Appendix Table 1. Detailed Intervention Content

Reference	Content
RCTs	
Davis et al. (2007)	Non-restrictive, individualized, home-based nutrition intervention for female Hispanic youth targeting two goals: (a) ≤10% of total daily calorie intake from sugar; (b) ≥14g/100kcal of dietary fiber per day. Weekly lesson content was culturally tailored and included dietary recall/review, cooking classes, games, workbook handouts, goal setting, MI, and intuitive eating. Body image, social pressures, and emotional eating were addressed.
Davis et al. (2009a)	Two intervention groups. (1) Nutrition education only: Non-restrictive, individualized, clinic-based dietary intervention for Hispanic youth targeting two goals: (a) ≤10% of total daily calorie intake from sugar, and (b) ≥14g/100kcal of dietary fiber per day. Weekly lesson content included MI, goal setting, free transportation, and $25 grocery cards. (2) Above plus two 60 minute strength training sessions twice per week. Sessions included MI for PA and both compound and isolated lower and upper body exercises.
Davis et al. (2009b)	Three intervention groups. (1) Nutrition education only: Non-restrictive, individualized, clinic-based dietary intervention for Hispanic youth targeting two goals: (a) ≤10% of total daily calorie intake from sugar, and (b) ≥14g/100kcal of dietary fiber per day. Weekly lesson content included MI, goal setting, free transportation, and $25 grocery cards. (2) Above nutrition intervention plus two 60 minute strength training sessions twice per week. Sessions included MI for PA and both compound and isolated lower and upper body exercises. (3) Above nutrition intervention plus combined aerobic and strength training (30 minutes cardiovascular activity, 30 minutes strength exercises) and MI for PA.
Davis et al. (2011)	Two intervention groups. (1) Individualized, progressive, clinic-based circuit training intervention: two 60–90 minute training sessions per week (30–45 minutes cardiovascular activity, 30–45 minutes strength training). (2) Above circuit training intervention plus MI.
Foster et al. (2010)	School-based lifestyle intervention delivered over 2.5 years to a cohort of children in sixth grade at enrollment, consisting of (a) nutrition and PA education modules integrated into classroom curriculum, (b) PA education delivered in physical education classes and additional supervised PA, (c) collaboration with school food service staff and nutrition teams to improve nutrition of foods and beverages served to students, (d) newsletters sent home to increase parent awareness/involvement and promote healthy behaviors over school breaks, and (e) social marketing campaigns (e.g., motivational posters) to encourage student enthusiasm for program goals. Curriculum included self-monitoring, goal setting, and problem solving to facilitate student behavior change in dietary intake and PA.

Kelly et al. (2015)	Home-based strength training intervention with monthly in-person visits and weekly phone calls from a personal trainer. Sessions consisted of compound and isolated upper and lower body exercises progressing in intensity and repetitions over 16 weeks, and four phone-based MI sessions with trainers.
Patrick et al. (2013)	Three intervention groups. (1) Access to website and tutorials designed to promote weight loss through increased physical activity and healthy eating, plus monthly informational mailings and weekly individualized emails from a health counselor. (2) Access to the above web resources and mailings, plus monthly 90 minute in-person group sessions for adolescents and parents, plus bi-monthly phone calls from a health counselor. (3) Access to above web resources and mailings plus three or more weekly text messages and access to text communication with a health counselor (cell phone and texting plan provided).
Rosenbaum et al. (2007)	School-based lifestyle intervention consisting of (a) weekly 45 minute lessons integrated into existing science classes and (b) supervised PA sessions three times per week (dance and non-contact kickboxing). Lessons addressed nutrition and physical activity, gave recommendations for behavior change in both areas, and encouragement to share this information with parents.
Shaibi et al. (2006)	Boys and Girls Club-based progressive resistance training program two times per week involving compound and isolated upper and lower body exercises, single and multiple joint resistance exercises, and abdominal strengthening exercises.
Treviño et al. (2004)	School-based educational lifestyle change program focused on three diabetes prevention-related goals: (a) decreased saturated fat intake, (b) increased fiber intake, and (c) increased PA. These three core messages were taught though daily classroom, school cafeteria, and afterschool program activities including cooking classes, dancing and other PA, club participation, games, and crafts. Curriculum encouraged goal setting, record-keeping, and sharing of health messages with family.
Weigensberg et al. (2014)	Educational lifestyle change program based on two primary components: (a) intuitive eating (e.g., non-restriction, eating for physical versus emotional reasons, reliance on internal hunger cues) and (b) modification of dietary carbohydrate intake. Intervention included six educational sessions, two trainer-supervised physical activity sessions, and four sessions on body image, role of self-esteem, and obstacles to behavior change.
Uncontrolled trials	
Coleman et al. (2010)	Educational lifestyle change program for both children and parents. Sessions included 30 minutes of joint parent-child PA, 60 minutes of separated PA, and a 30 minute educational class. The physical activities were designed to be replicable at home without specialized equipment. The classes consisted of diabetes education, cooking demonstrations, culturally-appropriate recipes, and discussion of portion sizes, how to access and afford healthier foods, and reduction of barriers to behavior change.

Shaibi et al. (2010)	Educational lifestyle change program designed for both children and parents including classes on diabetes risk, nutrition, physical activity, communicating with family about health, self-esteem and self-efficacy for behavior change, and goal setting. Curriculum also addressed barriers to behavior change such as cost of healthy foods, neighborhood safety, and coping with family-related stress.
Shaibi et al. (2012)	YMCA-based educational lifestyle change program involving classes for youth and parents, and three times per week 60 minute PA sessions for youth. Class topics included health risk factors, social roles within family, nutrition, physical activity, goal-setting, hands-on family grocery-shopping experiences, and youth self-esteem.
Van der Heijden et al. (2010)	Individualized, clinic-based aerobic exercise program consisting of supervised two times per week 30 minute exercise sessions (treadmill, elliptical, or bicycle) at an intensity level designed to correspond to 70% of their peak oxygen consumption. Participants were instructed to exercise at a similar duration and intensity two times per week at home.

Kcal, kilocalories; MI, Motivational Interviewing; PA, physical activity; YMCA, Youth Men's Christian Association

Appendix Table 2. Quality of Evidence Ratings Using the EPHPP

Authors (Year)	Selection bias	Study design	Confounders	Blinding	Assessment method	Attrition	Global rating[a]
Coleman et al. (2010)	3	2	N/A	N/A	1	2	2
Davis et al. (2007)	3	1	1	2	1	1	2
Davis et al. (2009a)	3	1	1	2	1	2	2
Davis et al. (2009b)	3	1	1	2	1	1	2
Davis et al. (2011)	3	1	1	2	1	1	2
Foster et al. (2010)	2	1	1	2	1	2	2
Kelly et al. (2015)	3	1	1	2	1	1	2
Patrick et al. (2013)	2	1	1	2	1	2	1
Rosenbaum et al. (2007)	3	1	1	2	1	1	2
Shaibi et al. (2006)	3	1	1	2	1	2	2
Shaibi et al. (2010)	2	2	N/A	N/A	1	NR	1
Shaibi et al. (2012)	2	2	N/A	N/A	1	1	1
Trevino et al. (2004)	2	1	1	2	1	1	1
Van der Heijden et al. (2010)	3	2	N/A	N/A	1	1	2
Weigensberg et al. (2014)	3	1	1	2	1	1	2

[a]Each study was assigned a global rating based on the total number of "weak" scores: global rating of 1 (strong) = no weak ratings; 2 (moderate) = one weak rating; 3 (weak) = two or more weak ratings.

EPHPP, Effective Public Health Practice Project rating scale; N/A, not applicable; NR, not reported