Integrated Nutrition Education Program

University of Colorado—Anschutz Medical Campus, School of Medicine and School of Public Health, Rocky Mountain Prevention Research Center

Overview

The Integrated Nutrition Education Program (INEP) is a multi-level comprehensive direct education and policy, system, and environment (PSE) change intervention designed to increase fruit and vegetable intake and physical activity levels in children and their parents and to reduce the risk of obesity and chronic disease. INEP’s programming consists of classroom nutrition education and physical activity lessons, take-home recipes, newsletters, and parent nights designed to combat the rising rates of obesity, diabetes, hypertension, and other negative health outcomes. INEP’s programming is designed to positively influence healthy eating habits for students and empower them to take what they learn in school back home to their families at no cost to participants. Target Behavior: Healthy Eating, Physical Activity and Reducing Screen Time Intervention Type: Direct Education, PSE Change

Intervention Reach and Adoption

INEP targets Pre-K through 5th grade students in the classroom at elementary schools with high free and reduced lunch participation rates. Nutrition education in low-income elementary schools helps shape children’s food choices and their health into adulthood. Elementary schools are an ideal setting for a childhood obesity-prevention intervention as it reaches children at a young age, and schools are the “hub” of the community, allowing access to the parents of these children. All students receive the direct education, and all parents receive indirect programming (e.g., take-home recipes and newsletters). Setting: Child care (Learn), Community (Live), School (Learn) Target Audience: Preschool (<5 years), Elementary School, Parents/Mothers/Fathers Race/Ethnicity: All
**Intervention Components**

INEP includes 9 classroom-based nutrition education lessons that include a book that is read to the children and involve food preparation and tasting, as well as “Brain Boosts” to increase physical activity throughout the school day. Other components that are not critical features, but that are highly recommended are teacher training, parent recipes and newsletters, the PSE assessment tool, and corresponding technical assistance.

**Intervention Materials**

INEP intervention materials include the following available on the INEP website:

- Pre-K to 5th grade classroom-based nutrition education curriculum (9 lessons/grade)
- Health newsletters for families (English/Spanish)

The following items are available upon request:

- Pre-K to 5th grade classroom-based nutrition education curriculum (past lessons not being used)
- Family letters with recipes and health tips
- Health newsletters for families (prior years)
- Evaluation tools (current and prior years)

**Intervention Costs**

Materials available at no cost.

**Evidence Summary**

Classroom plate waste studies examined the impact of INEP curriculum on students’ consumption of fruits and vegetables. Statistically significant difference in INEP students’ consumption of snap peas, a vegetable that is used in INEP, and recipes that incorporated fruits and vegetables were obtained, when compared to control students. Statistically significant increases in students’ nutrition-related knowledge and self-efficacy to prepare healthy foods resulted for students participating in INEP. Parents and teachers report an increase in their and their children’s consumption of fruits, vegetables, and water, and an increase in their and their children’s physical activity levels because of INEP. Published research includes:

- Outcomes from a School-based Nutrition Education Program Using Resource Teachers and Cross-disciplinary Models

**Evidence-based Approach:** Research-tested
Evaluation Indicators

Based on the SNAP-Ed Evaluation Framework, the following outcome indicators can be used to evaluate intervention progress and success.

<table>
<thead>
<tr>
<th>Population Results (R)</th>
<th>Readiness and Capacity – Short Term (ST)</th>
<th>Changes – Medium Term (MT)</th>
<th>Effectiveness and Maintenance – Long Term (LT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>ST1</td>
<td>MT1, MT2, MT3</td>
<td></td>
</tr>
<tr>
<td>Environmental Settings</td>
<td></td>
<td>MT5</td>
<td></td>
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<tr>
<td>Sectors of Influence</td>
<td></td>
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- ST1a, ST1b: Statistically significant difference in intervention student’s willingness to try recipes that incorporated fruits and vegetables
- MT1: Healthy Eating Behaviors
  - MT1c: 85% of students consumed fruits and vegetables (lesson observation) 91% of parents report their children are eating more than one kind of fruit per day
  - MT1d: 85% of students consumed fruits and vegetables (lesson observation); 87% of parents report their children are eating more than one kind of vegetable per day
  - MT1f, h, m: 39% of parents are using MyPlate to make food choices; 82% of parents report they are drinking fewer sugary drinks; 79% of parents are eating more cups of vegetables per day
- MT2f: 85% of parents are purchasing more fruits and vegetables
- MT3a: 82% of parents are more active; 91% of parents report their children are more active; 81% of teachers report their students are more active
- MT5a - f: 45 elementary schools adopted at least 1 PSE change focused on healthy eating; 83 nutrition-related PSE changes were made in FY 18

Evaluation Materials

Tools measure the following based on INEP’s impact:
- Plate waste- student consumption of fruits and vegetables
- Student survey- nutrition knowledge; preferences and self-efficacy around fruits and vegetables
- Parent survey- impact on home and children
- Teacher survey- acceptability and quality improvement, impact on own behavior; perception of student behavior
- Principal survey- perceived impact on school
- PSE Assessment tool- school needs assessment/environmental scan
Additional Information

**Website:** The INEP website includes classroom-based nutrition education curriculum for 9 lessons per grade, health newsletters for families, as well as information about the program and other materials available upon request. **Contact Person:** Julie Atwood 303-724-4457 Julie.Atwood@cuanschutz.edu