TABLE 1
Catalogue of Observational Study Design.

Study	Time	Sample	Groups	Exercise Definition	Instrument of physical activity measurement	Main Results
Shada et al., 2013	36 months	n = 120 years = 45.8 BMI = 45.9 kg·m^{-2} ♂= 15.8%; ♀ = 84.2% Surgery: LAGB	1: 0-59 min/week 2: 60-149 min/week 3: >150 min/week	Active: at least 150 min/week of aerobic exercise	Interview	EWL: 33% (group 1); 46.4% (group 2). 54.1% (group 3). ↑ volume = ↑ loss
Bond et al., 2009	12 months	n = 199 years = 43.8 BMI = 49.8 kg·m^{-2} ♂= 17%; ♀ = 83% Surgery: RYGB	1: Inactive/Inactive 2: Active/Active 3: Active/Inactive	Inactive: <200 min/week of M/V PA Active: >200 min/week of M/V PA	IPAQ-short	EWL: 63.1% (group 1). 69.8% (group 2). 71.5% (group 3). Physically active = ↑ loss
Livhits et al., 2010	30 months	n = 149 years = 45.9 BMI = 46.2 kg·m^{-2} ♂= 16%; ♀ = 84% Surgery: LRYGB	1: Low 2: Medium 3: High	Active: at least 150 min/week of aerobic exercise	IPAQ-short	66.7% of high activity = EWL succes 18% of medium activity = EWL succes 15.4% of low activity = EWL succes Activity as a predictor of weight loss succes
Larsen et al., 2006	34 months	n = 157 years = 40 BMI = 45.5 kg·m^{-2} ♂= 8%; ♀ = 92% Surgery: LAGB		Not specified in the text	BAQ	Activity does not have correlation with BMI reduction
Welch et al., 2011	30 months	n = 75 years = 39 BMI = 49.8 kg·m^{-2}		Active: at least 150 min/week of aerobic exercise	Bariatric surgery self-management Questionnaire PA subscale	Activity as a predictor of %EWL (R^2=.08)

		♂ = 14.7%; ♀ = 85.3% Surgery: LAGB		Interview	
Wolfe & Terry, 2006	12-36 months	n = 93 years = 44.3 BMI = 52.5 kg·m⁻² ♂ = 12.9%; ♀ = 87.1% Surgery: RYGB	Not specified in the text	Interview	Activity correlate with BMI reduction (r = .36) No differences between active and inactive (*p* > .6)
Latner et al., 2004	16 months	n = 65 years = 39.5 BMI = 54.1 kg·m⁻² ♀ = 100% Surgery: ?	Active: at least 150 min/week of MPA	Interview Prime-MD Eating Disorder Examination	Activity frequency correlate with %EWL (r = .345)
Colles et al., 2008	12 months	n = 129 years = 42.5 BMI = 44.3 kg·m⁻² ♂ = 20.2%; ♀ = 79.8% Surgery: LAGB	Not specified in the text	Baecke Physical Activity Questionnaire Pedometer	Activity as a predictor of %EWL (r² = .213)
Bond et al., 2004	24 months	n = 1585 years = 40.4 BMI = 49.8 kg·m⁻² ♂ = 17.3%; ♀ = 82.6% Surgery: ?	1: BMI 35-49 kg·m² 1.1 = active; 1.2 = inactive 2: BMI 40-70 kg·m² 2.1 = active; 2.2 = inactive	Not specified in the text	Self-reporting	1.1 = 72.1 %EWL; 1.2 = 68.3%EWL 2.1 = 63.2 %EWL; 2.2 = 57.9 %EWL Activity = increased %EWL
Forbush et al., 2011	36 months	n = 265 years = 48.3 BMI = 61.1 kg·m⁻²	EC: Low = 0-300 kj/day; medium = 301-3000 kj/day; high = >3000 kj/day Activity volume: low	Not specified in the text	Arizona Activity Frequency Questionnaire	EC: low = 79.32 %EWL. medium = 81.5 %EWL. high = 91.93 %EWL Activity: low = 78.1 %EWL. medium = 85.28 %EWL. high = 93.48 %EWL More EC = more %EWL (low vs high)

Study	Duration	Sample	Groups	Activity criteria	Measure	Results
		♂= 14%; ♀ = 86% Surgery: RYGB		= 0-30 min/day; medium = 30-60 min/day; high = >60 min/day		More activity volume = more %EWL (low vs high and low vs medium)
Mundi et al., 2013	12 months	n = 118 years = 51.2 BMI = 44.9 kg·m⁻² ♂= 19.2%; ♀ = 80.8% Surgery: ?	1: EWL < 50% 2: EWL > 50%	1: 68 min/week MPA; 40 min/week VPA 2: 150 min/week MPA; 120 min/week VPA	IPAQ-Short Baecke Physical Activity Questionnaire	Physical activity does correlate with %EWL (r = .24)
Boddu et al., 2012	6 months	n = 125 years = ? BMI = ? ♂= 20%; ♀ = 80% Surgery: RYGB. LAGB. SG	1: High 2: Medium 3: Low	1: 1500 MET-minutes/week of VPA or 3000 MET-minutes/week of MPA 2: at least 600 MET-minutes/week 3: Not meet criteria for groups 1 or 2	GPAQ	Activity does not have correlation with %EWL
Livhits et al., 2011	12-72 months	n = 119 years = 49.7 BMI = 48.7 kg·m⁻² ♂= 15.1%; ♀ = 84.9% Surgery: LRYGB	1: Weight regain 2: Weight loss	IPAQ categories: low-medium-high	IPAQ-short	Low = 18.5% no weight regain Medium = 27.2% no weight regain High = 54.2% no weight regain Low levels of PA predict weight regain
Josbeno et al., 2011	24-60 months	n = 40 years = 50.6 BMI = 48.8 kg·m⁻² ♂= 10%; ♀ = 90%		1: <150 min/week MVPA 2: >150 min/week MVPA	Body Media Sense Wear Pro	Group 1: 52.5%EWL Group 2: 68.2 %EWL MVPA correlate with greater %EWL

		Surgery: RYGB				
Rosenberger et al., 2011	12 months	n = 131 years = 42.9 BMI = 51.6 kg·m^{-2} ♂= 12%; ♀ = 88% Surgery: ?		Not specified in the text	GLTQ	Moderate/strenuous PA correlated with %EWL (r^2 = .24)
Welch et al., 2008	14 months	n = 200 years = 44.9 BMI = 53.5 kg·m^{-2} ♂= 15%; ♀ = 85% Surgery: RYGB		5 times/week 30-60 min	Bariatric Surgery Self-management Behaviors Questionnaire	PA as a predictor of grater weight loss (r^2 = .09)
Colleen & Edwards 1999	84 months	n = 100 years = ? BMI = ? ♂= 5%; ♀ = 95% Surgery: ?		Not specified in the text	Interview	Active = 77% no weight remain PA correlated with maintained weigth loss
Hernández-Estefanía et al., 2000	24-60 months	n = 67 years = 20-60 BMI = 47.5 kg·m^{-2} ♂= 15%; ♀ = 85% Surgery: VBG		At least walking 30 min every days		Active subjects greater weigth loss (p = .001)
Metcalf et al., 2005	6 months	n = 100 years =27-63 BMI = ?	1: Active 2: Inactive	Active: ≥3 times/week 30 min during previous 6 months	Self-reporting	No differences in body weigth between groups Actives = 28% higher loss of fat mass (p < .05) Actives = 8% higher gain in lean body mass (p < .05)

		♂= 14%; ♀ = 86% Surgery: DS		Inactive: who don't meet the above criteria		
Silver et al., 2006	24 months	n = 140 years = 45.2 BMI = 49.8 kg·m⁻² ♂= 11.4%; ♀ = 88.6% Surgery: RYGB		Intensity: Light: < 3 METs Moderate: 3-6 METs Vigorous: >6 METs Frecuency: 2 or less times/month 2 times/week 7 times/week	BRFSS + exercise frequency and duration	↑ PA = ↓ IMC (r = -.25)
Bueter et al., 2007	27 months	n = 85 years = 40 BMI = 49 kg·m⁻² ♂= 19%; ♀ = 81% Surgery: LAGB	1: EWL < 50% 2: EWL ≥ 50%	Active subjects: ≥3 times/week >30 min of aerobic exercise	Interview	Activity as a predictor of weight loss succes (RR 4.2; p = .007)

BAQ: Baecke Activity Questionnaire; BMI: Body mass index; BRFSS: Behavioral Risk Factor Surveillance System; DS: Duodenal switch; EC: Energy consumption; GLTQ: The Godin Leisure Time Questionnaire: GPAQ: Organization's global physical activity questionnaire; IPAQ-short: Short International physical activity questionnaire; LAGB: Laparoscopic adjustable gastric banding; LRYGB: Laparoscopic Roux-en-Y gastric bypass; MET: Metabolic equivalent; MPA: Moderate physical activity; MVPA: Moderate-vigorous physical activity; PA: Physical activity; Prime-MD: Primary Care Evaluation of Mental Disorders; RYGB: Roux-en-Y gastric bypass; VPA: Vigorous physical activity; VBG: Vertical banded gastroplasty; ♂: Male; ♀: Female.

TABLE 2
Catalogue of Interventional Study Design.

Study	Time	Sample	Groups	Physical Activity Volume and Intensity	Instrument of physical activity measurement	Main Results
Sha et al., 2011	12 weeks	n = 33 years = 49.7 BMI = 41.89 kg·m^{-2} ♂= 9%; ♀ = 91% Surgery: RYGB, LAGB	1. Exercise 2. Control	Energy consumption of 2000 kcal/week with aerobic exercise 60-70% VO$_{2max}$	Maximal exercise test on treadmill Anthropometry Dual-energy X-ray absorptiometry Blood sample	1.- weight ↓ 4.8% 2.- weight ↓ 4.6% No difference in weight loss
Stegen et al., 2011	12 weeks	n = 15 years = 40.5 BMI = 42.5 kg·m^{-2} ♂= 27%; ♀ = 73% Surgery: RYGB	1. Exercise 2. Control	3 days/week: 30' of aerobic exercise 60-75% HRR 3 days/week: strength training 60-75% RM	Maximal exercise test on bicycle Sit-to-stand test Dynamic muscle strength Handgrip dynamometer	No difference in ↓ BMI Strength:↑ group 1; ↓ group 2 Group 1 ↑ in sit-to-stand test Both ↓ handgrip strength
Castello et al., 2011	12 weeks	n = 21 years = 37 BMI = 45 kg·m^{-2} ♀ = 100% Surgery: RYGB	1. Exercise 2. Control	3 days/week 40' of aerobic exercise 50-70% HRP	Not specified in the text	1.- Weight ↓ 22.7 kg 2.- Weight ↓ 26.6 kg No difference in weight loss

LAGB: Laparoscopic adjustable gastric banding; RYGB: Roux-en-Y gastric bypass; LRYGB: Laparoscopic Roux-en-Y gastric bypass; DS: Duodenal switch; VBG: Vertical banded gastroplasty; VO$_{2max}$: Maximal oxygen uptake; HRR: Heart rate reserve; HR$_{peak}$; Heart rate peak.