| **Study Reference****Quality Rating** | **Intervention Aim/Theory** | **Description of Intervention and Control** |
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| Anderssen, 1995144ODES (Oslo Diet and Exercise Study)Fair | **Aim/theory:** *Diet*Decreased total calorie intake, increased intake of fish and fish products, reduced total and saturated fat intake, increased intake of vegetables, decrease intake of sugar, reduced salt intake (if elevated BP), reduction in body weight (usually 0.5-1.0 kg per month), advised against smoking*Exercise*Endurance exercise, advised against smoking | **Intervention description:** *Diet:* Focused on the aims. During counseling a target body weight reduction was agreed upon. At months 3 and 9 there was a followup of the dietary advice. 180-item food frequency questionnaire*Exercise:* Focused on the aims. Groups of 14-20 were offered a 1 hour supervised exercise program 3 times per week with intensity of 60-80% of each participant's peak heart rate. Additional physical activity was recorded in log books**Control description:** Told to not change their lifestyle and advised against smoking**Intervention Duration:***Individual Sessions*Number: 3 (diet) (assumed)Length: NRTime period: 12 months*Group Sessions*Number: 156 (exercise)Length: 1 hourTime period: 12 months**Who administered intervention:** NR Providers: NR Training: NR**Intervention Setting:** Ullevaal Hospital (assumed)**Incentives:** NR  |
| Burke, 2005145ADAPTFair | **Aim/theory:** Aimed to decrease baseline weight by 5-10% over the 4-month period, larger goal to reduce need for hypertension meds | **Intervention Setting:** NR**Intervention description:** Individual sessions, interactive group workshops, and 5 handouts. Diet low in fat (<30% energy from total fat; <10% energy from saturated fat), salt, and sugar, high in fruits and vegetables, 4 fish meals/week. 30 min moderate activity most days and increased incidental activity. Alcohol intake ≤2 drinks per day. Printed handout and individual session on smoking. Social support from partners encouraged. Encouraged self-directed change in behavior focusing on barriers to change, costs/benefits of a healthy lifestyle, goal setting, and time management. Individual sessions addressed factors like diet, blood pressure, cholesterol, weight loss. Group session topics like food purchasing and prep (15-25/group)**Control description:** Information by the National Heart Foundation and the Health Department of Western Australia. Seminars at 2, 7, 12, 14 mo**Intervention Duration:***Individual Sessions: (est 8 sessions in 12 mos)*Number: NR (6 weight/BP check and "regular" phone contact to monitor BP during followup)Length: NRTime period: 4 mo active, 12 mo followup*Group Sessions: (est 12 session in 12 mos)*Number: 6 active, 6 followupLength: 90 minutesTime period: 4 months**Who administered intervention:** Research staff Providers: NR Training: NR**Incentives:** NR |
| Christian, 2008146Fair | **Aim/theory:** Improve physical activity and diet, enhancing motivation to change | **Intervention Setting:** Outpatient clinic**Intervention description:** 10-min computer-based assessment of motivational readiness. Computer generated tailored report that addressed barriers to improving PA and diet. 30-page planning guide that provided supplemental information on diabetes and achieving a healthy lifestyle. A report was also generated for the patient's physician with findings from the assessment and counseling recommendations. During regularly scheduled visit, patients met with their physician and talked about the lifestyle change goals. Physicians used motivational interviewing.**Control description:** Packet of health education materials addressing diabetes, diet, and exercise. Completed regular clinic visits with physician**Intervention Duration:***Individual Sessions*Number: 4 (baseline, 3,6,9 mo)Length: NRTime period: 9 months*Group Sessions*Number: NRLength: NRTime period: NR**Who administered intervention: Primary care staff** Providers: Patient's physician Training: 3-hour training session on brief motivational interviewing **Incentives:** NR |
| Cohen, 1991147Fair | **Aim/theory:** Reduce dietary caloric content | **Intervention Setting:** Family health center**Intervention description:** Physicians were taught about importance of weight reduction in managing hypertension and the effects of specific foods on body weight, caloric contents of foods, and strategies for changing dietary habits of their patients; patients were instructed about importance of blood pressure control at baseline; patients received consultations from their physicians about caloric content of various foods, suggestions regarding dietary changes, and short-term goal setting; participants' weight was recorded**Control description:** Instructed about importance of blood pressure control at baseline; usual care, physicians were free to refer their patients for dietary advice or therapy or to provide this themselves**Intervention Duration:***Individual Sessions*Number: Presume 12 ("monthly")Length: NRTime period: Presume 12 months, length of study*Group Sessions*Number: NRLength: NRTime period: NR**Who administered intervention:** Primary care staff Providers: Primary care staff Training: Received education session conducted by behavioral psychologist**Incentives:** NR |
| Cussler, 2008148Fair | **Aim/theory:** Weight loss of 0.5 kg per week | **Intervention Setting:** NR**Intervention description:** Group sessions weekly. Encouraged to produce small but lasting changes in eating and PA patterns, leading to a daily energy deficit of 300-500 kcal. Individualized goals for energy intake and expenditure. Targeted physical activity, nutrition and healthy eating, social support, and the mind/body connection. After the 4 month intervention, the website hosted communication tools, progress monitoring tools, curriculum materials, dietary and PA information, links to other websites of interest. Participants were offered two 2-hour training sessions for the website**Control description:** Participated in the group sessions with the IG. After the 4 month intervention, self-directed participants had no further contact with the study staff except for testing**Intervention Duration:***Individual Sessions*Number: NRLength: NRTime period: NR*Group Sessions*Number: 16 (weekly, wt-loss), 2 (maint)Length: 150 min (wt-loss), 2-hr (maint)Time period: 4 mo (wt-loss), 12 mo (maint)**Who administered intervention:** Research staff Providers: NR Training: NR**Incentives:** NR |
| Davis, 1992149Langford, 1991260Davis, 1989261TAIMFair | **Aim/theory:** Reduction of 10% of baseline weight or 4.54 kg (whichever was greater) | **Intervention Setting:** NR**Intervention description:** Placebo med, standard program of diet counseling, nutrition education, and related activities aimed at weight loss**Control description:** Placebo med, No further nutritional counseling beyond the initial explanation of the allocation and general consultation provided to all participants**Control weighing frequency:** Monthly intervals for 6 months then quarterly**Intervention Duration:***Individual Sessions*Number: Est 6 in 1st year (every 6 weeks after group phase ended), quarterly thereafterLength: NRTime period: For the duration*Group Sessions*Number: 10Length: NRTime period: 30 monthsSession in 1st 12 mos: 16**Who administered intervention:** NR *Providers:* NR *Training:* NR**Incentives:** NR |
| Diabetes Prevention Program Research Group, 1999142Diabetes Prevention Program Research Group, 2005212Orchard, 2005262Diabetes Prevention Program Research Group, 2005205Diabetes Prevention Program Research Group, 2005207Ackermann, 2009211Diabetes Prevention ProgramGood | **Aim/theory:** Achieve and maintain weight reduction of at least 7% of initial body weight through healthy eating and physical activity. Achieve and maintain physical activity of 150 minutes/week through moderate activity. | **Intervention Setting:** NR**Intervention description:** *Standard:* Written info, 20-30 min individual session with case manager. Food Pyramid guidelines. Consume equivalent of National Cholesterol Education Program step 1 diet. Lose 5-10% of initial weight through diet and exercise, increase to 30 min of moderate activity 5 days/week, avoid excessive alcohol intake. Reviewed annually.*Intensive:* Training in diet, exercise, and behavior modification skills. Frequent support for behavior change. Flexible diet and exercise interventions. Common and individually tailored infor. Group courses focused on maintenance and topics related to exercise, weight loss, or behavioral issues. IG-L=Standard+Intensive**Control description:** Standard intervention.**Intervention Duration:***Individual Sessions*Number: 1+16+12=29Length: NRTime period: 24 weeks; 30 months*Group Sessions*Number: 12Length: NRTime period: 30 monthsEst sessions in first 12 mos: 23**Who administered intervention:** Research staff Providers: Case managers Training: In nutrition, exercise, or behavior modification**Incentives:** Rewards (by clinic judgment) |
| Fitzgibbon, 2010204ORBITFair | **Aim/theory:** Weight loss goal of 7% initial body weight for the first 6 mo, maintained for the next 12 mo | **Intervention Setting:** University campus**Intervention description:** *Weight-loss:* Group classes. Taught behavioral strategies like self-monitoring, stimulus and portion control. Encouraged to adopt low-fat high-fiber diet with increased fruit and vegetables and decreased caloric intake. Encouraged to increase physical activity (10,000 steps/day) and given a pedometer. Given feedback on self-monitoring logs. Motivational inter-viewing that addressed diet or physical activity*Maintenance:* Weight loss if goal not met during first 6 mo. Motivational interviewing and group sessions. Newsletters each month on general health and safety topics**Control description:** Weekly newsletters on general health and safety topics. Telephoned monthly for questions/concerns**Control weighing frequency:** BL, 6, 18 mo**Intervention Duration:***Individual Sessions*Number: 18Length: 20-30 minutesTime period: 18 mo*Group Sessions*Number: 117Length: NRTime period: 18 moEst contacts in first 12 mo: 116**Who administered intervention:** Research staff Providers: Trained interventionists Training: "trained"**Incentives:** NR |
| Haapala, 2009151Fair | **Aim/theory:** Attitudes to teletechnology and perceptions of personal self-efficacy in dieting will influence contact and the use made of the program and affect weight loss | **Intervention Setting:** Over mobile phone**Intervention description:** Weight loss program called Weight Balance. Costs accrued due to the program were covered. Program calculated daily energy requirement and sent a text indicating percentage reached for the day's target weight; extent to which they had reached their daily weight goal; amount of food to be consumed in proportion to the subject's normal diet; and days remaining until target. Based only on text messages and initiated by participant. Advised to leave out foods high in sugar and/or fat and cut down on alcohol and increase physical activity. Website provided personal space for dietary records and tracking weight. Offered links to information on healthy nutrition and physical activity. Dieters were allowed to set target weight either as a short- or long-term goal and adjust as needed every 3 mo. Weight loss at 2 kg/mo (max of 4.8 kg/mo)**Control description:** Received no intervention (offered the intervention after 12 mo)**Control weighing frequency:** BL and 12 mo**Intervention Duration:***Individual Sessions*Number: NA (text messages initiated by participant)Length: NRTime period: 12 mo*Group Sessions:* NR**Who administered intervention:** Research staff Providers: Text messages Training: NR**Incentives:** NR |
| Hypertension Prevention Trial Research Group, 1990143HPTGood | **Aim/theory:** Bring body weight to desirable body weight (individual); 5% reduction in mean body weight (group) | **Intervention Setting:** NR**Intervention description:** Counseling aimed at achieving and sustaining the desired dietary changes. Techniques included a mixture of didactic presentations and demonstrations, token incentives, telephone calls, and newsletters.**Control description:** "Passive" control with no dietary counseling. Appears that only control group contact is for assessment. (See p6S in Meintert et al)**Intervention Duration:***Individual Sessions*Number: NRLength: NRTime period: NR*Group Sessions*Number: ~29 (calc)Length: NRTime period: 36 months(est 16 in 1st 12 mos)**Who administered intervention:** Research staff *Providers:* "Personnel trained and experienced in affecting behavior changes related to shopping, cooking, and eating practices." *Training:* NR**Incentives:** "Token incentives" |
| Irwin, 2003152Frank, 2005263Mohanka, 2006264PATHGood | **Aim/theory:** Reduce by fat by at least 45 minutes of moderate-intensity exercise 5 days/week | **Intervention Setting:** Study facility and at home**Intervention description:** Exercise sessions at the study facilities including treadmill walking, stationary bicycling, and strength training; home exercises including walking, aerobics, and bicycling. Participants wore heart rate monitors at the exercise facilities and were encouraged to at home. Received weekly telephone calls to promote adherence; exercise behavior-change education classes; individual meetings at BL and every 3 months to outline goals and provide feedback on progress; quarterly newsletters; group activities such as hikes. Participants were asked to maintain their usual diet**Control description:** Stretching sessions; asked to maintain their usual diet and exercise habits**Intervention Duration:***Individual Sessions* Number: 4 in-person + 52 phone callsLength: 0Time period: 0*Group Sessions*Number: 72Length: 45 minutesTime period: 12 mo**Who administered intervention:**  Providers: NR Training: NR**Incentives:** Stated that incentives were given, no further detail |
| Jeffery, 1993153Jeffery, 1995289Trial of Food Provision and Monitary IncentivesFair | **Aim/theory:** Behavioral therapy, food provision (antecedents) and financial incentives (consequences), alone or in combination, to reduce and maintain weight  | **Intervention Setting:** NR**Intervention description:** IG1: Behavioral intervention program with weigh-in, presentation of information, group discussion, review of progress. Calorie goal of 1000 or 1500/day and weight loss goal of 14, 18, or 23 kg. Walk/bike 5 days/week working to a goal of burning 1000 calories/week. Food and exercise diaries for 20 weeks and 1 week/month afterIG2: IG1 + 5 breakfasts and 5 dinners/week for 18 mo; meal plan; lunch recommendationsIG3: IG1 + cash related to weight loss ($25/ week if met and maintained goal, $2.50/week if didn't gain, $12.50 when reached 50% of goal)IG4: IG1 + IG2 + IG3**Control description:** No intervention.**Control weighing frequency:** BL, 6, 12, 18, and 30 months**Intervention Duration:***Individual Sessions*Number: NALength: NATime period: NA*Group Sessions* (est 27 in first 12 mo)Number: 33 Length: NRTime period: 18 months**Who administered intervention:** Research staff  Providers: Advanced degrees in nutrition or behavioral sciences Training: 2-day training session**Incentives:** Cash for IG3 and IG4  |
| Jones, 1999154Hansson, 1994265The HOT Study Group, 1993266Hypertension Optimal Treatment (HOT) SubstudyFair | **Aim/theory:** Caloric restriction and reduced fat intake | **Intervention Setting:** NR**Intervention description:** Counseled on food selection and preparation, weight reduction goals; blood pressure titrated to the target DBP as specified by the HOT protocol (by medication)**Control description:** Told by research nurses that they should lose weight**Control weighing frequency:** Every 6 months (plus additional weigh-in at 3 mos)**Intervention Duration:***Individual Sessions*Number: 2Length: NRTime period: 3-5 weeks*Group Sessions*Number: NR (2x/month for first 3 months, every 3-6 months thereafter)Length: NRTime period: 30 months(est 10 in first 12 mo)**Who administered intervention:** Research staff or primary care staffProviders: Registered dietician Training: NR**Incentives:** NR |
| Kastarinen, 2002155LIHEF Study (Lifestyle Intervention against Hypertension in Eastern Finland)Fair | **Aim/theory:** Achieve normal weight (BMI<25); daily NaCl intake <5g; alcohol <2 drinks/day; moderate intensity exercise 3+times/week at 30 mins; stop smoking | **Intervention Setting:** 10 municipal primary health care centers in eastern Finland**Intervention description:** Simple counseling and behavioral modification methods in four individual visits the first year and three visits the second year, as well as two 2-hour group sessions at 6 and 18 months**Control description:** Usual care, no further detail **Intervention Duration:***Individual Sessions*Number: 7Length: NRTime period: 2 years*Group Sessions*Number: 2Length: 2 hoursTime period: 18 months**Who administered intervention:** Research staff or primary care staff Providers: Public health nurses trained by the study physician and a nutritionist Training: Y**Incentives:** NR |
| Kulzer, 2009156Fair | **Aim/theory:** Lifestyle modification based on self-management theory to achieve 5% weight loss, change of unhealthy eating habits, and increase physical activity to >150 minutes per week. | **Intervention description:** Eight core lessons focusing on lifestyle modification and 4 booster lessons were given. The lessons were conducted in small groups (median size 7 people). Each participant received an exercise book containing information about diabetes prevention and resources such as a table of caloric values and worksheets for each lesson.**Control description:** Written information about diabetes prevention.**Intervention Duration:***Individual Sessions*Number: 0Length: NATime period: NA*Group Sessions*Number: 12Length: 90 minutesTime period: 8 lessons in 8 weeks, 4 booster lessons in 10 months**Who administered intervention:** Research staff *Providers:* Diabetes educators or psychologists *Training:* Qualified in group education and skills in the fields of nutrition and physical activity**Intervention Setting:** NR**Incentives:** NR |
| Langford, 1985157Wassertheil-Smoller, 1985267DISHFair | **Aim/theory:** Reduce body weight to ideal weight or achieve a 20% reduction | **Intervention Setting:** NR**Intervention description:** Goal setting, behavior change techniques, and self-monitoring. Dietary change was approached as a gradual process and educational efforts were focused on such areas as diet attitudes, beliefs, knowledge, skills, behaviors, and environmental situations. Urged to keep food records, become aware and monitor their eating behavior, and score caloric intake**Control description:** Discontinue meds with no further intervention **Duration:***Individual Sessions*Number: 15Length: NRTime period: 11 months*Group Sessions*Number: 8Length: NRTime period: 8 weeks(est 18 in 12 mo)**Who administered intervention:** Research staff *Providers:* Nutritionist (individual), NR (group) *Training:* NR**Incentives:** NR |
| Martin, 2008158Martin, 2006268Fair | **Aim/theory:** Gradual increases in physical activity with the goal of 150 minutes per week, decreased consumption of energy-dense foods, increased consumption of fruits and vegetables | **Intervention Setting:** Primary care physician office visits**Intervention description:** Physicians received 2 hours of instruction on general obesity treatment and 5 hours on assessment of stage of change, motivational interviewing, and techniques for behavioral treatment. Given instruction on appropriate dietary recommendations. Participants had monthly office visits with their physician (weight loss, ways to decrease dietary fat, ways to increase physical activity, dealing with barriers to weight loss, healthy eating, maintaining motivation). Personalized verbal recommendations and handouts summarizing the focus of each visit.**Control description:** Physicians providing standard care received training on current guidelines for the treatment of obesity, no specific weight loss protocol. Usual obesity management**Intervention Duration:***Individual Sessions*Number: 6Length: 15 minutesTime period: 6 months*Group Sessions*: NR**Who administered intervention:** Primary care staff Providers: Primary care physician Training: 7 hours on obesity treatment.**Incentives:** $35 per visit for assessments; $10 for IG monthly visits |
| Mayer-Davis, 2004159POWERFair | **Aim/theory:** Achieving and maintaining 1 10% weight loss over 12 months | **Intervention Setting:** Primary health care centers**Intervention description:** IG1&2: Reduction in fat/calorie intake (25% of calories from dietary fat), increased activity (minimum of moderate intensity 150 minutes per week), frequent contact with a nutritionist (group and individual), self-monitoring, and other strategies for sustained behavior change. IG1: Re-imbursable lifestyle: 4 1-hour sessions over 12 mos, consistent with Medicare reimbursement rulesIG2: Intensive Intervention: similar as year 1 of DPP, with added group sessions**Control description:** One meeting with the nutritionist over the 12-month period**Intervention Duration:***Individual Sessions*Number: 8 (IG2), 4 (IG1)Length: 1 hour (IG1&2)Time period: 12 months (IG1&2)*Group Sessions*Number: 22 (IG2), 0 (IG1)Length: 1 hourTime period: 12 months**Who administered intervention:** Research staff (but integrated into primary health care center operations) Providers: Nutritionist Training: NR**Incentives:** $10 gift certificate to a local grocery store after screening visit 1; $25 after randomization; additional incentives with each followup (range $20-$25 gift cards plus gift) |
| Mensink, 2003160Mensink, 2003269Fair | **Aim/theory:** Body weight loss of 5-7% and increasing physical activity to at least 30 minutes of moderate activity 5 days per week | **Intervention Setting:** NR**Intervention description:** Dietary recommendations based on Dutch guidelines for a healthy diet (Energy intake: 55% from carbohydrates, <30-35% from fat, <10% saturated fatty acids, protein 10-15%; Cholesterol intake <33mg/MJ; dietary fiber intake 3 g/MJ). Participants encouraged to stop smoking and reduce alcohol intake. Dietary advice given at regular intervals by a skilled dietician on an individual basis (considering 3-day food record). If no weight loss in first year, mild energy restriction proposed. Encouraged to increase levels of physical activity. Individual advice given on how to increase daily activity and goals are set. Encouraged to participate in a study exercise program.**Control description:** Verbal and written info about the beneficial effects of a health diet, weight loss, and physical activity.**Intervention Duration:***Individual Sessions*Number: 9Length: NRTime period: 24 months*Group Sessions*Number: NRLength: NRTime period: 24 months(est 4 in first 12 mos)**Who administered intervention:** Research staff Providers: Dieticians (for diet); NR (exercise) Training: NR**Incentives:** NR |
| Mitsui, 2008161Fair | **Aim/theory:** Walking and self-weight resistance training combined with dietary counseling | **Intervention Setting:** NR**Intervention description:** Participants attended lectures at a city gym on nutrition, cooking, exercise, and preventive medicine. Training consisted of walking 20-30 min and 2-3 self-weight resistance exercises for 10 min. Time was provided for warm-up and cool-down. Participants were advised to perform self-training 30-40 min/day initially 2-3 times per week; later they were asked to exercise more than 5 days per week**Control description:** NR**Intervention Duration:***Individual Sessions*Number: NRLength: NRTime period: NR*Group Sessions*Number: 24Length: NRTime period: 12 months**Who administered intervention:** Research staff *Providers:* NR *Training:* NR**Incentives:** NR |
| Moore, 2003162Fair | **Aim/theory:** Treating obesity through lifestyle modification | **Intervention Setting:** Primary care offices**Intervention description:** 3 90-minute training sessions over a max of 4 weeks. General practitioners and nurses were asked to attend. Four dietitians delivered the training. The training covered clinical benefit of weight loss and effective treatment options, including reduced dietary energy intake, increased physical activity, and pharmaceuticals. Practitioners saw patients ~every 2 weeks until they lost 10% of their original body weight and then every 1-2 months. Current weight, target weight, dietary and activity targets were recorded in the patients' records. Prescription of 500 kcal deficit was advocated. Diet sheets and supporting written resources were given to patients. Each practice devised individualized weight management protocols to implement with their patients**Control description:** Control practices were asked to provide usual care to their patients**Intervention Duration:***Individual Sessions*: NR*Group Sessions*: NR**Who administered intervention:** Primary care staff Providers: General practitioners, practice nurses Training: Three 90-minute training sessions**Incentives:** NR |
| Narayan, 1998163Fair | **Aim/theory:** Increase energy expenditure over baseline by 700-1000 kcal per week through physical activity; reduce fat and alcohol and increase fiber intake | **Intervention Setting:** NR**Intervention description:** Choice of physical activities (walking, water aerobics, softball, volleyball, community farming/gardening, cleaning local cemetery) with a group or on their own. Maintained PA log. Advised by a dietitian, in keeping with the recommendations of the American Diabetics Association. Weekly group meetings, reinforced by home visits as needed. Behavioral techniques. Classes consisted of modeling and role-playing, group problem-solving, food prep demonstrations, food tasting, and grocery store tours**Control description:** Self-directed learning, facilitated by an appreciation of Pima culture. Small groups facilitated by community member once/month to discuss current lifestyles in the community, local speakers on Pima culture and history. Basic printed information on health eating and exercise habits. Pima Pride newsletters. Interviewed on their perceptions about health and lifestyle**Intervention Duration:***Individual Sessions*: NR*Group Sessions*Number: 52 (weekly)Length: NRTime period: 12 months (assumed)**Who administered intervention:** Research staff Providers: Dietitian (dietary advice), NR (other) Training: NR**Incentives:** NR |
| Parikh, 2010208Project HEEDFair | **Aim/theory:** Promoting weight loss among overweight adults through a low-cost, peer-led lifestyle intervention | **Intervention Setting:** Community sites**Intervention description:** Lay leaders presented curriculum in a workshop consisting of eight 1.5 hour sessions over 10 weeks; topics included diabetes prevention, finding and affording healthy foods, meal planning, physical activity, label reading, and portion control**Control description**: Delayed intervention, 1 year*Individual Sessions*: NR*Group Sessions:*Number: 8Length: 1.5 hoursTime period: 10 weeks**Who administered intervention:** Providers: Community leaders / peersTraining: NR**Incentives**: NR, but perhaps monetary compensation of some kind (participant response during interview "I don't do it for the money but for my health" |
| Perri, 1988164Fair | **Aim/theory:** Maintain weight loss over long-term (24 mos).  | **Intervention Setting:** NR**Intervention description:** Conducted in groups.IG1 (BC): Received behavior therapy (CG) plus a maintenance program consisting of 26 biweekly therapist contacts. Maintenance program sessions consisted of weigh-ins, reviews of self-monitoring data, and therapist-led problem solving of difficulties in maintaining habit changesIG2 (BCS): IG1 plus a multifaceted program of social influence strategies designed to enhance motivation and to provide incentives for continued weight-loss. Monetary group contingencies for program adherence and continued weight loss. Active client participation in preparing and delivering lectures on maintaining weight loss. Instructions on how to provide peer support for weight loss through ongoing telephone contacts and peer group meetingsIG3 (BCA): IG1 plus aerobic exercise maintenance program consisting of a new set of exercise goals for the posttreatment period and therapist-led bouts during the biweekly treatment sessions. Physical activity increased to 180 minutes per week after the first 6 monthsIG4 (BCAS): Received all interventions**Control description** (B): Behavior therapy. Participants taught self-control procedures including self-monitoring, stimulus control strategies, self-reinforcement, cognitive restructuring and procedures to slow the pace of eating. Provided with a regimen of aerobic exercise. Aerobic training included written instructions, therapist-led demonstrations, and practice of the exercise. Target of 80 minutes of aerobic exercise per week. Treatment was 20 weeks.**Control weighing frequency:** 2 post-tx*Individual Sessions (maintenance phase only)*Number: 26? unclear if main therapist contacts are in group context, or social contingency activities separateLength: NRTime period: 1 yr*Group Sessions (for maintenance phase only)*Number: 26? unclear if main therapist contacts are in group context, or social contingency activities separateLength: NRTime period: 1 yrNumber of sessions in 1st 12 months: 26**Who administered intervention:** Research staff Providers: Clinical psychologist paired with either a physician or a nurse practitioner  Training: Provided with manuals and weekly training sessions**Incentives:** Monetary group contingencies for program adherence and continued weight loss (BCS and BCAS only) |
| Pritchard, 1999165Fair | **Aim/theory:** Restriction of total dietary energy, reduction of the fat component to no more than 30%, with carbohydrate contributing 50% or more and protein the balance | **Intervention Setting:** General practice**Intervention description:** IG1: Individual counseling sessions focusing on principles of good nutrition and exercise. Dietitian identified lifestyle and dietary problem areas. Advice on food shopping and cooking methods, food selection, meal planning, and exercise programs. Dietary changes in aim. Smoking was discouraged and alcohol consumption ≤2 drinks/day (women) and ≤4 (men) with ≥2 alcohol free days/week.IG2: IG1+ Patients saw their general practitioner on 2 occasions to get encouragement and their progress monitored.**Control description:** Results of the initial measurements and if they had queries were advised to discuss with the doctor. Usual care. **Control weighing frequency:** BL and 12 mo**Intervention Duration:***Individual Sessions*Number: 6 (IG2, + 2 appt with doctor)Length: 45 minutes for 1 session; 15 minutes for the remaining 5 (IG2, doctor devoted +5 minutes)Time period: 12 months*Group Sessions:* NR**Who administered intervention:** Primary care staff Providers: Dietitian (IG1 and IG2) and general practitioner (IG2 only) Training: NR**Incentives:** NR |
| Silva, 2009166Silva, 2008270Teixeira, 2009271Fair | **Aim/theory:** Self-determination theory | **Intervention Setting:** University**Intervention description:** 30 intervention sessions covering PA, eating/nutrition, body image, and more occurred weekly or bimonthly. Team promoted a sense of ownership over behavior so it would stem from an internal perceived locus of causality. Built sustainable knowledge that supported informed choices, encouraged choice and self-initiation, provided a menu of options and variety of avenues for behavior change, supported the presentation of tasks and choices with a clear rationale to adopt specific behavior, encouraged building and exploring congruence between values and goals and lifestyles**Control description:** 29 sessions, general health education curriculum based on several 3-6 week long education topics (nutrition, stress management, self-care, communication skills)**Control weighing frequency:** BL, 4 mo, 12 mo**Intervention Duration:***Individual Sessions*Number: NRLength: NRTime period: NR*Group Sessions*Number: 30Length: 120 minutesTime period: 12 months**Who administered intervention:** Research staff Providers: NR Training: NR**Incentives:** NR |
| Simkin-Silverman, 2003167Simkin-Silverman, 1998272Kuller, 2001273Park, 2007274Women's Healthy Lifestyle Project (WHLP)Good | **Aim/theory:** Reduction in weight by 5 lbs (BMI ≤24 kg/m2), 10 lbs (BMI 25-26 kg/m2), or 15 lbs (BMI ≥27 kg/m2); lower dietary fat to 25% of daily calories, saturated fat to 7%, and cholesterol to 100 mg/day; increase physical activity | **Intervention Setting:** NR**Intervention description:** 1300-1500 kcal meal plan for first 4 weeks, modified after; calcium supplement; 7-day pocket diaries for food monitoring; education and guidance to increase PA in a stepwise manner to expend 1000 kcals/week (1500 kcals/week if already active); self-monitored daily PA for first 6 months. Employed variety of behavioral mgmt techniques.**Control description:** Assessment only**Control weighing frequency:** BL, 6, 18, 30, 42, and 54 months**Intervention Duration:***Individual Sessions*Number: NRLength: NRTime period: 54 months *Group Sessions*Number: 15 (Phase I), 6+ (Phase II)Length: NRTime period: 5 months (Phase I), 48 months (Phase II) (est 20 in first 12 mos)**Who administered intervention:** Research staff Providers: Behavioral psychologists and nutritionists Training: NR**Incentives:** "Healthy lifestyle prizes" to enhance attendance and the return of self-monitoring diaries |
| Stevens, 1993168Whelton, 1992275The Trials of Hypertension Prevention Collaborative Research Group, 1992276Trials of Hypertension Prevention Phase IGood | **Aim/theory:** Achieve weight loss of at least 4.5 kg during the first 6 months and maintain the weight loss for the remaining 12 months through reducing energy intake and increasing physical activity and using behavioral self-management techniques | **Intervention Setting:** NR**Intervention description:** Weigh-ins; information on basic nutrition and ways to reduce total energy consumption by reducing fat, sugar, and alcohol intake; food diaries for the first 14 weeks; asked to walk 20 minutes 3 days/week; later asked to exercise 30-45 mins 4-5 days/week at an intensity of 40-55% of heart rate reserve; received general exercise guidelines; exercise demonstrations; supervised exercise periods; short-term goal setting and plans of action; reinforcement and social support; record-keeping to assess progress; problem-solving; relapse prevention**Control description:** Usual care**Control weighing frequency:** BL, 3, 6, 12, and 18 months**Intervention Duration:***Individual Sessions*Number: 1Length: NRTime period: Initially*Group Sessions*Number: 29Length: 90 minutesTime period: 18 months (weekly for 14 weeks, monthly thereafter) (est 23 in first year)**Who administered intervention:** Research staff  Providers: Registered dietitian and psychologist or exercise psychologist Training: NR**Incentives:** NR |
| Stevens, 2001169Hollis, 1995277TOHP, 1997278Trials of Hypertension Prevention Phase IIGood | **Aim/theory:** Lose ≥4.5 kg during the first 6 months and maintain the weight loss for the remainder of the trial. Reduce caloric intake; 30-45 mins of moderate PA 4-5 days/week. Achieve goal(s) in first 6 months and maintenance thereafter | **Intervention Setting:** NR**Intervention description:** Behavioral self-management, nutrition education, information on PA, social support, self-monitoring (food diaries and graphs of PA), goal-setting with action plans, strategies for situations that trigger problem eating**Control description:** NR**Control weighing frequency:** Every 6 mo to end of followup at 36, 42, or 48 mo, depending on randomization date**Intervention Duration:***Individual Sessions*Number: 1+ Length: NR Time period: Beginning of the trial, optional after month 18 *Group Sessions*Number: 50+ (add'l optional) Length: NR Time period: 36 months (est 32 sessions in first 12 mos)**Who administered intervention:** Research staff or primary care staff *Providers:* Dieticians and Health Educators  *Training:* NR **Incentives:** NR  |
| Svetkey, 2008170Weight Loss Maintenance Trial PROTOCOL, 2008279WLMGood | **Aim/theory:** Maintenance of Phase I weight loss or additional loss if desired; moderate PA at least 225 mins/week; reduce caloric intake and adopt the DASH diet | **Intervention Setting:** NR**Intervention description:** IG1: Interactive website (goal-setting, graphing data over time, problem-solving and motivation, bulletin board for social support, and self-monitoring caloric intake and physical activity). Encouraged to log in at least 1x/week.IG2: Person-to-person guidance and support mostly via phone and in person every 4th month (self-reported weight, progress review, # of days food diary was kept, frequency of weighing, average minutes of exercise, progress on additional goals and action plans, problem-solving)**Control description:** Printed lifestyle guidelines with diet and physical activity recommendations; met with study interventionist at 12 mo**Control weighing frequency:** Every 6 months for 30 months**Intervention Duration:***Individual Sessions*Number: IG1: 0, IG2: 30, (+ 20 6 mo phase 1)Length: IG1: NA, IG2: 5-15 mins x 23, 7 x 45-60 minsTime period: 30 months, (+6 months phase 1)*Group Sessions*Number: 0 (est 12 in first 12 mos)Length: NATime period: NA**Who administered intervention:** Research staff  Providers: IG1: NA, IG2: "Health counselor" Training: NR**Incentives:** NR |
| ter Bogt, 2009171Fair | **Aim/theory:** NR | **Intervention Setting:** Primary Care**Intervention description:** 4 individual visits and one telephone session. NP was guided by standardized computer software. Visit 1 consisted of information on healthy lifestyle, stimulating awareness of lifestyle and body weight, conversation on history of slimming and motivation to change lifestyle/lose weight and first step in the development of the treatment plan. Visit 2 included feedback on lifestyle by critiquing food diary, physical activity, and BL questionnaire; finished treatment plan. Visit 3 evaluated goals, changed treatment plan if needed and referred to dietitian. Visit 4 and call evaluated and supported changes in lifestyle and if necessary, changed individual goals**Control description:** One visit with GP (~10 minutes) to discuss results from the initial screening and thereafter usual GP care**Control weighing frequency:** BL and 12 mo**Intervention Duration:***Individual Sessions*Number: 4 (in person) + 1 (phone)Length: 35 minutes (Visits 1 and 2), 25 minutes (Visit 3), otherwise NRTime period: 12 mo*Group Sessions:* NR**Who administered intervention:** Primary care staff Providers: Nurse practitioners Training: Specially developed training program (4 4-hour sessions) and individual instruction about the software program**Incentives:** NR |
| Tuomilehto, 2001172Eriksson, 1999280Lindstrom, 2003281Uusitupa, 2009282Finnish Diabetes Prevention StudyGood | **Aim/theory:** Reduction in weight ≥5%, in total intake of fat to <30% of energy consumed, and in intake of saturated fat to <10% of energy consumed; an increase in fiber intake to ≥15 g per 1000 kcal; and moderate exercise for ≥30 minutes/day | **Intervention Setting:** 5 participating centers, appear to be primarily research and university settings**Intervention description:** Individual dietary and physical activity counseling. Supervised, progressive, individually tailored circuit-type resistance training sessions were also offered**Control description:** General oral and written information about diet and exercise (2-page leaflet)**Intervention Duration:***Individual Sessions*Number: 11 (counseling) + NR (circuit training)Length: NRTime period: 2 years*Group Sessions*Number: NR, but do have someLength: 0Time period: 0**Who administered intervention:** Research staff or primary care staff *Providers:* Nutritionist, presume research staff *Training:* NR**Incentives:** NR |
| Villareal, 2008173Villareal, 2006283Villareal, 2006284Fair | **Aim/theory:** Achieve 10% weight loss at 6 months and maintain 6 additional months through calorie deficit and exercise | **Intervention Setting:** University-based research center**Intervention description:** Energy deficit of 500-750 kcal/day; 30% of energy as fat, 50% as carbohydrate, and 20% as protein; behavior therapy; daily multivitamin; counseled to consume adequate dietary calcium and vitamin D; group exercise focusing on flexibility, endurance, strength training, and balance**Control description:** Instructed to maintain usual diet and activities, asked not to participate in any weight-loss or exercise programs**Control weighing frequency:** Baseline, 6, and 12 months**Intervention Duration:***Individual Sessions*Number: 0Length: NATime period: NA *Group Sessions*Number: 52 with dietician, 156 exerciseLength: NR with dietician, 90 mins exerciseTime period: 52 weeks**Who administered intervention:** Research staff  *Providers:* Dietician experienced in group behavioral therapy *Training:* NR**Incentives:** NR |
| Werkman, 2010174Good | **Aim/theory:** Small and sustained adaptations in physical activity and/or diet | **Intervention Setting:** Computer-based**Intervention description:** Choice of 5 modules. 1 included information leaflet and several energy balance tools. 2 was a CD-ROM providing individually tailored feedback on BMI, health consequences and energy balance behavior. 3 had computer-tailored feedback regarding physical activity, fiber consumption, portion sizes of energy dense foods and fat consumption. In 4, participants could find out information about diet and physical activity behavior, participate in a forum and use links to other sites. 5 was written tailored advice on reported body weight, a food frequency questionnaire, and a physical activity questionnaire. Newsletters every 2-3 months.**Control description:** Newsletters with general information about the study and information about art exhibitions and city trips for instance.**Control weighing frequency:** BL, 12, 24 mo**Intervention Duration:***Individual Sessions*Number: NR (computer-based)Length: NRTime period: 12 mo*Group Sessions: NA***Who administered intervention:** Research staff Providers: Computer-based Training: NR**Incentives:** NR |
| Whelton, 1998175Appel, 1995285Chao, 2000286Kumanyika, 2002287Trial of Nonpharmacologic Interventions in the Elderly Good | **Aim/theory:** Achieve and maintain a weight loss goal ≥4.5 kg, dietary sodium intake of ≤80 mmol (only sodium reduction arms), and withdrawal of antihypertensive medication through diet, calorie deficit and increasing PA | **Intervention Setting:** NR**Intervention description:** Information and motivation around calorie control, basics of a sound diet, how to increase activity, exercise precautions, self-efficacy and commitment to the trial, self-monitoring of calories, eating behaviors and pulse rate, management of eating behaviors and situations, relapse prevention, hands-on food preparation and group exercise, overcoming barriers, food and PA records with feedback**Control description:** Quarterly group sessions on topics unrelated to the goals of the trial**Control weighing frequency:** Quarterly for 15-36 months (median 29 months)**Intervention Duration:***Individual Sessions*Number: 4Length: NRTime period: 4 months*Group Sessions*Number: 26-47 (median 40)Length: NRTime period: 15-36 months (median 29 months)**Who administered intervention:** NR *Providers:* Nutritionists and exercise counselors with expertise in lifestyle change techniques *Training:* NR**Incentives:** Adherence-related incentives |
| Wood, 1991177Kiernan, 2001288Fair | **Aim/theory:** Lowered caloric intake for IG1; Lowered caloric intake and increased PA for IG2 | **Intervention Setting:** NR**Intervention description:** IG1: Prudent diet with concomitant caloric reduction and no change in exercise level. Dietary recommendations presented by registered dietitians (approximately 55% of total energy was from carbohydrates, 30% from fat, ≤10% from saturated fat, dietary cholesterol below 300 mg/day)IG2: IG1 combined with increased physical activity. Supervised in a program of aerobic exercise (primarily brisk walking and jogging) that met 3 days a week. Instructed to work at 60-80% of maximal heart rate for at least 25 minutes initially, and to increase to at least 45 minutes by the 4th month**Control description:** Instructed to maintain their usual diet and exercise patterns**Control weighing frequency:** BL and 12 mo**Intervention Duration:***Individual Sessions*Number: NRLength: NRTime period: NR*Group Sessions*Number: 25Length: NRTime period: 12 mo**Who administered intervention:** Research staff Providers: Dietitians (NR for physical activity) Training: NR**Incentives:** NR |
| Wood, 1988176Frey-Hewitt, 1990150Fair | **Aim/theory:** Exercise to reduce total body fat by 1/3 for IG1 (without changing diet); diet to reduce total body fat by 1/3 for IG2 (without changing exercise habits) | **Intervention Setting:** NR**Intervention description:** IG1: Supervised exercise program with individual prescriptions; diet prescription (reduce by 300-500 kcal/day); record body weight; behavioral strategies; 24-hour food log. Running diaries collected at monthly intervals. Exercise level adjusted to keep weight stable during final 6-weeksIG2: Individualized diet (reduction of 32.3 MJ = loss of 1 kg adipose tissue). Food intake adjusted to keep weight stable during final 6-weeks. Exercise prescription (treadmill test with VO2 max); supervised exercise class 1-3 mo of fast walking and gradually jogging; 2 additional days/week walking or jogging at 6 mo; miles run, exercise heart rate, and total duration recorded; no change in eating habits**Control description:** Usual diet and exercise patterns (offered weight-loss program at end)**Control weighing frequency:** BL, 7 and 12 mo**Intervention Duration:***Individual Sessions*Number: 0 (IG1), NR (IG2)Length: NA (IG1), NR (IG2)Time period: 10.5 months (IG2)*Group Sessions*Number: NRLength: NRTime period: 10.5 months**Who administered intervention:** Research staff  Providers: "Training staff" (1), nutritionists (2) Training: NR**Incentives:** NR |
| Woollard, 2003178Fair | **Aim/theory:** Control weight, increase physical activity, reduce fat and sodium intake, increase fiber consumption, moderate alcohol intake, and achieve cessation of smoking | **Intervention Setting:** NR**Intervention description:** IG1: UC + 1 face-to-face counseling session and 10-15 min phone consultations every month for 12 mo. Personalized education manual supporting cognitive behavioral approach. Counseling focused on enhancing patients' cognitive, affective and psychomotor skillsIG2: Same as IG1 except individual counseling sessions up to 60 min every mo for 12 mo instead of phone consultations.**Control description:** Heart Foundation health promotion literature and remained under care of general practitioner**Control weighing frequency:** BL, 12, 18 mo**Intervention Duration:***Individual Sessions*Number: 13 (IG1), 12 (IG2)Length: 60 minutes for 1 session (assumed), 10-15 minutes for remaining 12 sessions (IG1); 60 minutes (IG2)Time period: 12 months (IG1 and IG2)*Group Sessions:* NR**Who administered intervention:** Primary care staff Providers: Practice nurses Training: 170-hour program based on the principles of adult learning theories with emphasis on transtheoretical model**Incentives:** NR |