Intervention	Setting	Intervention description	Study population
SHARE-AP [14]	Large Haudenosaunee First Nation in southern Ontario, 2004-2005	Home visits by community health workers, to assist in setting diet and physical activity goals. Bottled water provided.	Households with at least 1 child, all members aged 5 to 70 years
Sandy Lake Health and Diabetes Project (SLHDP) [9, 16]	Geographically isolated Oji- Cree First Nation in Ontario, 1998-1999	School-based. Family component: weekly radio show, information booklets. Peer component: cooking video, radio show. Environmental component: school- wide meal content policy, healthy school lunch program that was changed to breakfast mid- intervention.	Children in grades 3, 4, and 5
Kahnawake Schools Diabetes Prevention Project (KSDPP) [12, 13, 16]	Large Haudenosaunee community in southern Quebec, 1994-2002	School-based. Ten 45-minute lessons/year on diabetes, nutrition, physical activity, fitness. Community activities: advertisements, community events, walking club, food tasting, line dancing club, etc. Training of community members, staff and volunteers. Environment and policy changes: school nutrition policy, new walking/cycling paths.	Children in grades 1- 6
Action Schools! BC [10, 11]	Three geographically isolated Tsimshian First Nations in northern British Columbia, 2007-2008	School-based. Teachers trained and visited 3 times per year by support team. Consulting, planning guides, and activity equipment provided. Teachers asked to provide 15 minutes extra physical activity per day and 1 healthy eating activity per week.	Children in grades 4- 12

Supplementary Table 1 Intervention descriptions

Obesity Prevention Plus Parenting Support (OPPS) [15]	Large Haudenosaunee community in southern Canada/northern New York (years unknown)	Home based. Parenting support through in-home peer education program over 16 weeks. Specific focus on parenting skills to facilitate development of healthy diet and exercise behaviours in children.	Mothers of children between 9 months and 3 years, with BMI >25 kg/m2
Minneapolis after- school program [17]	Minneapolis, Minnesota (years unknown)	After-school program. Addition of 7-month nutrition programming to after-school program, including exposure to healthful foods and modification to after- school dinners.	Mainly Anishnaabeg children and adolescents aged 5 to 18 years
PATHWAYS [18, 19, 20, 21, 22, 23, 24, 25]	41 Tohono O'odham, Apache, Lakota and Navajo communities in Arizona, New Mexico and South Dakota, 1993-2000	School-based. Classroom curriculum to promote healthful eating, 5 minute exercise breaks during classes, physical activity component to increase energy expenditure in phys ed classes, food service worker knowledge and skills component, family component including "family action packs" and school-based family activities.	Children in grades 3-5

Supplementary Table 2 Evaluation designs, measures, and reported results

Intervention and evaluation design	Outcome measurements and reported results				Factors identified as limiting measured change	
	PA and SB	Diet	Knowledge, attitudes, beliefs	Overweight, obesity	Fitness, other	
SHARE-AP [14] RCT (n=174). Baseline and 6 month follow-up.	<u>Measurement</u> : self-assessment questionnaire adolescents, 24h PA recall for children. <u>Results</u> : PA: NS SB: NS	Measurement: 24 h dietary recall. Results: Reduction in trans fats (-0.2 vs +0.6 g/day, P=0.02), fats, oils, sweets (-4.9 vs -0.3 servings/day, P=0.006), soda/juice (-0.03 vs -0.1 servings/day, P=0.02). Increase in: bottled or distilled water (+0.3 vs -0.1 servings/day, P=0.04). NS change in total energy, F/V, % calories from fat.	Measurement: Modified PATHWAYS questionnaire. <u>Results</u> : No significant change in knowledge scales.	Measurement: Height, weight, skinfold, DEXA analysis of subset. <u>Results</u> : BMI, NS change in skinfold thickness body fat percentage.		"Structural" effects (walkability, access to fresh foods).

Sandy Lake Health and Diabetes Project (SLHDP)[9, 16] Single sample pretest/posttest (n=122 children), one-year follow-up.	Measurements: 24 hour PA recall, TV and video game recall. <u>Results</u> : Not Reported.	<u>Measurement</u> : 24 h recall over 3 weeks. Reduction in % energy from total fat for boys (34% vs 31%, P<0.05) but not girls. <u>Results</u> : Increased likelihood of meeting recommended daily dietary fibre intake (OR 11.0, P<.01). NS change in total energy, total fat, carbohydrates, protein.	Measurement: Health knowledge and behaviour questionnaire, parent/guardian questionnaire. <u>Results</u> : Improvement in: fat knowledge scale (+1.7, range 0-10, P<0.001), dietary intent scale (+.67, range 0-6, P<0.001), dietary preference (+.70, range 0-6, P<0.001), dietary self-efficacy (+1.7, range 0-27, P<0.01), curriculum knowledge (+1.4, range 0-8, P<0.001).	Measurement: Height, weight, skinfold <u>Results</u> : Increase in BMI (0.95, P<0.001) and % body fat (1.18, P<0.001)		
Kahnawake Schools Diabetes Prevention Project (KSDPP) [12, 13, 16] Quasi-experiment. Longitudinal (baseline and 2 years), cross- sectional (baseline, 2, 3, 4, 5, 8 years). n~420 intervention children, 195 control children	Measurement: 7 day PA and SB questionnaire <u>Results</u> : Reduction in frequency of phys ed classes in intervention school to year 2 (2.84 to 1.85 class/week, P<0.01) and	<u>Measurement</u> : 7- day FFQ <u>Results:</u> Decrease in sugar consumption index (-41% P<0.05) fat consumption index (-34%, P<0.05) to year 8. Reduction (-64%) in fruit and yegetable	_	Measurement: Height, weight, skinfold <u>Results</u> : Lower increase in mean skinfold in intervention school (11.29 to 15.24 P<0.01) compared to control school (10.84 to 17.43 P<0.01).	Measurement: Walk/run test <u>Results</u> : improved run/walk test scores in comparison school (8% shorter P<0.01), vs intervention school (22% longer P<0.01).	Phys ed classes in intervention school reduced during evaluation period.

	increase in comparison school (1.71 to 2.18, P<0.01). Increase in PA, returned to baseline by year 8.	consumption index (-37%, P<0.05), to year 8. NS difference between intervention and control school at 2 years.		Increase in risk of high BMI or skinfold by year 8 (37% to 94% excess risk P<0.01).		
	Marginal decrease in TV viewing on school days, returned to baseline year 8. NS change on Saturdays.					
Action Schools! BC [10, 11] Single sample pretest/posttest. Baseline and after 7 month program (n= 163 children).	Measurement: Child and Adolescent Physical Activity Questionnaire, accelerometry <u>Results</u> : NS change in PA	<u>Measurement</u> : 24 h recall <u>Results</u> : Sig. increase in # vegetable types/day (1.10 to 1.45, P=0.028), NS change in total energy, carbohydrate, sugar, protein, fat, fruit/vegetable servings/day.	_	Measurement: Height, weight, waist circumference, blood pressure <u>Results</u> : zBMI: NS increase in waist circumference (zWC) (0.46 to 0.57, P=0.023)	<u>Measurement</u> : 20 min shuttle run <u>Results</u> : Sig. reduction in % with low aerobic fitness (57.3 to 44.8%, P=0.023)	Weather, early start by teachers might have reduced observed change.
Obesity Prevention Plus Parenting Support (OPPS) [15] RCT Random assignment of 43 mother-child pairs to treatment or	<u>Measurement</u> : Accelerometry and log <u>Results</u> : NS change in PA	<u>Measurement</u> : Three-day records of child food intake (parental report) <u>Results</u> : NS change in maternal or child fat	Measurement: Mothers' expectations, self- efficacy and intentions to change questionnaire	<u>Measurement</u> : Mother and child height (length) and weight <u>Results</u> : NS change in BMI of mothers.	_	_

parenting support only. Baseline and 16 weeks. Minneapolis after-	_	intake. Report "borderline" significant"reduction in child energy intake (-6.8 kcal/kg per day, P=0.06) <u>Measurement</u> ; 24 h	<u>Results</u> : Intervention mothers engaged in less restrictive feeding practices over time (Child Feeding Questionnaire) <u>Measurement</u> :	NS change in % of children in high BMI categories <u>Measurement</u> :		Data problems for
school program [17] Single sample pretest/posttest Baseline and after 7 month program (n=154 children and adolescents).		recalls <u>Results</u> : Sig. increase in fat and sugar consumption among boys 11-18 (22.9 to 39.8 servings, P=0.006), NS change among girls.	Age appropriate dietary self- efficacy questionnaires. <u>Results</u> : Sig. improvement in dietary self- efficacy among children 5 to 10 years (2.09 to 2.34, 0-3 scale, P=0.002). NS change among adolescents 11 to 18 years.	Height, weight <u>Results</u> : Not reported (BMI used as control, not outcome)		children 5 to 10 prevented conclusions.
PATHWAYS [18, 19, 20, 21, 22, 23, 24, 25] RCT (schools randomized) Total n=1,704 3rd grade children at baseline. Fifth grade follow-up. Subsamples for specific surveys.	<u>Measurement</u> : Accelerometry and log, PA questionnaire <u>Results:</u> NS change in PA.	<u>Measurement</u> School menu analyses, 24 h recall and school lunch observations <u>Results:</u> School lunch observation Sig. greater reduction in % total calories from fat in intervention vs control (-4.1%, vs - 1.4%, P<0.05),	Measurement Knowledge, attitudes and behaviours questionnaire <u>Results:</u> Boys: sig improved food choice intentions scores (+0.09 on a 0-1 scale, P=0.003), PA	<u>Measurement</u> : Height, weight, skinfold, bioelectrical impedance <u>Results</u> : NS change	_	Reliability of the PA instrument identified as potential problem.

saturated fat (-2.3%	(+0.04, P=0.002).		
vs -0.09%, P<0.0001),	curriculum		
lower increase in %	knowledge (+0.08.		
calories from	P=0.001).		
carbohydrates (+3.8	,		
vs +0.1, P<0.05).	Girls: sig.		
. ,	improvement in		
NS difference in	food choice		
energy, total	intentions (+0.15,		
carbohydrates, total	P=0.001), PA self-		
fat, protein,	efficacy (+0.07,		
saturated fat,	P=0.014), PA		
polyunsaturated fat,	(+0.03, P=0.020),		
sucrose, fructose,	curriculum		
dietary fibre.	knowledge (+0.15,		
	P=0.001).		
24 hour recalls:			
intervention children	NS change in food		
had lower total	self-efficacy,		
energy intake (-263	attempted weight		
kcal, P<0.01), protein	loss, healthy body		
(-9.5g. P<0.01), fat (-	size attitudes.		
15.1g, P<0.001),			
saturated fat (-1.1%,			
P<0.001),			
significantly higher %			
calories from			
carbohydrates			
(+2.5%, P<0.05),			
compared with			
controls.			

PA, physical activity; SB, sedentary behaviour; RCT, randomized controlled trial; NS, not significant; F/V, fruits and vegetables; DEXA, dual-energy x-ray absorptiometry; FFQ, food frequency questionnaire; OR, odds ratio.