

Nutrition and Physical Activity: Community-based Digital Health and Telephone Interventions to Increase Healthy Eating and Physical Activity

Summary Evidence Table

This table outlines information from the studies included in the Community Guide systematic review of Community-based Digital Health and Telephone Interventions to Increase Healthy Eating and Physical Activity. It details study quality, population and intervention characteristics, and study outcomes considered in this review. Complete references for each study can be found in the Included Studies section of the [review summary](#).

Abbreviations Used in This Document:

- Outcomes:
 - FV: fruits and vegetables
 - DQI: Diet Quality Index
 - PA: physical activity
 - MVPA: moderate to vigorous physical activity
 - BMI: body mass index
 - HRQoL: health-related quality of life
 - SBP: systolic blood pressure
 - DPB: diastolic blood pressure
 - TC: total cholesterol
 - TG: triglycerides
 - HDL: high-density lipoprotein
 - LDL: low-density lipoprotein
 - Hb: hemoglobin
 - HbA1c: glycated hemoglobin
- Study design:
 - iRCT: individual randomized controlled trial
 - gRCT: group randomized trial
- Intervention components:
 - CC: coaching or counseling
 - SM: self-monitoring
 - GS: goal setting
 - FB: feedback
 - SS: social support
- Measurement terms:
 - CI: confidence interval
 - d: day
 - dL: deciliter
 - g: grams
 - kcal: kilocalories
 - kg: kilograms
 - L: liter
 - MET: Metabolic Equivalent of Tasks
 - mg: milligrams
 - min: minutes
 - mmHg: millimeters of mercury
 - mmol: millimole
 - m: months
 - serv: servings
 - wk: week
 - yrs: years
- Other terms:
 - ITT: intent to treat
 - NA: not applicable
 - NR: not reported
 - NS: not significant
 - SES: socioeconomic status
 - US: United States

Notes:

- **Suitability of design** includes three categories: greatest, moderate, or least suitable design. [Read more](#) >>
- **Quality of Execution** – Studies are assessed to have good, fair, or limited quality of execution. [Read more](#) >>
- **Race/ethnicity** of the study population: The Community Guide only summarizes race/ethnicity for studies conducted in the United States.
- **Intensity:**
 - High: at least weekly contact with trained counselor or coach, either in-person or telephone, and/or daily tracking or reminders of dietary/physical activity (PA) habits.
 - Moderate: less than weekly contact with trained counselor or coach, and/or weekly tracking, goal setting or feedback of dietary/PA habits
 - Low: No contact with trained counselor or coach; tracking, less than weekly goal setting or feedback of dietary/PA habits

Study	Population Characteristics	Intervention Characteristics	Results
WITH COACHING OR COUNSELING			
<p>Author, Year: Ashton et al., 2017</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: PA+Diet</p>	<p>Sample size: Intervention: 26 Control: 24</p> <p>Demographics: <u>Intervention</u> Mean age: 22.4 yrs (inclusion: 18-25 yrs) Gender: 100% male Race/ethnicity: NR SES: 50% middle/high</p> <p><u>Control</u> Mean age: 21.9 yrs (inclusion: 18-25 yrs) Gender: 100% male Race/ethnicity: NR SES: 45.8% middle/high</p>	<p>Location (urbanicity): New South Wales, Australia (NR)</p> <p>Intervention duration: 3m When intervention occurred: NR</p> <p>Intervention: Intensity: high Component(s): SM + CC + FB Device(s): computer/website, mobile/app, wearable device</p> <p>Intervention: Harnessing ehealth to enhance Young men’s Mental health, Activity and Nutrition 1. responsive website; 2. wearable PA tracker with associated mobile phone app; 3. 1-hour weekly face-to-face sessions at university delivered by PhD students - 11 sessions were group based</p>	<p>PA (min/wk) Intervention: baseline: 137.2; f/u: 291.3 Control: baseline: 108.8; f/u: 134.9 Adjusted and ITT Summary Effect: +128.0 min/wk (9.8, 246.2 min/wk)</p> <p>Weight Change (%) Intervention: f/u: -0.6 Control: f/u: +1.3 Adjusted and ITT Summary Effect: -2.0 pct pts</p> <p>BMI (kg/m²) Intervention: baseline: 26.1; f/u: 25.9 Control: baseline: 24.8; f/u: 25.1 Adjusted and ITT Summary Effect: -0.6 kg/m²</p> <p>SBP (mmHg) Intervention: baseline: 120.1; f/u: 117.7 Control: baseline: 121.6; f/u: 119.0 Adjusted and ITT Summary Effect: +0.3 mmHg</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>one was individual. Group sessions included 40 min exercise, 10 min nutrition ed, 10 min stress and well-being. individual session personalized feedback; 4. personalized food and nutrient recommendations; 5. Facebook discussion group; 6. resistance band with link to routines on website; 7. dinner disc to guide meal portion size email every 2 weeks and health tips focused on diet and physical activity sent by email or text messages (participant’s choice) every week; encouraged to access the SAHARA website</p> <p>Control: wait list control</p>	<p><u>DBP (mmHg)</u> Intervention: baseline: 75.1; f/u: 73.4 Control: baseline: 77.2; f/u: 76.1 Adjusted and ITT Summary Effect: -0.6 mmHg</p> <p><u>TC (mmol/L)</u> Intervention: baseline: 3.9; f/u: 3.6 Control: baseline: 3.9; f/u: 3.91 Adjusted and ITT Summary Effect: -0.4 mmol/L</p> <p><u>TG (mmol/L)</u> Intervention: baseline: 1.2; f/u: 1.2 Control: baseline: 1.2; f/u: 1.0 Adjusted and ITT Summary Effect: +0.2 mmol/L</p> <p><u>HDL (mmol/L)</u> Intervention: baseline: 1.2; f/u: 1.2 Control: baseline: 1.3; f/u: 1.3 Adjusted and ITT Summary Effect: 0.0 mmol/L</p> <p><u>LDL (mmol/L)</u> Intervention: baseline: 2.2; f/u: 1.8 Control: baseline: 2.0; f/u: 2.1 Adjusted and ITT Summary Effect: -0.5 mmol/L</p> <p>Paper conclusions: The program demonstrated feasibility in assisting young men to make some positive lifestyle changes (daily vegetable servings, energy dense, nutrient-poor foods, MVPA, weight, BMI, fat mass, waist circumference and cholesterol (all p < 0.05).</p>
<p>Author, Year: Bus et al., 2018</p> <p>Study Design: Other design with concurrent comparison group</p> <p>Suitability of Design: Greatest</p>	<p>Sample size: Intervention: 38 Control: 54</p> <p>Demographics: <u>Intervention</u> Mean age: 44.1 years Gender: 76.3% female</p>	<p>Location (urbanicity): Iowa, US (NR)</p> <p>Intervention duration: 2m When intervention occurred: NR</p> <p>Intervention: Intensity: high Component(s): SM + CC + GS + FB</p>	<p><u>BMI (kg/m²)</u> Intervention: baseline: 28.2 Control: baseline: 30.2 Effect reported by paper: no statistical difference between groups for weight loss</p> <p>Paper conclusions: online coaching may be equally effective as in-person</p>

Study	Population Characteristics	Intervention Characteristics	Results
<p>Quality of Execution: Fair</p> <p>Study Arms: Single</p> <p>Intent: PA+Diet</p>	<p>Race/ethnicity: 94.7% White, 5.3% Asian SES: 11% <\$50,000/year</p> <p><u>Control</u> Mean age: 42.6 years Gender: 68.5% female Race/ethnicity: 88.9% White, 5.6% Black or African American, 1.9% Asian SES: 26% <\$50,000/year</p>	<p>Device(s): computer/website, wearable device</p> <p><i>Intervention:</i> provided online coaching with option - weight management, dietary change, PA. After initial assessment met with counselor weekly online to discuss progress and goals. Participants provided with an armband to self-monitoring physical activity and weight management online software to record dietary habits.</p> <p>Control: same as above but in-person counseling</p>	
<p>Author, Year: Das et al., 2017</p> <p>Study Design: Other design with concurrent comparison group</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Weight loss</p>	<p>Sample size: Intervention: 309 Control: 45</p> <p>Demographics: NR</p>	<p>Location (urbanicity): Boston, MA, US (urban)</p> <p>Intervention duration: 2.75m</p> <p>When intervention occurred: 2013</p> <p>Intervention: Intensity: high Component(s): SM + GS + CC + SS Device(s): computer/website</p> <p><i>Intervention:</i> 11- weekly 1-hour group videoconference meetings (included nutrition and weight management) for support and discussion. Participants could communicate with leader and other participants in their group via a website message board, encouraged to log their weight in the program website. Weights were illustrated graphically.</p> <p>Control: Same intervention in-person</p>	<p><u>Weight Change (%)</u> Intervention change: -6.0 Control change: -5.2 Summary Effect: -0.8 pct pts</p> <p>Paper conclusions: clinically impactful mean weight loss</p>

Study	Population Characteristics	Intervention Characteristics	Results
<p>Author, Year: Dennison et al., 2014 NOTE: Web arm has no coaching or counseling</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Web Only Arm Web+Counseling Arm</p> <p>Intent: Weight</p>	<p>Sample size: Intervention (web only): 264 Intervention (web+counseling): 247 Control: 275</p> <p>Demographics: <u>Intervention (web only)</u> Mean age: 43.3 yrs Gender: 82.5% female Race/ethnicity: 95.8% White SES:</p> <p><u>Intervention (web+counseling)</u> Mean age: 44.4 yrs Gender: 78.9% female Race/ethnicity: 98.0% White, SES: NR</p> <p><u>Control</u> Mean age: 44.2 yrs Gender: 78.5% female Race/ethnicity: 96.4% White SES: NR</p>	<p>Location (urbanicity): city NR, UK (NR)</p> <p>Intervention duration: 0.75m When intervention occurred: 2012-2013 Intensity: moderate Component(s): Web Only: SM + FB + GS; Web+Counseling: CC + SM + FB + GS Device(s): Computer/website, telephone</p> <p>Intervention: Web Only: Completely automated Web-based weight management intervention. 1 web session per week with reminder email</p> <p>Web+Counseling: 3-12wk: 1 web session/w + reminder email + 2, 10-min coaching calls Web+coach: same as web only with addition of 2, 10 min coaching calls</p> <p>Control: wait list</p>	<p>Weight Loss (kg) Web Only Arm: baseline: 92.0; f/u: 90.0 Control Arm: baseline: 91.6; f/u: 91.3 ITT Summary Effect: -1.7 kg</p> <p>Web+Counseling Arm: baseline: 91.9; f/u: 89.6 Control Arm: baseline: 91.6; f/u: 91.3 ITT Summary Effect: -2.0 kg</p> <p>Paper conclusions: supplementing Web-based weight management with brief human support could improve usage and outcomes in those who take it up</p>
<p>Author, Year: Hageman et al., 2014</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Internet Arm, Print Arm</p>	<p>Sample size: Internet Arm: 116 Print Arm: 115 Control: 58</p> <p>Demographics: <u>Internet Arm</u> Mean age: 56.4 yrs (inclusion 40-69) Gender: 100% Race/ethnicity: 99% White, 1% Hispanic SES: 31% <\$40,000</p>	<p>Location (urbanicity): Nebraska, US (rural)</p> <p>Intervention duration: 12m (also f/u 18m, 24m) When intervention occurred: 2007-2010</p> <p>Intervention: Intensity: moderate Component(s): Internet Arm: CC + SM + FB + GS; Print Arm: CC + SM + FB + GS Device(s): Computer</p>	<p>FV Intake (serv/d) Internet Arm: baseline: 4.8; f/u: 6.58 Control Arm: baseline: 4.9; f/u: 5.8 Summary Effect: +0.8 serv/d</p> <p>Print Arm: baseline: 5.1; f/u: 7.1 Control Arm: baseline: 4.9; f/u: 5.8 Summary Effect: +1.1 serv/d</p> <p>Energy Intake (kcal/d) Internet Arm: baseline: 1644.9; f/u: 1550.0 Control Arm: baseline: 1702.6; f/u: 1475.4 Summary Effect: +132.3 kcal/d</p>

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Study	Population Characteristics	Intervention Characteristics	Results
<p>Intent: Diet + PA</p>	<p><u>Print Arm</u> Mean age: 56.4 yrs (inclusion 40-69) Gender: 100% Race/ethnicity: 97% White, 2% Hispanic, 1% unknown SES: 25% <\$40,000</p> <p><u>Control</u> Mean age: 56.4 yrs (inclusion 40-69) Gender: 100% Race/ethnicity: 98% White, 2% unknown SES: 31% <\$40,000</p>	<p><i>Intervention:</i> Internet Arm: 2, 2-hour training sessions with instruction by the extension educator/registered dietitian. Home blood pressure monitor, and pedometer given to women. Educated on self-monitoring to monitor eating, PA, and BP. Trained on how to use website. Individual telephone goal-setting counseling with women from a trained counselor at baseline, 3m, 6m, 9m, and 12m. Received 18 HPM-tailored newsletter content every two weeks. Provided received elastic resistance bands and an instructional exercise video.</p> <p>Print Arm: same as above with but instead of website received print materials to log activity.</p> <p>Control: 1, 30-minute introductory education session from a registered dietitian. Printed educational materials and no further contact.</p>	<p>Print Arm: baseline: 1740.3; f/u: 1597.2 Control Arm: baseline: 1702.6; f/u: 1475.4 Summary Effect: +84.1 kcal/d</p> <p><u>Sat Fat Intake (% daily calories)</u> Internet Arm: baseline: 10.8; f/u: 9.5 Control Arm: baseline: 10.9; f/u: 9.6 Summary Effect: 0.0% daily calories</p> <p>Print Arm: baseline: 10.8; f/u: 9.4 Control Arm: baseline: 10.9; f/u: 9.6 Summary Effect: -0.1 % daily calories</p> <p><u>Sodium (mg/d)</u> Internet Arm: baseline: 2748; f/u: 2608 Control Arm: baseline: 2926; f/u: 2514 Summary Effect: +272 mg/d</p> <p>Print Arm: baseline: 3048; f/u: 2788 Control Arm: baseline: 2926; f/u: 2514 Summary Effect: +152 mg/d</p> <p><u>MVPA (min/wk)</u> Internet Arm: baseline: 265.3; f/u: 356.6 Control Arm: baseline: 266.4; f/u: 370.3 Summary Effect: -12.6 min/wk</p> <p>Print Arm: baseline: 227.6; f/u: 323.6 Control Arm: baseline: 266.4; f/u: 370.3 Summary Effect: -7.9 min/wk</p> <p><u>BMI (kg/m²)</u> Internet Arm: baseline: 28.6; f/u: 27.8 Control Arm: baseline: 29.7; f/u: 29.4 Summary Effect: -0.5 kg/m²</p> <p>Print Arm: baseline: 30.5; f/u: 29.9 Control Arm: baseline: 29.7; f/u: 29.4 Summary Effect: -0.3 kg/m²</p>

Study	Population Characteristics	Intervention Characteristics	Results
			<p><u>SBP (mmHg)</u> Internet Arm: baseline: 127.1; f/u: 119.7 Control Arm: baseline: 128.3; f/u: 121.1 Summary Effect: -1.8 mmHg</p> <p>Print Arm: baseline: 128.3; f/u: 122.7 Control Arm: baseline: 128.3; f/u: 121.1 Summary Effect: -1.60 mmHg</p> <p><u>DBP (mmHg)</u> Internet Arm: baseline: 77.3; f/u: 72.7 Control Arm: baseline: 76.6; f/u: 73.0 Summary Effect: -1.0 mmHg</p> <p>Print Arm: baseline: 76.9; f/u: 73.1 Control Arm: baseline: 76.6; f/u: 73.0 Summary Effect: -0.3 mmHg</p> <p><u>TC (mg/dL)</u> Internet Arm: baseline: 201.9; f/u: 201.9 Control Arm: baseline: 194.7; f/u: 196.3 Summary Effect: -2.5 mg/dL</p> <p>Print Arm: baseline: 194.9; f/u: 193.1 Control Arm: baseline: 194.7; f/u: 196.3 Summary Effect: -3.4mg/dL</p> <p><u>TG (mg/dL)</u> Internet Arm: baseline: 127.5; f/u: 125.5 Control Arm: baseline: 113.5; f/u: 121.5 Summary Effect: -10.0 mg/dL</p> <p>Print Arm: baseline: 119.4; f/u: 113.4 Control Arm: baseline: 113.5; f/u: 121.5 Summary Effect: -14.0 mg/dL</p> <p><u>HDL (mg/dL)</u> Internet Arm: baseline: 58.3; f/u: 56.8 Control Arm: baseline: 57.3; f/u: 54.9 Summary Effect: +0.9 mg/dL</p>

Study	Population Characteristics	Intervention Characteristics	Results
			<p>Print Arm: baseline: 56.0; f/u: 54.9 Control Arm: baseline: 57.3; f/u: 54.9 Summary Effect: +1.3 mg/dL</p> <p><u>LDL (mg/dL)</u> Internet Arm: baseline: 118.5; f/u: 119.7 Control Arm: baseline: 114.7; f/u: 117.0 Summary Effect: -1.1 mg/dL</p> <p>Print Arm: baseline: 115.0; f/u: 115.6 Control Arm: baseline: 114.7; f/u: 117.0 Summary Effect: -1.7 mg/dL</p> <p>Paper conclusions: Rural women with prehypertension receiving distance-delivery theory-based lifestyle modifications can achieve a reduction of blood pressure.</p>
<p>Author, Year: Jacobs et al., 2011</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 194 Control: 93</p> <p>Demographics: <u>Intervention</u> Mean age: 40.9 yrs Gender: 34% female Race/ethnicity: NR SES: lawyers</p> <p><u>Control</u> Mean age: 39.6 yrs Gender: 32.3% female Race/ethnicity: NR SES: lawyers</p>	<p>Location (urbanicity): Belgium (NR)</p> <p>Intervention duration: 12m When intervention occurred: 2007-2010</p> <p>Intervention: Intensity: low, moderate, and high intensity options provided Component(s): CC + FB + GS + SS Device(s): Computer/website, telephone</p> <p><i>Intervention:</i> Design their own individual coaching with regard to the targeted lifestyle factors, the dose and the delivery mode (e-mail; regular mail; telephone; face-to-face; web-based). The coaching was given by a health psychologist. For web-based, participants could log in to a tailored website including a cardiology section by default.</p>	<p><u>FV Intake (% change)</u> Intervention: +23.9 Control: +16.6 Summary Effect: +7.3 pct pts</p> <p><u>Saturated Fat Intake (% change)</u> Intervention: -0.5 Control: +0.3 Summary Effect: -0.9 pct pts</p> <p><u>PA (% change)</u> Intervention: +83.3 Control: +76.2 Summary Effect: +7.1 pct pts</p> <p><u>Weight (% change)</u> Intervention: -0.6 Control: -0.01 Summary Effect: -0.6 pct pts</p> <p>Paper conclusions: no significant differences between study conditions</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>Participants were free to subscribe to sections with information on individual lifestyle factors, behavior change techniques, self-tests and tailored advice.</p> <p>Control: usual care</p>	
<p>Author, Year: Kanaya et al., 2012</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 113 yrs Control: 115 yrs</p> <p>Demographics: <u>Intervention</u> Mean age: 58 yrs Gender: 73% female Race/ethnicity: 22% White, 23% Black or AA, 18% Asian, 35% Hispanic or Latino SES: NR</p> <p><u>Control</u> Mean age: 55 yrs Gender: 74% female Race/ethnicity: 23% White, 23% Black or AA, 13% Asian, 39% Hispanic or Latino SES: NR</p>	<p>Location (urbanicity): Berkeley, Oakland, Richmond, CA (NR)</p> <p>Intervention duration: 6m When intervention occurred: 2006</p> <p>Intervention: Intensity: moderate Component(s): CC + GS + SS Device(s): Computer/website, telephone</p> <p><i>Intervention:</i> Trained health department counselors provided education and skills training through telephone-based counseling (12 calls) with 2 in-person sessions and 5 optional group workshops. In-person and group sessions were held in neighborhood settings. Nineteen possible "contacts" for a total of 15 possible hours. Materials available on website (resource only, not used to deliver intervention) Delivered in Spanish and English. 6m active intervention phase and a 6m maintenance phase.</p> <p>Control: wait-list control</p>	<p><u>FV Intake (serv/d)</u> Intervention: baseline: 3.0; f/u: 3.3 Control: baseline: 3.1; f/u: 2.9 Summary Effect: +0.5 serv/d</p> <p><u>Energy Intake (kcal/d)</u> Intervention: baseline: 1870.5; f/u: 1606.2 Control: baseline: 1915.1; f/u: 1698.5 Summary Effect: -47.7 kcal/d</p> <p><u>Total Fat Intake (g/d)</u> Intervention: baseline: 71.5; f/u: 58.5 Control: baseline: 67.9; f/u: 62.7 Summary Effect: -7.7 g/d</p> <p><u>Fiber Intake (g/d)</u> Intervention: baseline: 17.8; f/u: 16.7 Control: baseline: 19.7; f/u: 18.4 Summary Effect: +0.2 g/d</p> <p><u>Physical Activity (min/wk)</u> Intervention: baseline: 479.4; f/u: 523.8 Control: baseline: 420.0 f/u: 446.4 Summary Effect: +18.0 min/wk</p> <p><u>Weight (kg)</u> Intervention: baseline: 80.8; f/u: 78.9 Control: baseline: 80.2; f/u: 80.0 Summary Effect: -0.9 kg</p> <p>Improve Sleep: -0.2 sleep problems index <u>SBP (mmHg)</u> Intervention: baseline: 126.9; f/u: 127.6</p>

Study	Population Characteristics	Intervention Characteristics	Results
			<p>Control: baseline: 127.6; f/u: 126.4 Summary Effect: +0.4 mmHg</p> <p><u>TG (mg/dL)</u> Intervention: baseline:148.3; f/u: 139.5 Control: baseline:128.1; f/u: 142.5 Summary Effect: -23.2 mg/dL</p> <p><u>HDL (mg/dL)</u> Intervention: baseline:53.1; f/u: 54.8 Control: baseline:54.7; f/u: 55.3 Summary Effect: 2.4 mg/dL</p> <p><u>LDL (mg/dL)</u> Intervention: baseline: 112.0; f/u: 105.4 Control: baseline:114.8; f/u: 112.4 Summary Effect: -4.2 mg/dL</p> <p><u>Fasting glucose (mg/dL)</u> Intervention: baseline: 93.8; f/u: 93.1 Control: baseline: 93.5; f/u: 93.9 Summary Effect: -1.1 mg/dL</p> <p>Paper conclusions: modestly improved some diabetes risk factors, individualized, telephone-based models may be a promising alternative to group-based interventions</p>
<p>Author, Year: Lombard et al., 2016</p> <p>Study Design: gRCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p>	<p>Sample size: Intervention: 348 Control: 301</p> <p>Demographics: <u>Intervention</u> Mean age: 40.1 yrs Gender: 100% female Race/ethnicity: NR SES: 22.3% <\$40,000</p> <p><u>Control</u> Mean age: 39.0 yrs</p>	<p>Location (urbanicity): Australia (rural)</p> <p>Intervention duration: 12m When intervention occurred: 2012</p> <p>Intervention: Intensity: moderate Component(s): CC + SM + FB + GS Device(s): telephone, mobile/app</p> <p><i>Intervention:</i> One facilitator-led interactive small group session. Program manual used to identify</p>	<p><u>FV Intake (serv/d)</u> Intervention: baseline: 4.4; f/u: 4.6 Control: baseline: 4.5; f/u: 4.6 Summary Effect: +0.2 serv/d</p> <p><u>Snack Food (g/d)</u> Intervention: baseline: 50.0; f/u: 35.3 Control: baseline: 43.7; f/u: 34.6 Adjusted Summary Effect: -1.9 g/d</p> <p><u>Energy Intake (kcal/d)</u> Intervention: baseline: 1870.5; f/u: 1606.2 Control: baseline: 1915.1; f/u: 1698.5</p>

Study	Population Characteristics	Intervention Characteristics	Results
Intent: weight	Gender: 100% female Race/ethnicity: NR SES: 22.9% <\$40,000	personal health priorities and practiced skills in goal setting, problem solving, relapse prevention, and self-monitoring. Participants completed manual in 4 wks. Received an SMS text message every 4 wks to reinforce program messages. At 12 wks, they participated in one 20-min phone coaching session, delivered by staff trained in motivational interviewing Control: 1, 45-min group education session on general women’s health	Summary Effect: -47.7 kcal/d <u>Leisure time MET</u> Intervention: baseline: 925; f/u: 879 Control: baseline: 863; f/u: 974 Adjusted Summary Effect: -118 METs <u>Sedentary Time (hrs/d)</u> Intervention: baseline: 3.9; f/u: 3.8 Control: baseline: 3.7; f/u: 3.7 Adjusted Summary Effect: -0.01 hrs/d <u>Weight (kg)</u> Intervention: baseline: 78.0; f/u: 77.5 Control: baseline: 76.2; f/u: 76.6 Adjusted Summary Effect: -0.9 kg Paper conclusions: low-intensity lifestyle program was able to prevent weight gain in a general population of women
<p>Author, Year: Quinn et al., 2017</p> <p>Study Design: Other design with concurrent comparison group</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 74-108 Control: 5,272-5455</p> <p>Demographics: <u>Intervention</u> Mean age: NR Gender: NR Race/ethnicity: 100% aboriginal SES: 59.2 HS graduate <u>Control</u> Mean age: 49 Gender: 74.2 female Race/ethnicity: 95.5% non-aboriginal SES: 43.2 HS graduate</p>	<p>Location (urbanicity): Australia (NR)</p> <p>Intervention duration: 6m When intervention occurred: NR</p> <p>Intervention: Intensity: Moderate Component(s): CC + GS Device(s): telephone</p> <p><i>Intervention:</i> Level 1: information-only Level 2: health coaching support Receive Aboriginal-specific information materials and three additional coaching calls (13 total calls provided over 6 months) Sent: Welcome letter from the Chief Health Officer and Aboriginal information booklet and/or coaching journal</p>	<p><u>FV Intake (serv/d)</u> Intervention change: 1.4 Control change: 1.4 Summary Effect: 0.0 serv/d</p> <p><u>Sugar Sweetened Beverage (serv/d)</u> Intervention change: -0.3 Control change: -0.3 Summary Effect: 0.0 serv/d</p> <p><u>Moderate to Vigorous PA (20 min vigorous intensity and 30 min moderate intensity sessions/wk)</u> Intervention change: 1.2 Control change: 1.1 Summary Effect: +0.1, 30 min moderate PA session/wk</p> <p><u>BMI (kg/m²)</u> Intervention change: -1.5</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>Control: same intervention with 3 less calls and non-aboriginal population</p>	<p>Control change: -1.3 Summary Effect: -0.2 kg/m²</p> <p>Paper conclusions: telephone-based services can be modified and enhanced to meet the needs of Aboriginal communities.</p>
<p>Author, Year: Risica et al., 2013</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Interactive Television Show (ITV)+ Telephone Support (TS) Arm, ITV Only Arm, Passive TV (PTV)+TS Arm</p> <p>Intent: Weight</p>	<p>Sample size: ITV+TS: 74 ITV Only: 66 PTV+TS: 74 Control: 82</p> <p>Demographics: ITV+TS Mean age: 18-29: 8.2%; 30-39: 27.4%; 40-49: 32.9%; >50: 31.5% Gender: 100% female Race/ethnicity: 7.0% Black or African American; 1.5% Hispanic; 1.5% Mixed SES: 23.1% ≤20k, 44.6% 20k-40k, 18.5% 40k-60k, 13.9% ≥60k</p> <p>ITV only Mean age: 18-29: 15.6%; 30-39: 29.7%; 40-49: 25.0%; >50: 29.7% Gender: 100% female Race/ethnicity: 98.3% Black or African American; 1.7% Mixed SES: 15.3% ≤20k, 47.5% 20k-40k, 18.6% 40k-60k, 18.6% ≥60k</p> <p>PTV+TS Mean age: 18-29: 9.6%; 30-39: 27.4%; 40-49: 31.5%; >50: 31.5% Gender: 100% female</p>	<p>Location (urbanicity): Boston, MA, US (urban)</p> <p>Intervention duration: 3m When intervention occurred: 1999</p> <p>Intervention: ITV+TS Arm Intensity: High Component(s): CC + SS Device(s): Telephone</p> <p><i>Intervention (ITV+TS Arm):</i> 12 one-hour weekly programs broadcast live on cable television. Corresponding print materials were mailed out biweekly during the 12-week program. Focus was on weight control; content of the TV programs was divided between nutrition and physical activity with behavior change, stress reduction, and self-management principles integrated into both sections. During the last 20 minutes, the social worker led a live “sharing” component, which consisted of a discussion between the social worker, featured guests and live callers. They also received 12 weekly then 4 monthly social support phone calls delivered by community outreach educators (COEs). Biweekly mailings of written education materials that corresponded with the TV shows. After the 12 weekly shows, participants received monthly mailings</p>	<p><u>Fat Intake</u> ITV+TS: baseline 1.1 f/u 0.8 Control: baseline 1.0 f/u 1.0 Summary effect: -0.3</p> <p>ITV Only: baseline 1.0 f/u 0.9 Control: baseline 1.0 f/u 1.0 Summary effect: -0.2</p> <p>PTV+TS: baseline 0.9 f/u 0.8 Control: baseline 1.0 f/u 1.0 Summary effect: -0.1</p> <p><u>Leisure Activity Score</u> ITV+TS: baseline 67.8 f/u 79.0 Control: baseline 60.0 f/u 56.1 Summary effect: 15.0</p> <p>ITV Only: baseline 67.6 f/u 79.5 Control: baseline 60.0 f/u 56.1 Summary effect: 15.8</p> <p>PTV+TS: baseline 68.7 f/u 71.1 Control: baseline 60.0 f/u 56.1 Summary effect: 6.3</p> <p><u>BMI</u> ITV+TS baseline: 35.6 f/u 35.4 Control: baseline 34.4 f/u 34.6 Summary effect: -0.4</p> <p>ITV Only: baseline 35.2 f/u 35.0 Control: baseline 34.4 f/u 34.6 Summary effect: -0.4</p>

Study	Population Characteristics	Intervention Characteristics	Results
	<p>Race/ethnicity: 100% Black or African American SES: 19.4% ≤20k, 44.8% 20k-40k, 20.9% 40k-60k, 14.9% ≥60k</p> <p><u>Control</u> Mean age: 18-29: 11.3%; 30-39: 27.9%; 40-49: 32.3%; >50: 28.4% Gender: 100% female Race/ethnicity: 100% Black or African American SES: 23.0% 20k or less, 47.3% 20k-40k, 13.5% 40k-60k, 16.2% 60k or up</p>	<p>for four months including educational materials and four booster video-tapes that focused on maintenance of behavior changes and included a compilation of the three most popular “10- Minute Workouts” as an exercise video.</p> <p>ITV Arm Intensity: Moderate Component(s): CC + SS Device(s): Telephone</p> <p><i>Intervention (ITV Arm):</i> Participants received the same 12-week interactive TV show intervention with the same toll free call-in number but did not receive the telephone support calls.</p> <p>PTV + TS Arm Intensity: Moderate Component(s): CC + SS Device(s): Telephone</p> <p><i>Intervention (PTV + TS Arm):</i> Participants received the 12 weekly TV shows but their format did not allow them to call in during the sharing segment. They also received 12 weekly and 4 monthly telephone support calls from a COE.</p> <p>Control: Biweekly mailings for 12 weeks and then monthly mailings for four months that contained wellness content unrelated to weight, nutrition or physical activity, i.e., cancer screening, injury prevention, etc.</p>	<p>PTV+TS: baseline 34.0 f/u 33.7 Control: baseline 34.4 f/u 34.6 Summary effect: -0.4</p> <p>Paper conclusions: Cable TV was an effective delivery channel to assist Black women with weight control, increasing physical activity and decreasing dietary fat. Enhanced social support and the ability to interact with others during the show were not effective complementary intervention components as conducted in this trial.</p>

Study	Population Characteristics	Intervention Characteristics	Results
<p>Author, Year: Spring et al., 2012</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 48 Control: 53</p> <p>Demographics: <u>Intervention</u> Mean age: 33.4 yrs Gender: 70.8% female Race/ethnicity: 45.8% White, 31.3% Black or African American, 6.3% Hispanic, 14.6% Asian, 2.1% Other SES: 64.6% college degree, 35.6% no college</p> <p><u>Control</u> Mean age: 30.8 yrs Gender: 77.4% female Race/ethnicity: 60.4% White, 11.3% Black or African American, 9.4% Hispanic, 13.2% Asian, 5.7% Other SES: 78.6% college, 21.4% no college</p>	<p>Location (urbanicity): Chicago, IL, US (urban)</p> <p>Intervention duration: 0.75m When intervention occurred: NR</p> <p>Intervention: Intensity: High Component(s): CC + SM + FB + GS Device(s): Computer/website, mobile/app</p> <p><i>Intervention:</i> FV+PA and the Coaches tailored behavioral strategies 1st week and 2nd week set daily goals. 3rd week, uploaded data daily and communicated as needed with their coaches via telephone or e-mail, per preference, to problem-solve barriers. Participants could earn a \$175 incentive for meeting goals.</p> <p>Intervention 3 weeks; f/u 20 weeks Immediately after the treatment period, participants were informed that attainment of diet and activity targets was no longer required; payment was now contingent solely upon recording and transmitting handheld data on a predetermined schedule.</p> <p>Control: Control group received same intervention as the intervention group except for target behaviors. Control group was asked to change behaviors related to sedentary time and dietary fat intake.</p>	<p><u>FV Intake (serv/d)</u> Intervention: baseline 1.3; f/u 5.6 Control: baseline 1.4; f/u 1.9 Summary Effect: 3.8 serv/d</p> <p><u>Saturated Fat/Fat Intake (%/d)</u> Intervention: baseline 11.2; f/u 9.3 Control: baseline 11.3; f/u 7.8 Adjusted Summary Effect: +1.6 pct pts</p> <p><u>Sedentary Time (min/d)</u> Intervention: baseline 228.1; f/u 206.2 Control: baseline 232.1; f/u 89.5 Adjusted Summary Effect: +120.7 min/d</p> <p><u>PA (min/d)</u> Intervention: baseline 492.8; f/u 889.7 Control: baseline 462.0; f/u 537.6 Adjusted Summary Effect: +321.3 min/d</p> <p>Paper conclusions: Remote coaching supported by mobile technology and financial incentives holds</p>

Study	Population Characteristics	Intervention Characteristics	Results
<p>Author, Year: Spring et al., 2018</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Sequential Arm, Simultaneous Arm</p> <p>Intent: Diet + PA</p>	<p>Sample size: Sequential:84 Simultaneous: 84 Control:44</p> <p>Demographics: <u>Sequential</u> Mean age: 40.9 yrs Gender: 77.4% female Race/ethnicity: 47.6% White, 45.2% Black or African American, 1.2% Asian, 11.0% Hispanic, 6.0% Other SES: 65.5% College degree</p> <p><u>Simultaneous</u> Mean age: 40.7 yrs Gender: 76.2% female Race/ethnicity: 33.3% White, 50.0% Black or African American, 6.0% Asian, 6.3% Hispanic, 10.7% Other SES: 71.4% College degree</p> <p><u>Control</u> Mean age: 40.8 yrs Gender: 75% female Race/ethnicity: 43.2% White, 43.2% Black, 4.5% Asian, 14.0% Hispanic, 9.1% Other SES: 72.7% College degree</p>	<p>Location (urbanicity): Chicago, IL, USA (urban)</p> <p>Intervention duration: 3m When intervention occurred: 2012-2014</p> <p>Intervention: <u>Sequential</u> Intensity: High Component(s): CC + SM + FB + GS Device(s): mobile/app + wearable device</p> <p><i>Intervention:</i> Participants were trained to estimate portion sizes, use smartphone app to record behaviors (dietary intake, leisure screen time, stress level, relaxation exercises, and sleep), and wear an accelerometer. Participants were encouraged to enter all meals and snacks immediately after eating and show accumulated leisure screen time four times daily. intervention apps provided users with continuously updated feedback about their performance of targeted behaviors relative to goal. The apps also wirelessly transmitted this information to coaches, who used it to tailor telephone counseling. Participants were asked to modify only sedentary leisure screen time and FV for the first 6 weeks. Between weeks 7 and 12, they were asked to maintain goal levels for leisure screen time and fruit and vegetables, while progressively increasing MVPA. The PA interface remained inactive until week seven. During treatment initiation (weeks 1-12), a trained paraprofessional telephoned</p>	<p><u>FV Intake (serv/d)</u> Sequential: baseline 1.8; f/u 9 Control: baseline 1.2; f/u 1.9 Summary Effect: 6.5 serv/d</p> <p>Simultaneous: baseline 1.8; f/u 9.6 Control: baseline 1.2; f/u 1.9 Summary Effect: 6.5 serv/d</p> <p><u>DQI</u> Sequential change: 1.2 Control change: 0.3 Summary Effect: 0.9</p> <p>Simultaneous: change: 1.2 Control change: 0.3 Summary Effect: 0.9</p> <p><u>Saturated Fat (% kcal/d)</u> Sequential: baseline 12.5; f/u 7.6 Control: baseline 1.8; f/u 10.0 Summary Effect: -3.1 % kcal/d</p> <p>Simultaneous: baseline 11.6; f/u 8.6 Control: baseline 1.8; f/u 10.0 Summary Effect: -1.2 % kcal/d</p> <p><u>Sedentary Time (min/d)</u> Sequential: baseline 262; f/u 62 Control: baseline 250; f/u 200 Adjusted Summary Effect: -150 min/d</p> <p>Simultaneous: baseline 262; f/u 62 Control: baseline 250; f/u 200 Adjusted Summary Effect: -150 min/d</p> <p><u>PA (min/d)</u> Sequential: baseline 9.5; f/u 31 Control: baseline 9.5; f/u 24.5 Summary Effect: 6.5 min/d</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>each participant weekly for a 15-minute coaching session. Coaching call frequency decreased to biweekly in weeks 13-24 and monthly in weeks 25-40, and call duration decreased to 10 minutes.</p> <p><u>Simultaneous</u> Intensity: High Component(s): CC + SM + FB + GS Device(s): mobile/app + wearable device</p> <p>Intervention: same as sequential but sedentary leisure screen time, FV, and PA were all implemented at the same time.</p> <p>Control: focus on stress and sleep coached to perform three relaxation exercises per day (a progressive muscle relaxation technique, a mindfulness meditation, and a self-hypnosis technique), and to achieve end goals of ≥7.5 hours of sleep per day and a 30% reduction in stress over the 12-week intervention.</p>	<p>Simultaneous: baseline 9.5; f/u 40 Control: baseline 9.5; f/u 24.5 Summary Effect: 15.5 min/d</p> <p>Paper conclusions: Multicomponent mHealth diet and activity intervention involving connected coaching and modest initial performance incentives holds potential to reduce chronic disease risk.</p>
<p>Author, Year: Toro Ramos et al., 2020</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Single</p> <p>Intent: weight</p>	<p>Sample size: Intervention:103 Control:99</p> <p>Demographics: <u>Intervention</u> Mean age: 55.7 yrs Gender: 73.8% female Race/ethnicity: NR SES: NR</p> <p><u>Control</u> Mean age: 57.5 yrs Gender: 69.0% female</p>	<p>Location (urbanicity): Long Island, NY, US (urban)</p> <p>Intervention duration: 12m When intervention occurred: 2016-2018</p> <p>Intervention: Intensity: high Component(s): CC + SM + FB + GS Device(s): Mobile/app</p> <p><i>Intervention:</i></p>	<p><u>Weight change (%)</u> Intervention: -2.5 Control: +0.3 ITT Summary Effect: -2.9 pct pts</p> <p><u>BMI (kg/m²)</u> Intervention: baseline: 31.3; f/u: 31.3 Control: baseline: 30.9; f/u: 30.9 ITT Summary Effect: -0.6 kg/m²</p> <p><u>HbA1c (%)</u> Intervention: baseline: 5.94 f/u: -5.8 Control: baseline: 5.9; f/u: 5.8 ITT Summary Effect: 0.0 pct pts</p>

Study	Population Characteristics	Intervention Characteristics	Results
	Race/ethnicity: NR SES: NR	<p>Participants had mobile access to coach-participant messaging, group messaging, daily challenges for behavior change, the Diabetes Prevention Program education articles (weekly content), food logging with color coding, steps and exercise logging, and automated feedback based on food choices. Participants were asked to log their weight (self-reported), meals, and physical activity on a weekly basis. National Diabetes Prevention Program-certified coaches securely monitored participant progress through a web-based dashboard. Participants could communicate as needed to support their journeys and could expect to hear from their coach every day. Coaches were trained in motivational interviewing techniques and assisted users in setting specific, measurable, attainable, realistic, and time-based goals on a weekly basis. Coaches digitally communicated with participants individually and as a group.</p> <p>Control: Participants were asked to maintain usual lifestyle habits in the four weeks between assessments and gained access to the intervention after study completion.</p>	<p>Paper conclusions: demonstrate that a novel fully mobile-based smartphone-delivered DPP with human coaching is an effective and powerful tool for attaining clinically and statistically significant weight loss up to 1 year, reducing T2DM risk as well as in-person interventions but without the added barriers</p>
<p>Author, Year: Valle et al., 2017</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p>	<p>Sample size: Intervention Only: 13 Intervention Plus: 11 Control: 11</p> <p>Demographics: <u>Intervention Only</u> Mean age: 52.6 yrs Gender: 100% female Race/ethnicity: 100% Black or African American</p>	<p>Location (urbanicity): Chapel Hill, NC, US (NR)</p> <p>Intervention duration: 6m When intervention occurred: 2014-2015</p> <p><u>Intervention Only</u> Intensity: high Component(s): CC + SM + FB + GS Device(s): computer/website, mobile/app</p>	<p><u>Energy Intake (kcal/d)</u> Intervention Only: baseline: 1778; f/u: 1529 Control: baseline: 1587; f/u: 1701 Summary Effect: -172 kcal/d</p> <p>Intervention Plus: baseline: 1848; f/u: 1519 Control: baseline: 1587; f/u: 1701 Summary Effect: -182 kcal/d</p> <p><u>Energy Expenditure (kcal/wk)</u> Intervention Only: baseline: 607; f/u:384</p>

Study	Population Characteristics	Intervention Characteristics	Results
<p>Study Arm(s): Intervention Only Arm, Intervention Plus Arm</p> <p>Intent: weight</p>	<p>SES: NR</p> <p><u>Intervention Plus</u> Mean age: 52.2 yrs Gender: 100% female Race/ethnicity: 100% Black or African American SES: NR</p> <p><u>Control</u> Mean age: 54.4 yrs Gender: 100% female Race/ethnicity: 100% Black or African American SES: NR</p>	<p><i>Intervention:</i> 1. face-to-face sessions (interventionist with PhD training in nutrition intervention) 2. daily self-weighing (Bluetooth and Wifi-enabled wireless scale with access to a companion mobile app and website with graphs of weight trends) 3. 24 weekly email-delivered behavioral lessons 4. 24 weekly emails with tailored feedback on self-weighing and weight data Participants were instructed to monitor their weight daily using the wireless scale and taught how to use the scale and access the website or app for viewing weight trends over time</p> <p><u>Intervention Plus</u> Intensity: high Component(s): CC + SM + FB + GS Device(s): computer/website, mobile/app</p> <p><i>Intervention:</i> same as Intervention only with the addition of an activity tracker and encouraged to track activity daily. Tailored feedback to participants in this group incorporated both objective physical activity monitoring information.</p> <p>Control: received a wireless scale and advised to maintain their current weighing behaviors.</p>	<p>Control: baseline: 144; f/u: 144 Summary Effect: +72 kcal/wk</p> <p>Intervention Plus: baseline: 432; f/u: 864 Control: baseline: 144; f/u: 144 Summary Effect: +432 kcal/wk</p> <p><u>Weight Change (%)</u> Intervention Only: -0.2 Control: baseline: +0.2 Summary Effect: -0.4 pct pts</p> <p>Intervention Plus: -0.9 Control: +0.2 Summary Effect: -1.1 pct pts</p> <p><u>BMI (kg/m²)</u> Intervention Only: baseline: 32.4; f/u: 32.2 Control: baseline: 34.1; f/u: 34.0 Summary Effect: -0.1 kg/m²</p> <p>Intervention Plus: baseline: 34.0; f/u: 32.5 Control: baseline: 34.1; f/u: 34.0 Summary Effect: -1.4 kg/m²</p> <p><u>SBP (mmHg)</u> Intervention Only: baseline: 116.0; f/u: 130.3 Control: baseline: 124.3; f/u: 121.7 Summary Effect: 16.9 mmHg</p> <p>Intervention Plus: baseline: 122.3; f/u: 109.7 Control: baseline: 124.3; f/u: 121.7 Summary Effect: -10 mmHg</p> <p><u>DBP (mmHg)</u> Intervention Only: baseline: 78.7; f/u: 79.0 Control: baseline: 80.3; f/u: 86.3 Summary Effect: -5.7 mmHg</p> <p>Intervention Plus: baseline: 81.0; f/u: 77.7</p>

Study	Population Characteristics	Intervention Characteristics	Results
			<p>Control: baseline: 80.3; f/u: 86.3 Summary Effect: -9.3 mmHg</p> <p><u>HbA1C (%)</u> Intervention Only: baseline: 5.7; f/u: 5.6 Control: baseline: 5.6; f/u: 5.8 Effect: -0.3 pct pts</p> <p>Intervention Plus: baseline: 5.7; f/u: 5.9 Control: baseline: 5.6; f/u: 5.8 Effect: -0.0 pct pts</p> <p><u>TC (mg/dL)</u> Intervention Only: baseline: 201.0; f/u: 202.0 Control: baseline: 191.0; f/u: 196.0 Summary Effect: +15.0 mg/dL</p> <p>Intervention Plus: baseline: 182.0; f/u: 173.0 Control: baseline: 191.0; f/u: 196.0 Summary Effect: +2.0 mg/dL</p> <p><u>LDL (mg/dL)</u> Intervention Only: baseline: 112.0; f/u: 117.5 Control: baseline: 119.0; f/u: 108.5 Summary Effect: +16.0 mg/dL</p> <p>Intervention Plus: baseline: 103.4; f/u: 98.5 Control: baseline: 119.0; f/u: 108.5 Summary Effect: +5.6 mg/dL</p> <p><u>HDL (mg/dL)</u> Intervention Only: baseline: 54.0; f/u: 57.0 Control: baseline: 43.0; f/u: 56.0 Summary Effect: -10.0 mg/dL</p> <p>Intervention Plus: baseline: 45.0; f/u: 56.0 Control: baseline: 43.0; f/u: 56.0 Summary Effect: -2.0 mg/dL</p> <p><u>TG (mg/dL)</u></p>

Study	Population Characteristics	Intervention Characteristics	Results
			<p>Intervention Only: baseline: 104.0; f/u: 86.00 Control: baseline: 111.0; f/u: 103.5 Summary Effect: -10.5 mg/dL</p> <p>Intervention Only: baseline: 71.0; f/u: 102.0 Control: baseline: 111.0; f/u: 103.5 Summary Effect: 38.5 mg/dL</p> <p>Paper conclusions: An intervention focused on daily self-weighing as a self-monitoring strategy shows promise for preventing weight gain in breast cancer survivors.</p>
<p>Author, Year: Van Doorn-van Atten et al., 2018</p> <p>Study Design: group nonrandomized</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 97 Control: 107</p> <p>Demographics: <u>Intervention</u> Mean age: 78.4 yrs Gender: 66.0% female Race/ethnicity: NR SES: NR</p> <p><u>Control</u> Mean age: 81.0 yrs Gender: 76.6% female Race/ethnicity: NR SES: NR</p>	<p>Location (urbanicity): The Netherlands (NR)</p> <p>Intervention duration: 6m When intervention occurred: 2016-2017</p> <p>Intervention: Intensity: moderate Component(s): CC + SM + FB + GS Device(s): website, telehealth</p> <p><i>Intervention:</i> perform self-measurements of body weight (weekly), steps (1 week/month), and blood pressure (monthly or bi-monthly). participants received a scale, a pedometer, and a sphygmomanometer. The scale and sphygmomanometer were connected via Bluetooth to a set-top box. This box was connected to the participant’s television and automatically displayed on the participant’s television. Results were sent to the nurses. participants received computer-tailored and non-tailored information about nutrition. The computer-tailored</p>	<p><u>Diet Quality Index (0-80)</u> Intervention: baseline: 57.3; f/u: 59.8 Control: baseline: 56.5; f/u: 57.1 Summary Effect: +1.9</p> <p><u>Fruit Score (0-10)</u> Intervention: baseline: 8.2; f/u: 9.1 Control: baseline: 8.7; f/u: 8.4 Summary Effect: +1.2</p> <p><u>Vegetable Score (0-10)</u> Intervention: baseline: 6.3; f/u: 7.9 Control: baseline: 7.2; f/u: 7.2 Summary Effect: +1.6</p> <p><u>Saturated Fatty Acids Score (0-10)</u> Intervention: baseline: 5.0; f/u: 4.5 Control: baseline: 4.5; f/u: 4.5 Summary Effect: -0.5</p> <p><u>Short Physical Performance Battery (0-12)</u> Intervention: baseline: 7.2; f/u: 7.2 Control: baseline: 7.2; f/u: 6.6 Summary Effect: +0.6</p> <p><u>Weight (kg)</u> Intervention: baseline: 80.1; f/u: 80.2 Control: baseline: 74.0; f/u: 73.9</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>information contained two letters. The non-tailored information consisted of three short and general television messages (<500 characters) that were sent weekly to the participants and that targeted determinants of dietary and physical activity behavior such as awareness, knowledge and attitude.</p> <p>Control: Usual care</p>	<p>Summary Effect: +0.2 kg</p> <p>Paper conclusions: improved diet quality and physical activity levels of community dwelling elderly.</p>
<p>Author, Year: van Keulen et al., 2011</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Telephone Only Arm, Telephone + Print Arm</p> <p>Intent: Diet + PA</p>	<p>Sample size: Telephone Only Arm: 407 Telephone + Print Arm: 408 Control: 409</p> <p>Demographics: <u>Telephone Only Arm</u> Mean age: 57.3 yrs Gender: 43.5% female Race/ethnicity: NR SES: NR</p> <p><u>Telephone + Print Arm</u> Mean age: 56.9 yrs Gender: 47.5% female Race/ethnicity: NR SES: NR</p> <p><u>Control</u> Mean age: 56.8 yrs Gender: 42.8% female Race/ethnicity: NR SES: NR</p>	<p>Location (urbanicity): Limburg, Brabant, the Netherlands (NR)</p> <p>Intervention duration: 18m When intervention occurred: 2005-2006</p> <p>Intervention: Telephone Only Arm Intensity: Moderate Component(s): CC Device(s): Telephone</p> <p><i>Intervention:</i> 4 motivational interviewing telephone calls (wk 5, 13, 30, and 43) by trained counselor. Participants received a pedometer as a reward, with short instructions encouraging them to gradually increase their number of steps to at least 10,000</p> <p>Telephone + Print Arm Intensity: moderate Component(s): CC + GS + FB Device(s): Telephone</p>	<p><u>FV (serv/d)</u> Telephone Only Arm Intervention: baseline: 4.1; f/u: 5.1 Control: baseline: 4.2; f/u: 4.6 Summary Effect: +0.6 serv/d</p> <p>Telephone + Print Arm Intervention: baseline: 4.1; f/u: 5.1 Control: baseline: 4.2; f/u: 4.6 Summary Effect: +0.6</p> <p><u>PA (min/wk)</u> Telephone Only Arm Intervention: baseline: 290.4; f/u: 340.2 Control: baseline: 276.6; f/u: 319.2 Summary Effect: +7.2 min/wk</p> <p>Telephone + Print Arm Intervention: baseline: 258.6; f/u: 367.8 Control: baseline: 276.6; f/u: 319.2 Summary Effect: +66.6 min/wk</p> <p>Paper conclusions: Tailored print communication and telephone motivational interviewing or their combination are equally successful in changing multiple behaviors.</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p><i>Intervention:</i> 2 motivational interviewing telephone calls (see above) and 2 tailored letters with feedback based on behavioral progress</p> <p>Control: usual care</p>	
WITHOUT COACHING OR COUNSELING			
<p>Author, Year: Anand et al., 2016</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 169 Control: 174</p> <p>Demographics: <u>Intervention</u> Mean age: 50.6 Gender: 53.3% female Race/ethnicity: NR SES: 49.1% >\$60,000/yr</p> <p><u>Control</u> Mean age: 50.6 Gender: 43.1% female Race/ethnicity: NR SES: 51.1% >\$60,000/yr</p>	<p>Location (urbanicity): Toronto, Vancouver, Canada (urban)</p> <p>Intervention duration: 12m When intervention occurred: 2012-2014</p> <p>Intervention: Intensity: low Component(s): SM + FB + GS + SS Device(s): computer/web + mobile/app</p> <p><i>Intervention:</i> motivational messages sent by email every 2 weeks and health tips (sent by email or txt) focused on diet and physical activity messages (based participant's choice) every week. Participants were encouraged to access website for South Asian-specific prevention advice. All intervention subjects received a telephone call at 3 and 9 months to monitor their success at meeting their goals, and to reassess their readiness for change. Peer-to-peer support and motivational sessions were also be available for intervention participants in the form of a monthly skype/webinar featuring a dietician, kinesiologist, expert in stress reduction, yoga and meditation</p>	<p><u>FV (serv/d)</u> Intervention: baseline: 4.8; f/u: 4.8 Control: baseline: 4.6; f/u: 4.4 Summary Effect: +0.2 serv/d</p> <p><u>Deep Fried Food (serv/d)</u> Intervention: baseline: 0.3; f/u: 0.2 Control: baseline: 1.0; f/u: 0.7 Summary Effect: +0.0 serv/d</p> <p><u>Salty Snacks (serv/d)</u> Intervention: baseline: 0.8; f/u: 0.7 Control: baseline: 4.6; f/u: 4.4 Summary Effect: +0.2 serv/d</p> <p><u>Moderate or Very Active in Leisure Time (%)</u> Intervention: baseline: 37.9; f/u: 35.4 Control: baseline: 34.5; f/u: 31.8 Summary Effect: +0.3 pct pts</p> <p><u>Waist-to-hip ratio</u> Men Intervention: baseline: 0.9; f/u: 0.9 Control: baseline: 0.9; f/u: 0.9 Summary Effect: +0.0 pct pts</p> <p>Women Intervention: baseline: 0.9; f/u: 0.9 Control: baseline: 0.9; f/u: 0.8 Summary Effect: -0.1 pct pts</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>to increase health information and reinforce the health goals. All participants received gift card incentives for completing their clinical visits.</p> <p>Control: encouraged to access website for South Asian-specific prevention advice.</p>	<p><u>HbA1C (%)</u> Intervention: baseline: 5.9; f/u: 5.7 Control: baseline: 5.8; f/u: 5.7 Summary Effect: 0.0</p> <p><u>SBP (mmHg)</u> Intervention: baseline: 127; f/u: 127 Control: baseline: 127; f/u: 126 Summary Effect: +1 mmHg</p> <p><u>DBP (mmHg)</u> Intervention: baseline: 83; f/u: 82 Control: baseline: 81; f/u: 81 Summary Effect: -1 mmHg</p> <p>Paper conclusions: Among South Asian individuals, a digital health intervention was not associated with a reduction in MI risk score after 12 months</p>
<p>Author, Year: Celis-Morales et al.,</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Arm 1, Arm 2</p> <p>Intent: Diet + PA</p>	<p>Sample size: Arm1: 377 Arm 2: 376 Control: 363</p> <p>Demographics: <u>Arm 1</u> Mean age: 39.7 yrs Gender: 57.5% female Race/ethnicity: 97.3% White, 2.7% unknown SES: NR</p> <p><u>Arm 2</u> Mean age: 40.2 yrs Gender: 58.3% female Race/ethnicity: 98.0% White, 2.0% unknown SES: NR</p>	<p>Location (urbanicity): Ireland, The Netherlands, UK, Spain, Germany, Poland, Greece (NR)</p> <p>Intervention duration: 6m When intervention occurred: 2012-2014</p> <p>Intervention: Arm 1 Intensity: low Component(s): FB + GS Device(s): computer/website</p> <p><i>Intervention:</i> Personalized feedback reports derived manually from decision trees implemented by trained nutritionists and Dietitians.</p>	<p><u>FV (serv/d)</u> Arm 1 baseline: 7.5; f/u: 8.0 Control baseline: 7.5; f/u: 7.7 Summary Effect: +0.2</p> <p>Arm 2 baseline: 7.6; f/u: 8.1 Control baseline: 7.5; f/u: 7.7 Summary Effect: +0.5</p> <p><u>DQI</u> Arm 1 baseline: 49.5; f/u: 52.9 Control baseline: 49.5; f/u: 51.3 Summary Effect: +1.6</p> <p>Arm 2 baseline: 48.2; f/u: 52.7 Control baseline: 49.5; f/u: 51.3 Summary Effect: +2.7</p> <p><u>Energy Intake (kcal/d)</u> Arm 1 baseline: 2507.9; f/u: 2188.4</p>

Study	Population Characteristics	Intervention Characteristics	Results
	<p><u>Control</u> Mean age: 39.4 yrs Gender: 58.9% female Race/ethnicity: 95.6% White, 4.4% unknown SES: NR</p>	<p>diet group: feedback on how their intakes of specific food groups (fruits and vegetables, whole-grain products, fish, dairy products and meat) compared with guideline amounts. personalized feedback given three to five times during the intervention (at baseline, month 1, 2, 3 and month 6) In addition, online forum for discussion of topics related to the intervention, personalized recipes and personalized physical activity (PA) feedback</p> <p>Arm 2 Intensity: low Component(s): FB + GS Device(s): computer/website</p> <p><i>Intervention:</i> same as above with addition of feedback based on metabolic and related biomarkers</p> <p>Control: non-personalized dietary advice based on conventional population healthy eating guidelines and generic PA An advice leaflet was delivered via the web and also attached to an e-mail, which was sent to participants at baseline and at month 3 of the study</p>	<p>Control baseline: 2556.3; f/u: 2369.9 Summary Effect: -133.8 kcal/d</p> <p>Arm 2 baseline: 2603.4; f/u: 2236.1 Control baseline: 2556.3; f/u: 2369.9 Summary Effect: -181.7 kcal/d</p> <p><u>Salt Intake (g/d)</u> Arm 1 baseline: 7.1; f/u: 6.1 Control baseline: 7.3; f/u: 6.8 Summary Effect: -0.5 g/d</p> <p>Arm 2 baseline: 7.7; f/u: 6.1 Control baseline: 7.3; f/u: 6.8 Summary Effect: -1.0 g/d</p> <p><u>Whole grains (g/d)</u> Arm 1 baseline: 166; f/u: 160 Control baseline: 181; f/u: 164 Summary Effect: +11 g/d</p> <p>Arm 2 baseline: 165; f/u: 171 Control baseline: 181; f/u: 164 Summary Effect: +23 g/d</p> <p><u>Meat Intake (g/d)</u> Arm 1 baseline: 74.4; f/u: 60.5 Control baseline: 74.4; f/u: 66.6 Summary Effect: -6.1 g/d</p> <p>Arm 2 baseline: 89.9; f/u: 58.4 Control baseline: 74.4; f/u: 66.6 Summary Effect: -23.7 g/d</p> <p><u>PA (min/wk)</u> Arm 1 baseline: 343; f/u: 351 Control baseline: 287; f/u: 315 Summary Effect: -20 min/wk</p> <p>Arm 2 baseline: 308; f/u: 315</p>

Study	Population Characteristics	Intervention Characteristics	Results
			<p>Control baseline: 287; f/u: 315 Summary Effect: -21 min/wk</p> <p><u>Sedentary Time (min/d)</u> Arm 1 change: -195 Control change: -200 Summary Effect: +5 min/wk</p> <p>Arm 2 change: -197 Control change: -200 Summary Effect: +25 min/wk</p> <p><u>BMI (kg/m²)</u> Arm 1: baseline: 25.2; f/u: 28.6 Control: baseline: 25.4; f/u: 28.9 Summary Effect: -0.1 kg/m²</p> <p>Arm 2: baseline: 25.6; f/u: 28.7 Control: baseline: 25.4; f/u: 28.9 Summary Effect: -0.4 kg/m²</p> <p>Paper conclusions: Personalized nutrition advice via internet-delivered intervention produced larger and more appropriate changes in dietary behaviour than a conventional approach.</p>
<p>Author, Year: Cheung et al., 2017</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Video Arm, Text Arm</p>	<p>Sample size: Video Arm: 803 Text Arm: 839 Control: 781</p> <p>Demographics: <u>Video Arm</u> Mean age: 48.3 yrs Gender: 47.9% female Race/ethnicity: NR SES: NR</p> <p><u>Text Arm</u></p>	<p>Location (urbanicity): The Netherlands (NR)</p> <p>Intervention duration: 3m (6m and 12m f/u)</p> <p>When intervention occurred: 2012</p> <p>Intervention: <u>Video Arm</u> Intensity: low Component(s): SM + FB + GS Device(s): Computer/website</p>	<p><u>Energy Intake (kcal/d)</u> Video Arm: baseline: 1384.1; f/u: 1014.9 Control: baseline: 1320.6; f/u: 1189.8 Summary Effect: -238.4 kcal/d</p> <p>Text Arm: baseline: 1351.5; f/u: 990.3 Control: baseline: 1320.6; f/u: 1189.8 Summary Effect: -230.4 kcal/d</p> <p><u>PA (min/wk)</u> Video Arm: baseline: 529.6; f/u: 764.1 Control: baseline: 568.6; f/u: 804.9 Summary Effect: -1.8 min/wk</p>

Study	Population Characteristics	Intervention Characteristics	Results
<p>Intent: Weight</p>	<p>Mean age: 48.0 yrs Gender: 57.1% female Race/ethnicity: NR SES: NR</p> <p><u>Control</u> Mean age: 48.6 yrs Gender: 59.5% female Race/ethnicity: NR SES: NR</p>	<p><i>Intervention:</i> Web-based computer-tailored intervention (objective of the intervention was to prevent weight gain or achieve modest weight loss by making small changes in dietary intake and/or physical activity.) 6 weekly sessions of approximately 15 min: 75% of the educational content was delivered via videos (25% consisted of text-based content). The videos had a news-driven format in which professional actors read aloud the tailored information.</p> <p><u>Text Arm</u> Intensity: low Component(s): SM + FB + GS Device(s): Computer/website</p> <p><i>Intervention:</i> same as video but received text through website - no visual</p> <p>Control: no intervention</p>	<p>Text Arm: baseline: 533.6; f/u: 807.2 Control: baseline: 568.6; f/u: 804.9 Summary Effect: 37.3 min/wk</p> <p><u>BMI (kg/m²)</u> Video Arm: baseline: 29.8; f/u: 28.8 Control: baseline: 29.3; f/u: 28.6 Summary Effect: -0.2 kg/m²</p> <p>Text Arm: baseline: 29.7; f/u: 28.7 Control: baseline: 29.3; f/u: 28.6 Summary Effect: -0.3 kg/m²</p> <p>Paper conclusions: The video computer-tailored intervention was effective on energy intake after one year.</p>
<p>Author, Year: Doets et al., 2019</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Good</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 30 Control: 29</p> <p>Demographics: <u>Intervention</u> Mean age: 68.0 yrs Gender: 63.3% female Race/ethnicity: NR SES: NR</p> <p><u>Control</u> Mean age: 67.4 yrs Gender: 62.1% female Race/ethnicity: NR SES: NR</p>	<p>Location (urbanicity): Netherlands (rural)</p> <p>Intervention duration: 2.25m When intervention occurred: 2015</p> <p>Intervention: Intervention components: SM + FB + GS Device(s): computer/website</p> <p><i>Intervention:</i> Participants received feedback on their health status based on extensive baseline measurements. Participants were given a leaflet with the food-based dietary guidelines and received</p>	<p><u>PA (Short Performance Physical Battery)</u> Intervention: baseline: 10.3; f/u: 11.1 Control: baseline: 10.3; f/u: 10.7 Summary Effect: 0.3</p> <p><u>BMI (kg/m²)</u> Intervention: baseline: 26.3; f/u: 26.1 Control: baseline: 25.8; f/u: 25.8 Summary Effect: -0.2 kg/m²</p> <p>Paper conclusions: Findings suggest that although no clear effects on wellbeing were found, still, at least on the short term, personalized advice may evoke health benefits in a population of seniors as compared to generic advice.</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>personalized advice through an online portal.</p> <p>Control: Leaflet of food-based dietary guidelines.</p>	
<p>Author, Year: Du et al., 2014</p> <p>Study Design: group nonrandomized</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 11 Control: 8</p> <p>Demographics Mean age: 43 yrs Gender: Race/ethnicity: 47.3% White, 5.3% Hispanic, 5.3% Black or African American; 36.8% Asian; 5.3% unknown SES: employed professionals and assistants</p>	<p>Location (urbanicity): US (NR)</p> <p>Intervention duration: 2m When intervention occurred: 2013</p> <p>Intervention: Intervention components: FB + GS + SS Device(s): mobile/app, computer/website</p> <p><i>Intervention:</i> Intervention was a smartphone app that consisted of two eight-week challenges developed in collaboration with two certified experts in personal training and nutrition consulting. The challenges promoted three behaviors: nutrition, walking, and stress busting. Both challenges contain four nutrition activities: eat slowly, add a serving of vegetables, add a small healthy meal while reducing the others, and keep a food diary. These activities were offered for two-three weeks each with overlap in the transition week from one habit to the next. The stress relieving portion included an advanced workout focusing on relieving stress.</p> <p>Control: A beginner level program to get people moving more. Included walking 15 minutes 3 times a week on flat surfaces and ramping up to 45 minutes 5 times a week on inclined surfaces with</p>	<p><u>DQI (0-7 scale)</u> Intervention: baseline: 4.3; f/u: 4.6 Control: baseline: 3.8; f/u: 4.6 Summary Effect: -0.6 Intervention Pre-Post: +0.3</p> <p><u>PA (min/wk)</u> Intervention: baseline: 376; f/u: 418 Control: baseline: 116; f/u: 273 Summary Effect: -115 min/wk Intervention Pre-Post: +42 min/wk</p> <p>Paper conclusions: Over the 8-week pilot study, the gains on test scores of healthy eating and physical activity showed medium to large effect sizes.</p>

Study	Population Characteristics	Intervention Characteristics	Results
		some exercises (e.g., jumping jacks) or short jogging sessions added to the walk.	
<p>Author, Year: Du et al., 2016</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Team Mobile Arm, Solo Mobile Arm</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention (Team Mobile Arm): 29 Intervention (Solo Mobile Arm): 29 Control (Team Paper Arm): 31 Control (Solo Paper Arm): 35</p> <p>Demographics: <u>Intervention (Team Mobile Arm)</u> Mean age: 35.7 yrs Gender: 72.4% female Race/ethnicity: 75.9% white, 24.1% NR SES: 69% college degree or higher</p> <p><u>Intervention (Solo Mobile Arm)</u> Mean age: 35.0 yrs Gender: 65.5% female Race/ethnicity: 93.1% white, 6.9% NR SES: 58.6% college degree or higher</p> <p><u>Control (Team Paper Arm)</u> Mean age: 36.9 yrs Gender: 54.8% female Race/ethnicity: 87.1% white, 12.9% NR SES: 87.1% college degree or higher</p> <p><u>Control (Solo Paper Arm)</u> Mean age: 37.6 yrs Gender: 65.7% female Race/ethnicity: 88.6% white, 11.4% NR</p>	<p>Location (urbanicity): US (NR)</p> <p>Intervention duration: 2m</p> <p>When intervention occurred: 2013</p> <p>Intervention: Device(s): computer/website, mobile/app</p> <p><i>Intervention (Team Mobile Arm):</i> Intervention components: SM + FB + GS + SS</p> <p>Mobile app allows for a selection of challenges, and includes activities (or goals) as part of the challenge that the user should complete on that given day. An icon represents each goal with a completion status. Activity icons open up the title, basic reminder details, the ability to substitute the task for another, a link to more detailed information about the activity, and the ability to self-report completion and submit a multimedia-enabled post to the team activity feed related to the selected activity. The app also provided visual analytics showing the user’s and the team’s goal accomplishment for the week. The app provided an activity-posting bar on the dashboard to provide a means for the user to share multimedia posts with the team at any time.</p> <p>Two 8-week challenges promoted the behaviors of nutrition, walking, and stress relieving workouts. The challenges</p>	<p>Team Mobile Arm: Diet Quality (lower score better) Intervention: baseline: NR; f/u: NR Control (Team Paper Arm): baseline: NR; f/u: -0.1 Summary Effect: +0.1 Intervention Pre-Post: -0.05</p> <p>Team Mobile Arm: MET Intervention: baseline: NR; f/u: NR Control (Team Paper Arm): baseline: NR; f/u: NR Summary Effect: +0.03 Intervention Pre-Post: +0.05</p> <p>Solo Mobile Arm: Diet Quality Intervention: baseline: NR; f/u: NR Control (Solo Paper Arm): baseline: NR; f/u: NR Summary Effect: +0.09 Intervention Pre-Post: -0.06</p> <p>Solo Mobile Arm: MET Intervention: baseline: NR; f/u: NR Control (Solo Paper Arm): baseline: NR; f/u: NR Summary Effect: 0 Intervention Pre-Post: 0.04</p> <p>Paper conclusions: No significant effects of media or team type were found for the changes observed in MET. However, as for Healthy Eating, participants in ePaper conditions reported more improvements than participants in Mobile conditions.</p>

Study	Population Characteristics	Intervention Characteristics	Results
	<p>SES: 77.1% college degree or higher</p>	<p>consisted of a beginner-level program to get people walking and moving more, and a workout focusing on relieving stress. The walking challenge started with 15 minutes 3 times a week on flat surfaces and ramping up to 45 minutes 5 times a week on inclined surfaces with some exercises (eg, jumping jacks) or short jogging sessions added to the walk. The stress relieving workout focused on 3 scheduled workouts during the week.</p> <p><i>Intervention (Solo Mobile Arm):</i> Intervention components: SM + FB + GS Same as above (Team Mobile Arm), but without any team components.</p> <p>Control: (Team Paper Arm): Emailed the PDF version of the wellness program described under Team Mobile Arm. (Solo Paper Arm): Emailed the PDF version of the wellness program described under Team Mobile Arm, but did not participate in any team components.</p>	
<p>Author, Year: Duncan et al., 2014</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p>	<p>Sample size: Intervention: 205 Control: 96</p> <p>Demographics: <u>Intervention</u> Mean age: 44.2 yrs Gender: 100% male Race/ethnicity: NR SES: 18% blue collar</p> <p><u>Control</u></p>	<p>Location (urbanicity): Australia (NR)</p> <p>Intervention duration: 9m</p> <p>When intervention occurred: 2010</p> <p>Intervention: Intervention components: SM + FB + GS + SS Device(s): computer/website, mobile/app</p> <p><i>Intervention:</i></p>	<p><u>DQI</u> Intervention: baseline: 52.0; f/u: NR Control: baseline: 52.0; f/u: NR Beta coefficient: +1.02 Intervention Pre-Post: "significantly higher"</p> <p><u>PA (min/wk)</u> Intervention: baseline: 286.1; f/u: NR Control: baseline: 277.9; f/u: NR Beta coefficient: +1.03 Intervention Pre-Post: "significantly higher"</p>

Study	Population Characteristics	Intervention Characteristics	Results
Intent: Diet + PA	Mean age: 43.8 yrs Gender: 100% male Race/ethnicity: NR SES: 24% blue collar	Intervention participants received given six PA and dietary challenges. Delivery was IT-based and consisted of a website (profile, progress, friends, groups, weight, information center) and automated feedback on progress toward completing their PA and dietary behavior challenges. Specific components of the IT-based intervention were intended to foster social support between participants via commenting on and viewing the progress of others in-line with social cognitive theory. Control: Provided with the same PA and dietary intervention as intervention participants, but materials were print-based.	Paper conclusions: Intervention was effective in improving physical activity and dietary behaviors in middle-aged males with no significant differences between IT- and print-based delivery modes.
<p>Author, Year: Kelders et al., 2011</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Weight</p>	<p>Sample size: Intervention: 127 Control: 142</p> <p>Demographics: <u>Intervention</u> Mean age: 41.2 yrs Gender: 67% female Race/ethnicity: (Dutch sample) SES: "low education" 13%</p> <p><u>Control</u> Mean age: 41.7 yrs Gender: 65% female Race/ethnicity: (Dutch sample) SES: "low education" 16%</p>	<p>Location (urbanicity): Netherlands (NR)</p> <p>Intervention duration: 3m When intervention occurred: 2008</p> <p>Intervention: Intervention components: SM + FB + GS Device(s): website</p> <p><i>Intervention:</i> Web-based lifestyle intervention focusing on increasing knowledge about quality of food. Goals are to maintain healthy weight status through healthy eating and physical activity. Intervention followed the transtheoretical model and consisted of 4 steps. Participants entered the website, assessed baseline status for weight, dietary and PA behaviors, and emotions concerning these behaviors. Participants asked to reflect on difficult</p>	<p><u>DQI (% Complying with Netherlands Nutrition Standards)</u> Intervention: baseline: 27%; f/u: 35% Control: baseline: 28%; f/u: 32% Summary Effect: +4 pct pts</p> <p><u>PA (% meeting Dutch Standard for PA)</u> Intervention: baseline: 38.6%; f/u: 46.0% Control: baseline: 41.0%; f/u: 49.0% Summary Effect: -0.6 pct pts</p> <p><u>BMI (kg/m²)</u> Intervention: baseline: 24.0; f/u: 24.1 Control: baseline: 23.9; f/u: 24.0 Summary Effect: 0 kg/m²</p> <p>Paper conclusions: There were no apparent effects of the intervention, although exploratory analyses showed that choosing to use or not to use the intervention led to different outcomes.</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>moments regarding unhealthy behavior. The intervention coaches the participant through this step by giving automated tailored feedback based on input. Final step is goal setting and monitoring achievement of goals. The intended use is one or multiple visits within a short period of time to complete the first 3 steps. For the last step, the intended use is once a week to once a fortnight over a longer period of time.</p> <p>Control: Received an email newsletter every 3 weeks, but not access to the intervention website. Newsletter contained general information about the study and the university. It contained leisure tips, but no information on healthy lifestyle.</p>	
<p>Author, Year: Levin et al., 2017</p> <p>Study Design: iRCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: n=23 Intervention: NR Control: NR</p> <p>Demographics: Mean age: 26.9 yrs Gender: 57% female Race/ethnicity: 83% White, 17% Hispanic SES: 52% earn ≤\$40K/yr</p>	<p>Location (urbanicity): US (NR)</p> <p>Intervention duration: 0.5m</p> <p>When intervention occurred: NR</p> <p>Intervention: Intervention components: SM + GS Device(s): mobile/app + telephone</p> <p><i>Intervention:</i> Participants were provided an orientation regarding the Acceptance and Commitment Therapy (ACT) quadrants of values, toward moves, internal barriers, and away moves. Researchers guided participants in sorting their experiences into these quadrants. An app on the ACT quadrants was provided to participants. It was delivered through an online mobile assessment platform that allowed apps</p>	<p><u>DOI (Weight Control Strategies Scale – Dietary Choice)</u> Intervention: baseline: 30.6; f/u: 33.9 Control: baseline: 27.1; f/u: 27.0 Summary Effect: +3.4</p> <p><u>PA (Weight Control Strategies Scale – PA)</u> Intervention: baseline: 16.5; f/u: 19.4 Control: baseline: 15.7; f/u: 14.1 Summary Effect: +4.5</p> <p>Paper conclusions: The app in this intervention appears promising for improving health behaviors, but additional revisions and research is needed.</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>with sophisticated prompting and interactive components as well as secure database integration. The app randomly prompted participants three times a day to check-in between 9 am and 9 pm for two weeks. The app would ask participants “Right now are you engaged more in an away move or a toward move? If unsure just guess” with the options to respond “away” or “toward.” Participants received check-in calls twice during the two week testing period. These calls were completed by the same, single researcher who conducted the app orientation, following up on experiences using the app and supporting continued adherence. The phone check-in calls were based on the supportive accountability model and associated protocols Check-in calls were relatively brief (approximately 5–10 min) and focused on supporting adherence to the app.</p> <p>Control: waitlisted</p>	
<p>Author, Year: Mailey et al., 2019</p> <p>Study Design: other design with concurrent comparison group</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p>	<p>Sample size: Intervention: 119 Control: 112</p> <p>Demographics: <u>Intervention</u> Mean age: 31.9 yrs Gender: 100% female Race/ethnicity: 91% white, 9% NR SES: 78% college or higher</p> <p><u>Control</u> Mean age: 33.1 yrs Gender: 100% female Race/ethnicity: 93% white, 7% NR</p>	<p>Location (urbanicity): midwestern US (NR)</p> <p>Intervention duration: 2.5m</p> <p>When intervention occurred: 2016</p> <p>Intervention: Intervention components: GS + SS Device(s): computer/website</p> <p><i>Intervention:</i> Participants were provided weekly modules consisting of 3–5 podcasts that were specifically tailored to military</p>	<p><u>FV Intake (cups/d)</u> Intervention: baseline: 2.6; f/u: 2.6 Control: baseline: 2.3; f/u: 2.3 Summary Effect: 0 cups/d Intervention Pre-Post: 0 cups/d</p> <p><u>Energy Dense Food Intake (teaspoons sugar/d)</u> Intervention: baseline: 14.8; f/u: 11.2 Control: baseline: 13.7; f/u: 10.4 Summary Effect: -0.2 tsp/d Intervention Pre-Post: -3.6 tsp/d</p> <p><u>Fiber Intake (g/d)</u> Intervention: baseline: 14.1; f/u: 14.0 Control: baseline: 13.6; f/u: 13.4</p>

Study	Population Characteristics	Intervention Characteristics	Results
Intent: Diet + PA	SES: 83% college or higher	<p>spouses: one related to physical activity, one related to diet, and 1–3 related to personal growth or emotional well-being. Each podcast included an activity that was accessible via the website. Participants were on a team with 4-6 other military spouses; teams had a captain and were encouraged to set weekly goals. There was also a discussion board. All intervention content delivered by website and was accessible via computer, tablet, or smartphone.</p> <p>Control: Control group given access to an existing website (Operation Live Well) that included weekly modules and vague prompts. A discussion board was accessible from the existing website.</p>	<p>Summary Effect: +0.1 g/d Intervention Pre-Post: -0.1 g/d</p> <p><u>PA (MET min/wk)</u> Intervention: baseline: 5,424; f/u: 7,003 Control: baseline: 5,885; f/u: 7,339 Summary Effect: 125 MET min/wk Intervention Pre-Post: 1,579 MET min/wk</p> <p>Paper conclusions: Web-based interventions may promote positive changes in mental health and health behaviors among military spouses.</p>
<p>Author, Year: Oftedal et al., 2019</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Greatest</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 20 Control: 20</p> <p>Demographics: <u>Intervention</u> Mean age: 34.9 yrs Gender: 60% female Race/ethnicity: 90% White, 5% Asian, 5% Other SES: 70% income ≥\$50K/yr</p> <p><u>Control</u> Mean age: 36.6 yrs Gender: 45% female Race/ethnicity: 90% White, 5% Asian, 5% Native Hawaiian or Pacific Islander SES: 50% income ≥\$50K/yr</p>	<p>Location (urbanicity): Australia (NR)</p> <p>Intervention duration: 1m</p> <p>When intervention occurred: 2018-19</p> <p>Intervention: Intervention components: SM + GS + FB Device(s): mobile/app</p> <p><i>Intervention:</i> The intervention had four components. First was the smartphone app that contained a unique identifier (password + login) so that use could be monitored. Participants set goals for and self-monitored physical activity, diet quality, and sleep and updated goals. Participants were encouraged to log daily by an automated push-notification from the app. Personalized feedback on progress toward goals was provided</p>	<p><u>DQI (Australian Recommended Food Score)</u> Intervention: baseline: 31.0; f/u: 35.6 Control: baseline: 33.2; f/u: 33.2 Summary Effect: 4.5</p> <p><u>MVPA (min/d) (derived from formula: walking+moderate activity + (2 X vigorous activity minutes)</u> Intervention: baseline: 1,462; f/u: 1,248 Control: baseline: 1,198; f/u: 1,273 Summary Effect: -307 min/d</p> <p><u>Sleep (Pittsburgh Sleep Quality Index Score)</u> Intervention: baseline: 7.5; f/u: 7.0 Control: baseline: 7.9; f/u: 7.1 Summary Effect: 0.20</p> <p>Paper conclusions: Findings indicated a positive effect on diet quality, while no significant effect was observed for other measures.</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>using graphs within the app on a daily, weekly, and monthly basis. The Balanced app uses a traffic light feature on the app’s home screen to provide dynamic feedback on performance. The second component was detailed, weekly summary reports (e.g., most active days, number of days where goals were achieved) that were emailed to participants. The third component was a Shift-Worker Move, Eat, and Sleep Handbook that explained the physical, mental, and social benefits of improving health behaviors and included tools for action planning. The main topics with sub-chapters were goal-setting for physical activity; goal-setting for healthy eating; goal-setting for sleep; and mindfulness practice and stress reduction. The handbook was delivered to participants as a pdf via email. The fourth component was weekly text messages that were scheduled with facts and tips for improving physical activity, diet quality, and sleep.</p> <p>Control: participants asked to maintain usual lifestyle habits during intervention period.</p>	
<p>Author, Year: Rabbi et al., 2015</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p>	<p>Sample size: Intervention: 9 Control: 8</p> <p>Demographics: Mean age: 28.3 yrs Gender: 47% female Race/ethnicity: NR SES: 24% professionals/76% university students</p>	<p>Location (urbanicity): US (NR)</p> <p>Intervention duration: 3 weeks</p> <p>When intervention occurred: NR</p> <p>Intervention: Intensity: High Component(s): SM + FB + GS Device(s): mobile/app</p>	<p><u>Energy Intake (kcal/d)</u> Intervention: baseline: NR; f/u: -99.3 Control: baseline: NR; f/u: 211.7 Summary Effect: -311.0 kcal/d</p> <p><u>PA (min/wk)</u> Intervention: baseline: NR; f/u: 70.0 Control: baseline: NR; f/u: 0 Summary Effect: 70.0 min/wk</p>

Community-based Digital Health and Telephone Interventions to Increase Healthy Eating and Physical Activity—Summary Evidence Table

Study	Population Characteristics	Intervention Characteristics	Results
<p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>		<p>Intervention: Intervention was designed to (1) use a combination of automatic and manual logging to track physical activity (eg, walking, running, gym), user location, and food intake, (2) automatically analyze activity and food logs to identify frequent and nonfrequent behaviors, and (3) use a standard machine-learning, decision-making algorithm to generate personalized suggestions that ask users to either continue, avoid, or make small changes to existing behaviors to help users reach behavioral goals. Participants were expected to track PA and dietary behaviors daily.</p> <p>Control: received generic prescriptive recommendations generated from a pool of suggestions for healthy living, such as “walk for 30 minutes” and “eat fish for dinner.”</p>	<p>Paper conclusions: This is a simple-to-use mobile phone app with preliminary evidence of efficacy.</p>
<p>Author, Year: Safran Naimark et al., 2015</p> <p>Study Design: gRCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Weight</p>	<p>Sample size: Intervention: 69 Control: 30</p> <p>Demographics: <u>Intervention</u> Mean age: 48.5 yrs Gender: 59% female Race/ethnicity: NR SES: NR</p> <p><u>Control</u> Mean age: 46.7 yrs Gender: 72% female Race/ethnicity: NR SES: NR</p>	<p>Location (urbanicity): “south and center of Israel” (NR)</p> <p>Intervention duration: 3.5m</p> <p>When intervention occurred: 2013</p> <p>Intervention: Intensity: Moderate Component(s): SM + FB Device(s): mobile/app</p> <p>Intervention: Web-based, password-protected, app was designed for a healthy non-professional audience interested in self-management and achievement of a healthy lifestyle. The app allowed the</p>	<p><u>DQI (score based on diet quality questionnaire)</u> Intervention: baseline: 67; f/u: 71 Control: baseline: 61; f/u: 62 Summary Effect: +2</p> <p><u>PA (min/wk)</u> Intervention change: +63 Control change: -30 Summary Effect: +93 min/wk</p> <p><u>Weight Change (%)</u> Intervention change: -1.7 pct pts Control change: 0.0 pct pts Summary Effect: -1.7 pct pts</p> <p><u>BMI (kg/m²)</u> Intervention: baseline: 26.2; f/u: 25.7 Control: baseline: 25.0; f/u: 25.0</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>participant to choose their own preferred diet within the Dietary Reference Intake recommendations that were related to the participant. First meeting was face-to-face where all participants received a presentation on a healthy lifestyle. The app enabled the participants to monitor dietary intake and physical activity by receiving real-time feedback.</p> <p>Control: Participants received the face-to-face meeting regarding a healthy lifestyle, and asked to live a healthy lifestyle, without being provided the app.</p>	<p>Summary Effect: -0.5 kg/m²</p> <p>Paper conclusions: There was a positive impact of this web-based app on lifestyle indicators. These results are promising in the app’s potential to promote a healthy lifestyle, although larger and longer duration studies are needed to achieve more definitive conclusions</p>
<p>Author, Year: Werkman et al., 2010</p> <p>Study Design: gRCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Weight</p>	<p>Sample size: Intervention: 203 Control: 197</p> <p>Demographics: <u>Intervention</u> Mean age: 59.5 yrs Gender: 100% male SES: 25% considered low level of education</p> <p><u>Control</u> Mean age: 59.4 yrs Gender: 100% male SES: 23% considered low level of education</p>	<p>Location (urbanicity): Netherlands (NR)</p> <p>Intervention duration: 12m</p> <p>When intervention occurred: 2003</p> <p>Intervention: Intensity: Low Component(s): SM + FB + GS + SS Device(s): computer/website</p> <p><i>Intervention:</i> Five program modules were provided. Participants could choose to use the modules or not. Modules 1 and 2 aimed to increase awareness of the energy balance concept and module 3 aimed to improve dietary and/or physical activity behavior. Module 1 was provided as a toolbox and included an information leaflet and several energy balance tools, (e.g. a pedometer). Module 2 was a CD-ROM providing individually computer tailored feedback on BMI, its health</p>	<p><u>FV Intake (g/d)</u> Intervention: baseline: 296.4; f/u: 338.2 Control: baseline: 313.6; f/u: 335.2 Summary Effect: +20.2 g/d</p> <p><u>Energy Intake (kcal/d)</u> Intervention: baseline: 2271; f/u: 2032 Control: baseline: 2342; f/u: 2151 Summary Effect: -48 kcal/d</p> <p><u>PA (min/wk)</u> Intervention: baseline: 270; f/u: 320.9 Control: baseline: 250; f/u: 288.6 Summary Effect: 24.26 min/wk</p> <p><u>BMI (kg/m²) (direct measure)</u> Intervention: baseline: 26.7; f/u: 26.2 Control: baseline: 27.3; f/u: 26.7 Summary Effect: -0.07 kg/m²</p> <p><u>Systolic BP (mmHg)</u> Intervention: baseline: 142.7; f/u: 136.2 Control: baseline: 145.6; f/u: 141.0 Summary Effect: -1.9 mmHg</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>consequences and energy balance behavior. In module 3 participants could receive computer-tailored feedback regarding: physical activity, fiber consumption, portion sizes of energy dense foods and fat consumption. Modules 4 and 5 were accessible via the study website. After login, participants could find information about diet and physical activity, participate in a forum and use links to other websites (module 4). Module 5 was an interactive weight maintenance program that provided a written tailored advice based on reported body weight, a food frequency questionnaire and a physical activity questionnaire. Last, the intervention group received newsletters every 2-3 months on diet and physical activity and encouragements to use the modules.</p> <p>Control: provided newsletters with general information about the study, such as study progress, and information about other topics, such as art exhibitions and city trips.</p>	<p><u>Diastolic BP (mmHg)</u> Intervention: baseline: 86.1; f/u: 82.1 Control: baseline: 86.1; f/u: 83.3 Summary Effect: -1.2 mmHg</p> <p>Paper conclusions: The multifaceted computer-tailored program for recent retirees did not appear to be effective.</p>
<p>Author, Year: Winett et al., 2011</p> <p>Study Design: RCT</p> <p>Suitability of Design: Greatest</p> <p>Quality of Execution: Fair</p> <p>Study Arm(s): Single</p> <p>Intent: Diet + PA</p>	<p>Sample size: Intervention: 231 Control: 225</p> <p>Demographics: Age range: 19 yrs -63 yrs, Mean age NR Gender: 87.5% female Race/ethnicity: 91.5% White SES: median income \$85K/year</p>	<p>Location (urbanicity): US (NR)</p> <p>Intervention duration: 12m When intervention occurred: 2007</p> <p>Intervention: Intensity: high Component(s): SM + FB + GS + SS Device(s): computer/website</p> <p><i>Intervention:</i> Included 52 weekly social cognitive theory (SCT) based modules, taking 5–10 minutes each. Participants logged-in</p>	<p><u>FV Intake (servings/d)</u> Intervention: baseline: 5.0, f/u: 6.4 Control: baseline: NR, f/u: NR Summary Effect: “similar” Intervention Pre-Post: +1.4 servings/d (p<0.01)</p> <p><u>PA (steps/d)</u> Intervention baseline: 6,179, f/u: 7,787 Control baseline: NR, f/u: NR Summary Effect: 1,423 steps/d Intervention Pre-Post: “similar”</p> <p><u>Weight (lbs)</u> Intervention: baseline: 171.9, f/u: 167.0</p>

Study	Population Characteristics	Intervention Characteristics	Results
		<p>as often as once a week with the username/password. Following SCT, modules 1–5 targeted self-efficacy (i.e., guided, gradual behavior change, e.g., increasing steps 400 steps per/day, and increasing intake of FV by one serving per day) and introduced self-regulatory strategies (i.e., tracking food intake, daily steps). In addition to self-efficacy and self-regulation (i.e., providing feasible and acceptable strategies, e.g., building steps into one’s normal routine and switching to acceptable fat modified foods), modules 6–16 focused on outcome expectations, on garnering social support for walking and nutrition changes, and on increasing PA enjoyment. Modules 17–52 involved continued self-regulation to enhance and maintain nutrition and PA behavior change. There was an enhanced comprehensive approach to self-regulation that included tailored planning, feedback, and goal setting for participants.</p> <p>Control: Same intervention as above without enhanced approach (i.e., no tailored planning, feedback, or goal setting).</p>	<p>Control: baseline: NR, f/u: NR Summary Effect: -4.9 lbs Intervention Pre-Post: NR</p> <p>Paper conclusions: A relatively simple entirely Internet-based program can help people improve health behaviors and prevent weight gain.</p>