

Table S3. Excluded studies and reasons for exclusion

First author	Year	Title	Reason for exclusion
Yoo	2010	Difference of body compositional changes according to the presence of weight cycling in a community-based weight control program	No RCT
Yáziǵi	2013	The PICO project: Aquatic exercise for knee osteoarthritis in overweight and obese individuals	Invalide article type
Xu	2013	Effects of lifestyle intervention and meal replacement on glycaemic and body-weight control in Chinese subjects with impaired glucose regulation: a 1-year randomised controlled trial	Not obesity
Landry	2017	Mississippi Communities for Healthy Living: Results of a 6-Month Nutrition Education Comparative Effectiveness Trial	Not obesity
Gallagher	2006	Psychosocial factors related to physical activity and weight loss in overweight women	No RCT
Hornbuckle	2012	Effects of resistance training and walking on cardiovascular disease risk in African-American women	Not obesity
Frank	2015	An Integrated Risk Reduction Intervention can reduce body mass index in individuals being treated for bipolar I disorder: results from a randomized trial	No outcome of interest
deZwaan	2012	INTERBED: internet-based guided self-help for overweight and obese patients with full or subsyndromal binge eating disorder. A multicenter randomized controlled trial	Invalide article type
Brintz	2017	Sedentary behavior associations with cardiometabolic risk and depressive symptoms in overweight/obese type 2 diabetics: Results from the CALM-D trial	Invalide article type
Bennett	2015	Satisfaction with primary care provider involvement is associated with greater weight loss: Results from the practice-based POWER trial	No outcome of interest

Russo	2018	An intensive lifestyle intervention reduces circulating oxidised low-density lipoprotein and increases human paraoxonase activity in obese subjects	No RCT
Vivian	2014	Effects of a nursing intervention on cardiovascular health in hypertensive, dyslipidemic and overweight postmenopausal women	Invalide article type
Toro-Ramos	2017	Effectiveness of a Smartphone Application for the Management of Metabolic Syndrome Components Focusing on Weight Loss: A Preliminary Study	No RCT
Roessler	2013	Effects of exercise and group counselling on body composition and VO 2max in overweight women with polycystic ovary syndrome	Not obesity
Thomas	2015	Behavioral response to a just-in-time adaptive intervention (JITAI) to reduce sedentary behavior in obese adults: Implications for JITAI optimization	No RCT
Thompson	2014	Increasing physician activity with treadmill desks	Wrong population
Vasquez	2018	Lessons from Singapore's national weight management program, Lose To Win	No RCT
Waters	2013	Long-term maintenance of weight loss after lifestyle intervention in frail, obese older adults	No RCT
Vesco	2014	Efficacy of a group-based dietary intervention for limiting gestational weight gain among obese women: A randomized trial	Wrong population
Romero-Moraleda	2015	Lipid profile response to weight loss program in overweight and obese patient is related with gender and age	No SMI
VanOers	2014	Cost-effectiveness of a structured lifestyle program in overweight and obese subfertile women. Preliminary data from a randomised controlled trial-the LIFEstyle study	Invalide article type
Yin	2014	Effectiveness of knowledge-based interventions for promoting healthy eating and physical activity among women in Beijing, China: a quasi-randomized controlled trial	Invalide article type

Wallia	2014	Culturally adapting the prevention of diabetes and obesity in South Asians (PODOSA) trial	Invalide article type
Kucio	2017	The application of Nordic walking in the treatment hypertension and obesity	No RCT
Marchesi	2015	Road Running After Gastric Bypass for Morbid Obesity: Rationale and Results of a New Protocol	No RCT
Martínez-González	2014	Obesity indexes and total mortality among elderly subjects at high cardiovascular risk: The PREDIMED study	Not obesity
Nanditha	2016	Impact of lifestyle intervention in primary prevention of Type 2 diabetes did not differ by baseline age and BMI among Asian-Indian people with impaired glucose tolerance	Not obesity
Watanabe	2017	Effects of a lifestyle modification programme to reduce the number of risk factors for metabolic syndrome: a randomised controlled trial	Not obesity
Wilbur	2008	Outcomes of a home-based walking program for African-American women	No RCT
Whited	2016	Obstructive sleep apnea and weight loss treatment outcome among adults with metabolic syndrome	No RCT
Unick	2014	Evaluation of early weight loss thresholds for identifying nonresponders to an intensive lifestyle intervention	No RCT
vanStralen	2010	Exploring the efficacy and moderators of two computer-tailored physical activity interventions for older adults: a randomized controlled trial	Not obesity
Wasenius	2014	The effect of structured exercise intervention on intensity and volume of total physical activity	No SMI
TarragaMarcos	2017	Analysis of clinical relevance applied to 3 methods of reducing weight in overweight or obesity followed-up for one year	Invalide article type
Stillman	2018	Weight-Loss Outcomes from a Pilot Study of African Dance in Older African Americans	Not obesity

Stomby	2015	Diet-induced weight loss has chronic tissue-specific effects on glucocorticoid metabolism in overweight postmenopausal women	No SMI
Zoellner	2013	Randomized controlled trial targeting obesity-related behaviors: Better Together Healthy Caswell County	Not obesity
Takada	2011	'The relationship between weight loss and time and risk preference parameters: A randomized controlled trial': Erratum	Invalide article type
Swoboda	2018	Multiple behavior change using goal setting, decision support, and motivational interviewing for type 2 diabetes	Invalide article type
McGorrian	2015	Erratum to 'BMI change in Australian cardiac rehabilitation patients: Cookery skills intervention versus written information	Invalide article type
LaCaille	2016	Go!: results from a quasi-experimental obesity prevention trial with hospital employees	No RCT
Kuller	2001	Women's healthy lifestyle project: A randomized clinical trial: Results at 54 months	Not obesity
Mensink	2003	Lifestyle intervention according to general recommendations improves glucose tolerance	Not obesity
Kolodziejczyk	2013	Feasibility and effectiveness of an automated bilingual text message intervention for weight loss: pilot study	No RCT
Katterman	2014	Efficacy of an acceptance-based behavioral intervention for weight gain prevention in young adult women	Not obesity
Kattelman	2014	The effects of Young Adults Eating and Active for Health (YEAH): a theory-based Web-delivered intervention	Not obesity
Reyes-Rodriguez	2016	"Las penas con pan duelen menos": The role of food and culture in Latinas with disordered eating behaviors	No RCT
Jahangiry	2015	Interactive web-based lifestyle intervention and metabolic syndrome: Findings from the Red Ruby (a randomized controlled trial)	Not obesity

Huang	2013	Benefits of different intensity of aerobic exercise training in modulating the anthropometric indexes of obese college students	Invalide article type
GokeeLaRose	2010	Preventing Weight Gain in Young Adults. A Randomized Controlled Pilot Study	Not obesity
Fisher	2012	Aerobic exercise training conserves insulin sensitivity for 1 yr following weight loss in overweight women	No SMI
Dunn	2014	Using synchronous distance-education technology to deliver a weight management intervention	Not obesity
deRezende	2016	One-Year Results of an Educational Program on Osteoarthritis: A Prospective Randomized Controlled Trial in Brazil	Not obesity
Cramer	2016	Yoga in Women With Abdominal Obesitya Randomized Controlled Trial	No SMI
Chaudhary	2010	The effects of aerobic versus resistance training on cardiovascular fitness in obese sedentary females	No SMI
Biddle	2011	Randomised controlled trial of informal team sports for cardiorespiratory fitness and health benefit in Pacific adults	Not obesity
Álvarez-Pérez	2016	Influence of a Mediterranean Dietary Pattern on Body Fat Distribution: Results of the PREDIMED–Canarias Intervention Randomized Trial	Not obesity
Rosas	2018	HOMBRE: A randomized controlled trial to compare two approaches to weight loss for overweight and obese Latino men (Hombres con Opciones para Mejorar el Bienestar y bajar el Riesgo de Enfermedades cronicas; men with choices to improve well-being and decrease chronic disease risk)	Invalide article type
Petrella	2014	Mobile health, exercise and metabolic risk: a randomized controlled trial	Not obesity
Pekmezi	2018	Physical Activity Maintenance Following Home-Based, Individually Tailored Print Interventions for African American Women	Not obesity

Martin	2015	mActive: A randomized clinical trial of an automated mHealth intervention for physical activity promotion	Not obesity
Mandal	2018	Nutrition and Exercise Rehabilitation in Obesity hypoventilation syndrome (NERO): a pilot randomised controlled trial	Invalide article type
Lombard	2016	Preventing weight gain in women across multiple settings and lifestages: heLP-her cluster randomised controlled trials	Invalide article type
Lanzi	2015	Short-term HIIT and Fat max training increase aerobic and metabolic fitness in men with class II and III obesity	No SMI
Napoli	2014	Effect of weight loss, exercise, or both on cognition and quality of life in obese older adults	No RCT
Lee	2018	Mobile health, physical activity, and obesity: Subanalysis of a randomized controlled trial	No RCT
Lappalainen	2014	The effectiveness and applicability of different lifestyle interventions for enhancing wellbeing: the study design for a randomized controlled trial for persons with metabolic syndrome risk factors and psychological distress	Invalide article type
Laitner	2016	The role of self-monitoring in the maintenance of weight loss success	No RCT
Janke	2014	A randomized clinical trial of an integrated behavioral self-management intervention Simultaneously Targeting Obesity and Pain: the STOP trial	Invalide article type
Jabbour	2017	Effect of supramaximal exercise training on metabolic outcomes in obese adults	No SMI
Oddone	2017	Evaluation of a coaching by telephone intervention for veterans and care team engagement (activate)	Invalide article type
Lombard	2014	Effectiveness and implementation of an obesity prevention intervention: the HeLP-her Rural cluster randomised controlled trial	Invalide article type
Kozica	2015	Acceptability of delivery modes for lifestyle advice in a large scale randomised controlled obesity prevention trial	No outcome of interest

Heinrich	2014	High-intensity compared to moderate-intensity training for exercise initiation, enjoyment, adherence, and intentions: an intervention study	No SMI
Potts	2018	Putting weight in context: Acceptance and Commitment Therapy (ACT) guided self-help for weight self-stigma	Invalide article type
Madigan	2014	The efficacy of self-weighing as a standalone weight loss intervention: randomised controlled trial (SCALE DOWN)	Invalide article type
Lawrence	2015	Training response inhibition to food is associated with weight loss and reduced energy intake	Not obesity
LaRose	2014	Daily self-weighing within a lifestyle intervention: impact on disordered eating symptoms	No RCT
Lanzi	2014	Effects of 2-week endurance training in severe obese men: high intensity interval versus Fatmax training	Invalide article type
Kroeger	2017	Alternate day fasting versus calorie restriction for weight maintenance	Invalide article type
Khodaveisi	2017	The Effect of Pender's Health Promotion Model in Improving the Nutritional Behavior of Overweight and Obese Women	Invalide article type
Kegler	2017	Home environments, physical activity, and energy expenditure among low-income overweight and obese women	No RCT
Hunnemeyer	2011	The base for a balanced life - The randomized controlled base (bariatric surgery and education) study	Invalide article type
Hillier	2012	A community-based health promotion intervention using brief negotiation techniques and a pledge on dietary intake, physical activity levels and weight outcomes: lessons learnt from an exploratory trial	Not obesity
Hedayati	2017	Comparing the effects of whole body vibration with and without exercise on body composition in healthy adults	Invalide article type

Foley	2012	Weight gain prevention among black women in the rural community health center setting: the Shape Program	Invalid article type
Wang	2018	A Behavioral Lifestyle Intervention Enhanced With Multiple-Behavior Self-Monitoring Using Mobile and Connected Tools for Underserved Individuals With Type 2 Diabetes and Comorbid Overweight or Obesity: Pilot Comparative Effectiveness Trial	Duplicate
Teychenne	2015	Adoption and maintenance of gym-based strength training in the community setting in adults with excess weight or type 2 diabetes: a randomized controlled trial	Duplicate
Sorkin	2014	Dyadic collaboration in shared health behavior change: the effects of a randomized trial to test a lifestyle intervention for high-risk Latinas	Duplicate
Rubin	2014	Impact of intensive lifestyle intervention on depression and health-related quality of life in type 2 diabetes: the Look AHEAD Trial	Duplicate
Rock	2014	Weight loss, glycemic control, and cardiovascular disease risk factors in response to differential diet composition in a weight loss program in type 2 diabetes: a randomized controlled trial	Duplicate
Osama	2015	Psychological wellbeing and biochemical modulation in response to weight loss in obese type 2 diabetes patients	Duplicate
Lutes	2018	COMRADE: A randomized trial of an individually tailored integrated care intervention for uncontrolled type 2 diabetes with depression and/or distress in the rural southeastern US	Duplicate
Houston	2015	A long-term intensive lifestyle intervention and physical function: the look AHEAD Movement and Memory Study	Duplicate
Holland-Carter	2017	Impact on psychosocial outcomes of a nationally available weight management program tailored for individuals with type 2 diabetes: Results of a randomized controlled trial	Duplicate
Hansel	2017	A Fully Automated Web-Based Program Improves Lifestyle Habits and HbA1c in Patients With Type 2 Diabetes and Abdominal Obesity:	Duplicate

		Randomized Trial of Patient E-Coaching Nutritional Support (The ANODE Study)	
Grande	2017	Community health worker support versus collaborative goal-setting for disadvantaged patients with multiple chronic diseases: a randomized clinical trial	Not obesity
Espeland	2014	Impact of an intensive lifestyle intervention on use and cost of medical services among overweight and obese adults with type 2 diabetes: The action for health in diabetes	Duplicate
Jiang	2017	The effect of care intervention for obese patients with type II diabetes	Duplicate
Gibbs	2014	Effect of improved fitness beyond weight loss on cardiovascular risk factors in individuals with type 2 diabetes in the Look AHEAD study	Duplicate
Goode	2018	The feasibility of a binge eating intervention in African-American women who are overweight or obese	Invalid article type
Goode	2017	Feasibility of an appetite awareness intervention to reduce cardiovascular disease risk factors and binge eating in African-American women with obesity	Invalid article type
Ghavami	2015	Effects of lifestyle interventions on body mass index in breast cancer patients	Invalid article type
French	2011	Household obesity prevention: Take actiona group-randomized trial	Not obesity
Fernandez	2015	Images of a Healthy Worksite: A Group-Randomized Trial for Worksite Weight Gain Prevention With Employee Participation in Intervention Design	Not obesity
Ferentzi	2018	Retraining of automatic action tendencies in individuals with obesity: A randomized controlled trial	No RCT
Esmaeili	2014	A Randomized Trial on the Effect of Razavi's Dietary Pattern on the Components of Metabolic Syndrome	Not obesity

Eaglehouse	2016	Physical Activity Levels in a Community Lifestyle Intervention: A Randomized Trial	Mixed population
Duncan	2016	Family-centered brief intervention for reducing obesity and cardiovascular disease risk: A randomized controlled trial	Not obesity
Choi	2015	The effects of the DASH diet education program with omega-3 fatty acid supplementation on metabolic syndrome parameters in elderly women with abdominal obesity	Not obesity
Chasapidou	2014	A mediterranean-type nutrition intervention program in greek municipalities for patients with cardiometabolic diseases (food 4health study)	Invalide article type
Carter	2015	Frequency of electronic dietary self monitoring using a smartphone app and weight loss	Invalide article type
Braxton	2017	Design and testing of a behavioral weight loss program for African American women who are severely obese	Invalide article type
Bozzetto	2014	A CHO/fibre diet reduces and a MUFA diet increases postprandial lipaemia in type 2 diabetes: no supplementary effects of low-volume physical training	No SMI
Blomquist	2011	Predictive significance of changes in dietary restraint in obese patients with binge eating disorder during treatment	No SMI
Bender	2017	A feasible and effective mobile health weight loss lifestyle intervention for filipinos with type 2 diabetes	Invalide article type
Beeken	2015	Piloting a manualised weight management programme for overweight and obese persons with mild-moderate learning disabilities: results of the shape up-LD study	Invalide article type
Annesi	2015	Theory-based psychosocial factors that discriminate between weight-loss success and failure over 6 months in women with morbid obesity receiving behavioral treatments	No RCT
Allet	2014	Dance Therapy-its effect on quality of life, and functional capactiy	Invalide article type

Fitzpatrick	2014	Examining behavioral processes through which lifestyle interventions promote weight loss: results from PREMIER	No RCT
Assaf	2016	Low-Fat Dietary Pattern Intervention and Health-Related Quality of Life: The Women's Health Initiative Randomized Controlled Dietary Modification Trial	Not obesity
Breyer	2014	Intensive lifestyle intervention reduces urinary incontinence in overweight/obese men with type 2 diabetes: Results from the look AHEAD trial	No outcome of interest
Espeland	2014	Long-term impact of behavioral weight loss intervention on cognitive function	No outcome of interest
Ahrendt	2014	The Effectiveness of Telemedicine for Weight Management in the MOVE! Program	No RCT
AbdEl-Kader	2015	Aerobic exercises alleviate symptoms of fatigue related to inflammatory cytokines in obese patients with type 2 diabetes	No outcome of interest