Youth/Adult Obesity

V(A). Planned Program (Summary)

1. Name of the Planned Program

Youth/Adult Obesity

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
<th>%1862 Extension</th>
<th>%1890 Extension</th>
<th>%1862 Research</th>
<th>%1890 Research</th>
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<tbody>
<tr>
<td>701</td>
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<td>702</td>
<td>Requirements and Function of Nutrients and Other</td>
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<td>25%</td>
<td></td>
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<td></td>
<td>Food Components</td>
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<td>Nutrition Education and Behavior</td>
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<td>25%</td>
<td></td>
<td></td>
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<tr>
<td>724</td>
<td>Healthy Lifestyle</td>
<td>40%</td>
<td>40%</td>
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</table>

Total 100% 100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Extension</td>
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<tr>
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<tr>
<td>1862 1890 1862 1890</td>
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<tr>
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

<table>
<thead>
<tr>
<th>Extension</th>
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<tbody>
<tr>
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<tr>
<td>1862 All Other 4216284</td>
<td>1862 All Other 128863</td>
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</table>

| 1890 Matching |
| 1890 All Other |

V(D). Planned Program (Activity)

1. Brief description of the Activity
Youth/Adult Obesity

- To identify the factors that promote excessive weight gain as well as protect against childhood obesity

- Measure how children born small for age are different with respect to body composition and risk for diabetes prior to developing diabetes or obesity.

- Investigate how perilipin A works in adipocytes to control fat storage and fat breakdown.

- Collect and analyze data on obesity-related measures (i.e., BMI) in adults and children

- Examine how weight loss affects calcium absorption and bone mass

- Create a multidisciplinary program comprising of faculty, staff, the medical community, industry partners and government officials

- Conduct adult/youth education and deliver targeted messages on healthy food choices and increased physical activity education using the following strategies:

  Direct Methods:

  - Educate Youth
  - Educate Parents
  - Educate Volunteers
  - Food and Fitness Ambassadors
  - Educate Professionals
    - Child Health Summit
  - Educate Teachers/School Nurses
  - Educate Communities

  Indirect Methods:

  - Website

2. Brief description of the target audience

- Clinicians and Physicians
- Nurses School
- Health Care Professionals
- Hospitals (including teaching hospitals)
- Staff and students who gain valuable scientific experience
- Industry partners that benefit from fundamental and applied research in obesity and related chronic diseases
- Communities that benefit from increased knowledge about the mechanisms involved in obesity
- Other faculty and staff working on similar research
- Health-related organizations and foundations interested in obesity/nutrition issues
- School Age Youth
- Teens
- Teachers
- After School Providers
- Parents
- Volunteers
- Extension Professionals
- State and County Agencies and Organizations
V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct Contacts Adults</th>
<th>Indirect Contacts Adults</th>
<th>Direct Contacts Youth</th>
<th>Indirect Contacts Youth</th>
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<td>Target</td>
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<td>Target</td>
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2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

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<td>2007:</td>
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Patents listed

3. Publications (Standard General Output Measure)

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<thead>
<tr>
<th>Number of Peer Reviewed Publications</th>
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<tbody>
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<tbody>
<tr>
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<td>19</td>
<td>17</td>
<td>36</td>
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V(F). State Defined Outputs

Output Target
Youth/Adult Obesity

Output #1

**Output Measure**
- Short Term Individuals gain awareness, knowledge, skills related to:
  - Attitudes about healthy eating for adults/youth
  - Healthy food choices for adults/youth
  - Selection of healthy foods for adults/youth
  - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer)
  - Physical activity recommendations for health for adults/youth
  - RCRE
  - Identify factors that promote excessive weight gain as well as protect against childhood obesity
  - Understand the molecular mechanisms of lipid transport in the intestinal cell
  - Demonstrate the affects on calcium absorption and bone mass by weight loss.

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<tbody>
<tr>
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Output #2

**Output Measure**
- Medium Term Individuals incorporate skills/Change behaviors related to: Increased adoption of healthy food practices Increased consumption of fruits, vegetables, whole grains and low-fat dairy Increased participation in family meals Increased participation in physical activity Increased participation in family-related physical activity Increased use of new "campaign" website. Improved understanding of the relationship between early nutrition and later risk for chronic disease. Understand the process by which perilipins at the surface of lipid droplets control how much energy is released from the adipocyte at times of need. Understanding how the intestines and body uptake and process dietary fat Identify genes, their protein product and how the proteins influences the way the body processes fat.

<table>
<thead>
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<th>Year</th>
<th>Target</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
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</table>

Output #3

**Output Measure**
- Newsletters, Health Summits, news articles, 24 radio programs, 737 office visits, 375 educational programs, trained volunteers, 74 extention publications, 56 professional presentations, 2 books, 4 articles in non-refereed journals, 6 poster presentations, 2 TV programs aired, 1 computer based program developed, 82 newspaper articles, 88 trained volunteers, and 30 students supervised.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
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</thead>
<tbody>
<tr>
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## V(G). State Defined Outcomes

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<td>Long Term Individuals experience: Decreased overweight and obesity for youth/adults Decreased risk factors for nutrition-related health problems and chronic diseases that are affected by diet and physical activity for youth/adults A clear and comprehensive understanding of the genetic and physiological mechanisms of obesity and related chronic diseases Pharmacological and/or medical treatments to alleviate the effects of obesity and related diseases</td>
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<tr>
<td>2</td>
<td>Short Term - Individuals gain awareness, knowledge, skills related to: - Attitudes about healthy eating for adults/youth - Healthy food choices for adults/youth - Selection of healthy foods for adults/youth - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer) - Physical activity recommendations for health for adults/youth - RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity - Understand the molecular mechanisms of lipid transport in the intestinal cell - Demonstrate the effects of calcium absorption and bone mass by weight loss.</td>
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<tr>
<td>3</td>
<td>Short Term - Individuals gain awareness, knowledge, skills related to: - Attitudes about healthy eating for adults/youth - Healthy food choices for adults/youth - Selection of healthy foods for adults/youth - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer) - Physical activity recommendations for health for adults/youth - RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity - Understand the molecular mechanisms of lipid transport in the intestinal cell - Demonstrate the effects of calcium absorption and bone mass by weight loss.</td>
</tr>
<tr>
<td>4</td>
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</tr>
<tr>
<td>5</td>
<td>Short Term- Individuals gain awareness, knowledge, skills related to: - Attitudes about healthy eating for adults/youth - Healthy food choices for adults/youth - Selection of healthy foods for adults/youth - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer) - Physical activity recommendations for health for adults/youth - RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity - Understand the molecular mechanisms of lipid transport in the intestinal cell - Demonstrate the effects of calcium absorption and bone mass by weight loss.</td>
</tr>
<tr>
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</table>
| 7     | Short Term: Individuals gain awareness, knowledge, skills related to: - Attitudes about healthy eating for adults/youth - Healthy food choices for adults/youth - Selection of healthy foods for adults/youth - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer) - Physical activity recommendations for health for adults/youth - RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity - Understand the molecular mechanisms of lipid transport in the intestinal cell - Demonstrate the effects of calcium absorption and bone mass by weight loss.
Youth/Adult Obesity

Outcome #1

1. Outcome Measures
   Long Term Individuals experience: Decreased overweight and obesity for youth/adults Decreased risk factors for nutrition-related health problems and chronic diseases that are affected by diet and physical activity for youth/adults A clear and comprehensive understanding of the genetic and physiological mechanisms of obesity and related chronic diseases Pharmacological and/or medical treatments to alleviate the effects of obesity and related diseases

2. Associated Institution Types
   • 1862 Extension
   • 1862 Research

3a. Outcome Type:
   Change in Condition Outcome Measure

3b. Quantitative Outcome

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<thead>
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3c. Qualitative Outcome or Impact Statement

   Issue (Who cares and Why)

   What has been done

   Results

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures
   Short Term - Individuals gain awareness, knowledge, skills related to: - Attitudes about healthy eating for adults/youth - Healthy food choices for adults/youth - Selection of healthy foods for adults/youth - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer) - Physical activity recommendations for health for adults/youth - RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity - Understand the molecular mechanisms of lipid transport in the intestinal cell - Demonstrate the affects of calcium absorption and bone mass by weight loss.

2. Associated Institution Types
   • 1862 Extension

3a. Outcome Type:
   Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
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<th>Quantitative Target</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>(No Data Entered)</td>
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</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

   Issue (Who cares and Why)
A September 2004 Childhood Weight Status report published by the New Jersey Department of Health and Senior Services indicated that 20% of New Jersey's sixth graders are obese and another 18% are overweight. Based on these statistics, the number of overweight and obese youth in New Jersey is higher than the national average.

A 2005 New Jersey Student Health Survey of Middle and High School Students conducted by the NJ Department of Education revealed that 75% of high school students surveyed do not consume fruits or fruit juices at least once a day. 89% of high school students did not eat at least one vegetable a day. 65% of high school students and 63% of middle school students were drinking less than a glass of milk a day.

The same study found that 25% of high school students and 20% of middle school students were not physically active for at least 60 minutes at least one day of the week. Another 38% of high school students and 34% or middle school students indicated they were only physically active for 60 minutes 1-3 days in one week. These statistics indicate a strong need for New Jersey's youth to better understand the nutritional and physical activity requirements needed to live a healthy life.

What has been done

Family Fun Events were held at locations in nine New Jersey Counties. The events utilized the Get Moving - Get Healthy with New Jersey 4-H action kits and curriculum that were developed to provide a way for a unified educational message to be used throughout the state with a recognizable title and logo. In 2005, the program was developed through a collaboration between teens and adults. Teens were trained as 4-H Food and Fitness Ambassadors, learning about basic nutrition and the importance of physical activity for healthy living. The teens then developed the title and logo for the program. They screened various activities and selected ones to be included in a hands-on activity kit. The kits and curriculum have three major focus areas - understanding MyPyramid, identifying portion sizes, and learning easy ways to exercise.

As part of the GMGH initiative's commitment to youth and adult partnerships, current Food and Fitness Ambassadors and 4-H staff worked together to plan the GMGH Family Fun events, develop the marketing and promotion plan, and train 8 new Food and Fitness Ambassadors. The current Food and Fitness Ambassadors and 4-H staff developed strategies to market and promote the GMGH Family Fun events. The group created press releases, newspaper ads, and other promotional pieces to use prior to and after the event.

Each Family Fun Event started with family members completing a pre-test. The event used the existing GMGH kits to provide a variety of hands-on activities for families including - Exercise Challenge, Finding Your Pyramid, Healthy Plate, Measure Up, Portion Distortion, Read the Label, Serving Match, Think What You Drink, and What Counts. Educational materials with tips to increase physical activity and to prepare nutritious meals were provided. Participants also be made a healthy snack. At the conclusion of the event, all family members completed a post-test and each family completed a "health pledge" to set at least three goals for the family to accomplish in the following six weeks to improve the health of the family.

Results
A 4-hour training program was conducted to introduce new Food & Fitness Ambassadors to the Get Moving - Get Healthy with New Jersey 4-H program and how to implement the Family Fun Events. 7 teens and 1adult were trained as Food & Fitness Ambassadors. An additional 14 previously trained Food & Fitness Ambassadors assisted with the implementation of the program by providing input in the planning process of the state-wide program and worked with county 4-H staff to coordinate GMGH Family Fun Events in their counties.

A CD was developed with the materials needed to coordinate a Get Moving - Get Healthy Family Fun Events. The CD included instructions on how to run an event, promotional flyers, a newspaper ad, a newspaper article, evaluations, a family goal setting sheet, and a family goals calendar.

Nine counties coordinated a total of 19 Get Moving - Get Healthy Family Fun Events.

The GMGH Family Fun Events were attended by:
513 youth
361 adults

Based on a pre- and post-test assessment of participants, the following results were achieved. (pre-test n=172, post-test n=156).

*Participants' understanding of the sizes of portions was measured in their ability to correctly identify the object equal in size to one cup.
Pre-Test: Yes - 82 / 48%
Post-Test: Yes - 132 / 84.6
Change: 36.7

*Participants' knowledge of the importance of physical activity was measured in their ability to correctly identify the amount of exercise that youth need daily.
Pre-Test (n=172)  Post-Test (n=156)
Pretest: Yes - 111 / 64.5%
Postest: Yes - 108 / 96.2%
Change: 4.7

*The following are the increases in the participant's ability to correctly identify foods in each food group of MyPyramid. (The number is the average number of foods correctly identified in each food group, with 4 being the highest number correct.)

Food Group
Pretest (No) vs. Posttest (No)
Fruit: 3.9/97.2% vs. 3.9/98.1% = Change 0.8%
Vegetable: 3.5/86.8% vs. 3.6/90.7%=Change 3.9%
Meat & Bean: 3.0/75.7% vs. 3.3/82.2%=Change 6.5%
Milk: 3.9/97.5% vs. 3.9/98.7%=Change 1.2%
Grain: 3.4/85.8% vs. 3.7/92.9%=Change 7.2%

In addition, participants indicated that as a result of the program:
Post-Test
Yes
. . . I will do something new or different. 151 / 96.8%
. . . I will change the way I think, act or behave. 143/91.7%
. . . I plan to use or share what I learned. 141/90.4

Because of the format of the events, 1/3 of the participating families actually completed the family goal sheets. The following is a list of the top goals selected by families. (n=96)  %
Drink at least 2 glasses/bottles of water a day. 34.4
Spend at least 1 hour a day being active. 34.4
Snack on healthier foods and less on junk food and sweets. 29.1
Eat at least a total of 5 fruits and vegetables a day. 27.0
Eat a healthy breakfast. 26.0
Try a new fruit or vegetable. 26.0
Youth/Adult Obesity

The follow-up survey was sent at least 6 weeks after participation in the program. The follow-up survey had a 16.6% return rate.

75% of the participants responding to the follow-up survey indicated their family had done well at meeting their goals.

Participants responding to the follow-up survey indicated the most useful information presented at the GHGH Family Fun Event was as follows:

Amount of sugar in soda and other beverages 31.2
Appropriate portion sizes 25.0
How to read food labels 18.8

Participants responding to the follow-up survey indicated increases in the following family activities:

Eating more meals together (Another 21% already ate meals together as a family) 35.7%
Cooking together 14.2%
Food shopping together 14.2%
Doing physical activities together 7.1%

Participants responding to the follow-up survey indicated the following changes in health after attending the GH

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>724</td>
<td>Healthy Lifestyle</td>
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<tr>
<td>703</td>
<td>Nutrition Education and Behavior</td>
</tr>
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</table>

Outcome #3

1. Outcome Measures

- Short Term - Individuals gain awareness, knowledge, skills related to: - Attitudes about healthy eating for adults/youth - Healthy food choices for adults/youth - Selection of healthy foods for adults/youth - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer) - Physical activity recommendations for health for adults/youth - RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity - Understand the molecular mechanisms of lipid transport in the intestinal cell - Demonstrate the affects of calcium absorption and bone mass by weight loss

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

- Change in Knowledge Outcome Measure

3b. Quantitative Outcome

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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Improving Nutrition, Food Safety, and Health of New Jersey Families.

According to the USDA Food Guide Pyramid and the Dietary Guidelines for Americans, individuals need to choose a diet low in fat, saturated fat, and cholesterol and high in whole grains, fruits and vegetables. American diets normally consist of too much fat and too little grains, fruits and vegetables. Americans have become a sedentary nation with modern conveniences and technology being responsible in part. Childhood obesity is increasing and over weight children are showing the same risk factors as overweight adults. In addition, food must be handled and prepared properly in order to prevent food borne illnesses. Research shows that poor personal hygiene is a contributing factor in many food borne disease outbreaks. Although government regulations help to make our food supply safe, the consumer has the final responsibility to handle food safely. Nutritious food choices and safe food handling add to healthier lifestyles. Efforts in nutrition education and food safety are necessary to help consumers to make wise food related decisions for themselves and their families.
What has been done

Since the inception of the program in 2003, FCHS educators have planned and implemented Children's Health Summit - Fighting Back Against Childhood Obesity in nine counties. These Summits are 6-hour intensive conferences for professionals who work with and care about children.

Children's Health Summits were designed to:
* Raise awareness of the scope and severity of the childhood obesity epidemic facing today's society;
* Present the latest research findings from a variety of sources; Increase professionals' knowledge on the topic;
* Identify strategies for affecting change;
* Provide attendees with educational materials for use with professional and lay clientele;
* Organize and facilitate local-level partnerships, called Building Healthy Kids Coalitions, that will stay in place after the Summits conclude.

FCHS has reached more than 1200 school, health, and social service professionals in the causes, consequences, and solutions surrounding childhood obesity. Additional Summits are planned for 2008.

2. Media coverage

Children's Health Summits generated local and regional press coverage. Newspaper, radio and television coverage helped to heighten public awareness and extend the message about childhood obesity to a broader audience

School professionals, nurses, dieticians, parents, health care providers, school food service have been very satisfied with the program. Some of the 2007 written participant comments included, 'I will use this information in teaching new parents classes. Plus continue to use this information with my three boys.' And 'I work for resource and referral agency and plan to provide this information to them.' 'I plan to team with health teachers to provide quarterly family nutrition nights.' 'I plan to hold an awareness health fair.' 'I plan to exercise.'

Results

Evaluations document the following:

Behavior changes reported:
* 91% of participants surveyed reported a better understanding of obesity causes;
* 92% noted a better understanding of physical and emotional health consequences;
* 88% reported a better understanding of portion sizes;
* 89% noted a better understanding of the benefits of physical activity.

Actions as a result of participation:

94% of Summit attendees agreed to share information from the conference with at least one other person;
73% will encourage parents, youth group leaders and other adults to serve healthy snacks at meetings and events.
88% will encourage children to eat a nutritious diet;
61% will schedule family meals weekly.
80% agreed to set a good example for children, in terms of eating habits and physical activity.

Participants self-reported a commitment to one or more of the following behaviors:
* eat a healthy breakfast,
* help children find other ways besides food to handle set backs or successes,
* play and be physically active with children,
* select standard food portions instead of super-sized ones,
* teach children to accept all body shapes and sizes;
* let children know that they are loved no matter what;
* recognize children for their positive qualities, strengths and abilities instead of their physical appearance.

As a result of the Summits, additional community partnerships have developed in 2007. Some of the partners have included Shop-Rite Foods, Morristown Memorial Hospital, College of St. Elizabeth, Horizon Blue Cross Blue Shield of New Jersey, Whole Foods Market, Kings Super Market, American Cancer Society, NJ Department of Health Senior Services, NJ Dept. of Agriculture, NJ. Dept of Education.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>724</td>
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1. Outcome Measures

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2. Associated Institution Types

   • 1862 Extension

3a. Outcome Type:

   Change in Knowledge Outcome Measure

3b. Quantitative Outcome

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<thead>
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<td>2007</td>
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</table>

3c. Qualitative Outcome or Impact Statement

   Issue (Who cares and Why)

   School Wellness

   A School Wellness program has been offered to schools and community groups in New Jersey by NJ Department of Agriculture staff and by the FCHS Department to assist schools (staff and parents) and families to:
   (1) understand the nutrition education goals that are part of the NJ School Wellness legislation
   (2) to understand the physical activity goals that are part of the legislation
   (3) to understand the nutrition standards that are part of the school wellness
   (4) to understand the importance of the local school wellness committee
   and their impact on compliance of school wellness policies
   (5) to understand the role of school food service, teachers, administrators and parents in developing and implementing the NJ School Wellness policy.

   What has been done

   A total of 116 school educators and staff received training on school wellness in 2007.

   Results

   93% of attendees felt the School Wellness program gave them new information to assist them in establishing and implementing the school wellness policy in their district.

   Evaluation data from teachers, administrators and school food service personnel revealed that:
   93% will offer their expertise in participation on the wellness committee to implement their school's policy
   71% had no knowledge of current school wellness committee or policy
   87% will support the implementation of nutrition & activity in their schools and the school wellness policy in their district
   93% will assist in developing a school wellness policy that meets the needs of their students
   92% will assist in developing a staff wellness policy in their schools

   116 participants in these programs requested the following additional information to implement their school wellness policies:
   * How to get administrative approval for FCS teacher involvement on school wellness committees
   * How to develop a school wellness policy program for students and parents so they understand the school policy
   * Available lessons for getting youth to consume more fruit, vegetables, low-fat dairy and whole grains along with activities to help youth increase their level of fitness
   * Train the trainer programs for staff wellness
   * How to work with school food service to improve fruit, vegetable, low-fat milk and whole grain intake

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>703</td>
<td>Nutrition Education and Behavior</td>
</tr>
<tr>
<td>724</td>
<td>Healthy Lifestyle</td>
</tr>
</tbody>
</table>
Youth/Adult Obesity

Outcome #5

1. Outcome Measures
   Short Term- Individuals gain awareness, knowledge, skills related to:
   - Attitudes about healthy eating for adults/youth
   - Healthy food choices for adults/youth
   - Selection of healthy foods for adults/youth
   - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer)
   - Physical activity recommendations for health for adults/youth
   - RCRE-Identify factors that promote excessive weight gain as well as protect against childhood obesity
   - Understand the molecular mechanisms of lipid transport in the intestinal cell
   - Demonstrate the affects of calcium absorption and bone mass by weight loss

2. Associated Institution Types
   - 1862 Extension

3a. Outcome Type:
   Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
<td>2007</td>
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Small Steps to Health & Wealth

Many Americans are experiencing significant problems related to their health such as diabetes and obesity; or their personal finance situation, such as credit problems, lack of savings and low savings or in both areas. The research shows that health and money troubles generally develop gradually and take time to address. Financial worries negatively affect health and poor health negatively affect one's economic well being. Lack of limits causes problems and restrictions help avoid them; drastic solutions to problems, such as bankruptcy and liposuction, can have serious consequences; a lot of people expect quick fixes to their problems and are susceptible to fraudulent health and financial claims.

Small Steps to Health and Wealth (SSHW) is a program designed to motivate participants to improve both their health and their finances. Consisting of 38 PowerPoint slides, a Wellness Wheel handout, and a Small Steps to Health and Wealth Planning Worksheet, the program encourages participants to set a health goal and/or a wealth goal and take action to achieve their goals by identifying small progress steps. The program consists of two main sections: a discussion of 20 similarities between health and personal finance issues and 10 suggested behavior change strategies that can be applied to either area of life. The impact of health on finances and finances on health is also explored. The program concludes with a discussion of seven key health and wealth success factors: attitude, automation, awareness/knowledge, control, environment, goals, and time. Participants are encouraged to share their successes.

What has been done

Two power point programs, a journal article, several Visions articles and related to the 'small steps' concept and a book 'Small Steps to Health & Wealth' have been written on the topic. A web page for national data collection has been established as part of the University of Arizona website. USDA/CSREES has supported the program and book for national use. A Small Steps walking program was launched for six weeks in the Spring of 2007 with 125 participants.

Ten 'Small Steps to Health and Wealth' seminars were presented to Morris County groups in 2007. The class illustrates 25 behavior change strategies that can be applied to improve a person's health as well as his/her finances. Participants were encouraged to adopt no more than three to four strategies to insure success in maintaining new habits. It was the most requested program by county organizations.

Results
Outcomes/Impacts of the Small Steps to Health & Wealth Challenge Pilot Test:
* 51 of 125 SSHW Challenge participants (41%) completed an online survey

* Participants rated their experience with the SSHW Challenge as follows:
  o 59%: Very positive and motivational
  o 41%: Somewhat positive and motivational

* Participants reported the following positive behavior changes as a result of the SSHW Challenge:
  o 65% ate healthier foods
  o 63% increased daily physical activity
  o 43% saved money (individual savings of $20 to $1,000 was reported)
  o 43% improved spending habits
  o 29% lost weight (individual weight loss of 1 to 14 pounds over 6 weeks was reported)
  o 20% made other changes (e.g., increased awareness, kick started changes, joined a gym)

* The most frequently reported 'best features' of the SSHW Challenge included:

Increased accountability, the group motivation and support of being part of a team, the daily checklist and tracking of activities, wearing a pedometer, increased physical activity, camaraderie of friends and colleagues, a personal analysis of daily eating and spending habits, a manageable number of tasks, the ability to participate in the Challenge from a distance, and fun with and support from teammates.

* The most frequently reported suggestions to improve the SSHW Challenge included:

Web-based reporting of scores, eliminating 'saving pocket change' as an activity, provide more references for health and financial articles, have a sliding scale of points for number of steps walked instead of just wearing a pedometer, make all activities very specific (e.g., reduce calories and reduce spending are too vague), and revitalize teams halfway through the Challenge.

* The following suggestions and comments were included in survey responses:
  o Would do again.
  o I really enjoyed participating and would participate again if you had another challenge.
  o Enjoyed the experience and the guidance given.
  o Great activity! Should be required for all college students as well.
  o It would be easier to have online tracking of our steps and our goals.
  o Neat concept!
  o Thanks again for a great program...I look forward to the next one!

As a result of this class, what action(s) do you plan to take in the future? (Check all that apply) Results from 70 participants on 1/10/07—Fanwood Woman's Club for 15 participants; on 4/21/07 at Bergen County Education Association for 45 educators and 10/10/07 at the Hillside Public Library for 10 participants.

75% Set one or more specific written health or financial goals
67% Decrease portion sizes of foods eaten
47% Decrease discretionary household spending
58% Track current eating and/or spending habits
77% Increase daily exercise
27% Compare current health and finances to expert recommendations (e.g., BMI, debt ratios)
27% 'Automate' a health or financial behavior (e.g., automated investment plans)
55% Better control intake and outgo of food (eating/exercising) and/or money (earning/spending)
30% Read or attend seminars on health or finance topics
62% Periodically monitor progress toward health or finance goals

4. Associated Knowledge Areas

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1. **Outcome Measures**

   Short Term--Individuals gain awareness, knowledge, skills related to:
   - Attitudes about healthy eating for adults/youth
   - Healthy food choices for adults/youth
   - Selection of healthy foods for adults/youth
   - Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer)
   - Physical activity recommendations for health for adults/youth
   - RCRE
   - Identify factors that promote excessive weight gain as well as protect against childhood obesity
   - Understand the molecular mechanisms of lipid transport in the intestinal cell
   - Demonstrate the affects of calcium absorption and bone mass by weight loss

2. **Associated Institution Types**

   • 1862 Research

3a. **Outcome Type:**

   Change in Knowledge Outcome Measure

3b. **Quantitative Outcome**

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

   **Issue (Who cares and Why)**

   Drug Therapies to Treat Obesity

   Obesity in the United States has risen at an epidemic rate during the past 20 years, a condition affecting about one-third of American adults, according to the Centers for Disease Control and Prevention. One of the national health objectives for the year 2010 is to reduce the prevalence of obesity among adults to less than 15 percent. Obesity is widely prevalent in the US and dietary fat is the major calorie generating nutrient in our diets. However, little is known about the process of dietary fat uptake or how certain enzymes such as lipin affect fat metabolism, where excess lipin promotes extra body fat.

   **What has been done**

   One research group investigated the mechanism and regulation of intestinal fatty acids and monoacylglycerol lipase (iMGL) transport and metabolism. Transgenic mice that overexpressed iMGL in the small intestine were used to elucidate the role of the enzyme in fat metabolism. For lipin research, a yeast model was used to show that lipin (phosphatidic acid phosphatase or PAP) was required for the formation of fat triglycerides. They then decoded the amino acid sequence for the PAP enzyme from yeast, and confirmed its correspondence with mammalian lipin.

   **Results**

   This research provides new information on how certain enzymes regulate fat uptake in the body provide new targets for drug therapies to prevent or treat obesity. The transgenic mice ate much more and had decreased energy expenditure as compared to normal mice. Based on the research, iMGL has a role in whole body energy balance, possibly via regulation of food intake. Also, iMGL, may play a functional role not only in lipid synthesis but also in the regulation of appetite and energy expenditure.

   The breakthrough for lipin research was the isolation of the PAP enzyme from yeast that corresponds in form to lipin in mammals and the fact that yeast cells lacking the enzyme exhibited a 90 percent reduction in the yeast's version of fat loss. Without PAP enzyme, the ability to lose fat was practically extinguished, highlighting the role of this lipin enzyme in fat loss, and adding a key process for for lipin's role in fat metabolism. Combined with the information from the iMGL work, there are new substances and pathways to target new pharmaceuticals and other therapies for treatment and prevention of obesity.

4. **Associated Knowledge Areas**

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<td>702</td>
<td>Requirements and Function of Nutrients and Other Food Components</td>
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<tr>
<td>701</td>
<td>Nutrient Composition of Food</td>
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**Outcome #7**

1. **Outcome Measures**
Youth/Adult Obesity

Short Term: Individuals gain awareness, knowledge, skills related to:
- Attitudes about healthy eating for adults/youth
- Healthy food choices for adults/youth
- Selection of healthy foods for adults/youth
- Benefits of physical activity, (reduced overweight and obesity, reduced risk of diabetes, heart disease and cancer)
- Physical activity recommendations for health for adults/youth
- RCRE - Identify factors that promote excessive weight gain as well as protect against childhood obesity
- Understand the molecular mechanisms of lipid transport in the intestinal cell
- Demonstrate the effects of calcium absorption and bone mass by weight loss.

2. Associated Institution Types

• 1862 Extension
• 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Health Literacy

Health literacy is usually considered to be a problem for the public, whereas only 12% of the adult population achieves proficient health literacy. Low health literacy is linked with poor health outcomes, higher hospitalization and less frequent use of preventative services. However, providers of health care and health information often exhibit poor health literacy as well; for example, they may communicate in linguistically and culturally inappropriate manners. This work creates a positive impact by bringing those often hidden barriers to the attention of public health professionals, academics, health communicators, and medical practitioners and supplying them with a set of skills they can put into practice in their daily work to ultimately protect and improve public health.

What has been done

In order to address the problem of low health literacy, faculty at NJAES are reviewing the existing literature and practices to identify best practices and program guidelines related to health literacy, as well as conducting an active research program into the determinants and appropriate responses to low health literacy. By working with partners in government and non-government organizations, they can help increase awareness of health literacy among public health and medical professionals, and ultimately, improve ability of public health and medical professions to clearly and effectively communicate. In New Jersey, a network of individuals is being created, working across the state to improve health literacy skills of health and related professionals within the state to improve health literacy skills of health and related professionals within the state. Also, they are identifying and working with national and international partners and venues for outreach and interventions. Through a series of seminars, training sessions, grand rounds, and any and other training and outreach opportunities, increased awareness of health literacy will help both the general public and public health professionals bridge communication and knowledge gaps.

Results

The training events produced increased awareness and capacity in individuals to address their own health literacy. Two-thirds of the participants said that the trainings increased their understanding ‘very much,’ and 90% stated that they can use the information and 80% said that they will take a specific action in the future. By increasing awareness, these health literacy solutions can solve many of the communication problems between people and the health service sectors, and lead to increased health literacy and increased overall health.

4. Associated Knowledge Areas

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V(H). Planned Program (External Factors)

External factors which affected outcomes
Youth/Adult Obesity

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned
   - After Only (post program)
   - Retrospective (post program)
   - Before-After (before and after program)
   - Time series (multiple points before and after program)
   - Comparisons between program participants (individuals, group, organizations) and non-participants
   - Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
   - Comparison between locales where the program operates and sites without program intervention

**Evaluation Results**
   Evaluation results are unique to each program. See Qualitative Outcome Statements.

**Key Items of Evaluation**