

## The Use of Energizers to Reinforce Nutrition Concepts and Encourage Physical Activity

### Abstract

Given the importance of including daily physical activity as a part of a healthy lifestyle, Extension educators should do as much as they can to incorporate physical activity into their educational programming. A University of Minnesota Extension team has created a set of activities that incorporate motion to reinforce nutrition concepts, which can be adapted by educators to almost any topic. Initial evidence suggests incorporating these activities is both effective and reasonably easy. With appropriate time and space, these energizers can be used to increase participants' physical activity, as well as reinforce lesson concepts and make class more fun.

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### Introduction

Research on integrating short bursts of physical activity into classrooms and workplaces shows evidence of many positive impacts on both children and adults. A synthesis of research in classrooms and workplaces, performed by Barr-Anderson, AuYoung, Whitt-Glover, Glenn, and Yancey (2011), showed evidence of impacts on:

- Physical activity levels in children (strongest evidence) and adults.
- Academic and work performance outcomes.
- Broader physical health outcomes (e.g., BMI, blood pressure, etc.).
- Emotional health.

Despite this, the idea of integrating physical activity into community-based nutrition education is

relatively new. Although the 1995 Dietary Guidelines for Americans recommended "balancing the food you eat with physical activity," it wasn't until the release of the 2005 Dietary Guidelines (US Department of Health) that the USDA encouraged Supplemental Nutrition Assistance Program-Education (SNAP-Ed) nutrition educators to talk about physical activity and its relationship to healthy eating.

In response to the new key message, "become more physically active every day as a part of a healthy lifestyle," Extension educators from the University of Minnesota began adapting programming to include physical activity (Van Offelen, Schroeder, Leines, Roth-Yousey, & Reicks, 2011) and ultimately developed a set of nutrition-related physical activities for inclusion SNAP-Ed classes. Energizers Classroom-based Physical Activities (Maher, Kenny, Shields, Scales, & Collins, 2006), a set of activities developed for use with school children were modified, piloted, and finalized (based on initial feedback) by SNAP-Ed paraprofessionals to focus on nutrition-related topics and to incorporate physical activity in the lessons with participants of all ages. Extension educators in Health & Nutrition adapted the activities to ensure relevance and ease of teaching across a variety of audiences in classrooms and community settings.

Nutrition messages used in the energizers are in keeping with USDA's 2010 Dietary Guidelines for Americans recommendations for a healthy diet and active lifestyle. In total, 53 nutrition energizers were finalized for use by paraprofessionals to enhance existing SNAP-Ed curricula (University of Minnesota Extension). These nutrition-related energizers are ideal for encouraging participants to make healthy diet and lifestyle choices while giving everyone in the class a boost of energy. What's more, preliminary data suggest these energy-filled lessons have helped increase participants' physical activity beyond of the classroom settings.

## **Incorporating "Energizers"**

Energizers are highly flexible and adaptable to fit the specific requirements and limitations of the audience, the educator, the nutrition message, and the space available (Kemirembe, Radhakrishna, Gurgevich, Yoder, & Ingram, 2011). Energizers are designed to use standard nutrition education equipment and to be delivered with minimal additional preparation. In addition, energizers can be adapted to fit the flow and time available during a lesson. The educator can insert an energizer at the beginning, middle, or end of the lesson and can conduct the energizer anywhere from 2 to 10 minutes.

Each energizer activity contains information on appropriate age levels, classroom formations, and equipment, and includes step-by-step directions. They are available for download from the University of Minnesota Extension website (University of Minnesota Extension). Energizers are indexed by USDA key (nutrition) messages in an appendix to assist educators in selecting the best energizer for the nutrition or health concept being taught.

For example, Label Moves is an energizer reinforcing Nutrition Facts Label concepts: each participant receives a Nutrition Facts label, and the educator instructs participants to perform a movement that corresponds to their own label (e.g., if your product has whole grain listed as the first ingredient, do 10 arm circles). Different movements are assigned to each Nutrition Fact based on the lesson contents and objectives. Label Moves can be adapted to fit the physical abilities of the participants (e.g., seated

actions for older adults or standing actions for youth), the lesson content (e.g., whole grains, fiber, sodium, or fat content), and the time available in the lesson (e.g., changing the number of nutrition facts used and/or number of repetitions to meet time demands).

## Evaluation Efforts

To try to get a sense of how participation in energizers affected students, a limited post-intervention evaluation was followed using two groups (Davis, 2003). Participants were enrolled in similar nutrition education classes:

- Some had an energizer component and were labeled "intervention."
- Some had no energizer component and were labeled "control."

A total of 315 participants completed a reflective evaluation survey after attending a 4-6 week SNAP-Ed course. One question asked for a yes or no response to the statement, "I am more physically active now than I was before this class."

Participant characteristics are described in Table 1. A binary logistic regression was used in the analysis, and controls for race, gender, age, number of sessions attended, and time in class were included. The regression was applied to isolate how energizers affected the likelihood of a participant saying they are more physically active now than before the course. The results (Table 2) estimate that those with the intervention were more than twice as likely to say they were more physically active after the class ( $p < .05$ ). A 95% confidence interval shows that while the results are positive, the magnitude is unclear.

Although statistical control was used, the analysis of self-report data has validity limitations in that classes were not randomly assigned energizers. Further efforts to understand program effects should include objective measures of physical activity, other impact measures, and randomization.

**Table 1.**  
Demographics of Participants

	<b>Had Energizers (Intervention)</b>	<b>Did Not Have Energizers (Control)</b>
<b>Total Participants</b>	183	132
<b>Male</b>	95 (51.9%)	56 (42.4%)
<b>Female</b>	88 (48.1%)	76 (57.6%)
<b>American Indian or Alaska Native</b>	1 (0.50%)	1 (0.8%)
<b>Asian</b>	18 (9.8%)	1 (0.8%)
<b>Black or African American</b>	6 (3.3%)	32 (24.2%)

<b>White</b>	151 (82.5%)	96 (72.7%)
<b>More than One Race</b>	7 (1.1%)	2 (1.5%)
<b>Youth - younger than 13</b>	125 (68.3%)	67 (50.8%)
<b>Teens - 13-19</b>	58 (31.7%)	22 (16.7%)
<b>Adults - older than 19</b>	0 (0.0%)	43 (32.6%)
<b>Mean Number of Sessions Attended</b>	6.97	6.09
<b>Mean Minutes in Class</b>	418	412

**Table 2.**

Selected Results of Binary Logistic Regression

	<b>B</b>	<b>Exp(B)</b>	<b>95% C.I. for EXP(B)</b>
<b>Energizer</b>	0.716*	2.047	1.06 > Exp(B) > 3.954
*p<.05			

## Conclusions and Recommendations

Nutrition education paraprofessionals identified many benefits and challenges of energizers in a follow-up survey. For instance, they commented that energizers make nutrition lessons more interactive, help participants be more alert, promote physical activity, and promote interest in the lesson. On the other hand, limited space in some settings and limited time in some classes can make using energizers a challenge. Additional paraprofessional training and coaching to include energizers with all age groups and in all settings will increase energizer use. The authors have developed online training to enable dissemination across the nation. This training includes a train-the-trainer module for state and regional leaders and a module for trainers to use with paraprofessional community nutrition educators.

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