Prevention of Obesity through Improving Dietary Patterns, Healthy Eating, and Physical Activity

Title: Prevention of Obesity through Improving Dietary Patterns, Healthy Eating, and Physical Activity

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Performing Department
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Tobey, L

Collaborating/Partnering States
(NO DATA ENTERED)

Collaborating/Partnering Organizations
(NO DATA ENTERED)

Collaborating/Partnering Countries
(NO DATA ENTERED)

Non-Technical Summary
Obesity is multi-factorial, involving complex interactions between physiological, behavioral, social, and environmental variables. While obesity has been increasing among adults, it is also becoming more prevalent in children. Currently, ~32% of children and adolescents aged 2-19 years of age are overweight, while 17% are obese. The increasing number of youth experiencing weight problems is troubling, since it puts them at risk for one or more chronic diseases earlier in life. The multi-disciplinary project will bring together a team of researchers who will apply a social-ecological framework to examine how exposure and familiarity with more nutritional foods can increase acceptability and incorporation of these foods into diets of various populations. Researchers will also examine if greater exposure and familiarity with whole grains, vegetables and fruits increases the selection and incorporation of these foods into typical dietary patterns at home, in school lunches and in residential retirement communities. The project will examine what environmental and social factors predict how groups (e.g. communities, schools, families) and/or individuals (e.g. mothers, family food providers) make long-term positive changes in dietary patterns, healthy eating and physical activity (PA) behaviors for obesity prevention and reduction of chronic disease risk. Finally, we are interested in the impact of diet (types of foods) and levels of PA intensity on appetite, food selection and weight management.

Goals / Objectives
The project team will apply the social-ecological framework to study how exposure and familiarity with more nutritional foods can increase incorporation of these foods into diets of various populations, as well as acceptability. The study will also determine if the greater exposure and familiarity with whole grains, vegetables and fruits increases the selection and incorporation of these foods into typical dietary patterns at home and in school lunches as well as among seniors in residential retirement communities. The project will examine what environmental and social factors predict how groups (e.g. communities, schools, families) and/or individuals make long-term positive changes in dietary patterns, healthy eating and physical activity (PA) behaviors for obesity prevention and reduction of chronic disease risk. Finally, we are interested in the impact of diet (types of foods) and levels of PA intensity on appetite, food selection and weight management.
individuals (e.g. mothers, family food providers, etc.) make long-term positive changes in dietary patterns, healthy eating and PA behaviors for obesity prevention and reduction of chronic disease risk. Finally, we are interested in the impact of diet (types of foods) and levels of PA intensity on appetite, food selection and weight management. Specific objectives include: 1. Determine what factors, such as creative, new tasty healthy dishes, realistic methods for incorporating healthy foods into daily dietary patterns, result in greater frequency of consumption; 2. Examine how community gardens in rural communities may increase healthy eating and encourage economic growth through the development of microenterprise ventures designed to market produce within the local community; 3. Determine key factors for positive long-term changes in weight and waist circumference (WC) by exploring how low-energy dense diets can reduce total energy intake through increased satiety and improve overall dietary patterns. A secondary aim is to examine how the interaction of low-energy dense diets and different levels of PA impact weight, WC and risk of chronic disease. Focus will be on children, young adults and parents; and 4. Determine the key factors that link the above projects and their individual outcome goals into a larger project that can be submitted for external funding for obesity prevention in young adults and their families.

Methods

AIM 1- Step 1: (Year 1-2) Generate and test healthy easy-to-prepare and acceptable recipes for use in homes, schools and senior care facilities; Step 2: (Year 3-5) Explore how sensory acceptability is related to intent to choose, popularity of preparation, actual choice and popularity or choice (e.g., food waste) among various audiences. AIM 2 - Step 1: (Years 1-2) Provide financial support to enable 4-5 rural communities to construct and develop garden projects for low-income children and youth, and provide technical assistance and training in organic gardening, nutrition education, and basic marketing skills to youth and adult mentors; Step 2: Collect feedback on the development of training modules designed to bring adult volunteers and low-income youth together; Step 3: Collaborate with Dr. Cluskey to test recipes developed to improve consumption of healthy fruits and vegetables; Step 4: Measure familiarity and consumption of locally grown vegetables, fruits and cereal grains. AIM 3 - Determine key factors for positive long-term changes in weight and waist circumference (WC) in adults and children by exploring how low-energy dense diets can reduce total energy intake and appetite through increased satiety and improve overall dietary patterns, as well as determine the impact of diet and various levels of PA intensity on objective and subjective determinates of appetite. Step 1: (Years 1-2) Develop and pilot test dietary approaches for breakfast and snacks; Step 2: Use the information gained in step one to write USDA/NIFA and other grants to test our approach in a larger scale studies, carefully monitoring changes in diet, PA, appetite, weight and chronic disease risk factors in participants, as well as assessing changes in dietary patterns within the home; Step 3: Work on better ways of communicating the dynamic energy balance messages (e.g. the integrated effect of diet and PA on weight) to future health professionals, current Extension and professional faculty working in the area of nutrition and PA, and parents and children. AIM 4 - Determine the key factors that link the above projects and their individual outcome goals into a larger project that can be submitted for external funding for obesity prevention in young adults and their families.

Target Audience

(NO DATA ENTERED)

Products

(NO DATA ENTERED)

Expected Outcomes

(NO DATA ENTERED)

Keywords

obesity ~diet ~nutrition ~whole grains ~vegetables ~fruits ~behavior ~food density ~acceptability ~familiarity ~youth ~women ~seniors ~social-ecological framework ~chronic diseases
Estimated Project FTEs For The Project Duration

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<th>Role</th>
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Animal Health Component 0 %

Is this an AREERA Section 204 Integrated Activity? {NO DATA ENTERED}

Activities

- Research 0 %
- Extension 0 %
- Education 0 %

Classification

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Knowledge Area

701 - Nutrient Composition of Food; 702 - Requirements and Function of Nutrients and Other Food Components; 703 - Nutrition Education and Behavior; 704 - Nutrition and Hunger in the Population

Subject Of Investigation

6099 - People and communities, general/other

Field Of Science

1010 - Nutrition and metabolism

Associated Planned Programs

{NO DATA ENTERED}
Assurance Statements

1. Are Human Subjects Involved?  ○ No  ○ Yes
   If YES to Human Subjects
   Is the Project Exempt from Federal regulations?
      ○ Yes
      ○ No
   If yes, select the appropriate exemption number.
      ○ No
   If no, is the IRB review Pending?
      ○ Yes
      ○ No  IRB Approval Date

   Human Subject Assurance Number

2. Are Vertebrate Animals Used?  ○ No  ○ Yes
   If YES to Vertebrate Animals
   Is the IACUC review Pending?
      ○ Yes
      ○ No  IACUC Approval Date

   Animal Welfare Assurance Number

Project Proposal:
Filename  Size  Type
11140.pdf  178888  application/x-pdf

Project Signature Panel
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