

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

**Program # 5**

**1. Name of the Planned Program**

Childhood Obesity

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
703	Nutrition Education and Behavior	45%		45%	
724	Healthy Lifestyle	35%		35%	
802	Human Development and Family Well-Being	10%		10%	
806	Youth Development	10%		10%	
	<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	4.0	0.0	0.7	0.0
Actual Paid Professional	4.0	0.0	1.5	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
148000	0	58900	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
224000	0	88000	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**

School-based curricula, including "On the Move to Better Health", "Banking on Strong Bones", and "Going Wild" will continue to be used with children. Community-based programs for adults and children, including "Walk North Dakota" and "Moving More, Eating Smarter," will continue.

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

Children and adults will be the target groups for the programming. They will be reached with both direct and indirect methods.

**3. How was eXtension used?**

The Ask an Expert feature of eXtension was 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>	5850	299000	11440	22000

**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>	4	2	6

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

**Output Target**

**Output #1**

**Output Measure**

- {No Data Entered}

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

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

O. No.	OUTCOME NAME
1	Number of children participating in the youth education curricula who will improve their diet quality and/or their physical activity level.
2	Number of adults participating in adult education curricula who will improve their knowledge of current nutrition and/or physical activity level.

## **Outcome #1**

### **1. Outcome Measures**

Number of children participating in the youth education curricula who will improve their diet quality and/or their physical activity level.

### **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	2478

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

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

Children in elementary classrooms and afterschool programs have been targeted with nutrition education programming. Multi-lesson curricula that integrate nutrition and fitness concepts for grades four to five have been used statewide.

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

The overall goal of the "Eat Smart. Play Hard. Together." program is to increase knowledge and change behavior among children and their parents through the use of two curricula in elementary schools and a recognition program used in 4-H clubs. "Banking on Strong Bones" is a five-week, school-based educational intervention for fourth graders. The purpose is to increase knowledge and change behavior regarding calcium-rich foods and weight-bearing activities. "On the Move to Better Health" is a five-week school-based curriculum for fifth graders, which aims to increase fruits, vegetables and calcium-rich foods in the diets of children, as well as increase physical activity. 4-H clubs completed an evaluation process to determine if their club met the "healthy club" criteria.

#### **Results**

From 2005-10, the "Banking on Strong Bones" five-lesson program has reached more than 7,000 children and their families. Students improved their knowledge scores and reported positive attitude and behavior changes toward consumption of dairy products. About 1,000 fourth graders participated in the 2011-2012 school year. On the pre-survey, 36% reported drinking three or more glasses of milk the previous day, compared to 56% on the post-survey. On the pre-survey, 21% reported drinking soda pop every day, compared to 11% on the post-survey. About 90% reported planned to drink more milk. According to the post-surveys of 1,000 fifth graders in the five-week "On the Move to Better Health" program, about 63% reported increasing the amount of fruits and vegetables they consumed, 58% reported drinking more milk, 60% reported drinking

less soda pop, 62% drank more water, 62% chose healthier snacks, and 63% increased the amount of daily physical activity. In 4-H youth programming, 478 children from 27 4-H Clubs from 12 counties were recognized for completing the criteria required for recognition as "healthy clubs."

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

#### Outcome #2

##### 1. Outcome Measures

Number of adults participating in adult education curricula who will improve their knowledge of current nutrition and/or physical activity level.

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2012	330

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

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

According to the 2011 Youth Risk Behavior Survey, 11% of North Dakota's high school students were obese. Fruits and vegetables (FV), as part of a healthy diet, are important for optimal child growth, weight management, and chronic disease prevention. Less than 20% of North Dakota's children (especially low-income children) eat the recommended levels of fruits and vegetables. Motivating children to try FV and then regularly eat FV is a challenge. Research indicates that modeling by cartoon characters can increase FV intake among 5- to 11-year-olds. Behavior change is more likely to occur if children are engaged in experience-based, realistic activities.

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

NDSU ES has adopted the University of Minnesota Extension's "Go Wild With Fruits & Veggies" (GWWFV) curriculum for third graders who participate in the Family Nutrition Program and other school-based educational programming. The GWWFV curriculum was created for grades three to

five to motivate children to consume FV by integrating a different wild animal character into seven interactive lessons. A pilot test was conducted to determine the effectiveness of the program to increase fruit and vegetable intake among third grade participants.

### **Results**

Results from the "Go Wild" intervention of 330 third graders reporting on the last lesson of the curriculum reveal their self-reported intake of FV significantly increased. Third graders report consuming on most days an average of 0.98 cups of fruit before and 1.26 cups after the intervention. For vegetables on most days, they report consuming an average of 0.88 cups before and 1.18 cups after the intervention. For fruits, 67% report they ate more fruit now than before the class, and 59% report consuming more vegetables now than before the class. Children are also communicating what they learn at home. Approximately 64% talked with their families about what they learned from GWWFV.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
724	Healthy Lifestyle

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

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

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes
- Populations changes (immigration, new cultural groupings, etc.)

#### **Brief Explanation**

Even though North Dakota suffered drought in 2012, Childhood Obesity goals for 2012 were met.

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

#### **Evaluation Results**

The purpose of the "Shape Up for Spring" study was to assess the influence of educational delivery modes (email, Facebook) on nutrition and physical activity knowledge and behavior compared with a control group. Participants (n=92, 87% female, 31% aged 55 or above) were randomly assigned to one of three groups (Facebook, email or control). Eighteen educational messages were delivered by email or Facebook during the six-week project. The Facebook group had the opportunity to interact within their group. All groups were eligible to receive weekly nutrition and fitness incentive prizes. Online pre- and post-surveys were used to assess knowledge gain and achievement of individual goals related to nutrition and fitness. Of the 92 participants who completed the pre-survey, 85 (92%) completed the post-survey. Data were analyzed using the SPSS computer program. Both the Facebook and email groups significantly increased their knowledge scores, but the control group showed a decrease in knowledge scores. About 79% of the email group read the majority of the messages, compared with 56% of the Facebook group. About 31% of control group participants continued involvement in other health programs during the

study, higher than the email (20.7%) or Facebook (22.2%) groups. The Facebook and email participants assigned themselves significantly higher average ratings in goal achievement than the control group ( $p < .05$ ).

**Key Items of Evaluation**