

Supplemental Material

Search Strategy:

Medline (PubMed)

(Semaglutide OR Ozempic OR Rybelsus OR Wegovy OR GLP-1 receptor agonists OR Glucagon-Like Peptide-1 Receptor Agonists OR Glucagon-Like Peptides OR GLP-1 Agonists OR Incretin-Based Therapy OR Antidiabetic Agents OR Diabetes Mellitus OR Metabolic Diseases OR Glucose Metabolism Disorders OR Glucose Intolerance OR T2DM OR Type 2 Diabetes OR Hyperglycemia OR Blood Glucose Control OR Weight Loss OR Obesity Management OR Bariatric OR Obesity Treatment OR Body Weight Management) AND (Gastric Content OR Gastric Residual OR Gastric Emptying OR Gastrointestinal Motility OR Gastric Volume OR Stomach Contents OR Gastroparesis OR Delayed Gastric Emptying OR Gastric Dysmotility OR Gastric Function) AND (Perioperative OR Preoperative OR Preoperative Management OR Intraoperative Complications OR Surgical Complications OR Preoperative Fasting OR Point-of-care ultrasound OR POCUS OR Perioperative Care OR Surgery Risks OR Pre-Surgical Risks OR Surgical Safety OR Anesthesia OR General Anesthesia OR Parenteral Anesthesia OR Inhalation Anesthesia OR Neuromuscular Blockade) AND (Aspiration OR Respiratory Aspiration OR Aspiration of gastric contents OR Inhalation OR Pulmonary Risks OR Aspiration Pneumonias OR Pulmonary Aspiration OR Pulmonary Complications OR Respiratory Risks OR Airway Control OR Airway Management OR Extubation OR Intubation OR Pre-operative interruption interval OR Drug Discontinuation OR Withdrawal Period OR Cessation Period OR Pre-operative Fasting Time OR Fasting Time OR Diabetes Complications OR Patient Recovery Time OR Nausea OR Vomiting OR Insulin Therapy OR Metabolic Control OR Glycemic Variability OR Thromboembolic Events OR Pre-operative Anxiety OR Patient Compliance OR Emergency Interventions OR Mortality)

Scopus

(ALL (semaglutide OR ozempic OR rybelsus OR wegovy OR glp-1 AND receptor AND agonists OR glucagon-like AND peptide-1 AND receptor AND agonists OR glucagon-like AND peptides OR glp-1 AND agonists OR incretin-based AND therapy OR antidiabetic AND agents OR diabetes AND mellitus OR metabolic AND diseases OR glucose AND metabolism AND disorders OR glucose AND intolerance OR t2dm OR type 2 diabetes OR hyperglycemia OR blood AND glucose AND control OR weight AND loss OR obesity AND management OR bariatric OR obesity AND treatment OR body AND weight AND management) AND ALL (gastric AND content OR gastric AND residual OR gastric AND emptying OR gastrointestinal AND motility OR gastric AND volume OR stomach AND contents OR gastroparesis OR delayed AND gastric AND emptying OR gastric AND dysmotility OR gastric AND function) OR ALL (perioperative OR preoperative OR preoperative AND management OR intraoperative AND complications OR surgical AND complications OR preoperative AND fasting OR point-of-care AND ultrasound OR pocus OR perioperative AND care OR surgery AND risks OR pre-surgical AND risks OR surgical AND safety OR anesthesia OR general AND anesthesia OR parenteral AND anesthesia OR inhalation AND anesthesia OR neuromuscular AND blockade) OR ALL (aspiration OR respiratory AND aspiration OR aspiration AND of AND gastric AND contents OR inhalation OR pulmonary AND risks OR aspiration AND pneumonias OR pulmonary AND aspiration OR pulmonary AND complications OR respiratory AND risks OR airway AND control OR airway AND management OR extubation OR intubation OR pre-operative AND interruption AND interval OR drug AND discontinuation OR withdrawal AND period OR cessation AND period OR pre-operative AND fasting AND time OR fasting AND time OR diabetes AND complications OR patient AND recovery AND time OR nausea OR vomiting OR insulin AND therapy OR metabolic AND control OR glycemic AND variability OR thromboembolic AND events OR pre-operative AND anxiety OR patient AND compliance OR emergency AND interventions OR mortality))

Web of Science

((ALL=((Semaglutide OR olympic OR rubellus OR wegov OR GLP-1 receptor agonists OR Glucagon-Like Peptide-1 Receptor Agonists OR Glucagon-Like Peptides OR GLP-1 Agonists OR Incretin-Based Therapy OR Antidiabetic Agents OR Diabetes Mellitus OR Metabolic Diseases OR Glucose Metabolism Disorders OR Glucose Intolerance OR T2DM OR Type 2 Diabetes OR Hyperglycemia OR Blood Glucose Control OR Weight Loss OR Obesity Management OR Bariatric OR Obesity Treatment OR Body Weight Management))) AND TS=((Gastric Content OR Gastric Residual OR Gastric Emptying OR Gastrointestinal Motility OR Gastric Volume OR Stomach Contents OR Gastroparesis OR Delayed Gastric Emptying OR Gastric Dysmotility OR Gastric Function))) AND TS=((Perioperative OR Preoperative OR Preoperative Management OR Intraoperative Complications OR Surgical Complications OR Preoperative Fasting OR Point-of-care ultrasound OR POCUS OR Perioperative Care OR Surgery Risks OR Pre-Surgical Risks OR Surgical Safety OR Anesthesia OR General Anesthesia OR Parenteral Anesthesia OR Inhalation Anesthesia OR Neuromuscular Blockade))) AND TS=((Aspiration OR Respiratory Aspiration OR Aspiration of gastric contents OR Inhalation OR Pulmonary Risks OR Aspiration Pneumonias OR Pulmonary Aspiration OR Pulmonary Complications OR Respiratory Risks OR Airway Control OR Airway Management OR Extubation OR Intubation OR Pre-operative interruption interval OR Drug Discontinuation OR Withdrawal Period OR Cessation Period OR Pre-operative Fasting Time OR Fasting Time OR Diabetes Complications OR Patient Recovery Time OR Nausea OR Vomiting OR Insulin Therapy OR Metabolic Control OR Glycemic Variability OR Thromboembolic Events OR Pre-operative Anxiety OR Patient Compliance OR Emergency Interventions OR Mortality))

Embase

('semaglutide'/exp OR semaglutide OR 'ozempic'/exp OR ozempic OR 'rybelsus'/exp OR rybelsus OR 'wegovy'/exp OR wegovy OR 'glp-1 receptor agonists' OR (('glp 1'/exp OR 'glp 1') AND ('receptor'/exp OR receptor) AND

('agonists'/exp OR agonists)) OR 'glucagon-like peptide-1 receptor agonists'/exp OR 'glucagon-like peptide-1 receptor agonists' OR ('glucagon like' AND ('peptide 1'/exp OR 'peptide 1') AND ('receptor'/exp OR receptor) AND ('agonists'/exp OR agonists)) OR 'glucagon-like peptides'/exp OR 'glucagon-like peptides' OR ('glucagon like' AND ('peptides'/exp OR peptides)) OR 'glp-1 agonists' OR (('glp 1'/exp OR 'glp 1') AND ('agonists'/exp OR agonists)) OR 'incretin-based therapy' OR ('incretin based' AND ('therapy'/exp OR therapy)) OR 'antidiabetic agents'/exp OR 'antidiabetic agents' OR (('antidiabetic'/exp OR antidiabetic) AND agents) OR 'diabetes mellitus'/exp OR 'diabetes mellitus' OR (('diabetes'/exp OR diabetes) AND mellitus) OR 'metabolic diseases'/exp OR 'metabolic diseases' OR (metabolic AND ('diseases'/exp OR diseases)) OR 'glucose metabolism disorders'/exp OR 'glucose metabolism disorders' OR (('glucose'/exp OR glucose) AND ('metabolism'/exp OR metabolism) AND ('disorders'/exp OR disorders)) OR 'glucose intolerance'/exp OR 'glucose intolerance' OR (('glucose'/exp OR glucose) AND ('intolerance'/exp OR intolerance)) OR 't2dm'/exp OR t2dm OR 'type 2 diabetes'/exp OR 'type 2 diabetes' OR (type AND ('2'/exp OR 2) AND ('diabetes'/exp OR diabetes)) OR 'hyperglycemia'/exp OR hyperglycemia OR 'blood glucose control'/exp OR 'blood glucose control' OR (('blood'/exp OR blood) AND ('glucose'/exp OR glucose) AND ('control'/exp OR control)) OR 'weight loss'/exp OR 'weight loss' OR (('weight'/exp OR weight) AND ('loss'/exp OR loss)) OR 'obesity management'/exp OR 'obesity management' OR (('obesity'/exp OR obesity) AND ('management'/exp OR management)) OR bariatric OR 'obesity treatment' OR (('obesity'/exp OR obesity) AND ('treatment'/exp OR treatment)) OR 'body weight management'/exp OR 'body weight management' OR (('body'/exp OR body) AND ('weight'/exp OR weight) AND ('management'/exp OR management))) AND ('gastric content'/exp OR 'gastric content' OR (gastric AND content) OR 'gastric residual'/exp OR 'gastric residual' OR (gastric AND residual) OR 'gastric emptying'/exp OR 'gastric emptying' OR (gastric AND emptying) OR 'gastrointestinal motility'/exp OR 'gastrointestinal motility' OR (('gastrointestinal'/exp OR gastrointestinal) AND

('motility'/exp OR motility)) OR 'gastric volume'/exp OR 'gastric volume' OR (gastric AND ('volume'/exp OR volume)) OR 'stomach contents' OR (('stomach'/exp OR stomach) AND contents) OR 'gastroparesis'/exp OR gastroparesis OR 'delayed gastric emptying'/exp OR 'delayed gastric emptying' OR (delayed AND gastric AND emptying) OR 'gastric dysmotility'/exp OR 'gastric dysmotility' OR (gastric AND dysmotility) OR 'gastric function'/exp OR 'gastric function' OR (gastric AND ('function'/exp OR function))) AND (perioperative OR preoperative OR 'preoperative management' OR (preoperative AND ('management'/exp OR management)) OR 'intraoperative complications'/exp OR 'intraoperative complications' OR (intraoperative AND ('complications'/exp OR complications)) OR 'surgical complications' OR (surgical AND ('complications'/exp OR complications)) OR 'preoperative fasting'/exp OR 'preoperative fasting' OR (preoperative AND ('fasting'/exp OR fasting)) OR 'point-of-care ultrasound'/exp OR 'point-of-care ultrasound' OR (('point of care'/exp OR 'point of care') AND ('ultrasound'/exp OR ultrasound)) OR 'pocus'/exp OR pocus OR 'perioperative care'/exp OR 'perioperative care' OR (perioperative AND ('care'/exp OR care)) OR 'surgery risks' OR (('surgery'/exp OR surgery) AND risks) OR 'pre-surgical risks' OR ('pre surgical' AND risks) OR 'surgical safety'/exp OR 'surgical safety' OR (surgical AND ('safety'/exp OR safety)) OR 'anesthesia'/exp OR anesthesia OR 'general anesthesia'/exp OR 'general anesthesia' OR (general AND ('anesthesia'/exp OR anesthesia)) OR 'parenteral anesthesia' OR (parenteral AND ('anesthesia'/exp OR anesthesia)) OR 'inhalation anesthesia'/exp OR 'inhalation anesthesia' OR (('inhalation'/exp OR inhalation) AND ('anesthesia'/exp OR anesthesia)) OR 'neuromuscular blockade'/exp OR 'neuromuscular blockade' OR (neuromuscular AND blockade)) AND ('aspiration'/exp OR aspiration OR 'respiratory aspiration'/exp OR 'respiratory aspiration' OR (('respiratory'/exp OR respiratory) AND ('aspiration'/exp OR aspiration)) OR 'aspiration of gastric contents'/exp OR 'aspiration of gastric contents' OR (('aspiration'/exp OR aspiration) AND of AND gastric AND contents) OR 'inhalation'/exp OR inhalation OR 'pulmonary risks' OR (pulmonary AND risks) OR 'aspiration

pneumonias' OR (('aspiration'/exp OR aspiration) AND pneumonias) OR 'pulmonary aspiration'/exp OR 'pulmonary aspiration' OR (pulmonary AND ('aspiration'/exp OR aspiration)) OR 'pulmonary complications' OR (pulmonary AND ('complications'/exp OR complications)) OR 'respiratory risks' OR (('respiratory'/exp OR respiratory) AND risks) OR 'airway control'/exp OR 'airway control' OR (('airway'/exp OR airway) AND ('control'/exp OR control)) OR 'airway management'/exp OR 'airway management' OR (('airway'/exp OR airway) AND ('management'/exp OR management)) OR 'extubation'/exp OR extubation OR 'intubation'/exp OR intubation OR 'pre-operative interruption interval' OR ('pre operative' AND interruption AND interval) OR 'drug discontinuation' OR (('drug'/exp OR drug) AND discontinuation) OR 'withdrawal period' OR (('withdrawal'/exp OR withdrawal) AND period) OR 'cessation period' OR (('cessation'/exp OR cessation) AND period) OR 'pre-operative fasting time' OR ('pre operative' AND ('fasting'/exp OR fasting) AND ('time'/exp OR time)) OR 'fasting time' OR (('fasting'/exp OR fasting) AND ('time'/exp OR time)) OR 'diabetes complications'/exp OR 'diabetes complications' OR (('diabetes'/exp OR diabetes) AND ('complications'/exp OR complications)) OR 'patient recovery time' OR (('patient'/exp OR patient) AND ('recovery'/exp OR recovery) AND ('time'/exp OR time)) OR 'nausea'/exp OR nausea OR 'vomiting'/exp OR vomiting OR 'insulin therapy'/exp OR 'insulin therapy' OR (('insulin'/exp OR insulin) AND ('therapy'/exp OR therapy)) OR 'metabolic control'/exp OR 'metabolic control' OR (metabolic AND ('control'/exp OR control)) OR 'glycemic variability'/exp OR 'glycemic variability' OR (glycemic AND ('variability'/exp OR variability)) OR 'thromboembolic events' OR (('thromboembolic'/exp OR thromboembolic) AND events) OR 'pre-operative anxiety' OR ('pre operative' AND ('anxiety'/exp OR anxiety)) OR 'patient compliance'/exp OR 'patient compliance' OR (('patient'/exp OR patient) AND ('compliance'/exp OR compliance)) OR 'emergency interventions' OR (('emergency'/exp OR emergency) AND ('interventions'/exp OR interventions)) OR 'mortality'/exp OR mortality)

LILACS (Latin American and Caribbean Health Sciences Literature)

(Semaglutide OR Ozempic OR Rybelsus OR Wegovy OR GLP-1 receptor agonists OR Glucagon-Like Peptide-1 Receptor Agonists OR Glucagon-Like Peptides OR GLP-1 Agonists OR Incretin-Based Therapy OR Antidiabetic Agents OR Diabetes Mellitus OR Metabolic Diseases OR Glucose Metabolism Disorders OR Glucose Intolerance OR T2DM OR Type 2 Diabetes OR Hyperglycemia OR Blood Glucose Control OR Weight Loss OR Obesity Management OR Bariatric OR Obesity Treatment OR Body Weight Management)

Cochrane Library for Systematic Reviews

Semaglutide OR Ozempic OR Rybelsus OR Wegovy OR GLP-1 receptor agonists OR Glucagon-Like Peptide-1 Receptor Agonists OR Glucagon-Like Peptides OR GLP-1 Agonists OR Incretin-Based Therapy OR Antidiabetic Agents OR Diabetes Mellitus OR Metabolic Diseases OR Glucose Metabolism Disorders OR Glucose Intolerance OR T2DM OR Type 2 Diabetes OR Hyperglycemia OR Blood Glucose Control OR Weight Loss OR Obesity Management OR Bariatric OR Obesity Treatment OR Body Weight Management) AND (Gastric Content OR Gastric Residual OR Gastric Emptying OR Gastrointestinal Motility OR Gastric Volume OR Stomach Contents OR Gastroparesis OR Delayed Gastric Emptying OR Gastric Dysmotility OR Gastric Function) AND (Perioperative OR Preoperative OR Preoperative Management OR Intraoperative Complications OR Surgical Complications OR Preoperative Fasting OR Point-of-care ultrasound OR POCUS OR Perioperative Care OR Surgery Risks OR Pre-Surgical Risks OR Surgical Safety OR Anesthesia OR General Anesthesia OR Parenteral Anesthesia OR Inhalation Anesthesia OR Neuromuscular Blockade) AND (Aspiration OR Respiratory Aspiration OR Aspiration of gastric contents OR Inhalation OR Pulmonary Risks OR Aspiration Pneumonias OR Pulmonary Aspiration OR Pulmonary Complications OR Respiratory Risks OR Airway Control OR Airway Management OR Extubation OR Intubation OR Pre-operative interruption interval OR Drug Discontinuation OR Withdrawal Period OR Cessation Period

OR Pre-operative Fasting Time OR Fasting Time OR Diabetes Complications
OR Patient Recovery Time OR Nausea OR Vomiting OR Insulin Therapy OR
Metabolic Control OR Glycemic Variability OR Thromboembolic Events OR
Pre-operative Anxiety OR Patient Compliance OR Emergency Interventions OR
Mortality) in Title Abstract Keyword - (Word variations have been searched)

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(Semaglutide OR Ozempic OR Rybelsus OR Wegovy OR GLP-1 receptor
agonists OR Glucagon-Like Peptide-1 Receptor Agonists OR Glucagon-Like
Peptides OR GLP-1 Agonists OR Incretin-Based Therapy OR Antidiabetic
Agents OR Diabetes Mellitus OR Metabolic Diseases OR Glucose Metabolism
Disorders OR Glucose Intolerance OR T2DM OR Type 2 Diabetes OR
Hyperglycemia OR Blood Glucose Control OR Weight Loss OR Obesity
Management OR Bariatric OR Obesity Treatment OR Body Weight
Management) AND (Gastric Content OR Gastric Residual OR Gastric Emptying
OR Gastrointestinal Motility OR Gastric Volume OR Stomach Contents OR
Gastroparesis OR Delayed Gastric Emptying OR Gastric Dysmotility OR
Gastric Function) AND (Perioperative OR Preoperative OR Preoperative
Management OR Intraoperative Complications OR Surgical Complications OR
Preoperative Fasting OR Point-of-care ultrasound OR POCUS OR Perioperative
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Anesthesia OR General Anesthesia OR Parenteral Anesthesia OR Inhalation
Anesthesia OR Neuromuscular Blockade) AND (Aspiration OR Respiratory
Aspiration OR Aspiration of gastric contents OR Inhalation OR Pulmonary
Risks OR Aspiration Pneumonias OR Pulmonary Aspiration OR Pulmonary
Complications OR Respiratory Risks OR Airway Control OR Airway
Management OR Extubation OR Intubation OR Pre-operative interruption
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OR Patient Recovery Time OR Nausea OR Vomiting OR Insulin Therapy OR
Metabolic Control OR Glycemic Variability OR Thromboembolic Events OR

Pre-operative Anxiety OR Patient Compliance OR Emergency Interventions OR Mortality)

Figures

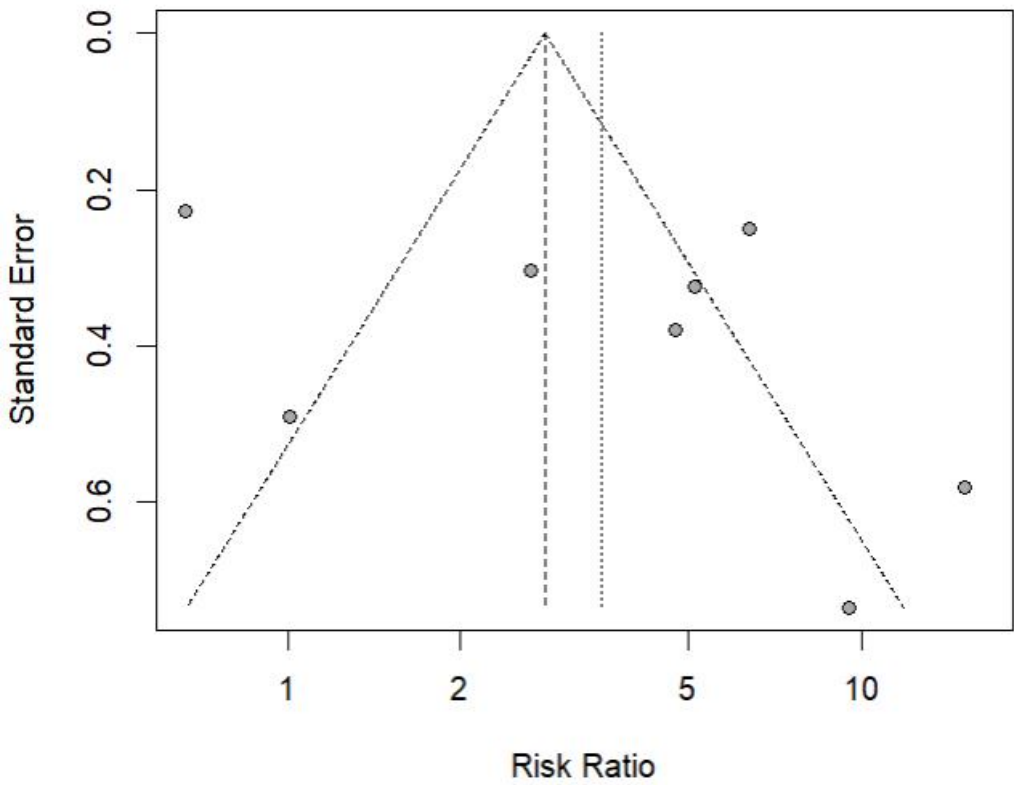


Figure 1 Funnel plot assessing publication bias for studies of residual gastric content and semaglutide use.

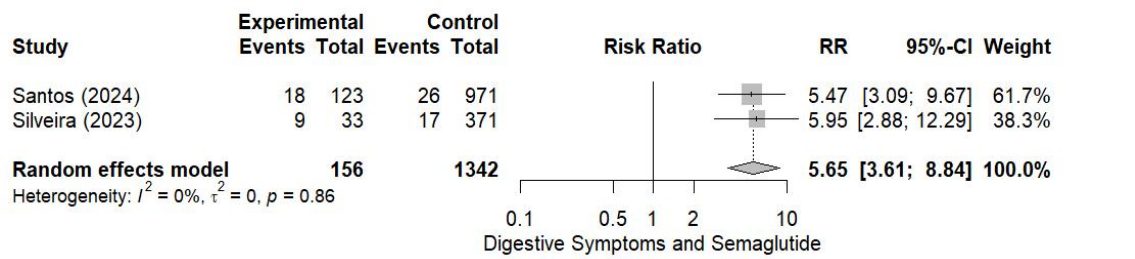


Figure 2 Forest plot of semaglutide use and digestive symptoms.

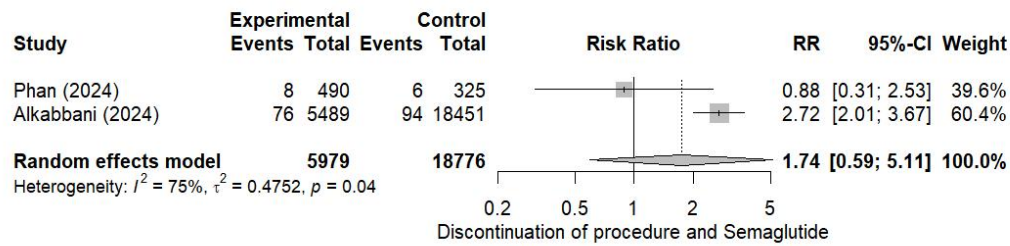


Figure 3 Forest plot of semaglutide use and procedure discontinuation.

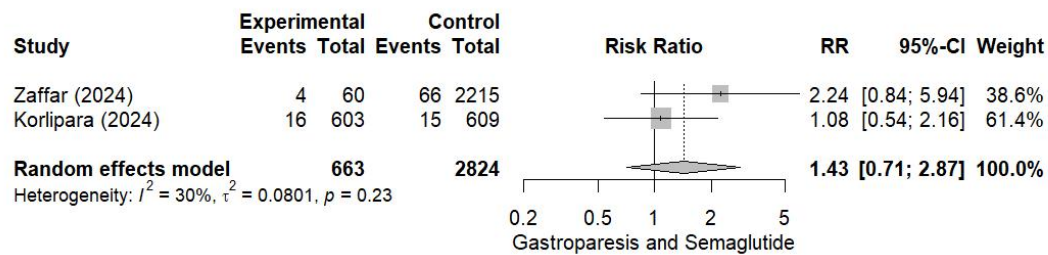


Figure 4 Forest plot of semaglutide use and gastroparesis.

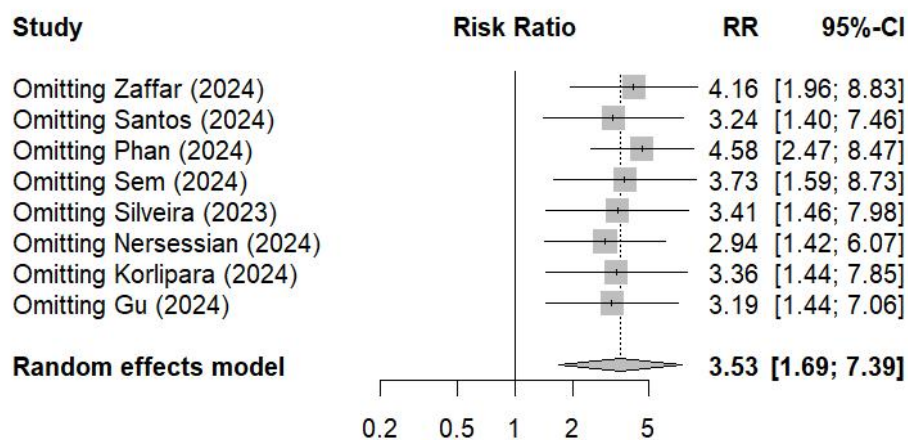


Figure 5 Leave-one-out sensitivity analysis for residual gastric content and semaglutide use

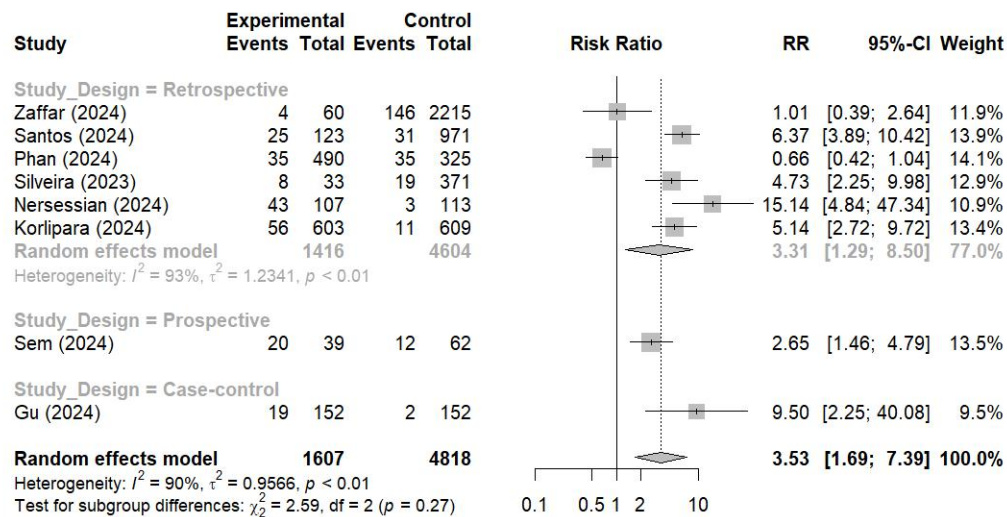


Figure 6 Subgroup analysis by study design for residual gastric content and semaglutide use.

Excluded Studies

Outcomes not reported

1. Ding SA, Simonson DC, Wewalka M, Halperin F, Foster K, Goebel-Fabbri A, Hamdy O, Clancy K, Lautz D, Vernon A, Goldfine AB. Adjustable gastric band surgery or medical management in patients with type 2 diabetes: a randomized clinical trial. The Journal of Clinical Endocrinology & Metabolism. 2015 Jul 1;100(7):2546-56. DOI: 10.1210/jc.2015-1443
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Semaglutide subgroup not reported

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- PNEUMONIA AFTER ENDOSCOPY?. *Gastroenterology*. 2024 May 18;166(5):S-293.
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Ineligible study design

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