoperative hypothermia increases duration of action and spontaneous recovery of vecuronium blockade during nitrous oxide-isoflurane anesthesia in humans. Anesthesiology 1991; 74:815-9 | No relevant outcomes reported |
| Heier T, Hetland S: A comparison of train-of-four monitoring: mechanomyography at the thumb vs acceleromyography at the big toe. Acta Anaesthesiol Scand 1999; 43:550-5 | No relevant outcomes reported |
| Hemmerling T M, Schmidt J, Hanusa C, Wolf T, Jacobi K E: The lumbar paravertebral region provides a novel site to assess neuromuscular block at the diaphragm. Can J Anaesth 2001; 48:356-60 | No relevant outcomes reported |
| Hemmerling T M, Schmidt J, Hanusa C, Wolf T, Schmitt H: Simultaneous determination of neuromuscular block at the larynx, diaphragm, adductor pollicis, orbicularis oculi and corrugator supercilii muscles. Br J Anaesth 2000; 85:856-60 | No relevant outcomes reported |
| Hemmerling T M, Schmidt J, Schurr C, Breuer G, Jacobi K E: A comparison between anterior and posterior monitoring of neuromuscular blockade at the diaphragm: both sites can be used interchangeably. Anesth Analg 2002; 95:940-3 | No relevant comparators |
| Hemmerling T M, Schmidt J, Wolf T, Hanusa C, Siebzehnruebl E, Schmitt H: Intramuscular versus surface electromyography of the diaphragm for determining neuromuscular blockade. Anesth Analg 2001; 92:106-11 | No relevant comparators |
| Hernández-Palazón J, Tortosa J A, Martínez-Lage J F, Pérez-Ayala M: Rocuronium-induced neuromuscular blockade is affected by chronic phenytoin therapy. J Neurosurg Anesthesiol 2001; 13:79-82 | No relevant outcomes reported |
| Hile GB, Healy KJ, Almassalkhi LR: Rocuronium reversal in the emergency department: retrospective evaluation of hemodynamic instability following administration of sugammadex versus neostigmine with glycopyrrolate. J Pharm Pract 2021:8971900211048747 | Not relevant clinical question |
| Hodgson R E, Rout C C, Rocke D A, Louw N J: Mivacurium for caesarean section in hypertensive parturients receiving magnesium sulphate therapy. Int J Obstet Anesth 1998; 7:12-7 | No relevant outcomes reported |
| Hofmockel R, Benad G: Time-course of action and intubating conditions with rocuronium bromide under propofol-alfentanil anaesthesia. Eur J Anaesthesiol Suppl 1995; 11:69-72 | No relevant outcomes reported |
| Huang C H, Wang M J, Susetio L, Cherng Y G, Shi J J, Chen Y A, Chiu W H: Comparison of the combined effects of atropine and neostigmine with atropine and edrophonium on the occurrence of postoperative nausea and vomiting. Ma Zui Xue Za Zhi 1993; 31:113-6 | Other exclusions |
| Iwasaki H, Kurosawa A, Iida T, Sasakawa T, Kanda H: Use of intraoperative neuromuscular monitor reduces the reversal dose of sugammadex: a single-center retrospective study. J Anesth 2020; 34:276-280 | No relevant comparators |
| Jain R, Ajai K J, Kumra V P: Recovery from atracurium or vecuronium at varying levels of neuromuscular blockade. J Anaesthesiol Clin Pharmacol 2002; 18:79-81 | Other exclusions |
| Jan G S, Tong W N, Chan A M, Hui T W, Lo J W: Recovery from mivacurium block with or without anticholinesterase following continuous infusion in obstetric patients. Anaesth Intensive Care 1996; 24:585-9 | No relevant outcomes reported |
| Jellish W S, Modica P A, Tempelhoff R: Accelerated recovery from pipecuronium in patients treated with chronic anticonvulsant therapy. J Clin Anesth 1993; 5:105-8 | No relevant outcomes reported |
| Jellish W S, Thalji Z, Brundidge P K, Tempelhoff R: Recovery from mivacurium-induced neuromuscular blockade is not affected by anticonvulsant therapy. J Neurosurg Anesthesiol 1996; 8:4-8:44659 | No relevant outcomes reported |
| Jeong J S, Kim K S, Lee H J, Shim J C, Lee J C, Lee J H: The effect of hand dominance on neuromuscular monitoring at the adductor pollicis muscle. Korean J Anesthesiol 2013; 65:33-6 | No relevant outcomes reported |
| Johnson K B, Dutton R P: Chasing Shadows, Catching Smoke, and Estimating Anaphylaxis to Sugammadex. Anesth Analg 2021; 132:89-92 | Not relevant publication |
| Jones K A, Lennon R L, Hosking M P: Method of intraoperative monitoring of neuromuscular function and residual blockade in the recovery room. Minn Med 1992; 75:23-6 | Other exclusions |
| Jung W, Hwang M, Won Y J, Lim B G, Kong M H, Lee I O: Comparison of clinical validation of acceleromyography and electromyography in children who were administered rocuronium during general anesthesia: a prospective double-blinded randomized study. Korean J Anesthesiol 2016; 69:21-6 | No relevant outcomes reported |
| Kam P J, Heuvel M W, Grobara P, Zwiers A, Jadoul J L, Clerck Ed, Ramael S, Peeters P A: Flucloxacillin and diclofenac do not cause recurrence of neuromuscular blockade after reversal with sugammadex. Clin Drug Investig 2012; 32:203-12 | Not relevant interventions |
| Kathopoulis N, Protopapas A, Stamatakis E, Chatzipapas I, Zacharakis D, Grigoriadis T, Athanasiou S, Valsmidis D: Deep versus moderate neuromuscular blockade in gynecologic laparoscopic operations: randomized controlled trial. J Personal Med 2022; 12 | No relevant outcomes reported |
| Kazuma S, Wakasugi K, Hagiwara H, Yamakage M: Comparative Study of TOF-Cuff, a New Neuromuscular Blockade Monitor, and TOF-Watch, an Acceleromyography. Anesth Analg 2019; 129:e16-e19 | No relevant outcomes reported |
| Kern S E, Johnson J O, Orr J A, Westenskow D R: Clinical analysis of the flexor hallucis brevis as an alternative site for monitoring neuromuscular block from mivacurium. J Clin Anesth 1997; 9:383-7 | No relevant outcomes reported |
| Kim E, Ryu J H, Byun S H: Effect of neuromuscular blockade reversal by pyridostigmine on spectral entropy values during recovery from desflurane anesthesia: a prospective, randomized, double-blind, controlled trial. Korean J Anesthesiol 2016; 69:227-33 | No relevant outcomes reported |
| Kim K S, Chung C W, Shin W J: Cisatracurium neuromuscular block at the adductor pollicis and the laryngeal adductor muscles in humans. Br J Anaesth 1999; 83:483-4 | No relevant comparators |
| Kirkegaard Nielsen H, May O: Double burst stimulation for monitoring profound neuromuscular blockade: a comparison with posttetanic count and train of four. Acta Anaesthesiol Belg 1992; 43:253-7 | No relevant outcomes reported |
| Kirkegaard-Nielsen H, Helbo-Hansen H S, Lindholm P, Severinsen I K, Bülow K: Double burst monitoring during surgical degrees of neuromuscular blockade: a comparison with train-of-four. Int J Clin Monit Comput 1995; 12:191-6 | No relevant comparators |
| Kirkegaard-Nielsen H, Helbo-Hansen H S, Lindholm P, Severinsen I K, Pedersen H S, Jensen E W: Optimum time for neostigmine reversal of atracurium-induced neuromuscular blockade. Can J Anaesth 1996; 43:932-8 | No relevant outcomes reported |
| Kirkegaard-Nielsen H, Helbo-Hansen H S, Severinsen I K, Lindholm P, Bülow K: Double burst monitoring during recovery from atracurium-induced neuromuscular blockade: a comparison with train-of-four. Int J Clin Monit Comput 1996; 13:209-15 | No relevant comparators |
| Kirkegaard-Nielsen H, Helbo-Hansen H S, Severinsen I K, Lindholm P, Pedersen H S, Schmidt M B: Comparison of tactile and mechanomyographical assessment of response to double burst and train-of-four stimulation during moderate and profound neuromuscular blockade. Can J Anaesth 1995; 42:21-7 | No relevant outcomes reported |
| Kirkegaard-Nielsen H, Lindholm P, Petersen H S, Severinsen I K: Antagonism of atracurium-induced block in obese patients. Can J Anaesth 1998; 45:39-41 | No relevant outcomes reported |
| Kirkegaard-Nielsen H, May O: The influence of the double burst stimulation (DBS) pattern on the DBS-train-of-four ratio relationship. Anasthesiol Intensivmed Notfallmed Schmerzther 1995; 30:163-6 | Not relevant clinical question |
| Kirov K, Motamed C, Ndoko S K, Dhonneur G: TOF count at corrugator supercilii reflects abdominal muscles relaxation better than at adductor pollicis. Br J Anaesth 2007; 98:611-4 | No relevant outcomes reported |
| Kitajima T, Ishii K, Kobayashi T: Monitoring of neuromuscular blockade on the foot: Comparison between accelography and EMG. Dokkyo Journal of Medical Sciences 1994; 21:153-156 | Other exclusions |
| Kitajima T, Ishii K, Ogata H: Assessment of neuromuscular block at the thumb and great toe using accelography in infants. Anaesthesia 1996; 51:341-3 | No relevant outcomes reported |
| Kitajima T, Ishii K, Kobayashi T, Ogata H: Differential effects of vecuronium on the thumb and great toe as measured by accelography and electromyography. Anaesthesia 1995; 50:76-8 | No relevant outcomes reported |
| Kitajima T, Ishii K, Kobayashi T, Ogata H: Differential effects of vecuronium on the thumb and the big toe muscles evaluated by acceleration measurement. J Anesth 1994; 8:143-145 | No relevant outcomes reported |
| Kizilay D, Dal D, Saracoglu K T, Eti Z, Gogus F Y: Comparison of neostigmine and sugammadex for hemodynamic parameters in cardiac patients undergoing noncardiac surgery. J Clin Anesth 2016; 28:30-5 | No relevant outcomes reported |
| Koenig H M, Hoffman W E: The effect of anticonvulsant therapy on two doses of rocuronium-induced neuromuscular blockade. J Neurosurg Anesthesiol 1999; 11:86-9 | No relevant outcomes reported |
| Koenig M H, Edwards L T: Cisatracurium-induced neuromuscular blockade in anticonvulsant treated neurosurgical patients. J Neurosurg Anesthesiol 2000; 12:314-8 | No relevant outcomes reported |
| Kopman A F, Klewicka M M, Neuman G G: The relationship between acceleromyographic train-of-four fade and single twitch depression. Anesthesiology 2002; 96:583-7 | Not relevant clinical question |
| Kopman A F, Mallhi M U, Justo M D, Rodricks P, Neuman G G: Antagonism of mivacurium-induced neuromuscular blockade in humans. Edrophonium dose requirements at threshold train-of-four count of 4. Anesthesiology 1994; 81:1394-400 | No relevant comparators |
| Kopman A F, Zank L M, Ng J, Neuman G G: Antagonism of cisatracurium and rocuronium block at a tactile train-of-four count of 2: should quantitative assessment of neuromuscular function be mandatory?. Anesth Analg 2004; 98:102-6 | Not relevant interventions |
| Kopman A F, Kumar S, Klewicka M M: The staircase phenomenon: implications for monitoring of neuromuscular transmission. Anesthesiology 2001; 95:403-7 | No relevant outcomes reported |
| Kwon Y S, Kim J H, Hwang S M, Choi J W, Kang S S: Comparison of the effect of sugammadex and pyridostigmine on postoperative catheter-related bladder discomfort: a retrospective matched cohort analysis. Medicina (Kaunas) 2022; 58 | No relevant outcomes reported |
| Ledowski T, Falke L, Johnston F, Gillies E, Greenaway M, De Mel A, Tiong W S, Phillips M: Retrospective investigation of postoperative outcome after reversal of residual neuromuscular blockade: sugammadex, neostigmine or no reversal. Eur J Anaesthesiol 2014; 31:423-9 | No relevant comparators |
| Lee D K, Kang S W, Kim H K, Kim H S, Kim H: Effect of sugammadex on chest radiographic abnormality in the early postoperative period after video-assisted thoracoscopic lobectomy. Turk J Med Sci 2020; 50:1236-1246 | No relevant outcomes reported |
| Lee O H, Choi G J, Kang H, Baek C W, Jung Y H, Woo Y C, Oh J: Effects of sugammadex vs. pyridostigmine-glycopyrrolate on post-operative nausea and vomiting: propensity score matching. Acta Anaesthesiol Scand 2017; 61:39-45 | Not relevant interventions |
| Lee Y J, Money K, Elliott A: Sugammadex compared with Neostigmine/Glycopyrrolate: An Analysis of Total PACU Time, Responsiveness, and Potential for Economic Impact. Innov Pharm 2019; 10:#pages# | No relevant outcomes reported |
| Leslie K, Iatrou C C, Jones K, Beemer G H: Common peroneal nerve stimulation for neuromuscular monitoring: evaluation in awake volunteers and anesthetized patients. Anesth Analg 1999; 88:197-203 | No relevant outcomes reported |
| Lessard M R, Trépanier C A, Rouillard J F: Neostigmine requirements for reversal of neuromuscular blockade following an infusion of mivacurium. Can J Anaesth 1997; 44:836-42 | No relevant outcomes reported |
| Llauradó S, Sabaté A, Ferreres E, Camprubí I, Cabrera A: Sugammadex ideal body weight dose adjusted by level of neuromuscular blockade in laparoscopic bariatric surgery. Anesthesiology 2012; 117:93-8 | No relevant comparators |
| Loan P B, Connolly F M, Mirakhur R K, Kumar N, Farling P: Neuromuscular effects of rocuronium in patients receiving beta-adrenoreceptor blocking, calcium entry blocking and anticonvulsant drugs. Br J Anaesth 1997; 78:90-1 | No relevant outcomes reported |
| Loan P B, Paxton L D, Connolly F M, McCoy E P: The TOF-Guard neuromuscular transmission monitor. Anaesthesia 1995; 50:699-702 | No relevant outcomes reported |
| Lopez-Raigada A, Vega de la Osada F, Lopez-Sanz C, Múgica García MV, Alfranca A, Blanco C: Severe perioperative anaphylaxis due to allergy to the sugammadex-rocuronium complex. J Investig Allergol Clin Immunol 2022; 32:163-4 | Not relevant study design |
| Lowen DJ, Hodgson R, Tacey M, Barclay KL: Does deep neuromuscular blockade provide improved outcomes in low pressure laparoscopic colorectal surgery? A single blinded randomized pilot study. ANZ J Surg 2022 | Not relevant clinical question |
| Magorian T T, Lynam D P, Caldwell J E, Miller R D: Can early administration of neostigmine, in single or repeated doses, alter the course of neuromuscular recovery from a vecuronium-induced neuromuscular blockade?. Anesthesiology 1990; 73:410-4 | No relevant outcomes reported |
| Marcotte J, Drolet P, Perreault L, Girard M: Dose-response relationships for edrophonium antagonism of mivacurium-induced neuromuscular block during N2O-enflurane-alfentanil anaesthesia. Can J Anaesth 1995; 42:879-83 | No relevant outcomes reported |
| Markle A, Horn K, Welter J, Dullenkopf A: An observational study comparing the performance of TOF-Cuff with TOF-Scan monitoring during anaesthetic induction in clinical routine. Anaesthesiol Intensive Ther 2020; 52:181-186 | No relevant outcomes reported |
| Martini C H, Honing G H M, Bash L D, Olofsen E, Niesters M, van Velzen M, Dahan A, Boon M: The use of muscle relaxants and reversal agents in a setting without cost restrictions: experience from a tertiary academic hospital in the Netherlands. Ther Clin Risk Manag 2022; 18:379-90 | No relevant outcomes reported |
| McCaul C, Tobin E, Boylan J F, McShane A J: Atracurium is associated with postoperative residual curarization. Br J Anaesth 2002; 89:766-9 | No relevant outcomes reported |
| McCluskey A, Meakin G, Hopkinson J M, Baker R D: A comparison of acceleromyography and mechanomyography for determination of the dose-response curve of rocuronium in children. Anaesthesia 1997; 52:345-9 | No relevant outcomes reported |
| McCoy E P, Mirakhur R K, Maddineni V R, Loan P B, Connolly F: Administration of rocuronium (Org 9426) by continuous infusion and its reversibility with anticholinesterases. Anaesthesia 1994; 49:940-5 | No relevant outcomes reported |
| Meistelman C, Plaud B, Donati F: Rocuronium (ORG 9426) neuromuscular blockade at the adductor muscles of the larynx and adductor pollicis in humans. Can J Anaesth 1992; 39:665-9 | No relevant comparators |
| Meistelman C: Effect sites of neuromuscular blocking agents and the monitoring of clinical muscle relaxation. Adv Exp Med Biol 2003; 523:227-38 | Not relevant publication |
| Meretoja O A, Taivainen T, Wirtavuori K: Cisatracurium during halothane and balanced anaesthesia in children. Paediatr Anaesth 1996; 6:373-8 | No relevant outcomes reported |
| Miller D R, Bryson G, Martineau R J, Kitts J B, Curran M, Bragg P, Watson J B, Hull K, Lindsay: Edrophonium requirements for reversal of deep neuromuscular block following infusion of mivacurium. Can J Anaesth 1995; 42:996-1002 | No relevant outcomes reported |
| Mills K G, Wright P M, Pollard B J, Scott J M, Hing J P, Danjoux G, Hunter J M: Antagonism of rapacuronium using edrophonium or neostigmine: pharmacodynamics and pharmacokinetics. Br J Anaesth 1999; 83:727-33 | No relevant comparators |
| Min K C, Bondiskey P, Schulz V, Woo T, Assaid C, Yu W, Reynders T, Declercq R, McCrea J, Dennie J, Adkinson F, Shepherd G, Gutstein D E: Hypersensitivity incidence after sugammadex administration in healthy subjects: a randomised controlled trial. Br J Anaesth 2018; 121:749-757 | Not relevant patient population |
| Min K C, Woo T, Assaid C, McCrea J, Gurner D M, Sisk C M, Adkinson F, Herring W J: Incidence of hypersensitivity and anaphylaxis with sugammadex. J Clin Anesth 2018; 47:67-73 | Not relevant study design |
| Moningi S, Durga P, Mantha S, Ramachandra G: Train of four responses in paretic limbs. J Neurosurg Anesthesiol 2009; 21:334-8 | No relevant outcomes reported |
| Moon Y J, Kim S H, Kim J W, Lee Y K, Jun I G, Hwang G S: Comparison of postoperative coagulation profiles and outcome for sugammadex versus pyridostigmine in 992 living donors after living-donor hepatectomy. Medicine (Baltimore) 2018; 97:e0129 | No relevant comparators |
| Morita T, Tsukagoshi H, Sugaya T, Saito S, Sato H, Fujita T: Inadequate antagonism of vecuronium-induced neuromuscular block by neostigmine during sevoflurane or isoflurane anesthesia. Anesth Analg 1995; 80:1175-80 | No relevant outcomes reported |
| Motamed C, Bourgain J L: Computerized recording of neuromuscular monitoring and the risk of residual paralysis at the time of extubation. J Clin Monit Comput 2008; 22:315-8 | No relevant outcomes reported |
| Motamed C, Kirov K, Combes X, Duvaldestin P: Comparison between the Datex-Ohmeda M-NMT module and a force-displacement transducer for monitoring neuromuscular blockade. Eur J Anaesthesiol 2003; 20:467-9 | Not relevant interventions |
| Motsch J, Leuwer M, Böttiger B W, Bach A, Schönstedt R, Martin E: Dose-response, time-course of action and recovery of rocuronium bromide in children during halothane anaesthesia. Eur J Anaesthesiol Suppl 1995; 11:73-8 | No relevant outcomes reported |
| Motsch J, Leuwer M, Pfau M, Zimmerman J, Martin E: Time course of action and recovery of rocuronium bromide in children during halothane anaesthesia--a preliminary report. Eur J Anaesthesiol Suppl 1994; 9:75-7 | No relevant outcomes reported |
| Murphy G S, Szokol J W, Marymont J H, Avram M J, Vender J S: Residual neuromuscular blockade and critical respiratory events in the postanesthesia care unit. Anesth Analg 2008; 107:130-7 | Not relevant question |
| Naguib M, Abdulatif M, al-Ghamdi A: Dose-response relationships for edrophonium and neostigmine antagonism of rocuronium bromide (ORG 9426)-induced neuromuscular blockade. Anesthesiology 1993; 79:739-45 | No relevant outcomes reported |
| Naguib M, Abdulatif M: Dose-response relationships for edrophonium and neostigmine antagonism of pipecuronium-induced neuromuscular block. Anesth Analg 1994; 78:306-11 | No relevant comparators |
| Naguib M, Riad W: Dose-response relationships for edrophonium and neostigmine antagonism of atracurium and cisatracurium-induced neuromuscular block. Can J Anaesth 2000; 47:1074-81 | No relevant outcomes reported |
| Naguib M, Samarkandi A H, Bakhamees H S, Turkistani A, Alharby S W: Edrophonium and human plasma cholinesterase combination for antagonism of mivacurium-induced neuromuscular block. Br J Anaesth 1996; 77:424-6 | No relevant comparators |
| Naguib M, Selim M, Bakhamees H S, Samarkandi A H, Turkistani A: Enzymatic versus pharmacologic antagonism of profound mivacurium- induced neuromuscular blockade. Anesthesiology 1996; 84:1051-9 | No relevant outcomes reported |
| Nagy H I A, Elkadi H W: Can sugammadex improve the reversal profile of atracurium under sevoflurane anesthesia?. Egypt J Anaesth 2014; 30:95-99 | Other exclusions |
| Nakata Y, Goto T, Saito H, Ichinose F, Uezono S, Suwa K, Morita S: Comparison of acceleromyography and electromyography in vecuronium-induced neuromuscular blockade with xenon or sevoflurane anesthesia. J Clin Anesth 1998; 10:200-3 | No relevant outcomes reported |
| Nam S W, Oh A Y, Koo B W, Kim B Y, Han J, Chung S H: Effects of depth of neuromuscular blockade on the BIS-guided propofol requirement: A randomized controlled trial. Medicine (Baltimore) 2021; 100:e26576 | Not relevant clinical question |
| Nepveu M E, Donati F, Fortier L P: Train-of-four stimulation for adductor pollicis neuromuscular monitoring can be applied at the wrist or over the hand. Anesth Analg 2005; 100:149-54 | No relevant outcomes reported |
| Niño F B, Cohen V S, Medina-Vera A J: Influence of magnesium sulfate on the reversal time of rocuronium induced neuromuscular blockade using sugammadex: A randomized, double-blind, placebo-controlled trial. Rev Argent Anestesiol 2017; 75:1-6 | Other exclusions |
| Oğuz G, Unver S F D A, Acikgoz G B D L, Tuncel Y I: Postoperative residual curarization in postanesthesia care unit: Relationship with clinical tests. Gogus-Kalp-Damar Anestezi ve Yogun Bakim Dernegi Dergisi 2016; 22:24-28 | Not relevant clinical question |
| Oh A Y, Kim S D, Kim C S: Early and late reversal of rocuronium with pyridostigmine during sevoflurane anaesthesia in children. Anaesth Intensive Care 2004; 32:649-52 | No relevant comparators |
| Oh C S, Lim H Y, Jeon H J, Park H J, Piao L, Kim S H: Effect of deep neuromuscular blockade on serum cytokines and postoperative delirium in elderly patients undergoing total hip replacement: A prospective single-blind randomised controlled trial. Eur J Anaesthesiol 2021; 38:S58-S66 | No relevant comparators |
| Oh S K, Kwon W K, Park S, Ji S G, Kim J H, Park Y K, Lee S Y, Lim B G: Comparison of Operating Conditions, Postoperative Pain and Recovery, and Overall Satisfaction of Surgeons with Deep vs. No Neuromuscular Blockade for Spinal Surgery under General Anesthesia: A Prospective Randomized Controlled Trial. J Clin Med 2019; 8:#pages# | No relevant comparators |
| Oh S K, Park S, Lim B G, Kim Y S, Kim H, Kong M H: Comparison between the trapezius and adductor pollicis muscles as an acceleromyography monitoring site for moderate neuromuscular blockade during lumbar surgery. Sci Rep 2021; 11:14568 | No relevant outcomes reported |
| Oh T K, Ryu J H, Nam S, Oh A Y: Association of neuromuscular reversal by sugammadex and neostigmine with 90-day mortality after non-cardiac surgery. BMC Anesthesiol 2020; 20:41 | No relevant outcomes reported |
| Ono Y, Fujita Y, Kajiura T, Okawa H, Nakashima J, Isobe H, Fujiwara Y: Efficacy and safety of sugammadex in patients undergoing renal transplantation. JA Clin Rep 2018; 4:56 | Not relevant study design |
| O'Reilly-Shah V N, Lynde G C, Mitchell M L, Maffeo C L, Jabaley C S, Wolf F A: Initial experience with the unrestricted introduction of sugammadex at a large academic medical center: a retrospective observational study examining postoperative mechanical ventilation and efficiency outcomes. Korean J Anesthesiol 2018; 71:374-385 | No relevant comparators |
| Ornstein E, Matteo R S, Weinstein J A, Halevy J D, Young W L, Abou-Donia M M: Accelerated recovery from doxacurium-induced neuromuscular blockade in patients receiving chronic anticonvulsant therapy. J Clin Anesth 1991; 3:108-11 | Other exclusions |
| Parida S, Kausalya V, Mishra S K, Adinarayanan S: Dose-reversal effect relationship of three different doses of neostigmine in obese patients: A randomised clinical trial. Indian J Anaesth 2017; 61:787-792 | No relevant comparators |
| Park S, Oh E J, Han S, Shin B, Shin S H, Im Y, Son Y H, Park H Y: Intraoperative Anesthetic Management of Patients with Chronic Obstructive Pulmonary Disease to Decrease the Risk of Postoperative Pulmonary Complications after Abdominal Surgery. J Clin Med 2020; 9:#pages# | Not relevant clinical question |
| Park Y S, Kim J, Kim S H, Moon Y J, Kwon H M, Park H S, Kim W J, Ha S: Comparison of recovery profiles in patients with Parkinson's disease for 2 types of neuromuscular blockade reversal agent following deep brain stimulator implantation. Medicine (Baltimore) 2019; 98:e18406 | Not relevant patient population |
| Patil S, Divatia J V: Detection of residual neuromuscular blockade after use of non-depolarizing muscle relaxant: utility of double burst stimulation comparing with train-of-four. Indian J Anaesth 2005; 49:40-3 | No relevant outcomes reported |
| PatrocÃ­nio M D, Shay D, Rudolph M I, Santer P, Grabitz S D, Xu X, Nabel S, Bose S, Eikermann M: Residual Neuromuscular Block Prediction Score Versus Train-of-Four Ratio and Respiratory Outcomes: A Retrospective Cohort Study. Anesth Analg 2021; #volume#:#pages# | Not relevant clinical question |
| PeÃ±a O, Prestjohn S, Guzzetta C E: Agreement between muscle movement and peripheral nerve stimulation in critically ill pediatric patients receiving neuromuscular blocking agents. Heart Lung 2000; 29:309-18 | Not relevant patient population |
| Pei D Q, Zhou H M, Zhou Q H: Grip strength can be used to evaluate postoperative residual neuromuscular block recovery in patients undergoing general anesthesia. Medicine (Baltimore) 2019; 98:e13940 | Not relevant interventions |
| Phillips B J, Hunter J M: Use of mivacurium chloride by constant infusion in the anephric patient. Br J Anaesth 1992; 68:492-8 | No relevant outcomes reported |
| Pinard A M, Donati F, Martineau R, Denault A Y, Taillefer J, Carrier M: Magnesium potentiates neuromuscular blockade with cisatracurium during cardiac surgery. Can J Anaesth 2003; 50:172-8 | No relevant outcomes reported |
| Plaud B, Debaene B, Donati F, Marty J: Residual paralysis after emergence from anesthesia. Anesthesiology 2010; 112:1013-22 | Not relevant publication |
| Plaud B, Debaene B, Lequeau F, Meistelman C, Donati F: Mivacurium neuromuscular block at the adductor muscles of the larynx and adductor pollicis in humans. Anesthesiology 1996; 85:77-81 | No relevant outcomes reported |
| Puura A I, Baer G A, Rorarius M G: Edrophonium is better than neostigmine to antagonize residual vecuronium induced neuromuscular block. Acta Anaesthesiol Belg 1994; 45:161-6 | No relevant outcomes reported |
| Rahe-Meyer N, Fennema H, Schulman S, Klimscha W, Przemeck M, Blobner M, Wulf H, Speek M, McCrary Sisk C, Williams-Herman D, Woo T, Szegedi A: Effect of reversal of neuromuscular blockade with sugammadex versus usual care on bleeding risk in a randomized study of surgical patients. Anesthesiology 2014; 121:969-77 | No relevant comparators |
| Ranjan S, RR Hall Iii, Al-Zarah M, Squraishi AS, Drzymalski MD: Identifying high dose neostigmine as a risk factor for post-operative respiratory complications: a case-control study. Anaesthesiol Intensive Ther 2021; 53:325-8 | Not relevant study design |
| Richard A, Girard F, Girard D C, Boudreault D, Chouinard P, Moumdjian R, Bouthilier A, Ruel M, Couture J, Varin F: Cisatracurium-induced neuromuscular blockade is affected by chronic phenytoin or carbamazepine treatment in neurosurgical patients. Anesth Analg 2005; 100:538-44 | No relevant outcomes reported |
| Rimaniol J M, Dhonneur G, Sperry L, Duvaldestin P: A comparison of the neuromuscular blocking effects of atracurium, mivacurium, and vecuronium on the adductor pollicis and the orbicularis oculi muscle in humans. Anesth Analg 1996; 83:808-13 | No relevant outcomes reported |
| Robertson E N, Driessen J J, Vogt M, De Boer H, Scheffer G J: Pharmacodynamics of rocuronium 0.3 mg kg(-1) in adult patients with and without renal failure. Eur J Anaesthesiol 2005; 22:929-32 | No relevant outcomes reported |
| Rodiera J, Serradell A, Alvarez-Gómez J A, Aliaga L: The cuff method: a pilot study of a new method of monitoring neuromuscular function. Acta Anaesthesiol Scand 2005; 49:1552-8 | No relevant outcomes reported |
| Rudolph M I, Chitilian H V, Ng P Y, Timm F P, Agarwala A V, Doney A B, Ramachandran S K, Houle T T, Eikermann M: Implementation of a new strategy to improve the peri-operative management of neuromuscular blockade and its effects on postoperative pulmonary complications. Anaesthesia 2018; 73:1067-1078 | Not relevant interventions |
| Rudolph M I, Ng P Y, Deng H, Scheffenbichler F T, Grabitz S D, Wanderer J P, Houle T T, Eikermann M: Comparison of a novel clinical score to estimate the risk of REsidual neuromuscular block Prediction Score and the last train-of-four count documented in the electronic anaesthesia record: A retrospective cohort study of electronic data on file. Eur J Anaesthesiol 2018; 35:883-892 | Not relevant clinical question |
| Saarnivaara L, Simola M: Effects of four anticholinesterase-anticholinergic combinations and tracheal extubation on QTc interval of the ECG, heart rate and arterial pressure. Acta Anaesthesiol Scand 1998; 42:460-3 | No relevant comparators |
| Saddler J M, Marks L F, Norman J: Comparison of atracurium-induced neuromuscular block in rectus abdominis and hand muscles of man. Br J Anaesth 1992; 69:26-8 | No relevant comparators |
| Saddler J M, Bevan J C, Donati F, Bevan D R, Pinto S R: Comparison of double-burst and train-of-four stimulation to assess neuromuscular blockade in children. Anesthesiology 1990; 73:401-3 | No relevant outcomes reported |
| Saitoh Y, Oshima T, Nakata Y: Acceleromyographic monitoring of neuromuscular block over the orbicularis oris muscle in anesthetized patients receiving vecuronium. J Clin Anesth 2010; 22:318-23 | Other exclusions |
| Saitoh Y, Oshima T, Nakata Y: Monitoring of vecuronium-induced neuromuscular block at the sternocleidomastoid muscle in anesthetized patients. J Anesth 2010; 24:838-44 | Other exclusions |
| Saitoh Y, Aoki K, Okazaki M, Hirama T, Isosu T, Murakawa M: Reversal of vecuronium with neostigmine: a comparison between male and female patients. Fukushima J Med Sci 2009; 55 | Other exclusions |
| Saitoh Y, Fujii Y, Takahashi K, Makita K, Tanaka H, Amaha K: Recovery of post-tetanic count and train-of-four responses at the great toe and thumb. Anaesthesia 1998; 53:244-8 | Other exclusions |
| Saitoh Y, Fujii Y, Toyooka H, Amaha K: Post-tetanic burst count: a stimulating pattern for profound neuromuscular blockade. Can J Anaesth 1995; 42:1096-100 | No relevant outcomes reported |
| Saitoh Y, Fujii Y, Ueki M, Makita K, Amaha K: Accelographic and mechanical post-tetanic count and train-of-four ratio assessed at the great toe. Eur J Anaesthesiol 1998; 15:649-55 | Other exclusions |
| Saitoh Y, Hattori H, Sanbe N, Nakajima H, Akatu M, Murakawa M: Delayed recovery of vecuronium neuromuscular block in diabetic patients during sevoflurane anesthesia. Can J Anaesth 2005; 52:467-73 | Not relevant interventions |
| Saitoh Y, Hattori H, Sanbe N, Nakajima H, Akatu M, Murakawa M: Reversal of vecuronium with neostigmine in patients with diabetes mellitus. Anaesthesia 2004; 59:750-4 | Other exclusions |
| Saitoh Y, Kaneda K, Hattori H, Nakajima H, Murakawa M: Monitoring of neuromuscular block after administration of vecuronium in patients with diabetes mellitus. Br J Anaesth 2003; 90:480-6 | Other exclusions |
| Saitoh Y, Koitabashi Y, Makita K, Tanaka H, Amaha K: Train-of-four and double burst stimulation fade at the great toe and thumb. Can J Anaesth 1997; 44:390-5 | No relevant outcomes reported |
| Saitoh Y, Nakajima H, Hattori H, Aoki K, Katayama T, Murakawa M: Neuromuscular blockade can be assessed accelerographically over the vastus medialis muscle in patients positioned prone. Can J Anaesth 2003; 50:342-7 | No relevant comparators |
| Saitoh Y, Nakazawa K, Makita K, Tanaka H, Amaha K: Evaluation of residual neuromuscular block using train-of-four and double burst stimulation at the index finger. Anesth Analg 1997; 84:1354-8 | Other exclusions |
| Saitoh Y, Nakazawa K, Makita K, Tanaka H, Toyooka H: Evaluation of residual neuromuscular blockade using modified double burst stimulation. Acta Anaesthesiol Scand 1997; 41:741-5 | Other exclusions |
| Saitoh Y, Nakazawa K, Tanaka H, Toyooka H, Amaha K: Double burst stimulation2,3: a new stimulating pattern for residual neuromuscular block. Can J Anaesth 1996; 43:1001-5 | Not relevant interventions |
| Saitoh Y, Narumi Y, Fujii Y, Ueki M, Makita K: Electromyographic assessment of neuromuscular block at the gastrocnemius muscle. Br J Anaesth 1999; 82:329-32 | Other exclusions |
| Saitoh Y, Narumi Y, Fujii Y, Ueki M: Tactile evaluation of fade of the train-of-four and double-burst stimulation using the anaesthetist's non-dominant hand. Br J Anaesth 1999; 83:275-8 | Other exclusions |
| Saitoh Y, Sashiyama H, Oshima T, Nakata Y, Sato J: Assessment of neuromuscular block at the orbicularis oris, corrugator supercilii, and adductor pollicis muscles. J Anesth 2012; 26:28-33 | Other exclusions |
| Saitoh Y, Tanaka H, Toyooka H, Amaha K: Recovery of post-tetanic and train-of-four responses at the first dorsal interosseous and adductor pollicis muscles in patients receiving vecuronium. Can J Anaesth 1996; 43:362-7 | Other exclusions |
| Santanen O A, Paloheimo M P: Effects of small peripheral temperature changes on evoked baseline electromyographic response. Acta Anaesthesiol Scand 1999; 43:338-42 | No relevant outcomes reported |
| Santos F N C, Braga A D, Ribeiro C J, Carvalho V H, Junqueira F E: Use of protocol and evaluation of postoperative residual curarization incidence in the absence of intraoperative acceleromyography - Randomized clinical trial. Braz J Anesthesiol 2017; 67:592-599 | Foreign language article |
| Sasaki N, Meyer M J, Malviya S A, Stanislaus A B, MacDonald T, Doran M E, Igumenshcheva A, Hoang A H, Eikermann M: Effects of neostigmine reversal of nondepolarizing neuromuscular blocking agents on postoperative respiratory outcomes: a prospective study. Anesthesiology 2014; 121:959-68 | No relevant comparators |
| Schiavoni L, Pascarella G, Grande S, Agrò F E: Neuromuscular block monitoring by smartphone application (i-TOF(©) system): an observational pilot study. NPJ Digit Med 2020; 3:137 | Not relevant clinical question |
| Schulz-Stübner S, Wettmann G, Reyle-Hahn S M, Rossaint R: Magnesium as part of balanced general anaesthesia with propofol, remifentanil and mivacurium: a double-blind, randomized prospective study in 50 patients. Eur J Anaesthesiol 2001; 18:723-9 | Not relevant clinical question |
| Schwartz A E, Matteo R S, Ornstein E, Halevy J D, Diaz J: Pharmacokinetics and pharmacodynamics of vecuronium in the obese surgical patient. Anesth Analg 1992; 74:515-8 | No relevant outcomes reported |
| Schmartz D, Sghaier R, Bernard P, Fils J F, Fuchs-Buder T: Neuromuscular block in patients 80 years and older: a prospective, controlled study. BMC Anesthesiol 2021; 21:225 | Not relevant clinical question |
| Servin F S, Lavaut E, Kleef U, Desmonts J M: Repeated doses of rocuronium bromide administered to cirrhotic and control patients receiving isoflurane. A clinical and pharmacokinetic study. Anesthesiology 1996; 84:1092-100 | No relevant outcomes reported |
| Sharpe M D, Moote C A, Lam A M, Manninen P H: Comparison of integrated evoked EMG between the hypothenar and facial muscle groups following atracurium and vecuronium administration. Can J Anaesth 1991; 38:318-23 | No relevant outcomes reported |
| Shorten G D, Ali H H, Goudsouzian N G: Neostigmine and edrophonium antagonism of moderate neuromuscular block induced by pancuronium or tubocurarine. Br J Anaesth 1993; 70:160-2 | No relevant outcomes reported |
| Sidi A, Kaplan R F, Davis R F: Prolonged neuromuscular blockade and ventilatory failure after renal transplantation and cyclosporine. Can J Anaesth 1990; 37:543-8 | Not relevant clinical question |
| SimÃµes De Almeida M C, De Camargo D R, Linhares S F: Evaluation of residual neuromuscular block and late recurarization in the Post-Anesthetic Care Unit. Rev Brasil Anestesiol 2004; 54:518-531 | No relevant comparators |
| Sims T, Peterson J, Hakim M, Roth C, Tumin D, Tobias J D, Hansen J K: Decrease in heart rate following the administration of sugammadex in adults. J Anaesthesiol Clin Pharmacol 2020; 36:465-469 | Not relevant study design |
| Soffer O D, Kim A, Underwood E, Hansen A, Cornelissen L, Berde C: Neurophysiological Assessment of Prolonged Recovery From Neuromuscular Blockade in the Neonatal Intensive Care Unit. Front Pediatr 2020; 8:580 | No relevant outcomes reported |
| Soltesz S, Stark C, NoÃ© K G, Anapolski M, Mencke T: Monitoring recovery from rocuronium-induced neuromuscular block using acceleromyography at the trapezius versus the adductor pollicis muscle: an observational trial. Can J Anaesth 2016; 63:709-17 | No relevant comparators |
| Soriano S G, Kaus S J, Sullivan L J, Martyn J A: Onset and duration of action of rocuronium in children receiving chronic anticonvulsant therapy. Paediatr Anaesth 2000; 10:133-6 | No relevant outcomes reported |
| Soriano S G, Sullivan L J, Venkatakrishnan K, Greenblatt D J, Martyn J A: Pharmacokinetics and pharmacodynamics of vecuronium in children receiving phenytoin or carbamazepine for chronic anticonvulsant therapy. Br J Anaesth 2001; 86:223-9 | No relevant outcomes reported |
| Spacek A, Neiger F X, Krenn C G, Hoerauf K, Kress H G: Rocuronium-induced neuromuscular block is affected by chronic carbamazepine therapy. Anesthesiology 1999; 90:109-12 | No relevant outcomes reported |
| Spacek A, Neiger F X, Spiss C K, Kress H G: Atracurium-induced neuromuscular block is not affected by chronic anticonvulsant therapy with carbamazepine. Acta Anaesthesiol Scand 1997; 41:1308-11 | No relevant outcomes reported |
| Spacek A, Neiger F X, Spiss C K, Kress H G: Chronic carbamazepine therapy does not influence mivacurium-induced neuromuscular block. Br J Anaesth 1996; 77:500-2 | No relevant outcomes reported |
| Staals L M, Driessen J J, Van Egmond J, De Boer H D, Klimek M, Flockton E A, Snoeck M M: Train-of-four ratio recovery often precedes twitch recovery when neuromuscular block is reversed by sugammadex. Acta Anaesthesiol Scand 2011; 55:700-7 | No relevant outcomes reported |
| Suzuki T, Fukano N, Kitajima O, Saeki S, Ogawa S: Normalization of acceleromyographic train-of-four ratio by baseline value for detecting residual neuromuscular block. Br J Anaesth 2006; 96:44-7 | No relevant comparators |
| Suzuki T, Lien C A, Belmont M R, Tjan J, Savarese J J: Edrophonium effectively antagonizes neuromuscular block at the laryngeal adductors induced by rapacuronium, rocuronium and cisatracurium, but not mivacurium. Can J Anaesth 2003; 50:879-85 | No relevant comparators |
| Szalados J E, Donati F, Bevan D R: Edrophonium priming for antagonism of atracurium neuromuscular blockade. Can J Anaesth 1990; 37:197-201 | No relevant comparators |
| Thomas R, Smith D, Strike P: Prospective randomised double-blind comparative study of rocuronium and pancuronium in adult patients scheduled for elective 'fast-track' cardiac surgery involving hypothermic cardiopulmonary bypass. Anaesthesia 2003; 58:265-71 | No relevant comparators |
| Ting C K, Lin S M, Yang Y W, Tsai H J, Lao H C, Chu Y C, Tsai S K: Reversal of mivacurium chloride: edrophonium of spontaneous recovery in microscopic laryngeal surgery. Acta Anaesthesiol Sin 2001; 39:157-62 | No relevant comparators |
| Toyooka H, Noguchi Y, Ebata T, Amaha K: A close relationship between post-tetanic twitch and train-of-four responses during neuromuscular blockade by vecuronium. J Anesth 1991; 5:146-52 | No relevant outcomes reported |
| Tsai C C, Chung H S, Chen P L, Yu C M, Chen M S, Hong C L: Postoperative residual curarization: clinical observation in the post-anesthesia care unit. Chang Gung Med J 2008; 31:364-8 | No relevant outcomes reported |
| Unterbuchner C, Werkmann M, Ziegleder R, Seyfried T, Graf B, Zeman F, Blobner M, Sinner B, Metterlein T: Shortening of the twitch stabilization period by tetanic stimulation in acceleromyography in infants, children and young adults (STSTS-Study): a prospective randomised, controlled trial. J Clin Monit Comput 2020; 34:1343-9 | No relevant outcomes reported |
| Valencia Morales D J, Stewart B R, Heller S F, Sprung J, Schroeder D R, Ghanem O M, Weingarten T N: Urinary retention following inguinal herniorrhaphy: role of neuromuscular blockade reversal. Surg Laparosc Endosc Percutan Tech 2021; 31:613-7 | No relevant outcomes reported |
| Vegh T, Juhasz M, Laszlo I, Vasko A, Tassonyi E, Fulesdi B: Clinical observations on reversal of rocuronium-induced residual neuromuscular blockade by sugammadex after thoracic surgery. Jurnalul Roman de Anestezie Terapie Intensiva/Romanian Journal of Anaesthesia and Intensive Care 2014; 21:7-11:44753 | Not relevant study design |
| van den Broek L, Wierda J M, Smeulers N J, Proost J H: Pharmacodynamics and pharmacokinetics of an infusion of Org 9487, a new short-acting steroidal neuromuscular blocking agent. Br J Anaesth 1994; 73:331-5 | Not relevant clinical question |
| van Vlymen J M, Parlow J L: The effects of reversal of neuromuscular blockade on autonomic control in the perioperative period. Anesth Analg 1997; 84:148-54 | No relevant outcomes reported |
| Vargas M, Buonanno P, Sica A, Sabatella E, D'Alessio F P, Alfieri S, Iacovazzo C, Carrano R, Servillo G: Effects of Sugammadex Plus Rocuronium vs Neostigmine Plus Cisatracurium During Renal Transplantation on Graft Function: A Retrospective, Case-Control Study. Transplant Proc 2021; 53:818-824 | No relevant outcomes reported |
| Vincent R D Jr., Brockwell R C, Moreno M C: Posttetanic count revisited: are measurements more reliable using the TOF-Watch accelerographic peripheral nerve stimulator?. J Clin Monit Comput 2004; 18:33-7 | No relevant outcomes reported |
| Yoshida F, Suzuki T, Kashiwai A, Furuya T, Konishi J, Ogawa S: Correlation between cardiac output and reversibility of rocuronium-induced moderate neuromuscular block with sugammadex. Acta Anaesthesiol Scand 2012; 56:83-7 | Not relevant clinical question |
| Young M L, Hanson C W 3rd , Bloom J S, Muravchick S: Localized hypothermia influences assessment of recovery from vecuronium neuromuscular blockade. Can J Anaesth 1994; 41:1172-7 | No relevant outcomes reported |