

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Childhood Obesity, Nutrition and Healthy Lifestyles

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	5%			
703	Nutrition Education and Behavior	45%			
724	Healthy Lifestyle	45%			
802	Human Development and Family Well-Being	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	2.6	0.0	0.0	0.0
Actual Paid Professional	3.6	0.0	0.0	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
78963	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
94445	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct train-the-trainer workshops
- Conduct workshops, seminars, meetings
- Facilitate meetings, discussion groups, focus groups
- Develop local and state partnerships
- Develop MontGuides (fact sheets), publications, website materials, video based materials
- Conduct web based, interactive training/education opportunities

2. Brief description of the target audience

- Low income adults and children under the age of 19
- Low income youth, ages 5-12
- Low income adults 18 and older
- Adults that are FSP eligible
- Youth from FSP eligible households
- Teachers in the Montana School System
- Middle to older aged women, especially those living in rural areas
- Parents and youth living in rural areas

3. How was eXtension used?

Extension professionals and clientele use eXtension as a resource for specific information and educational materials.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	35104	333000	6990	19100

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
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- EFNEP/FSNP: The NEP curriculum will be used to teach a series of 8-12 sessions to adults who are enrolled. The NEP youth curriculum will be used to teach 6-7 lessons to youth in workshops (after school, in school, summer camps, park programs). Develop and maintain local and state partnerships and collaborations.

Year	Actual
2012	8195

Output #2

Output Measure

- Strong Women: Certify 10 county agents so they are qualified to conduct strength training classes. Conduct two 14 week sessions in each county with qualified leaders to deliver the program.

Year	Actual
2012	672

Output #3

Output Measure

- Healthy Lifestyles: To reach adult and youth audiences in rural communities with health fairs and school/community based programs that will provide medical screenings and classes. To track people who follow up with a physician or professional as a result of information gained at the health fair or similar activity.

Year	Actual
2012	33077

Output #4

Output Measure

- 4-Health: Design and introduce curriculum targeted at childhood obesity and healthy lifestyles for youth ages 8-12. Provide training for parents on relevant information, effective parenting skills and strategies and a strong social support network that encourages them to solve everyday problems relating to the health and well-being of their pre-teen children.

Year	Actual
2012	300

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	EFNEP/FSNP: Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, whole grains) Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increased physical activity Food safety principles (hand washing) Number of adults: Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains). Improving food safety practices (storing and thawing foods properly) Improving food resource management practices (meal planning, shopping with list) Improving nutrition practices (reading food labels) Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Increase their confidence in the ability to manage food resources as well as other resources.
2	HEALTHY LIFESTYLES: As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional. People will make better nutrition and food choices and engage in regular physical activity.
3	STRONG WOMEN: Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted (2# increasing to 5#).
4	4-HEALTH: Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children. Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity. Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health programs. Rural families will have decreased rates of childhood obesity.

Outcome #1

1. Outcome Measures

EFNEP/FSNP: Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, whole grains) Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increased physical activity Food safety principles (hand washing) Number of adults: Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains). Improving food safety practices (storing and thawing foods properly) Improving food resource management practices (meal planning, shopping with list) Improving nutrition practices (reading food labels) Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Increase their confidence in the ability to manage food resources as well as other resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	57905

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food insecurity and poverty continue to be a problem in Montana. Having nutritious, fresh and healthy foods available is a challenge with the long distances to grocery stores in rural areas. Both hunger and obesity are serious public health problems and sometimes co-exist in the same families or individuals. With fewer resources to buy food or to obtain health care or other preventative or remedial interventions, people with limited incomes are particularly susceptible to long term effects from hunger/food insecurity, obesity, or both. Lack of access to and knowledge about adequate nutritious food can result in weight gain and other serious health issues.

What has been done

The Expanded Food and Nutrition Program (EFNEP) and the Supplemental Nutrition Assistance Program (SNAP-Ed) are focused on improving nutrition and eating habits for limited resource families. Information is provided to families through individual and group meetings where participants learn to prepare healthy foods (snacks and meals), extend their food dollar through good shopping practices, manage their food dollar wisely and increase their physical activity. Educators reach low income youth in Title I schools and out-of-school programs and adults in both cities and rural areas.

Results

Adults completing the EFNEP lesson series reported as follows: 77% increased knowledge in two or more nutrition practices (planning nutritious meals, reading nutrition labels), 71% increased knowledge in food resource management strategies (making a grocery list, comparing prices) and 41% increased knowledge in food safety practices (thawing and storing food, hand washing). Follow up surveys indicated that 28% were now using a grocery list and 55% of youth said that they were eating more fruits and vegetables. SNAP youth graduates (73%) indicated that they were trying a wider variety of healthy foods. SNAP adults indicated they were using a shopping list (49%) and eating more fruits, vegetables and whole grains.

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

HEALTHY LIFESTYLES: As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional. People will make better nutrition and food choices and engage in regular physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	33077

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Chronic diseases are the leading cause of death, illness and disability and account for approximately 70% of health related costs for Montanans. Research shows that a healthy lifestyle can prevent or delay onset of these diseases. Healthy lifestyles include making good health choices, becoming physically active and monitoring and screening for early detection of health issues and are the result of understanding and incorporating all aspects of well-being to include physical, emotional, economic, environmental and other factors. Educational programs

are needed to help people learn how to reduce their risk of heart attacks, cancer, strokes, high blood pressure, diabetes and obesity.

What has been done

Dozens of workshops dealing with critical healthy lifestyle topics are taught regularly in counties throughout the state. These include, Making a Good Brain Great, Sun Safety, Gluten Free Cooking, Think Your Drink: Reducing Consumption of Embedded Sugars, Stealth Health and more. A major addition to healthy living programs offered through Extension are Blood Pressure and Cholesterol Reduction programs funded through mini-grants from MT DPHHS Cardiovascular Health Program. Agents have administered blood pressure screenings and provided related information/education in settings ranging from Producer meetings to County Health Fairs to 4-H and Homemakers events.

Results

Participants of Extension Healthy Lifestyles classes report using new skills ranging from identifying and preparing inexpensive cuts of meats, to using unit pricing to save money at the grocery store, to growing vegetables at home with all leading to increased healthy food consumption. Participants of the new Cardiovascular Health Program reported that screenings allowed family physicians to incorporate more direct and useful health plans without additional costs. One woman reported her pleasure with checking her blood pressure as she had been having trouble sleeping and other physical complaints, but never thought to check blood pressure. Because of this screening, she worked with her health care provider and has it under control.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

STRONG WOMEN: Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted (2# increasing to 5#).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2012

672

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Women start to show decline in muscle mass beginning at age 30. Research shows an increasing number of older Americans are living a sedentary lifestyle which increases their risk of developing chronic diseases such as diabetes, heart disease, osteoporosis and arthritis. The Strong Women™ program was developed by TUFTS University as a strength training program to be conducted through County Extension Offices. In Montana, the program is especially targeted at under-served women: those living in the most rural areas, lower-income, and isolated women with chronic illness.

What has been done

Strong Women™ programs are designed for women to increase muscle mass by strength training for 2-3 sessions per week. Counties offer the program to both male and female adults throughout the year with introductory classes held every 12 weeks to introduce new people to the group. These trainings are directed by an Extension specialist who has been certified as one of 14 Ambassadors to teach Strong Women™ programs. In addition to improving muscle mass, strength training is shown to improve the psychological health of seniors by reducing depression and improving sleep and the classes are a valuable source of socialization for older women as well.

Results

The Strong Women™ program continues to be highly utilized with many counties reporting waiting lists. One hundred percent of participants who complete the training report positive, healthy lifestyle changes including establishing a regular exercise program, an increase in healthy food selections, improvement of arthritis symptoms, improvement of sleep and more energy. One survey showed that 85% of participants increased 8 indicators of strength and flexibility between 10% and 81% from the first class to the last class. Practical applications of this increased strength lead to lifestyle improvements such as being able to lift a carry-on bag overhead during travel, being able to work in the garden and greater ease and increased ability in climbing stairs, lifting objects, sitting down and bending over.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #4

1. Outcome Measures

4-HEALTH: Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children. Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity. Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health

programs. Rural families will have decreased rates of childhood obesity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The increasing prevalence of childhood overweight and obesity is cause for alarm across the globe. Because they have poorer nutrition, more sedentary lifestyles and poorer body image, children today are worse off both physically and emotionally than children were just 25 years ago. The main goal of this program is to deliver an obesity prevention curriculum that will change the behaviors of parents and children thereby significantly reducing the likelihood of children becoming overweight. Throughout the course, parents will improve their abilities to encourage nutritious eating and physical activity and provide a healthier home environment for their children.

What has been done

Following a pilot test in six counties in 2010-2011, parents of 4-H youth in 21 counties (37.5% of all Montana counties) participated in this 8 month research and outreach program in 2011-2012. From September 2011 to May of 2012, 11 counties (experimental group) offered ten 90-minute interactive, action-packed sessions led by a facilitator. These sessions focused on providing important nutrition, physical activity, and body image information, as well as parenting and family communication skills to improve preteen and family health. Parents of early teen 4-H students in 10 additional counties (control group) received healthy living information via the mail.

Results

Participants in both groups reported an increase in active parenting, increase in children having a more positive body image, increase in food and nutrition knowledge, increase in physical activity, and increase in the number of days per week their child eats breakfast, with the experimental group in each case making larger gains than the control group. Parents in the experimental group reported an increase in daily vegetable consumption by children. Children in the experimental group reported less dissatisfaction with their bodies, while the control group reported more dissatisfaction. Children in the experimental group described their weight as somewhat decreased after the program, while the control group described their weight as somewhat increased. Children in both groups reported increasing the number of days they were physically active for at least 60 minutes, with the experimental group reporting greater improvement.

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
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.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Montana State University Extension successfully reached over 90,000 people, over 10% of the state's total population, either directly or indirectly, with information and educational programs related to childhood obesity, nutrition and healthy lifestyles. This program's ultimate goal was reducing obesity among children and adults by changing attitudes related to food, physical fitness/activity and body image. This objective was reached by working directly with low-income families (guiding parents in how to improve the overall health of the family through role modeling and positively working with their children), helping youth to be both knowledgeable and accountable about their health choices and targeting education and programming toward women (especially in rural areas and those over age 30).

As noted in the 2012 POW, the program assumes that a health-centered (rather than weight-centered) approach to well-being, will lead people to developing lifestyle habits rather than focusing on a specific body size or shape. Low-income families were directly reached through MSU Extension Nutrition Education Programs: Buy. Eat. Live. Better (which includes SNAP-Ed and EFNEP); as well as through the 4-Health program. Similar to the national EFNEP pre/post-education surveys, Montana participants in MSU Extension Nutrition Education indicated vastly improved knowledge and skills related to nutrition practices, stretching food dollars, handling food safely and increasing physical activity. The smaller study groups involved in the 4-Health research project demonstrated that while more solid gains were made when direct one-on-one interaction was involved, even monthly newsletters were effective in improving knowledge and changing attitudes related to healthy living. This would seem to suggest that a web site, newly created by the Buy. Eat. Live. Better. program (www.buyeatlivebetter.org) may encourage additional

improvements in these areas.

Another program that was utilized by MSU Extension in 2012 is the Strong Women program. Surveys from participants show that 100 percent of those who complete the program increase strength and flexibility; allowing them to have more active lifestyles. In addition, an unintended consequence is reported to be the friendships and camaraderie that is built from these classes. These relationships can be effective in reducing depression and inactivity that occurs with isolation.

Finally, an extremely valuable addition to the Extension work in this area in 2012 came from a partnership with the Montana Department of Public Health and Human Services. Through a grant, agents around the state participated in the Cardiovascular Health program, administering blood pressure screenings and providing health related information and education directly to more than 13,000 Montanans. Agents were able to provide education materials specifically to people whose screenings showed risk factors. Individuals reported that because of the screenings they followed-up with their medical professionals to prevent serious health conditions from getting worse. This program will continue in 2013.

Key Items of Evaluation

Pre and post survey data was used to evaluate this program.
Results are as follows:

EFNEP/SNAP-Ed

77% of EFNEP adults reported increased knowledge in two or more nutrition practices (i.e. planning nutritious meals, reading nutrition labels)

71% of EFNEP adults increased knowledge in food resource management strategies (i.e. making a grocery list, comparing prices)

41% of EFNEP adults increased knowledge in food safety practices (i.e. thawing and storing food, hand-washing)

28% of EFNEP adults indicated in a follow-up survey that they were using a grocery list

55% of EFNEP youth indicated in follow-up survey that they were eating more fruits and vegetables

73% of SNAP-Ed youth graduates indicated they were trying a wider variety of healthy foods

49% of SNAP-Ed adults indicated they were using a shopping list and eating more fruits and vegetables

Healthy Lifestyles

Other skills reported to have been learned by agents teaching healthy living courses included, identifying and preparing inexpensive cuts of meat, using unit pricing to save money at the grocery store and growing vegetables at home.

13,589 adults received blood pressure screenings at various events and locations statewide, as well as follow up educational materials

Strong Women

Of 672 women who completed the Strong Women program through MSU Extension, 100% indicated they improved their strength and flexibility

4-Health

The 4-Health research program continued with its first year of full programming following a pilot season in 2022. The experimental group received ten 90-minute interactive education sessions while the control group received healthy-living information via email.

Results as follows:

Both the experimental and control groups reported an increase (in all cases the experimental group had a greater increase) in:

Active parenting

Children having a more positive body image

Food and nutrition knowledge, increase in physical activity

Increase in the number of days the family ate breakfast

Parents in the experimental group also reported that children were eating more fruits and vegetables

Children in the experimental group reported less dissatisfaction with their body image, while children in the control group reported more dissatisfaction with their body image.

Children in the experimental group reported their weight as somewhat decreased after the program

Children in the control group reported their weight as somewhat increased after the program

Children in both groups reported increasing the number of days they were active for at least 60 minutes (with the children in the experimental group reporting a greater increase).