

**V(A). Planned Program (Summary)**

**Program # 2**

**1. Name of the Planned Program**

Nutrition, Health and Obesity Prevention

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
702	Requirements and Function of Nutrients and Other Food Components	50%		50%	
703	Nutrition Education and Behavior	50%		50%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	0.3	0.0	0.5	0.0
Actual Paid Professional	1.4	0.0	0.4	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
88299	0	52918	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
109453	0	62117	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)**

1. Brief description of the Activity

- Pilot testing with community stakeholders
- Development of two modules: increasing whole grain intake and increasing consumption of low-fat dairy foods
  - Student recruitment: baseline and post-intervention testing
  - Assessments: anthropometrics, biochemical, clinical and dietary measures
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- Developed and tested methods to assess free-living eating rate
- Validated eating behavior questionnaires against lab measures
- Designed and piloted interventions to reduce eating rate, moving from lab-based to community-based
  - Modify interventions for food-insecure individuals
  - Analyze YEAH data for relationships among perceived stress, BMI, and health-related behaviors

**2. Brief description of the target audience**

Young adults, college-age students at URI

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	283	0	0	0

**2. Number of Patent Applications Submitted (Standard Research Output)**

**Patent Applications Submitted**

Year: 2012

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2012	Extension	Research	Total
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

## **Output Target**

### **Output #1**

#### **Output Measure**

- Refine, deliver and evaluate major healthy weight intervention study

<b>Year</b>	<b>Actual</b>
2012	126

### **Output #2**

#### **Output Measure**

- Peer reviewed publications

<b>Year</b>	<b>Actual</b>
2012	3

### **Output #3**

#### **Output Measure**

- Abstracts

<b>Year</b>	<b>Actual</b>
2012	4

### **Output #4**

#### **Output Measure**

- Workshops

<b>Year</b>	<b>Actual</b>
2012	25

### **Output #5**

#### **Output Measure**

- Student Training

<b>Year</b>	<b>Actual</b>
2012	7

### **Output #6**

#### **Output Measure**

- Professional Training

<b>Year</b>	<b>Actual</b>
2012	0

**Output #7**

**Output Measure**

- Scientific and Professional Presentations

<b>Year</b>	<b>Actual</b>
2012	6

**Output #8**

**Output Measure**

- MS Thesis or PhD Dissertation

<b>Year</b>	<b>Actual</b>
2012	1

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Increase understanding of lipoprotein metabolism and metabolic syndrome on human health in young adults.
2	Promoting healthful eating to prevent excessive weight gain in young adults

## **Outcome #1**

### **1. Outcome Measures**

Increase understanding of lipoprotein metabolism and metabolic syndrome on human health in young adults.

### **2. Associated Institution Types**

- 1862 Extension
- 1862 Research

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	157

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Young adults (those 18-24 years of age) have been identified as a population of interest by NIH in relation to risk for coronary heart disease. Young adults are presenting with abnormal lipid profiles because of abnormal lipoprotein metabolism more frequently - this results in increased risk of metabolic syndrome and CHD. Because the lifestyle habits that can cause this increased risk and the biochemical changes can track later into adulthood intervening with college students on a mass scale is critical to reduce long-term chronic disease risk for a larger population than can be reached in one-to-one sessions or small intervention sessions.

#### **What has been done**

In the spring of 2012, we completed pilot testing with community stakeholders - URI's Student Health Services and Dining Services targeting whole grain consumption. Using the results from the pilot work, in addition to focus group research, we developed two modules - increased whole grain intake and increased intake of low-fat dairy. We worked with our stakeholders on clear messages to be displayed in campus dining facilities, text/email messages, and interactive booths promoting the two modules. We recruited students who were full-time URI students with a meal plan and completed baseline and post-intervention testing. Assessments included anthropometrics, biochemical clinical and dietary measures.

#### **Results**

We completed baseline and post-intervention assessments on approximately 100 participants and are currently completing the 6-month follow-up assessments on these participants. Of the 100 participants 26 consented to additional assessments that would provide more detail and information on biochemical and dietary (behavioral) measures. We are currently analyzing the data and cannot report on specific incidence or prevalence at this time.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components

#### Outcome #2

##### 1. Outcome Measures

Promoting healthful eating to prevent excessive weight gain in young adults

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2012	126

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

With ever increasing levels of obesity, it is important to study whether within meal eating behavior can be modified in ways that promote lower calorie intake and thus weight management.

###### **What has been done**

Developed and tested methods to assess free-living eating rate; validated eating behavior questionnaires against lab measures; assessed factors that may impact within-meal eating behaviors in "real world" settings, including social facilitation, meal type, location and utensil use; designed and piloted interventions to reduce eating rate, moving from lab-based to community-based protocol; assimilated pilot data regarding differences in within-meal eating behaviors among populations differing in socioeconomic status, and used these as a basis for modified interventions among food-insecure individuals. Analyzed YEAH data for relationships among perceived stress, BMI, and health-related behaviors.

###### **Results**

Five week one on one intervention is effective in modifying within meal eating behavior and caloric intake in a laboratory setting.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior

### **V(H). Planned Program (External Factors)**

#### **External factors which affected outcomes**

- Economy
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

#### **Brief Explanation**

The study sample of URI college students may have been impacted by the weak economy. As tuition dollars increased, the economic status of students attending URI increased, therefore reflecting a student body from a higher socio-economic class.

### **V(I). Planned Program (Evaluation Studies)**

#### **Evaluation Results**

We have been successful in working with community stakeholders - URI students, Student Health Services and Dining Services to develop a nutrition intervention that can reach large numbers of students at points of purchase. The nutrition intervention on increasing whole grains and low-fat dairy products have the potential to decrease coronary heart disease risk. We had hoped to recruit a total of 200 students but we only recruited 157 students. We are currently in the midst of the 6-month follow-up assessment visits and will soon start the analysis to see how the intervention impact the students' behaviors and coronary heart disease risk factors.

#### **Key Items of Evaluation**