

Table 4-E.1. Description of components tested in studies of the effects of single- vs. multi-component nutrition education interventions on dietary intake-related behavior

Study	Intervention Groups			Outcomes*
	Single-Component (SC) Intervention	Multi-Component (MC) Intervention	Control	
DeBar, 2006 RCT	Individual counseling visits	<ul style="list-style-type: none"> <li>• Individual counseling visits</li> <li>• Telephone calls</li> <li>• Group meetings</li> <li>• Diet self-monitoring</li> <li>• Use of a study website</li> <li>• Youth/parent newsletters</li> <li>• Fitness center membership</li> </ul>	No control group	<ul style="list-style-type: none"> <li>• MC &gt; SC for calcium, vitamin D, fruit, vegetables*</li> <li>• MC = SC for soda (no change)</li> </ul>
He, 2009 RCT	Free fruit/vegetable snack	<ul style="list-style-type: none"> <li>• Free fruit/vegetable snack</li> <li>• Classroom nutrition education</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• MC &gt; Control for fruit/ vegetable consumed at school*</li> <li>• SC = MC and control for fruit/ vegetable consumed at school (no change)</li> <li>• MC, SC = control for fruit/ vegetable consumed at home (no change)</li> </ul>
Hopper, 2005 RCT	Usual school nutrition education curriculum	<ul style="list-style-type: none"> <li>• Classroom nutrition education</li> <li>• Physical education</li> <li>• Parental involvement</li> </ul>	No control group	<ul style="list-style-type: none"> <li>• MC &gt; SC for fat intake*</li> <li>• MC = SC for calories, protein, carbohydrate, saturated fat, cholesterol, sodium, % energy from carbohydrate, % energy from fat (no change)</li> </ul>
Hopper, 1996 RCT	Classroom nutrition education	<ul style="list-style-type: none"> <li>• Classroom nutrition education</li> <li>• Parental involvement</li> </ul>	Usual school nutrition education curriculum	<ul style="list-style-type: none"> <li>• MC = SC for fat (both decreased significantly compared to controls)*</li> </ul>
Kitzman-Ulrich, 2009 RCT	Family-based psychoeducation	<ul style="list-style-type: none"> <li>• Family-based psychoeducation</li> <li>• Multifamily group therapy</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• SC &gt; MC, control for calories*</li> </ul>
Long, 2004 Quasi-experimental	Usual classroom nutrition education curriculum	<ul style="list-style-type: none"> <li>• Classroom nutrition education</li> <li>• Web-based nutrition education</li> </ul>	No control group	<ul style="list-style-type: none"> <li>• MC = SC</li> </ul>
McAleese, 2007 Non-RCT	Classroom nutrition education	<ul style="list-style-type: none"> <li>• Classroom nutrition education</li> <li>• School gardening</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• MC &gt; SC and control group for fruit, vegetables, vitamin A, vitamin C, fiber*</li> </ul>
McKenzie, 1996 RCT	Home nutrition education (parent-child auto-tutorial)	<ul style="list-style-type: none"> <li>• Individual counseling sessions (child and parent)</li> <li>• Take-home nutrition education materials</li> <li>• Telephone access to an RD</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• SC decreased fruit (fruit and fruit juice) *</li> <li>• MC, Control – no significant changes</li> </ul>
Neumark-Sztainer, 2003 RCT	Distribution of educational materials on healthy eating and physical education in school	<ul style="list-style-type: none"> <li>• Nutrition education sessions</li> <li>• Physical activity sessions</li> <li>• Social support sessions</li> <li>• Lunch meetings with healthy food</li> <li>• Parental involvement</li> </ul>	No control group	<ul style="list-style-type: none"> <li>• MC = SC</li> </ul>
Olvera, 2010 Non-RCT	Behavioral counseling sessions	<ul style="list-style-type: none"> <li>• Nutrition education sessions</li> <li>• Physical activity sessions</li> <li>• Behavioral counseling sessions</li> </ul>	No control group	<ul style="list-style-type: none"> <li>• MC = SC (no change)</li> </ul>
Parmer, 2009 Non-RCT	Classroom nutrition education	<ul style="list-style-type: none"> <li>• Classroom nutrition education</li> <li>• School gardening</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• MC &gt; SC &gt; Control for vegetables*</li> </ul>

Table 4-E.1. Description of components tested in studies of the effects of single- vs. multi-component nutrition education interventions on dietary intake-related behavior—continued

Study	Intervention Groups			Outcomes*
	Single-Component (SC) Intervention	Mult-Component(MC Intervention)	Control	
Prell, 2005 RCT	Modification of school meals	<ul style="list-style-type: none"> <li>• Modification of school meals</li> <li>• Home economics education/cooking</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• MC &gt; Control for fish*</li> <li>• MC increased fish*</li> <li>• SC = Control and MC (no change)</li> </ul>
Reinaerts, 2008 RCT	Free fruit/vegetable snack	<ul style="list-style-type: none"> <li>• Classroom nutrition education</li> <li>• Parental involvement</li> </ul>	Control group received no intervention	<ul style="list-style-type: none"> <li>• MC = SC &gt; Control* (increased fruit, total fruit, juice, vegetables)</li> <li>• SC &gt; MC, and Control – vegetable intake at snack and dinner*</li> </ul>
Sahota, 2001 RCT	Usual school nutrition education curriculum	<ul style="list-style-type: none"> <li>• Teacher training</li> <li>• Modification of school meals, foods sold in school</li> <li>• Action plans developed and implemented for nutrition and physical education curriculum</li> </ul>	No control group	<ul style="list-style-type: none"> <li>• MC &gt; SC for vegetables*</li> <li>• SC &gt; MC (obese subjects) for fruit*</li> <li>• SC &gt; MC (overweight subjects) for sugar*</li> </ul>

\* indicates that the differences in outcomes described were statistically significant at the  $p \leq 0.05$  level  
> indicates an improvement in one group compared to another  
= indicates no differences between groups