**Table 20. Description of interventions in studies on populations with cardiovascular disease and/or type 2 diabetes mellitus**

| **Author,**  **Year** | **Duration of Intervention (Only for interventional studies)** | **Control** | **Active Intervention, Self-management** | **Active Intervention, Diet** | **Active Intervention, Physical Activity** | **Comment** |
| --- | --- | --- | --- | --- | --- | --- |
| **KQ1: self-management** |  |  |  |  |  |  |
| Clark, 20041 | 6 months | Usual care/no intervention | The key features of the intervention were assessment, patient participation in goal setting, selecting personalized strategies to overcome barriers, and follow-up contacts. The assessment used the specific self-report measures to assess eating patterns and level of physical activity. These measures established the patient’s current lifestyle, identified the most problematic areas, and identified the patient’s barriers to making lifestyle changes. Info then used to guide discussion with the patient to help develop discrepancy between current status and desired goals., Number of sessions, 3 in-person, 3 telephone, In person, By Phone (do not use for text messages)  Goal setting: 1st in-person visit (30 min), participants set one dietary and one physical activity goal; set further goals at 12- and 24-wk in-person visits if initial goals met. |  |  |  |
| **KQ2: Diet** |  |  |  |  |  |  |
| Zazpe, 20082 | 36 months | Control: Leaflet about the American Heart Association dietary recommendations and single meeting with a dietician about this diet |  | Mediterranean diets encouraged:   * Use of virgin olive oil * Consumption of   + ≥ 2 servings per day of vegetables   + ≥ 3 servings per day of fruit   + ≥ 3 servings per week of legumes   + ≥ 3 servings per week of fish or seafood   + ≥ 3 servings per week of nuts or seeds   + White meats (ie, poultry without skin or rabbit) instead of red meats or processed meats   + ≥ 7 glasses each week of wine if participant consumes wine   + Regularly cooking with salsa made with minced tomato, garlic,and onion simmered in olive oil. * Discouraged consumption of cream, butter, margarine, cold meats, pate, duck, carbonated and/or sugared beverages, pastries, commercial bakery products, French fries or potato chips, and out-of-home precooked meals.   Individual sessions: Personalized motivational interview administered by dietician quarterly with positive recommendations to follow this food pattern  Group sessions: Educational sessions run by dieticians with up to 20 participants per session and separate sessions for each group.  Individual and group sessions: Included information on typical Mediterranean-diet foods and seasonal shopping lists, meal plans, and cooking recipes.  Participants had free and continuous access to their center’s dietician.  Free provision of olive oil: Participants in the “Mediterranean Diet with Virgin Olive Oil” arm were given 3-month quantities of virgin olive oil (1 L/week).  Free provision of mixed nuts: Participants in the “Mediterranean Diet with Mixed Nuts” arm were given 3-month quantities of mixed nuts (30 g/day, distributed as 15 g walnuts, 7.5 g almonds, and 7.5 g hazelnuts). |  |  |
| Abraira, 19803 | 24 months | Usual Care (Hines VA Diabetic Diet):   * Three meals + bedtime snack * Strict avoidance of refined sugars * Consumption of starches * Avoidance of saturated fat * No exchange system * No caloric goal * No specific carbohydrate distribution * No cholesterol restriction |  | American Diabetes Association Diet:   * Calculated daily caloric goal based on ideal body weight and energy expenditure * Daily meal pattern planned and distributed through a food exchange * Three meals + bedtime snack * Carbohydrate distribution: breakfast (30%), lunch (30%), dinner (30%), and snack (10%). * Moderate restriction of both refined sugars and carbohydrates. |  | Both diets delivered by dieticians at quarterly regular clinic visits |
| **KQ3: Physical activity** |  |  |  |  |  |  |
| Yates, 20104 | 6 months | Received printed information sheet by mail about impaired glucose tolerance and  the role of physical activity in controlling impaired glucose tolerance |  |  | PREPARE+ pedometer:   * Single in-person, 180-min group, session at baseline consisting of information about impaired glucose tolerance and counseling about perceived effectiveness of exercise, walking self-efficacy beliefs, barriers to walking, and self-regulatory strategies * 10 minute review of progress in person at 3 and 6 months * Received steps per day goal and pedometer |  |
|  |  |  |  |  | PREPARE   * Same as PREPARE+ pedometer but NO pedometer given |  |
| Anderssen, 19955 Torjesen, 19976 | 12 months | Usual care/no intervention |  |  | Physical activity: Three supervised, group 1-hour endurance exercise sessions per week  Goal to attain improve peak VO2 with by targeting 60-80% of peak heart rate  Eight weeks of progression in intensity and duration of the program followed by maintenance of intensity.  At the first training session, participants are informed orally and in writing about simple principles of training physiology |  |
| **KQ5: Combination** |  |  |  |  |  |  |
| Stefanick, 19987 | 9-11 months | Usual care/no intervention |  | Dieticians presented dietary recommendations, Counseling, Other : 1 individual counseling session followed by 8 group lessons; 6-8 months maintenance phase with monthly contacts, Other : initial intervention in-person; maintenance could be in-person (group or individual) or by mail/phone  NCEP Step 2: less than 30 percent total fat, less than 7 percent saturated fat, and less than 200 mg of cholesterol per day  Other: Participants entered a 12-week adoption phase in which an individualized counseling session was followed by eight one-hour, mixed-sex group lessons on replacing dietary sources of saturated fat with complex carbohydrates, low-fat dairy foods, and other alternatives, including lean meats. Weight loss was not emphasized in the group sessions, which were held separately for the diet-alone and diet plus- exercise groups and which averaged 15 persons per group. A six-to-eight-month maintenance phase consisted of monthly contacts with study dietitians, by mail or telephone or in group or private meetings. |  |  |
|  |  |  |  | Exercise staff delivered intervention in individual and group sessions | 1 individual followed by 6-wks adoption phase in groups (3 x/week) followed by maintenance phase x 7-8 month (in groups or at home)  Physical activity; individual visit then group; maintenance through group or home, Individual (running, lifting, swimming).  Group (classes, organized sports), 3 Times/sessions per week for 60 Minutes.  The aerobic-exercise program began with a private meeting with members of the exercise staff, followed by a six-week adoption phase in which participants attended supervised, one-hour, mixed-sex exercise sessions, three times per week, that were held separately for the exercise-alone and diet-plus-exercise groups. The subjects were instructed not to discuss diet during these sessions. Throughout a seven-to-eight-month maintenance phase, participants could attend supervised group sessions three times per week, supplement the required monthly group sessions with home-based activities, or both, with the goal of engaging in aerobic activity equivalent to at least 16 km (10 mile) of brisk walking or jogging each week. |  |
|  |  |  | : | see NCEP Step 2 (Arm 2) intervention description | see exercise only (Arm 3) description  Weight loss was not emphasized in the group sessions, which were held separately for the diet-alone and diet plus-exercise groups and which averaged 15 persons per group.  Exercise: The subjects were instructed not to discuss diet during these sessions. |  |
| Samaras, 19978 | 6 months | Usual care/no intervention | Group sessions: safe exercise, exercise-specific education to improve confidence, coping w/ diabetes & exercise, self-esteem issues, decision making, goal setting & achieving mastery & enjoyment of chosen exercise, One time/month, In person.  Goal setting: log books for goal setting, goal and progress review |  | Physical activity educational handouts  Exercise: Group (classes, organized sports), 1 Time/session per month | Could still attend exercise sessions after 6 month program; do not state general exercise goals for participants outside of monthly sessions |
| Gram, 20109 | 4 months | Usual care/no intervention : Given the diabetes outpatient clinic's standard written information on exercise as part of the treatment for Type 2DM  Subjects did not receive supervised training.  Like patients in Arms 2 and 3, control group patients were advised to be physically active at inclusion |  |  | Intervention - advised to exercise outside training sessions; post-intervention - tailored advice/neighborhood opportunities.  Physical activity: Counseling, Other : Unclear, Other : probably in-person//Exercise: Individual (running, lifting, swimming)  Group (classes, organized sports)  Individually tailored program with aerobic and strength training, Times/sessions per week : Twice weekly for first 2 months, and then once weekly for final 2 months, Minutes : 45 (10-min warm up + 30 min exercise + 5-min cool down)  Individually based; however, participants had to work continuously for a min of 30mins at a workload of at least moderate intensity by perceived exertion  Supervised by a physiotherapist The training program was individually tailored and included both strength training and aerobic exercise. Training individualized on the basis of a cycle test at inclusion, the participant’s physical capacity, and his/her goals. Session equipment: ergometer cycles, rowing machines, step machines, and strength training machines. Participants interviewed 3 times by the physiotherapist using a structured interview at weeks 0, 8, and 16, then assisted with goal setting, and provided with advice about training and exercise.   During the intervention, a physiotherapist emphasized and instructed participants to increase physical activity outside of the training sessions.  At the end of the intervention: - participants were given information on physical training opportunities available in their neighborhood and individually tailored advice - Each participant was guided to take the initiative to find suitable forms of training in the follow-up period | Exercise on Prescription (EP) focuses on muscle strength and physical fitness.  Nordic walking (NW) is an outdoor activity that does not require specific equipment and seems to be easier than other sports to adjust to meet the individual’s needs and to fit into daily living. |
|  |  |  |  |  | A physiotherapist instructed and supervised this treatment arm. Intervention - advised to exercise outside training sessions; post-intervention - tailored advice/neighborhood opportunities.  Physical activity: Counseling, Other : Unclear, Other : presumed in-person//Exercise: Group (classes, organized sports)  Use of the same type of walking sticks (Exel Trainer Pro; ESB Sports Oy, Kitee, Finland) for Nordic Walking, 2 times a week for 2 months and then weekly for last 2 months.  Each supervised session lasted 45 minutes and included a 10-minute warm-up, 30 minutes of exercise/Nordic walking, and a 5-minute cool down.  Walking distance and intensity individually based. Participants instructed to walk at a speed of at least moderate intensity continuously for a minimum of 30 minutes by perceived exertion//The training for this group was conducted outdoors on forest paths  Participants kept walking sticks through 12 months of study  This arm was instructed and supervised by a physiotherapist   During the intervention, a physiotherapist emphasized and instructed participants to increase physical activity outside of the training sessions  At the end of the intervention: - participants were given information on physical training opportunities available in their neighborhood and individually tailored advice - Each participant was guided to take the initiative to find suitable forms of training in the follow-up period |  |
|  |  |  |  | Dietary history interview (taken by dietician) used to estimate weighted glycemic index (GI) and overall glycemic load (based on 2002 international table of GI and GL values) |  |  |
| Kumanyika, 200510 | 36-48 months | Usual care/no intervention | Individual counseling conducted based on results of health checkups and health assessment charts on physical activity, nutrient intake, and lifestyle at the baseline. | Participants were provided with the knowledge-skills by intensive initial counseling, with subsequent counseling less frequently basis to prevent relapse and support maintenance of sodium reduction, Counseling, > 15 Number of sessions, In person  Sodium intake <1800 mg/day by 6 months (individual goal<1600 mg): Participants were expected to make targeted changes in their usual food selections and eating patterns to lower sodium intake without affecting caloric intake or other aspects of dietary intake or lifestyle.  1 initial individual counseling session 10 weekly group counseling sessions (intensive phase) 4 monthly group counseling sessions (transitional phase) Periodic ‘mini-series’ of intervention sessions on selected topics Individual in-person, telephone, and mail contacts as needed  Groups: 60–90 min sessions; initial review of progress and information sharing among participants; interactive presentation and discussion  Content: How to identify Na content of foods, prepare lower Na foods, modify recipes, and make lower Na food selections at and between meals and when eating away from home; taste-testing lower Na packaged foods and recipes; how to make small, progressive Na intake changes; alternatives to high-Na eating behaviors; general behavioral modification and relapse prevention techniques, including self-monitoring of Na intake; counselor and peer support  To increase adherence: Counselor feedback based on suBMItted food records. Individual and group feedback on changes in urinary Na excretion based on timed, overnight urine samples or 24-h urine samples Various reminders and incentives throughout follow-up. |  |  |
| Babazono, 200711 | 12 months | Usual care/no intervention; received result of health exam.  Printed Materials | Goal to increase fruits/veg. and physical activity.  Visits at health center at 0, 4, and 6 months.  Visits at home twice  5 Number of sessions; In person  Goal setting: Overall goal to increase Fruits and vegetable intake and physical activity.  The support team – consisting of qualified dietitians, health exercise instructors, and public health nurses encouraged patients to set their own goals and to select lifestyle improvements that they were interested in making. They helped intervention group patients choose and prioritize physical activities to achieve goals set by the patients themselves. The support team provided advice, problem solved if needed, and reinforced positive changes. | increase fruits and vegetable intake, Counseling; 5Number of sessions, In person  Fruit/vegetable rich: Increase vegetables at every meal Increase vegetables in miso soup Increase intake of seaweed or mushrooms Increase soybean cake intake Decrease salty foods Decrease oily foods Decrease sugar intake Decrease alcohol intake Increase time for meals Eat more slowly and/or chew for a longer time. | Challenge cards used to promote physical activity  Physical activity: Counseling, 5Number of sessions: 5, In person.  Exercise: Individual (running, lifting, swimming)  Walk to workplace Increase walking around home Step exercise at home Jogging Stretching Muscle training Cycling Exercise at workplace Exercise at training gyms Increase time playing sports |  |

DM = Diabetes Mellitus; EP = Exercise on Prescription; GI = Glycemic Index; GL = Glycemic Load; Na = Sodium; NCEP = National Cholesterol Education Program; NW = Nordic Walking; VO2 = Volume of Oxygen (Measure of oxygen consumption); Wks = Weeks

Including exercise vs control only for ODES, deleted diet and diet + exercise because of weight loss goal

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