Table 1. Adverse events in medication studies

Adverse-event category	Descriptives aggregated into this category	Orlistat	Fluoxetine	Bupropion	Topiramate
Anorexia	Anorexia				x
Nausea/ vomiting	Nausea	X	X		
	Nausea/ vomiting	X	X		
	Vomiting	X			
	Nausea and vomiting		X		
	Nausea/ vomiting/ diarrhea/ vomiting		X		
Back pain	Back pain	X	X		
Bloating/ abdominal pain/ dyspepsia	Abdominal distention	X			
	Abdominal pain	X	X		
	Dyspepsia	X	X		
	Dyspepsia/ hiatal hernia/ esophagitis	X			
	Gastritis	X			
Central nervous system effects	Anxiety			X	X
	Concentration/attention difficulty				X
	Concentration difficulty				X
	Decreased concentration			X	
	Depression				X
	Difficulty with concentration				X
	Difficulty with concentration/attention				X
	Difficulty with memory				X
	Dizziness			X	X
	Insomnia			X	X
	Memory difficulty				X
	Mood problems				X
	Nervousness				X
	Somnolence				X
Constipation	Constipation			X	X
Decreased libido/ sexual dysfunction	Decreased libido/ sexual dysfunction		X		
Depression/ mood change	Depression	X	X		
	Mood change		X		
	Suicide attempt	X			
Diarrhea	Diarrhea	X	X	X	X
	Discolored feces	X			
	Fatty/ oily stool	X			
	Fecal incontinence	X			
	Fecal urgency	X			
	Increased defecation	X			
	Liquid stools	X			
	Loose stools	X			
	Oily evacuation	X			
	Oily spotting	X			
	Soft stools	X			
	Stool fat	X			
	Uncontrolled oily discharge	X			
Dry mouth	Dry mouth			X	X
Fatigue/ asthenia/ hypersomnia/ somnolence	Asthenia		X		
	Fatigue		X		X
	Hypersomnia		X		
	Somnolence		X		
Flatulence	Flatulence	X			
	Flatus with discharge	X			

Adverse-event category	Descriptives aggregated into this category	Orlistat	Fluoxetine	Bupropion	Topiramate
Gallbladder problems	Cholecystectomy	X			
	Cholelithiasis	X			
	Gallbladder abnormalities	X			
	Gallstones	X			
Headache	Headache	X	X	X	X
Hepatic abnormalities	Elevated transaminases	X			
	Hepatocellular damage	X			
	Liver disorders	X			
Hypertension	Hypertension			X	
Increased hepatic enzymes	Increased hepatic enzymes				X
Insomnia	Insomnia		X		
Nervousness/ sweating/ tremors	Nervousness		X		
	Sweating		X		
	Tremor		X		
Paresthesia	Paresthesia				X
Rhinitis	Rhinitis	X			
	Upper respiratory tract infection		X		
Seizure	Seizure			X	
Taste perversion	Taste perversion				X
Upper abdominal symptoms	Abdominal pain				X
	Dyspepsia				X
	Nausea			X	X
	Nausea or vomiting			X	
	Vomiting				x
Upper respiratory problems	Flu-like symptoms			X	
	Other respiratory complaints			X	
	Pharyngitis			X	
	Rhinitis			X	x
	Upper respiratory complaints			X	
	Viral infection			X	
	Upper respiratory tract infection				X
Urticaria/ pruritis/ rash	Pruritis		X		
	Rash		X		
	Skin rashes		X		
	Urticaria		X		
Vertigo	Vertigo				X

Table 2. Adverse events in surgery studies

Adverse-event category	Descriptives used in studies aggregated into this category
Anastomic or gastric outlet stenosis	Anas stenosis, Anastomotic stenosis, Anastomotic stricture, Gastric outlet stenosis, Gastric outlet obstruction, Gastric pouch outlet obstruction, Gastrojejunal anastomotic stenosis, Gastrojejunostomy anastomotic stricture, Narrowing of the communication lumen of 2 parts of stomach, Neostoma stenosis with porch enlargement, Outlet obstruction, Outlet stenoses, Pouch outlet obstruction, Stenosis, Stenosis at gastrojejunostomy, Stenosis of anastomosis, Stenosis of gastroplasty orifice, Stenosis of GJ, Stoma stenosis, Stomal stenosis, Stomal stenosis with endoscopy, Stomal stenosis with reoperation, Stomal stricture, Stricture
Anastomotic, gastric pouch or duodenal leak	Anastomotic failure, Anastomotic leak, Anastomotic leakage, Duodenal leak, Duodenal stomal obstruction, Gastric leak, GJ leak, Leak, Leak (asymptomatic/ contained), Leakage, Leakage/perforation, Loose suture in anastomosis, Surgical leak
Bleeding, all	Bleeding, Bleeding from suture line, Bleeding requiring reoperation or transfusion, Bleeding trocar site, Bleeding unstable BP, Endoluminal bleeding, Gastrointestinal hemorrhage, Gastric bleeding, Gastrointestinal bleeding, GI bleed, GI bleeding, GI hemorrhage, Hematemesis, Hematoma, Hemoperitoneum, Hemorrhage, Intra-abdominal bleeding, Intra-abdominal hemorrhage, Intraperitoneal bleeding, Interoperative hemorrhage, Mesenteric bleeding, Postoperative bleeding surgery required, Pouch hemorrhage, Significant bleeding, Staple line bleed, Staple line hemorrhage, Transfusion stable BP, Upper gastrointestinal bleed, Upper GI hemorrhage
Deep vein thrombosis / pulmonary embolism	Deep vein thrombosis, Deep venous thrombosis, DVT, DVT and PE, DVT/PE, Major pulmonary embolus, Nonfatal pulmonary embolism, Nonfatal pulmonary embolus, PE, Popliteal vein thrombosis, Pulmonary embolism, Thrombosis/ lung embolism
Gastrointestinal symptoms, all	Abdominal pain, Acute cholecystitis, Anorexia, Bypass enteritis, Cholecystectomy, Cholecystolithiasis, Cholelithiasis, Cirrhosis, Colitis, Constipation, Dairy food intolerance, Diarrhea, Difficulty in eating red meat, Dumping, Dumping syndrome, Dysmotility of esophagus, Dyspepsia, Dysphagia, Epigastric pain, Erosive esophatitis, Esophageal dilation, Esophagitis, Food intolerance, Frequent vomiting, Gallstones, Gastritis, Gastritis by endoscopy, Gastritis, esophagitis, Gastroesophageal reflux, GERD, Heartburn, Hepatic failure, Ileus, Intolerable malodorous gas, Involuntary vomiting, Lap cholecystectomy, Liver disease, Liver function abnormal, Lower GI hemorrhage, Mild dumping, Nausea, Nausea and vomiting, Obstipation, Obstructive ileus, Perianal abscess, Postanesthetic jaundice, Prolonged ileus, Prolonged nausea/vomiting, Readmit vomiting, Recurrent vomiting, Reflux esophagitis, Refuse du systeme, Ructus, Severe vomiting, Sigmoiditis, Symptomatic cholelithiasis, Total food intolerance, Transient hepatic dysfunction, Vomiting, Vomiting one or more per week, Vomiting with stapleline intact
Gastrointestinal symptoms, reflux	Dyspepsia, Erosive esophatitis, Esophagitis, Gastritis, esophagitis, Gastroesophageal reflux, GERD, Heartburn, Reflux esophagitis, Refuse du systeme

Adverse-event category	Descriptives used in studies aggregated into this category
Gastrointestinal symptoms, vomiting	Frequent vomiting, Involuntary vomiting, Nausea and vomiting, Prolonged nausea/ vomiting, Readmit vomiting, Recurrent vomiting, Severe vomiting, Vomiting, Vomiting one or more per week, Vomiting with stapleline intact
Medical (cardiac, stroke, severe hypertension)	A fib, Angina, Arrhythmia, Cardiac, Cardiovascular complications, CHF, CVA, MI, Severe hypertension, Severe tachycardia
Nutritional and electrolyte abnormalities	Anemia, B12 deficiency, Calcium, Electrolyte imbalance, Electrolytes abnormality, Folate deficiency, Folic acid, Iron deficiency, Iron deficient, Malnutrition, Nutritional deficiencies, Other vitamin deficiencies, Protein calorie malnutrition, Protein-calorie malnutrition, Temporary electrolytes imbalance, Vitamin B12, Vitamin and mineral deficiencies
Reoperations	Adhesiolysis, Band extraction, Band removal or revision, Bleeding requiring reoperation or transfusion, Conversion to duodenal switch, Normal but clinical failure, Open revision, Operation reversed, Patient request, Post-op exploratory laparotomy, Postoperative bleeding surgery required, Reoperation, Reanastomosis, Removal, Removal of band, Reop bowel obstruction, Reoperation for failure of reservoir, Reoperation revision, Reoperation, Reoperation due to malnutrition, Reoperation to reposition band, Revision, Same admission reoperation, Stomal stenosis with reoperation, Take downs, Stroke, Uncontrolled hypertension
Respiratory complications, all	ARDS, Atelectasis, Atelectasis/pneumonitis, Atelectesis/pneumonia, Bronchopneumonia, Chest infections, Effusion, Hemothorax, Hydrothorax, Massive subcutaneous emphysema, Other pulmonary complications, Pleura injury, Pleural effusion, Pneumonia, Pneumothorax, Post-op pneumonia, Postoperative respiratory distress, Prolonged apnea, Pulmonary problems, Pulmonary complications, Resp chest infection, Resp distress, Resp failure, Resp insufficiency, Resp rest, Respiratory, Respiratory complications, Respiratory failure, Respiratory insufficiency, Severe bronchospasm
Respiratory complications, pneumonia	Atelectesis/pneumonia, Bronchopneumonia, Pneumonia, Post op pneumonia, Dehiscence
Surgical, all	Abdominal or pulmonary collections, Abscess, Access port complications, Access port problems, Accidental band perforation, Acute obstruction, Adhesiolysis, Anas stenosis, Anastomotic failure, Anastomotic leak, Anastomotic leakage, Anastomotic stenosis, Anastomotic stricture, Anastomotic ulcers, Aneurysmal deformity of the balloon, Asymptomatic stomach erosions, Band dislocations, Band dislodgement or pouch dilation, Band disruption, Band erosion, Band extraction, Band infection, Band leakage, Band migration, Band penetration, Band rupturing, Band removal or revision, Band rupture, Band slippage, Band slipped out, Bleeding, Bleeding at port, Bleeding from suture line, Bleeding requiring reoperation or transfusion, Bleeding trocar site, Bleeding unstable BP, Bowel obstruction, C dificile colitis, Cervical esophageal mucosal tear from EEA anvil, Conversion, Conversion to duodenal switch, Conversion to open, Convert to open from bleeding, Convert to open gastric perforation, Converted to open, Dehiscence, Dehiscence of the vertical stapleline, Delayed pouch emptying, Dilated proximal pouch, Dilation or slippage, Disconnection, Disconnection of sc port, Distal Roux en Y leak, Duodenal leak, Duodenal stomal obstruction, Early band

Adverse-event category	Descriptives used in studies aggregated into this category
	repositioning, Early pouch dilatation, Efferent limb obstruction,
Surgical, all (continued)	Endoluminal bleeding, Enlarged orifice, Enlarged porch, Enlarged pouch with obstructive angulation, Enteric fistula, Enterocutaneous fistular, Erosion, Erosion into stomach, Evisceration, Fascia dehiscence and retrogastric abscess, Fistula, Food impaction, Food obstruction of stoma, Gallbladder puncture, Gastric outlet stenosis, Gastrointestional hemorrhage, Gastric bleeding, Gastric erosion at ring, Gastric fistula, Gastric herniation through band, Gastric leak, Gastric outlet obstruction, Gastric perforation, Gastric pouch outlet obstruction, Gastric slippage, Gastric wall perforation, Gastric wall slippage, Gastric perforation, Gastrogastric fistula, Gastrointestinal bleeding, Gastrointestinal ulcer, Gastrojejunal anastomotic stenosis, Gastrojejunostomy anastomotic stricture, Gastrotomy during lesser curve dissection, GI bleed, GI bleed from erosion, GI bleeding, GI hemorrhage, GJ leak, Hematemesis, Hematoma, Hemoperitoneum, Hemorrhage, Hernia, Hernia/ small bowel obstruction with reoperation, Herniation of band, Herniation of stomach through the band causing obstruction, Hypopharyngeal perforation, Incarcerated hernia, Incisional hernia, Incomplete division of stomach, Infected hematoma, Infected splenic hematoma, Infection around the port, Infection at reservoir, Infected reservoirs, Infection wound major, Internal hernia, Intestinal obstruction, Intestinal obstruction JJ, Intestinal obstruction after 1 year, Intra-abdominal abscess, Intraabdominal bleeding, Intra-abdominal hemorrhage, Intra-abdominal sepsis, Intractable ulcer, Intragastric band migration, Intraoperation perforation of stomach, Intraoperative complications, Intraperitoneal abscess, Intraperitoneal bleeding, Intraoperative hemorrhage, Intususception of gastric wall, J-J obstruction, Jejunujejunostomy obstruction, Laceration of liver/spleen, Laceration of reservoir, Lap band balloon leak, Large bowel perforation, Late band repositioning, Late pouch dilatation, Leak, Leak (asympt/ contained), Leak of reservoir, Leakage, Leakage of port from needle perforation 1, Leakage of ring, Leakage/ perforation, Leaking band, Leaking port, Leaks, LGI bleed, Liver hematoma, Liver injury, Loose suture anastomosis, Major infection, Major wound infection, Major wound problems, Marginal ulcer, Marginal ulcers NSAID induced, Mesenteric bleeding, Migration band, Minor dehiscence, Minor infection, Minor splenic injury, Minor wound infection, Minor wound problems, Miscellaneous, Narrowing of the communication lumen of 2 parts of stomach, Neostoma stenosis with porch enlargement, Normal but clinical failure, Obstruction at jejunojejunostomy, Obstruction at roux, Obstructive aneurysmal deformity, Open revision, Operation reversed, Other sepsis, Other wound infections, Outlet obstruction, Outlet stenoses, Pain in left shoulder, Painful port site, Pancreatitis, Partial obstruction, Patient request, Pelviperitonitis, Perforated stress ulcer, Perforation, Perforation of stomach, Perforation of stomach remnant, Perforation or erosion, Perforation pouch, Perioperative complications, Peritonitis, Plugging, Port, Port disconnection, Port infection, Port leakage, Port migration, Port problem, Port-site infection, Postoperative complications, Posterior herniation, Post-op exploratory laparotomy, Postoperative bleeding surgery required, Postoperative comp, Pouch dilation, Pouch hemorrhage, Pouch herniation, Pouch outlet obstruction, Prolapse of

Adverse-event category	Descriptives used in studies aggregated into this category
	stomach, Reoperation, Reanastomosis, Removal, Removal of band, Reop bowel obstruction, Reop for failure of reservoir, Reop revision, Reoperation due to malnutrition, Reoperation to reposition band,
Surgical, all (continued)	Repair hiatal hernia, Repair spleen, Repair umbilical hernia, Reservoir infection, Reservoir flipped over, Reservoir infections, Reservoir leak, Reservoir/ tubing breaks, Resp infection, Retained foreign body, Retained sponge, Revision, Rupture of tubing, Same admission reoperation, Small bowel obstruction JJ, Separation of catheter and reservoir, Sepsis, Septicemia, Seroma, Seroma with necrotic fat, Severe wound infection, Significant bleeding, Silicone band migration, Slippage, Slippage of band, Slippage or dilation, Slipping, Small bowel necrosis, Small bowel obstruction, Splenectomy, Splenic artery rupture, Splenic capsule tear, Splenic injury, Splenic laceration, Stable line disruption, Staple breakdown, Staple disruption, Staple line bleed, Staple line disruption, Staple line failure, Staple line fistula, Staple line hemorrhage, Staple line failure, Stapler malfunction, Stapling of nasogastric tube, Stenosis, Stenosis at gastrojejunostomy, Stenosis at mesocolon, Stenosis of anastomosis, Stenosis of gastroplasty orifice, Stenosis of GJ, Stoma dilation, Stoma stenosis, Stoma widening, Stomach injury, Stomach perforation, Stomach slippage, Stomal stenosis, Stomal stenosis with endoscopy, Stomal stenosis with reoperation, Stomal stricture, Stomal ulcer, Stricture, Subhepatic abscess, Subphrenic abscess, Subphrenic abscess, Subphrenic collection, Superficial wound infection, Surgical leak, Surgical wound infection, Symptomatic ulcer disease, Take downs, Technical band problems, Transfusion stable BP, Trocar hernia, Trocar site hernia, Tube dropped off the injection port, UGI bleed, Ulcer, Umbilical hernia, Upper GI hemorrhage, Ventral hernia, Violation of integrity of stomach, Vomiting with stapleline disruption, Wound abscess, Wound dehiscence, Wound hematomas, Wound hernia, Wound infection minor, Wound infection, Wound infection (pus or erythema), Wound infection erythema, Wound infection major, Wound infection minor, Wound infection or dehiscence, Wound infection port, Wound infection pus, Wound infections major, Wound minor, Wound necrotic fat, Wound or port infection, Wound seroma
Surgical: incisional hernia	Hernia, Incarcerated hernia, Incisional hernia, Ventral hernia, Wound hernia
Surgical: internal hernia	Hernia/small bowel obstruction with reoperation, Internal hernia
Surgical: splenic injury	Infected splenic hematoma, Laceration of liver/ spleen, Minor splenic injury, Repair spleen, Splenectomy, Splenic artery rupture, Splenic capsule tear, Splenic injury, Splenic laceration, Deep vein thrombosis
Surgical: wound complications, all	Evisceration, Fascia dehiscence and retrogastric abscess, Hernia, Incarcerated hernia, Incisional hernia, Infection around the port, Infection at reservoir, Infected reservoirs, Infection wound major, Infection wound minor, Major infection, Major wound infection, Major wound problems, Minor dehiscence, Minor infection, Minor wound infection, Minor wound problems, Other wound infections, Port infection, Port-site infection, Reservoir infection, Resp infection, Seroma, Seroma with necrotic fat, Severe wound infection, Superficial wound infection, Surgical wound infection, Ventral hernia, Wound abscess, Wound dehiscence, Wound hematomas, Wound hernia, Wound infection minor, Wound infection, Wound infection

Adverse-event category	Descriptives used in studies aggregated into this category
	(pus or erythema), Wound infection erythema, Wound infection major, Wound infection minor, Wound infection or dehiscence, Wound infection port, Wound infection pus, Wound infections major, Wound minor, Wound necrotic fat, Wound or port infection, Wound seroma
Surgical: wound, infection major	Infection around the port, Infection at reservoir, Infected reservoirs, Infection wound major, Major infection, Major wound infection, Port infection, Port-site infection, Reservoir infection, Severe wound infection, Wound abscess, Wound infection major, Wound infection port, Wound infection pus, Wound infections major
Surgical: wound, infection minor	Infection wound minor, Major infection, Minor infection, Minor wound infection, Superficial wound infection, Wound infection minor, Wound infection erythema, Wound infection minor, Wound minor

Table 3. Surgical procedure categories

Upper-level category	Lower-level category	Subcategory
Gastroplasty^	Open Gastroplasty	NA
	Laparoscopic Gastroplasty	NA
Jejunal-ileal bypass	NA	NA
BPD/Duodenal switch	NA	NA
Gastric Bypass	Open RYGB^^	Open RYGB, standard limb Open RYGB, long limb
	Open loop gastric bypass	NA
	Laparoscopic RYGB^^	Laparoscopic RYGB, standard limb Laparoscopic RYGB, long limb
Band	Open Band	Open adjustable Band Open nonadjustable Band
	Laparoscopic Band	Laparoscopic adjustable Band Laparoscopic nonadjustable Band
VBG**	Open VBG	NA
	Laparoscopic VBG	NA

** VBG includes: Vertical Banded Gastroplasty, VBG with Marlex, VBG with Dacron, gastric restriction, 4.5 gastroplasty, 5.0 gastroplasty, and Silastic Ring Vertical Gastroplasty.

^Gastroplasty includes: Horizontal Banded Gastroplasty, Gastric Portioning, Gastrogastrostomy, Gastric Portioning.

^^ RYGB bypass includes: Roux-en-Y Gastric Bypass and RYGBs that also have ring placement (i.e., Fobi).

Table 4. Meta-analysis of weight loss in placebo-controlled trials of orlistat at 6 months

Trial	Total n	Mean Difference	95% CI
Broom[65]	137	-1.80	(-3.15, -0.45)
Deerochangawong[67]	252	-1.20	(- 2.75, 0.35)
DeRosa[82]	48	-0.90	(-1.27, -0.53)
Halpern[72]	280	-1.66	(-4.56, 1.24)
Hauptman[56]	422	-3.30	(-4.94, -1.66)
Karhunen[70]	72	-2.50	(-5.41, 0.41)
Muls[66]	290	-2.78	(-3.73, -1.83)
Micic[81]	114	-3.41	(-5.72, -1.10)
Naumov[78]	30	-4.60	(-6.58, -2.62)
Rissanen[63]	51	-4.10	(7.55, -0.65)
Shi Yi[68]	428	-3.10	(-4.37, -1.83)
Pooled random-effects estimate		-2.51[1]	(-3.40, -1.63)

[1]Chi-squared test of heterogeneity p-value < 0.001.

Table 5. Meta-analysis of weight loss in placebo-controlled trials of Orlistat at 12 months

Trial	Total n	Mean Difference	95% CI
Bakris[74]	532	-2.70	(-3.79, -1.61)
Broom[66]	347	-3.50	(-5.07, -1.93)
Davidson[55]	591	-2.95	(-4.45, -1.45)
Derosa[82]	48	-1.00	(-1.49, -0.51)
Gotfredsen[79]	30	-3.10	(-8.48, 2.28)
Hanefeld[75]	369	-1.90	(- 2.96, -0.84)
Hauptman[56]	422	-3.80	(-5.37, -2.23)
Hill[57]	234	-1.31	(-3.00, 0.38)
Hollander[58]	321	-1.88	(-3.38, -0.38)
Karhunen[70]	72	-4.50	(-7.41, -1.59)
Kelley[69]	265	-2.62	(-3.38, -1.86)
Krempf[71]	478	-2.90	(-4.71, -1.09)
Lindgarde[83]	323	-1.30	(-2.51, -0.09)
Lucas[73]	444	-3.80	(-5.06, -2.54)
Miles[76]	311	-2.90	(-3.73, -2.07)
Reaven[80]	247	-2.14	(-3.94, -0.34)
Rissanen[280]	51	-5.80	(-9.25, -2.35)
Rosenfalck[77]	12	-4.78	(-11.88, 2.32)
Rossner[60]	479	-3.00	(-4.17, -1.83)
Sjostrom[61]	544	-4.20	(-5.26, -3.14)
Vidgren[62]	75	-4.20	(-7.46, -0.94)
Pooled random-effects estimate		-2.76[1]	(-3.31, -2.20)

[1]Chi-squared test of heterogeneity p-value < 0.001.

Table 6. Meta-analysis of adverse events in RCTs of orlistat

		Data				**Synthesis**			
Adverse event		*Placebo*		*Intervention groups*					
	# of studies	*# adverse events*	*sample size*	*# adverse events*	*sample size*	*Pooled OR*	*95% CI*	*RR*	*Number needed to harm (OR>1)*
Diarrhea	13	892	3178	4074	4876	54.85	(44.88, 67.48)	3.40	1.48
Flatulence	11	218	2972	1020	4669	3.72	(3.16, 4.39)	3.10	6.49
Bloating/abdominal pain/ dyspepsia	8	111	1388	155	1737	1.55	(1.18, 2.06)	1.48	25.80
Headache	3	29	516	34	519	1.18	(0.68, 2.05)	NC	NC
Nausea/vomiting	3	19	311	18	306	0.95	(0.46, 1.98)	NC	NC
Gallbladder problems	5	13	712	10	1322	0.71	(0.27, 1.82)	NC	NC
Depression/mood change	3	3	153	1	154	0.33	(0.01, 4.15)	NC	NC
Back pain	1	3	114	5	114	NC	NC	NC	NC
Hepatic abnormalities	3	0	498	1	886	NC	NC	NC	NC
Rhinitis	1	6	114	7	114	NC	NC	NC	NC

OR = Odds ratio

RR = Relative risk

NC = Not Calculated
CI = Confidence interval

Note: for the diarrhea group, five trials had more adverse events in the orlistat group than actual number of people. The total number of adverse events was truncated at the total number of people for the OR calculation.

Table 7. Meta-analysis of weight loss in placebo-controlled trials of fluoxetine at 6 months

Trial	Total n	Mean Difference	95% CI
Connolly[93]	24	-3.90	(-4.83, -2.97)
Goldstein[89]	303	-2.70	(-4.09, -1.31)
Gray[95]	36	-7.40	(-9.13, -5.67)
Marcus[90]	31	-9.10	(-13.32, -4.88)
Mendoza[94]	60	-4.57	(-6.58, -2.56)
Michelson[44]	192	-0.90	(-1.87, 0.07)
O'Kane[92]	18	-6.50	(-7.35, -5.65)
Pooled random-effects estimate		-4.75[1]	(-6.72, -2.77)

[1]Chi-squared test of heterogeneity p-value < 0.001.

Table 8. Meta-analysis of weight loss in placebo-controlled trials of fluoxetine at 12 months

Trial	Total n	Mean difference	95% CI
Breum[88]	29	-0.70	(-8.53, 7.13)
Darga[91]	30	-3.60	(-4.87, -2.33)
Goldstein[89]	212	0.40	(-1.70, 2.50)
Marcus[90]	21	-14.50	(-22.62, -6.38)
Michelson[44]	78	-0.20	(-2.59, 2.19)
O'Kane[92]	16	-5.80	(-7.57, -4.03)
Pooled random-effects estimate		-3.15[1]	(-5.82, -0.48)

[1]Chi-squared test of heterogeneity p-value < 0.00.

Table 9. Meta-analysis of adverse events in RCTs of fluoxetine for obesity

		Data				**Synthesis**			
Adverse event		*Placebo*		*Intervention groups*					
	# of studies	*# adverse events*	*sample size*	*# adverse events*	*sample size*	*Pooled OR*	*95% CI*	*RR*	*Number needed to harm (OR>1)*
Nervousness/sweating/ tremors	4	10	294	63	297	7.85	(3.87,17.63)	6.37	5.48
Nausea/vomiting	6	31	322	82	349	3.27	(1.94, 5.67)	2.68	6.17
Fatigue/asthenia/hypersomnia/ somnolence	6	37	336	87	363	2.83	(1.82, 4.45)	2.36	6.70
Insomnia	3	14	270	31	296	2.19	(1.10, 4.58)	2.06	18.15
Diarrhea	6	26	336	46	363	1.86	(1.10, 3.23)	1.74	17.37
Urticaria/pruritis/rash	4	7	74	11	76	1.67	(0.53, 5.65)	NC	NC
Headache	5	61	314	79	340	1.35	(0.91, 2.03)	NC	NC
Rhinitis	4	72	294	77	297	1.08	(0.73, 1.60)	NC	NC
Depression/mood change	3	6	68	6	70	0.96	(0.24, 3.82)	NC	NC
Back pain	2	5	46	6	47	NC	NC	NC	NC
Bloating/abdominal pain/dyspepsia	2	4	46	5	47	NC	NC	NC	NC
Decreased libido/sexual dysfunction	2	1	46	4	47	NC	NC	NC	NC

OR = Odds ratio

RR = Relative risk

NC = Not Calculated
CI = Confidence interval

Note: for the nausea/vomiting group, one trial had more adverse events in the fluoxetine group than actual number of people. The total number of adverse events was truncated at the total number of people for the OR calculation.

Table 10. Meta-analysis of weight loss in placebo controlled trials of bupropion at 6-12 months

Trial	Total n	Mean Difference	95% CI
Anderson [43]	217	-4.91	(-6.78, -3.05)
Croft [98]	423	-1.17	(-2.25, -0.09)
Jain [99]	384	-2.70	(-3.57, -1.83)
Pooled random-effects estimate		-2.77[1]	(-4.50, -1.05)

[1]Chi-squared test of heterogeneity p-value < 0.001.

Table 11. Meta-analysis of adverse events in RCTs of bupropion

		Data				**Synthesis**			
Adverse event		*Placebo*		*Bupropion*					
	# of trials	*# adverse events*	*sample size*	*# adverse events*	*sample size*	*Pooled OR*	*95% CI*	*RR*	*Number needed to harm (OR> 1)*
Dry mouth	2	13	321	58	428	3.26	(1.71, 6.64)	2.99	12.43
Diarrhea	1	7	112	18	215	1.37	(0.52, 4.01)	1.34	47.19
Constipation	2	20	321	39	428	1.31	(0.72, 2.44)	1.29	56.28
Upper respiratory problems	2	104	321	171	428	1.22	(0.88, 1.69)	1.14	22.23
Headaches	2	42	321	66	428	0.99	(0.63, 1.57)	NC	NC
Central nervous system effects	2	31	321	41	428	0.98	(0.58, 1.66)	NC	NC
Upper abdominal symptoms	2	24	321	30	428	0.81	(0.44, 1.50)	NC	NC
Hypertension	1	0	112	1	215	NC	NC	NC	NC
Seizure	1	0	209	1	213	NC	NC	NC	NC

NC = Not Calculated.

Table 12. Meta-analysis of weight loss in placebo controlled trials of topiramate at 6 months

Trial	Total n	Mean Difference	95% CI
Bray [31]	151	-3.70	(-5.23, -2.17)
Caterson [107]	195	-8.20	(-9.55, -6.85)
Prud' homme[105]	46	-6.00	(-9.19, -2.81)
Rissanen [104]	226	-9.10	(-10.36, -7.84)
Stenlof [103]	272	-7.00	(-8.14, -5.86)
Tonstad [106]	109	-4.60	(-6.40, -2.80)
Pooled random-effects estimate		-6.51[1]	(-8.25, -4.77)

[1]Chi-squared test of heterogeneity p-value < 0.001.

Table 13. Meta-analysis of adverse events in RCTs of topiramate

		Data				**Synthesis**			
Adverse event		*Placebo*		*Topiramate 192 mg*					
	# of trials	*# adverse events*	*sample size*	*# adverse events*	*sample size*	*Pooled OR*	*95% CI*	*RR*	*Number needed to harm (OR>1)*
Parasthesia	6	101	624	524	643	20.18	(13.99, 29.67)	4.92	1.58
Taste perversion	5	11	527	100	545	11.14	(5.80, 23.57)	9.19	5.85
Central nervous system effects	6	194	624	376	643	3.97	(2.90, 5.49)	2.06	3.02
Constipation	2	9	212	31	211	3.96	(1.77, 9.77)	3.52	9.36
Dry mouth	3	13	349	37	346	3.13	(1.59, 6.55)	2.90	14.13
Upper abdominal symptoms	5	73	589	123	610	1.76	(1.27, 2.47)	1.61	13.26
Fatigue	6	160	624	204	643	1.36	(1.03, 1.80)	1.25	15.91
Upper respiratory problems	5	184	487	199	508	1.32	(0.87, 1.99)	1.18	14.90
Diarrhea	3	47	275	55	297	1.08	(0.68, 1.71)	1.07	89.42
Vertigo	1	4	137	5	135	NC	NC	NC	NC
Headaches	1	16	177	20	178	NC	NC	NC	NC
Increased hepatic enzymes	1	0	75	0	76	NC	NC	NC	NC

NC = Not Calculated

Note: For the central nervous system effects and upper respiratory problems groups, one trial in each had more adverse events in the topiramate group than actual number of people.

For the paresthesia group, two trials had more adverse events in the topiramate group than actual number of people.

The total number of adverse events was truncated at the total number of people for the OR calculation.

Table 14. Summary of findings regarding medications for weight loss

Medication	Source of data	Weight loss assessed at:	Mean weight loss in treated patients compared to placebo (95% CI)
Sibutramine	Existing meta-analysis of 24 RCTs	52 weeks	-4.45 kg (-5.29, -3.62)
Orlistat	Our meta-analysis of 23 RCTs	52 weeks	-2.76 kg (-3.31, -2.20)
Fluoxetine	Our meta-analysis of 9 RCTs	52 weeks	-3.15 kg (-5.82, -0.48)
Phentermine	Existing meta-analysis of 9 RCTs	2 to 24 weeks	-3.6 kg (-6.0, -0.6)
Diethylpropion	Existing meta-analysis of 13 RCTs	6 to 52 weeks	-3.0 kg (-11.5, 1.6)
Bupropion	Our meta-analysis of 3 RCTs	24 to 52 weeks	-2.77 kg (-4.5, -1.0)
Zonisamide	1 RCT	16 weeks	Additional 5% of pre-treatment weight loss
Topiramate	Our meta-analysis of 6 RCTS	24 weeks	Additional 6.5% of pre-treatment weight loss (95% CI 4.8%, 8.2%)

Table 15. Summary of results of Cochrane review of surgery for morbid obesity*

Comparison	Results of literature search and synthesis
Surgery versus nonsurgical interventions RCT comparing diet and unbanded horizontal gastroplasty vs. very low calorie diet and diethylpropion in 60 patients	At 2 years, maximal weight loss did not differ between groups (26.1 kg vs. 22.0 kg), but differential regain in weight made the net weight loss favor surgically treated patients. At 5 years, 30% of surgical patients and 17% of diet patients had 10 kg or greater weight loss (p=n.s.), although 16% of surgically treated patients maintained at least 10 kg of net weight loss compared with 3% of diet-treated patients (p,0.05). Heartburn, pain projected to the left shoulder, and vomiting were more common in surgically treated patients, irritability and low spirits were more common in diet-only treated patients.
Cohort study comparing gastric surgery** vs. conventional treatment	At 8 years, surgical patients had lost 16% and conventional patients had lost 1% of weight (p<0.001)
RYGB versus unbanded horizontal gastroplasty	2/5 RCTs reported greater weight loss for patients treated with gastric bypass
VBG versus unbanded horizontal gastroplasty	1 RCT reported greater weight loss for patients treated with VBG
VBG versus adjustable gastric banding	1 RCT reported greater weight loss for patients treated with VBG

* Adapted from: Colquitt J, Clegg A, Sidhu M, Royle P. Surgery for Morbid Obesity[38]
** 94% purely gastric restrictive (VBG, gastric banding), 6% gastric bypass

Table 16. Weight loss following bariatric surgery by procedure (at 12 months followup), pooled results by study type

Controlled trials (includes controlled trials comparing one procedure to another)			**All studies (includes all controlled trials and case series)**		
Procedure	*Weight loss (kg) at 12 months*	*# trials # patients*	*Procedure*	*Weight Loss (kg) at 12 months (95% CI)*	*# Studies/Patients*
RYGB (all) versus VBG (all)	δ 42.43 kg δ 34.45 kg Mean difference = 7.97 kg CI (2.99, 12.96)	2 trials) n=114 n=117	RYGB (all) versus VBG (all)	Δ 43.46 kg (41.24, 43.46) Δ 32.16 kg (29.92, 34.41)	I=32 / n=2937 I=21 / n=2080
RYGB (all) versus Adj Band (all)	Not reported	(0 trials)	RYGB (all) versus Adj Band (all)	Δ 43.46 kg (41.24, 45.68) Δ 30.19 kg (27.95, 32.42)	I=32 / n=2937 I=27 / n=5562
RYGB (open) versus RYGB (lap)	δ 34.35 kg δ 37.00 kg Mean difference = -2.64 kg CI (-11.28, 6.00)	(1 trial) n=21 n=30	RYGB (open) versus RYGB (lap)	Δ 43.89 kg (41.09, 46.69) Δ 42.17 kg (38.95, 45.38)	I=25 / n=2074 I=10 / n=863
VBG (all) versus Adj Band (all)	δ 38.58 kg δ 24.20 kg Mean difference = 14.41 kg CI (9.39, 19.42)	(2 trials) n=71 n=76	VBG (all) versus Adj Band (all)	Δ 32.16 kg (29.92, 34.41) Δ 30.19 kg (27.95, 32.42)	I=21 / n=2080 I=27 / n=5562
RYGB (all) versus BPD (all)	Not reported	(0 Trials)	RYGB (all) versus BPD (all)	Δ 43.46 kg (41.24, 45.68) Δ 51.93 kg (45.10, 58.75)	I=32 / n=2937 I=3 / n=735

Table 17. Weight loss following bariatric surgery by procedure (at ≥ 36 months followup), pooled results by study type

Controlled trials (includes controlled trials comparing one procedure to another)			**All studies (includes all controlled trials and case series)**		
Procedure	*Weight loss (kg) at ≥ 36 months followup (95% CI)*	*# Trials # Patients*	*Procedure*	*Weight loss (kg) at ≥ 36 months followup (95% CI)*	*# Studies/patients*
RYGB (all) versus VBG (all)	Δ 39.73 kg Δ 30.65 kg Mean difference = 9.29 kg CI (1.61, 16.96)	(2 trials) n=103 n=96	RYGB (all) versus VBG(all)	Δ 41.46 kg (37.36, 45.56) Δ 32.03 kg (27.67, 36.38)	I=21 / n=1281 I=18 / n=1877
RYGB (all) versus Adj Band (all)	Not reported	(0 trials)	RYGB (all) versus Adj Band (all)	Δ 41.46 kg (37.36, 45.56) Δ 34.77 kg (29.47, 40.07)	I=21 / n=1281 I=17 / n=3076
RYGB (open) versus RYGB (lap)	Not reported	(0 trials)	RYGB (open) versus RYGB (lap)	Δ 41.58 kg (37.38, 45.78) Δ 38.32 kg (28.04, 48.60)	I=20 / n=1266 I=1 / n=15
VBG (all) versus Adj Band (all)	Δ 35.51 kg Δ 32.97 kg Mean difference = 2.79 kg CI (-16.63, 22.21)	(2 trials) n=64 n=60	VBG (all) versus Adj Band (all)	Δ 32.03 kg (27.67, 36.38) Δ 34.77 kg (29.47, 40.07)	I=18 / n=1877 I=17 / n=3076
RYGB (all) versus BPD (all)	Not reported	(0 trials)	RYGB (all) versus BPD (all)	Δ 41.46 kg (37.36, 45.56) Δ 53.10 kg (47.36, 58.84)	I=21 / n=1281 I=1 / n=50

Table 18. Mortality analysis, surgical procedures

	Early or time unspecified deaths				**Late deaths**			
Procedure	*Controlled trials*		*Case series*		*Controlled trials*		*Case series*	
RYGB	1.0% (0.5, 1.9)	l=15/ n=907	0.3% (0.2, 0.4)	l=50/ n=11290	1.1% (0.4, 2.5)	l=9/ n=524	0.6% (0.4, 0.8)	l=24/ n=5411
BPD	Not Reported	l=0/ n=0	0.9% (0.5, 1.3)	l=7/ n=2808	Not Reported	l=0/ n=0	0.3% (0.01, 0.6)	l=4/ n=2362
Band	0.4% (0.01, 2.1)	l=6/ n=268	0.02% (0, 0.78)	l=35/ n=9222	Not Reported	l=0/ n=0	0.1% (0.02, 0.2)	l=11/ n=3975
VBG	0.2% (0, 1.4)	l=11/ n=401	0.3% (0.1, 0.5)	l=33/ n=4091	0.0% (0, 16.8)*	l=1/ n=20	0.6% (0.4, 1.0)	l=20/ n=2638

* one-sided, 97.5% confidence interval

Early = ≤ 30 days from procedure, or designated “early” in the original report.
Late = > 30 days from procedure, or designated “late” in the original report

Table 19. Postoperative adverse events by bariatric procedure (RYGB versus VBG, Band, or BPD), results pooled by study type

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by procedure*	*(#trials) # patients*	*Adverse event (%) by procedure*	*# Studies/patients*
1. Gastrointestinal symptoms (including reflux, vomiting, dysphagia, dumping syndrome, etc.)	RYGB = 18.3% versus VBG = 15.2% OR=1.29 (0.70, 2.42)	(3 trials) n=169 n=178	RYGB = 16.9% versus VBG = 17.5%	I=34 / n=7374 I=21 / n=1692
	RYGB versus Band Not reported	(0 trials)	RYGB = 16.9% versus Band = 7.0%	I=34 / n=7374 I=17 / n=3400
	RYGB versus BPD Not reported	(0 trials)	RYGB = 16.9% versus BPD = 37.7%	I=34 / n=7374 I=1 / n=305
1a. Reflux	RYGB versus VBG Not reported	(0 trials)	RYGB = 10.9% versus VBG = 2.2%	I=3 / n=727 I=7 / n=823
	RYGB versus Band Not reported	(0 trials)	RYGB = 10.9% versus Band = 4.7%	I=3 / n=727 I=4 / n=485
	RYGB versus BPD Not reported	0 trials)	RYGB = 10.9% versus BPD = NR	I=3 / n=727 I=0 / n=0

trials considered for analysis by procedure
RYGB – 70 trials
VBG – 48 trials
BAND – 41 trials
BPD – 7 trials

Table 19. Postoperative adverse events by bariatric procedure (RYGB versus VBG, band, or BPD), results pooled by study type (cont.)

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by procedure*	*(#trials) # patients*	*Adverse event (%) by procedure*	*# Studies/patients*
1. Gastrointestinal symptoms (cont) 1b. Vomiting	RYGB versus VBG Not reported	(0 trials)	RYGB = 15.7% versus VBG = 18.4%	I=8 / n=1324 I=10 / n=1177
	RYGB versus Band Not reported	(0 trials)	RYGB = 15.7% versus Band = 2.5%	I=8 / n=1324 I=4 / n=562
	RYGB versus BPD Not reported	(0 trials)	RYGB = 15.7% versus BPD = 5.9%	I=8 / n=1324 I=1 / n=305
2. Nutritional and electrolyte abnormalities (including mineral, vitamin, protein deficiencies, etc.)	RYGB versus VBG Not reported	(0 trials)	RYGB = 16.9% versus VBG = 2.5%	I=10 / n=2088 I=4 / n=397
	RYGB versus Band Not reported	(0 trials)	RYGB = 16.9% versus Band = Not Reported	I=10 / n=2088 I=0 / n=0
	RYGB versus BPD Not reported	(0 trials)	RYGB = 16.9% versus BPD = Not Reported	I=9 / n=2088 I= 0 / n=0

trials considered for analysis by procedure

- RYGB – 70 trials
- VBG – 48 trials
- BAND – 41 trials
- BPD – 7 trials

Table 19. Postoperative adverse events by bariatric procedure (RYGB versus VBG, Band, or BPD), results pooled by study type (cont.)

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by procedure*	*(#Trials) # patients*	*Adverse event (%) by procedure*	*# Studies/patients*
3. Surgical, preventable and not preventable issues (including anastomotic or stoma-related, bleeding, reoperations, wound, etc.)	RYGB = 20.3% versus VBG = 15.1% OR=1.48 (0.88, 2.49)	(5 trials) n=241 n=252	RYGB = 18.7% versus VBG = 23.7%	I=49 / n=10088 I=34 / n=3247
	RYGB versus Band Not reported	(0 trials)	RYGB = 18.7% versus Band = 13.2%	I=49 / n=10088 I=34 / n=8846
	RYGB versus BPD Not reported	(0 trials)	RYGB = 18.7% versus BPD = 5.9%	I=49 / n=10088 I=5 / n=2663
3a. Anastomotic, gastric pouch or duodenal leak	RYGB = 1.4% versus VBG = 2.8% OR=0.49 (0.01, 9.74)	(2 trials) n=70 n=72	RYGB = 2.2% versus VBG = 1.0%	I=30 / n=5645 I=14 / n=1456
	RYGB versus Band Not reported	(0 trials)	RYGB = 2.2% versus Band = 3.3%	I=30 / n=5645 I=2 / n=180
	RYGB versus BPD Not reported	(0 trials)	RYGB = 2.2% versus BPD = 1.8%	I= 30/ n=5645 I=4 / n=2358

trials considered for analysis by procedure

- RYGB – 70 trials
- VBG – 48 trials
- BAND – 41 trials
- BPD – 7 trials

Table 19. Postoperative adverse events by bariatric procedure (RYGB versus VBG, Band, or BPD), results pooled by study type (cont.)

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by procedure*	*(#trials) # patients*	*Category of adverse event*	*Adverse event (%) by procedure*
3. Surgical, preventable and not preventable issues (cont.) 3b. Anastomotic or stomal stenosis	RYGB = 6.9 versus VBG = 14.9 OR=0.51 (0.13, 1.72)	(2 trials) n=72 n=74	RYGB = 4.6% versus VBG = 6.0%	I=27 / n=6078 I=16 / n=1696
	RYGB versus Band Not reported	(0 trials)	RYGB = 4.6% versus Band = Not reported	I=27 / n=6078 I=0 / n=0
	RYGB versus BPD Not reported	(0 trials)	RYGB = 4.6% versus BPD = Not reported	I=27/ n=6078 I=0 / n=0
3c. Bleeding	RYGB = 1.0% versus VBG = 0.0% OR = Not estimable	(1 trial) n= 99 n= 106	RYGB = 2.0% versus VBG = 0.7%	I=19 / n=5026 I=6 / n=1027
	RYGB versus Band Not reported	(0 trials)	RYGB = 2.0% versus Band = 0.3%	I=19 / n=5026 I=6 / n=2844
	RYGB versus BPD Not reported	(0 trials)	RYGB = 2.0% versus BPD = 0.2%	I=19 / n=5026 I=2 / n=1617

trials considered for analysis by procedure

- RYGB – 70 trials
- VBG – 48 trials
- BAND – 41 trials
- BPD – 7 trials

Table 19. Postoperative adverse events by bariatric procedure (RYGB versus VBG, Band, or BPD), results pooled by study type (cont.)

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by procedure*	*(#trials) # patients*	*Category of adverse event*	*Adverse event (%) by procedure*
3d. Reoperations (including those related to anastomosis, band, bleeding, revisions, etc.)	RYGB = 0% versus VBG = 3.7% OR=0 (0, 5.73)	(1 trial) n= 52 n= 54	RYGB = 1.6% versus VBG = 11.3%	I=9 / n=4356 I=7 / n=520
	RYGB versus Band Not reported	(0 trials)	RYGB = 1.6% versus Band = 7.7%	I=9 / n=4536 I=11 / n=2140
	RYGB versus BPD Not reported	(0 trials)	RYGB = 1.6% versus BPD = 4.2%	I=9 / n=4536 I=2 / n=1101
4. Medical (cardiac, stroke, or severe HTN)	RYGB versus VBG Not reported	(0 trials)	RYGB = 4.8% versus VBG = 4.7%	I=5 / n=2161 I=2 / n=473
	RYGB versus Band Not reported	(0 trials)	RYGB = 4.8% versus Band = 0.7%	I=5 / n=2161 I=1 / n=150
	RYGB versus BPD Not reported	(0 trials)	RYGB = 4.8% versus BPD = Not Reported	I=5 / n=2161 I=0/ n=0

trials considered for analysis by procedure

- RYGB – 70 trials
- VBG – 48 trials
- BAND – 41 trials
- BPD – 7 trials

Table 20. Postoperative adverse events following bariatric procedures differs by operative approach (open versus laparoscopic), pooled results by study type

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by operative approach*	*(#trials) # patients*	*Adverse event (%) by operative approach*	*# Studies/patients*
1. Respiratory (including pneumonia, atelectasis, respiratory insufficiency, etc.)	Open = 3.0% Lap = 1.9% OR=1.54 (0.17, 19.42)	(2 trials) N=101 N=104	Open = 2.4% Lap = 1.5%	I=26 / n=5317 I=18 / n=5437
1a. Pneumonia	Not reported	(0 trials)	Open = 0.9% Lap = 0.8%	I=11 / n=3555 I=7 / n=2064
2. Medical (cardiac, stroke, severe HTN)	Not reported	(0 trials)	Open = 6.0% Lap = 3.1%	I=5 / n=1360 I=5/ n=1463
3. Surgical, preventable and not preventable issues (including wound, hernia, splenic injury, reoperations, anastomotic, etc.)	Open = 31.1% Lap = 26.1% OR=1.32 (0.72, 2.43)	(3 trials) N=122 N=134	Open = 22.1% Lap = 12.4%	I=68 / n=11094 I=47 / n=13752
3a. Wound, all	Open = 13.1% Lap = 0.0% OR=Not estimable	(3 trials) N=122 N=134	Open = 11.4% Lap = 2.3%	I=47 / n=8333 I=27 / n=8320
I. Wound infection, major	Open = 3.0% Lap = 0.0% OR=Not estimable	(2 trials) N=101 N=104	Open = 4.0% Lap = 1.6%	I=8 / n=907 I=17 / n=4694

trials considered for analysis by operative approach

- Open – 98 trials
- Lap – 53 trials

Table 20. Postoperative adverse events following bariatric procedures differs by operative approach (open versus laparoscopic), pooled results by study type (cont.)

	Controlled trials (includes controlled trials comparing one procedure to another)		**All studies (includes all controlled trials and case series)**	
Category of adverse event	*Adverse event (%) by operative approach*	*(#trials) # patients*	*Adverse event (%) by operative approach*	*# studies/patients*
3a. Wound, all (cont.) II. Wound infection, minor	Open = 14.3% Lap = 0.0% OR=Not estimable	(1 trial) n=21 n=30	Open = 10.8% Lap = 3.3%	l=9 / n=739 l=5 / n=1555
III. Incisional hernia	Open = 8.2% Lap = 0.0% OR=Note	(3 trials) n=122 n=134	Open = 11.9% Lap = 0.4%	l=29 / n=3686 l=7 / n=1075
3b. Internal hernia	Open = 0.0% Lap = 1.3% OR=0.00 (0.00, 40.40)	(1 trial) n=76 n=79	Open = 1.4% Lap = 2.9%	l=4 / n=287 l=6 / n=3422
3c. Splenic injury (including splenectomy or repair)	Not reported	(0 trials)	Open = 1.2% Lap = 0.2%	l=18 / n=5065 l=4 / n=1541
3d. Reoperations	Open = 0.0% Lap = 4.0% OR=0.00 (0.00, 38.94)	(1 trial) n=25 n=25	Open = 8.1% Lap = 2.7%	l=18 / n=3465 l=9 / n=5018
4. DVT and/or PE	Open = 1.0% Lap = 0.9% OR=1.22 (0.02, 96.69)	(2 trials) n= 97 n= 109	Open = 1.3% Lap = 0.6%	l=23 / n=4704 l=16 / n=3995

trials considered for analysis by operative approach:

- Open – 98 trials
  Lap – 53 trials.