

Choose Health: Food, Fun and Fitness, an Experiential Youth Curriculum That Promotes Healthy Eating and Active Play

Wendy S. Wolfe, PhD

INTRODUCTION

Children make many independent food and activity decisions. Youth nutrition education can build the knowledge, skills, and behaviors children need to navigate obesogenic environments and develop habits that will persist into adulthood and prevent obesity and chronic disease.¹ *Choose Health: Food, Fun and Fitness* (CHFFF) was developed to meet this need.

CURRICULUM

Choose Health: Food, Fun and Fitness is a 6-lesson curriculum for third- to sixth-graders that uses experiential learning to teach healthy eating and active play (Figure 1). The objectives are to help youth learn and practice the following research-based behaviors that decrease the risk of child obesity and chronic disease²:

- Replace sweetened drinks with low-fat milk and water (lessons 1 and 6)
- Eat more vegetables, fruits, and whole grains (lessons 2, 4, and 6)
- Eat fewer high-fat and high-sugar foods (lessons 3, 5, and 6)
- Be more active (all lessons)

A unique feature of CHFFF is that the scripted lessons are structured based on the 4-A dialogue approach: Anchor to past knowledge and experience, Add new information, Apply by doing, and Away to generalize to other situations.³ This structure

supports the 4-H youth development Experiential Learning Model theoretical framework⁴ and ensures youth interaction and engagement. *Choose Health: Food, Fun and Fitness* is also adaptable. The full lessons take 70–90 minutes but can be delivered in 45 minutes with tasting rather than food preparation and only 1–2 games. A special characteristic is that CHFFF was also designed to be co-taught, after in-depth training, by teens teaching nutrition to younger youth in the companion program, *Choose Health Action Teens* (see Acknowledgments).

The CHFFF lesson content and activities align with Social Cognitive Theory.⁵ Each lesson includes hands-on, interactive nutrition activities, problem solving, and participatory experiences to enhance learning and skills (Social Cognitive Theory behavioral capacity, expectations, self-efficacy, and expectancies constructs). Example activities include measuring sugar in sweetened drinks and fat in fast foods (Figure 2); sorting nutrition facts labels by sugar, fat, and fiber using real food labels; and creating meals and snacks for a day that include the recommended amount of vegetables and fruits.

In each lesson, youth help prepare or at least taste an easy, healthy, kid-friendly recipe, expanding their preferences and cooking skills (behavioral capacity, expectations, and self-efficacy). To allow flexibility in teaching sites and logistics, 2 recipes per lesson are included: 1 that requires

electricity and 1 that does not. All include at least 1 vegetable or fruit and meet New York *Expanded Food and Nutrition Education Program* (EFNEP) guidelines: ≤ 2 teaspoons added sugar per serving, no full-fat dairy, and $\leq 35\%$ calories from fat. The recipes are sent home to families in a colorful newsletter, and in our evaluation, almost two thirds of youth reported that they or their family prepared some at home (behavioral capacity and reinforcement).⁶

Rather than talking about physical activity, youth play a variety of games to learn new ways to be active and promote alternatives to screen time (behavioral capacity, expectations, and self-efficacy). Each lesson includes 4 active games designed to keep all kids moving and having fun regardless of athletic ability; at least 2 games can be played in small spaces such as a classroom. How-to videos for educators demonstrate more complex games.

Youth set personalized weekly goals at the end of each lesson, which are included in their take-home newsletter to gain family support, and reviewed at the next lesson (self-control, behavioral capacity, and reinforcement). Youth are encouraged to try new foods and behaviors, praised for their efforts, and given a certificate at the end of the series (reinforcement).

Curriculum Development

Choose Health: Food, Fun and Fitness was originally developed in 2010 to fill a void in evidence-based curricula focused on obesity prevention behaviors for this commonly targeted age group and practical for delivery in EFNEP and the *Supplemental Nutrition Assistance Program-Education* (SNAP-Ed). It was developed collaboratively by nutrition and youth development experts, with iterative field testing and extensive input from county Extension nutrition and

Division of Nutritional Sciences, Cornell University, Ithaca, NY

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Address correspondence to: Wendy S. Wolfe, PhD, Division of Nutritional Sciences, Cornell University, 373 MVR Hall, Ithaca, NY 14853; Phone: (607) 255-2677; Fax: (607) 255-0027; E-mail: ww16@cornell.edu

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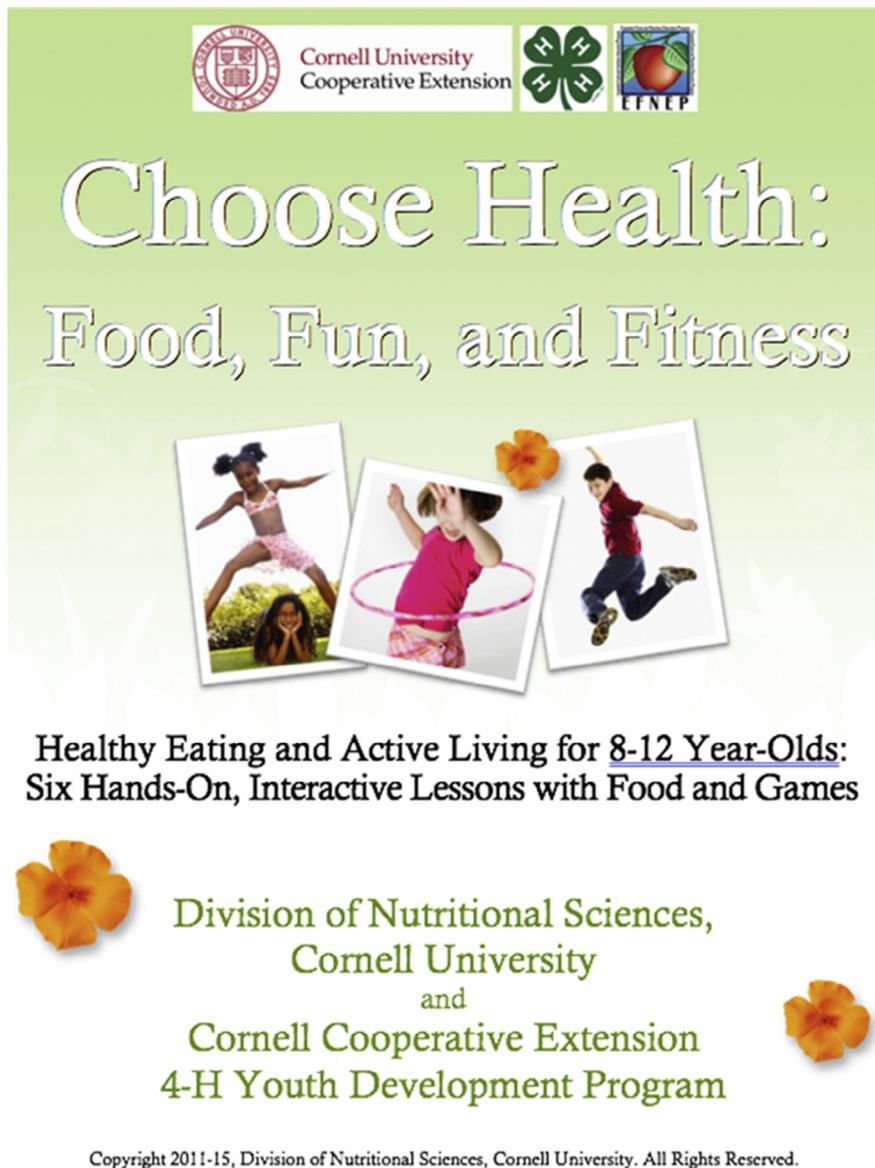


Figure 1. Cover page, *Choose Health: Food, Fun and Fitness* curriculum.

4-H professionals and front-line educators to ensure it met their needs. After revision following an initial pilot

test in 9 counties in 2010, it was revised again in 2014 based on (1) 2 youth focus groups per lesson,



Figure 2. “Yuck, look at all that fat!” Participants in CHFFF react after measuring the amount of fat in typical fast-food items such as burgers and chicken nuggets.

immediately after lesson delivery, in 5 counties; and (2) an online survey completed by 49 CHFFF educators. In 2016, the curriculum was translated into Spanish, with input from educators of varying Spanish dialects.

IMPLEMENTATION AND EVALUATION

Choose Health: Food, Fun and Fitness has been delivered in schools, after-school programs, summer day camps, and other settings in EFNEP, SNAP-Ed, 4-H, and other programs, and taught to seventh- and eighth-graders as well as the targeted third- through sixth-graders. It has been used in at least 30 states, with over 500 copies sold since December 2015 (Alaina Masler, National 4-H Council, written communication, May 2017). The ideal CHFFF group size is 10–12, but larger and smaller groups also have been successful. In-person training is recommended; a 2-day group training guide and webinar are provided.

Choose Health: Food, Fun and Fitness was evaluated in 2013–2015 in New York EFNEP and SNAP-Ed using the federal EFNEP pre-post surveys and added CHFFF-specific items. The results provides practice-based evidence that CHFFF promotes positive behavior change in participating youth, with significant improvements ($P < .001$) in consumption of vegetables, fruit, and sugar-sweetened beverages; nutrition label reading; tasting new foods; and other food and activity behaviors and skills.⁶ A more in-depth evaluation is under way.

ACKNOWLEDGMENTS

The evaluation was reviewed by Cornell’s Institutional Review Board and deemed exempt because it was part of regular educational programming. To purchase CHFFF, go to <http://www.4-hmall.org>. For information and support materials on both CHFFF and CHAT, go to www.fnec.cornell.edu. Development of the CHFFF curriculum was supported by the National Institute for Food and Agriculture, US Department of Agriculture, via EFNEP funding and special Smith Lever funds under Agreement Nos. 2009-10-264 and 2012-13-159. The Spanish translation was facilitated by National 4-H

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