Table 1. Characteristics of included studies – Module Opheffen van spierverslapping

Study	Participants (number, age, other important characteristics)	Comparison	Outcome measures	Comments	Risk of bias (per outcome measure)*
Included in systematic review Bai, 2023					
Yu, 2022	N at baseline Intervention: 50 Control: 50 Age Intervention: 54.1 ± 10.7 Control: 51.3 ± 11.5 Sex Intervention: male/female: 22/17 Control: male/female: 18/20 Reported risk factor: - Thoracic surgery	Intervention: 2 mg/kg sugammadex Control: 0.05 mg/kg neostigmine + 0.02 mg/kg atropine	Postoperative pulmonary complications: - Composite rate - Pneumothorax - Pleural effusion - Atelectasis - Pneumonia		LOW
Williams, 2020	N at baseline Intervention: 50 Control: 50	Intervention: 4 mg/kg sugammadex Control:	Postoperative pulmonary complications: - Respiratory failure - Aspiration pneumonitis - Pneumonia - Pleural effusion	Funded by Merck Sharp & Dohme Corp., USA.	HIGH

	Age Intervention: 68.7 ± 3.0 Control: 68.3 ± 3.8 Reported risk factor: - Patients older than 65 years	0.07 mg/kg neostigmine (maximum 5mg)	 Adverse events: - Vomiting - Nausea		
Togioka, 2020	N at baseline Intervention: 100 Control: 100 Age Intervention: 74.8 ± 4.3 Control: 75.1 ± 4.0 Sex Intervention: M/F – 48/52 Control: M/F – 44/56 Reported risk factors: - Patients older than 65 years. - Surgery duration of more than 3 hours.	Intervention: 2 mg/kg sugammadex Control: 0.07 mg/kg neostigmine plus 0.1-0.2 mg/kg glycopyrrolate	Postoperative pulmonary complications: - Respiratory failure - Aspiration pneumonitis - Pneumonia - Composite rate - Atelectasis - Pneumothorax Desaturation Adverse events: - Bronchospasm - Hypersensitivity reaction - Cough - Headache - Postoperative nausea and vomiting (PONV) - Itching - Foul, salty or metallic taste	Investigator-Initiated Studies Program of Merck Sharp & Dohme Corp.	Some concerns

Olesnicky, 2022	N at baseline Intervention: 19 Control: 11 Age Intervention: 57 ± 7 Control: 58 ± 7 Sex Intervention: M/F – 6/13 Control: M/F – 6/5 Reported risk factor: - Surgery duration of more than 2 hours	Intervention: 2 mg/kg sugammadex Control: 0.07 mg/kg plus 10 mcg/kg glycopyrrolate	Postoperative pulmonary complications: - Respiratory infection - Respiratory failure - Pleural effusion - Atelectasis - Pneumothorax Desaturation Adverse events: - Postoperative nausea and vomiting (PONV)		LOW
Lee, 2020	N at baseline Intervention: 37 Control: 36 Age Intervention: 57 (33-83), median (range) Control: 54 (27-83), median (range)	Intervention: 2-4 mg/kg sugammadex Control: 0.02-0.05 mg/kg neostigmine + glycopyrrolate in a ratio of 1:5	Postoperative pulmonary complications: - Respiratory failure		Some concerns

	Sex Intervention: M/F – 16/21 Control: M/F – 19/17 Reported risk factor: upper abdominal surgery				
Ledowski, 2021	N at baseline Intervention: 93 Control: 87 Age Intervention: 75 – 91 (range) Control: 75 – 88 (range) Sex Intervention: M/F – 31/54 Control: M/F – 32/51	Intervention: 2 mg/kg sugammadex Control: 0.05 mg/kg neostigmine + 0.015 mg/kg atropine	Postoperative pulmonary complications: - Respiratory failure - Aspiration pneumonitis Desaturation Adverse events: - Postoperative nausea and vomiting (PONV) - tachycardia/ bradycardia	Investigators received honoraria and travel from manufacturer of sugammadex. No conflicts related to planning, conduct, analysis or publication.	**Some concerns**

	Reported risk factor: patients older than 75 years				
Han, 2021	N at baseline Intervention: 40 Control: 40 Age Intervention: 54.1 ± 10.7 Control: 51.3 ± 11.5 Sex Intervention: M/F – 22/17 Control: M/F – 18/20 Reported risk factor: upper abdominal surgery	Intervention: 2-4 mg/kg sugammadex Control: 0.4–0.9, mg/kg neostigmine and 0.4 mg glycopyrrolate	Postoperative pulmonary complications: - Respiratory failure - Aspiration pneumonitis	Research was funded by Seoul National University Bundang Hospital Research Fund	LOW
Evron, 2017	N at baseline Intervention: 32 Control: 25	Intervention: 2 mg/kg sugammadex Control: 2.5 mg/kg neostigmine	Postoperative pulmonary complications: - Respiratory failure - Aspiration pneumonitis		LOW

	Age Intervention: 42.0 ± 13 Control: 45 ± 13 Sex Intervention: M/F – 11/21 Control: M/F – 11/14 Reported risk factor:		Desaturation		
Citil, 2019	N at baseline Intervention: 30 Control: 30 Age Intervention: 52 ± 9.6 Control: 51 ± 10.2 Sex Intervention: M/F – 19/11 Control: M/F – 20/10	Intervention: 2 mg/kg sugammadex Control: 0.05 mg/kg neostigmine (maximum 5 mg) plus 0.02 mg/kg atropine	Postoperative pulmonary complications: - Pneumonia - Atelectasis Adverse events: - Postoperative nausea and vomiting (PONV) - Sore throat - Shivering - Coughing - Bradycardia		Some concerns

	Reported risk factor: Thoracic surgery				
Carron, 2013	N at baseline Intervention: 20 Control: 20 Age Intervention: 46 ± 9 Control: 40.4 ± 12 Sex Intervention: M/F - 6/14 Control: M/F - 6/14 Reported risk factor: upper abdominal surgery	Intervention: 4 mg/kg sugammadex Control: 0.07 mg/kg neostigmine plus 0.01 mg/kg atropine	Postoperative pulmonary complications: - Respiratory failure	Funding from MSD and Johnson & Johnson	Some concerns
Brueckmann, 2015	N at baseline Intervention: 76 Control: 78	Intervention: 2 – 4 mg/kg sugammadex Control: a maximum dose of 5 mg neostigmine	Postoperative pulmonary complications: - Pneumonia	Funded by Merck Sharp & Dohme Corp	HIGH

	Age Intervention: 56.4 ± 2.8 Control: 57.0 ± 12.7 Sex Intervention: M/F - 47/27 Control: M/F – 43/34 Reported risk factor: upper abdominal surgery				
Alday, 2019	N at baseline Intervention: 65 Control: 65 Age Intervention: 65.9 ± 12.0 Control: 69.9 ± 13.0 Sex Intervention: M/F: 32/30	Intervention: 4mg/kg sugammadex Control: 40µg/kg Neostigmine + 0.01 mg/kg atropine	Postoperative pulmonary complications: - Respiratory failure - Pneumonia - Atelectasis Desaturation (postoperative hypoxemia)	Supported by a project grant from Merck Investigator Studies Program	HIGH

	Control: M/F: 32/32 Reported risk factor: Upper abdominal surgery				