Iowa’s Comprehensive Nutrition and Physical Activity Plan

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The topic of the 2005 World Food Prize International Symposium was “The Dual Global Challenges of Malnutrition and Obesity.” In the opening address of the conference, Iowa Governor Tom Vilsack spoke about the moral need to share resources such as healthy food with the less fortunate. Today, paradoxically, obesity coexists with malnutrition even in developing countries. Like much of the world, Iowa is struggling with the obesity pandemic. Children and Iowans with lower socio-economic resources, as in much of the rest of the world, particularly struggle with this issue.

Organized public health has been enabling Iowans to lead healthier lives, primarily though the prevention of infectious disease, for 125 years. Today, Iowans’ health is now impaired due to an epidemic of physical inactivity and poor nutrition. Obesity and related diseases are the consequences.

“Today’s children will be the first generation in memory to have a shorter life span than their parents”
(Sir John Krebs, chairman of United Kingdom’s Food Standards Agency).

As the Iowa Department of Public Health moves into the next 125 years, it is time to focus on health promotion and disease prevention.

The long-standing belief that overweight people lack willpower is slowly giving way to the realization about society’s role in this complex phenomenon. Modern conveniences, the availability and promotion of low nutrient foods, and a lack of physical activity have combined to create an “obesigenic environment.” It is thought to be one of the root causes for the unprecedented increase in overweight and obesity affecting Iowa, our nation, and many parts of the world.

Obesity and overweight, which are risk factors for a host of chronic diseases, affect 60.9 percent of Iowa adults. A condition that impacts over half of Iowans needs immediate action - action so great it will take efforts beyond those of the Iowa Department of Public Health. The department will strengthen current partnerships and form new ones for these essential efforts.
Overweight and obesity contribute to the burden of cardiovascular disease, the number-one killer of Americans. See the appendix for Iowa maps of cardiovascular disease rates, stroke disease rates, and diabetes prevalence. According to the Nutrition and Physical Activity Division at the Centers for Disease Control and Prevention (CDC), obesity and overweight are associated with an increased risk for hypertension, diabetes, hypertriglyceridemia, low levels of high density lipoprotein-cholesterol (HDL, or “good cholesterol”), and high levels of total and low density lipoprotein-cholesterol (LDL, or “bad cholesterol”). Other diseases associated with overweight and obesity include:

- Type 2 Diabetes
- Certain types of cancer
- Arthritis and orthopedic problems
- Sleep apnea
- Depression
- Asthma
- Gall Bladder Disease

The psychosocial ramifications can also be severe. Youth say that being teased and left out are the worst aspects of being overweight. People who are obese face social marginalization, job discrimination, and poor self esteem.

As a result, **obesity and physical inactivity are among the top ten leading Healthy People 2010 priorities (indicators) in the United States.** Healthy People 2010 is a national master health plan for health promotion and disease prevention. Its goals are to increase the quality and years of healthy life and eliminate health disparities. The Leading Health Indicators show individual behaviors, physical and social environmental factors, and important health system issues that greatly affect the health of individuals and communities. Healthy People 2010 includes the following healthy weight objectives:

<table>
<thead>
<tr>
<th>Objective #</th>
<th>Healthy People 2010 Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-1</td>
<td>Increase the proportion of adults who are at a healthy weight.</td>
</tr>
<tr>
<td>19-2</td>
<td>Reduce the proportion of adults who are obese. (Baseline: 24% Target: 15%)</td>
</tr>
<tr>
<td>19-3</td>
<td>Reduce the proportion of children and adolescents who are overweight or obese.* (Baseline: 12.5 percent; Target: 5%)</td>
</tr>
</tbody>
</table>

*See the appendix for definitions of overweight and obesity

In July 2004 the Iowa Department of Public Health was awarded CDC funding to address nutrition and physical activity to prevent obesity and other chronic diseases, specifically through the increased consumption of fruits and vegetables, increased physical activity, increased breastfeeding and the reduction of screen
time. Iowa’s project, Iowans Fit for Life, has two major components, the Iowans Fit for Life Partnership and the Iowans Fit for Life Intervention.

The Iowans Fit for Life Partnership was created in the spring of 2005 and includes a network of statewide partners with a vested interest in nutrition and physical activity. The partnership’s first responsibility was to write a comprehensive state plan to address nutrition and physical activity for Iowans of all ages.

Iowa currently has a health priority map, Healthy Iowans 2010, which includes Nutrition and Overweight chapter and a Physical Activity and Fitness chapter. Healthy Iowans 2010 has been used as a building block for the Iowans Fit for Life Partnership in developing Iowa’s Comprehensive Nutrition and Physical Activity Plan, and is designed to help meet Healthy Iowans 2010 and Healthy People 2010 objectives.

The purpose and long-range goal of Iowans Fit for Life is to improve quality of life and reduce obesity-related diseases and medical expenditures. While the rates of obesity and overweight are steadily increasing in Iowa, Iowans can immediately benefit from improved nutrition and increased physical activity.

The Burden of Obesity in Iowa

Obesity and overweight has been on the rise in Iowa over the last several years. Not only is the number of overweight adult Iowans increasing, but the number of overweight youth is escalating at an even higher rate. In Iowa, the Behavioral Risk Factor Surveillance System (BRFSS), the National Children’s Health Survey, and the Pediatric Nutrition Surveillance System (PedNSS) provide information about nutrition, physical activity, obesity, and related diseases. See the appendix for a more detailed description about these surveys.

Early Childhood

In 2004, nearly half of all Iowa babies born were eligible for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and according to census data, about 188,000 Iowans were under five years of age. PedNSS provides data on the prevalence of underweight, overweight, anemia, low birth weight and breastfeeding initiation and duration for children ages 0-4 years who participate in the WIC program.

During the period of 1984 to 2004 there was steady rise in the prevalence of overweight in Iowa WIC infants and children from 8 percent in 1984 to 13.6 percent in 2003 (compared to 14.7 percent nationally). In 2003, 31 percent of
low income Iowa children aged 2 to 5 years were overweight or at risk of becoming overweight. Minority populations in Iowa are small, but trends are similar to those reported in other states. Of children over two years of age, 12.8 percent of white, 11.1 percent of black, and 19.4 percent of Hispanic children were overweight in the 2003 report. Iowa’s ten counties with the highest prevalence (2003 data) of overweight in children two – four years of age are shown below.

### Overweight Children 2 - 4 Years of Age

<table>
<thead>
<tr>
<th>County</th>
<th>Percent of children &gt;95th percentile for weight</th>
<th>Percent of Hispanic children that are &gt;95% for weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mills</td>
<td>16.8%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Fremont</td>
<td>17.0%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Keokuk</td>
<td>17.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Louisa</td>
<td>17.7%</td>
<td>53.3%</td>
</tr>
<tr>
<td>Buena Vista</td>
<td>18.9%</td>
<td>59.3%</td>
</tr>
<tr>
<td>Marshall</td>
<td>19.4%</td>
<td>47%</td>
</tr>
<tr>
<td>Monroe</td>
<td>19.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Wright</td>
<td>21.6%</td>
<td>37.1%</td>
</tr>
<tr>
<td>Butler</td>
<td>22.4%</td>
<td>Not provided</td>
</tr>
<tr>
<td>Franklin</td>
<td>22.6%</td>
<td>34.4%</td>
</tr>
</tbody>
</table>

The data on the percent of overweight Hispanic children are shown in this table because it provides guidance on possible interventions customized to specific populations. With Iowa’s growing Hispanic population and data supporting the fact that Hispanic children are at higher risk of overweight, many communities will want to ensure that Hispanics are included when designing interventions. However, other communities have very few Hispanic children and yet have a high prevalence of overweight. These communities may customize their intervention strategies after studying their particular population more thoroughly.

**Youth**

The prevalence of overweight for U.S. children 6-11 years old has climbed to 16 percent, while the prevalence of overweight adolescents 12-19 years has nearly tripled in the past two decades to 16 percent. The American Heart Association, American Stroke Association and the Robert Wood Johnson Foundation declared in 2005 that childhood obesity is “the most pressing health concern in the country.” This concern stems from obesity in children and adolescents being associated with significant health problems, such as high blood cholesterol, high blood pressure, hypertension, diabetes, and depression. It is estimated that over one-third of children born in 2000 will develop diabetes if current trends continue. While children’s health diminishes, the children say the most immediate consequence of overweight is social discrimination.
Here are some sobering data:

- **Today’s children are less physically active than any other generation**\(^{10}\)

- **Overweight children report lower quality of life than children with cancer**\(^{11}\)

The National Survey of Children’s Health tracks health behaviors of children, their families, and communities through randomized telephone surveys. In Iowa, parents reported their child’s height and weight to interviewers, and it appears Iowa children have a lower incidence of “at risk for overweight” and “overweight” than the national average. Iowa children with special health care needs have a lower prevalence of those in the normal weight range (63.4 percent compared to 71.1 percent).

![Figure 1](http://www.nschdata.org/)


The surveys described thus far are based on self-report (or parent report) rather than actual measurements which are more accurate. A potential statewide health surveillance system with standardized anthropometric measurements of school-age youth is expanding. United States Senator Charles Grassley of Iowa secured earmarked funds for the surveillance project, “Physical Activity and Nutrition Among Rural Youth” (PANARY) through the University of Northern Iowa (Principal Investigator: Larry Hensley). In this project, physical education teachers measure the height, weight, and physical fitness of school-aged children from schools across Iowa. From data collected in 2003, the prevalence of
overweight among 3,416 Iowa fourth, fifth, and sixth grade children was found to be higher than the national average for this age group.\textsuperscript{12} The results showed:

- 60 percent were in the normal weight zone (as compared to 70 percent of U.S. children)

- 20 percent were in the “at risk for overweight” zone (as compared to 16 percent of U.S. children)

- 20 percent were in the “overweight” zone (as compared to 15 percent of U.S. children)

The national data is self-report rather than actual measurements, which may explain the higher prevalence of overweight found in the PANARY sample. Iowa children from rural areas had a higher prevalence of overweight and more were at-risk for overweight than children from urban areas and small cities.

<table>
<thead>
<tr>
<th>Children from Urban Areas</th>
<th>Children from Rural Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of Overweight</td>
<td>Distribution of Overweight</td>
</tr>
<tr>
<td>Normal weight</td>
<td>Normal weight</td>
</tr>
<tr>
<td>At-Risk for Overweight</td>
<td>At-Risk for Overweight</td>
</tr>
<tr>
<td>Overweight</td>
<td>Overweight</td>
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</table>

Figure 2. Differences in prevalence of normal weight, at-risk for overweight, and overweight among upper elementary Iowa children in the PANARY study.

Overweight has been increasing in all groups, but seems to be increasing at a greater rate among minority/ethnic groups. In this sample of Iowa children (92.7 percent white, non-Hispanic), overweight did not vary by ethnicity, but such differences have been reported nationally including:

- Non-Hispanic black (21 percent) and Mexican-American adolescents (23 percent), ages 12-19, were more likely to be overweight than non-Hispanic white adolescents (14 percent)

- Mexican-American children, ages 6-11, were more likely to be overweight (22 percent) than non-Hispanic black children (20 percent) and non-Hispanic white children (14 percent)

Youth obesity also has financial costs in addition to physical and emotional costs. Disease trends and the economic burden of youth obesity were examined from
1979 to 1999.\textsuperscript{13} During this time, the percentage of:

- obesity-related hospital discharges for diabetes nearly doubled,
- obesity and gallbladder diseases tripled, and
- sleep apnea increased fivefold.

After adjusting for inflation, annual hospital costs associated with these diseases were about $35 million during 1979-81 and increased more than threefold, to about $127 million, during 1997-1999.\textsuperscript{13}

**Adults**

The rate of overweight is also increasing among Iowa adults. Obesity among Iowa adults increased 84 percent from 1991 to 2004. The 2004 BRFSS data show:

- 37.4 percent of adult Iowans are overweight (having a body mass index (BMI) greater than or equal to 25 kg/m\textsuperscript{2}) and
- 23.5 percent are obese (BMI greater than or equal to 30 kg/m\textsuperscript{2}). See the appendix for more information about BMI

![Figure 3. Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 1991-2003.](image)

The majority of Iowans, 93 percent, are white, non-Hispanic. In the 2003 BRFSS the number of Iowans of other races/ethnicities sampled was not high enough to
identify Iowa-specific race/ethnicity trends in obesity. Nationally, African-American and Mexican-American women have the highest prevalence of overweight and obesity according to the National Health and Nutrition Examination Survey (NHANES). Beyond race and ethnicity, other groups of Iowans are also vulnerable:

- Women have a higher prevalence of overweight and obesity than men.
- Adults from rural areas have a higher incidence of overweight than those from urban areas, and the population of Iowa is 50 percent rural. (See Figure 4 for synthetic estimates of adult overweight and obesity in Iowa counties by level of urbanization.)
- Obesity prevalence is highest, 28.2 percent, among Iowans with incomes under $15,000
- Less education is associated with higher obesity
- The prevalence of overweight and obesity rises with increasing age to 64 years

The burden of obesity stretches into Iowa financially. Iowans pay $783 million in health care costs annually for problems associated with obesity. Of that, about half is covered by Medicaid & Medicare. National medical spending among obese adults averaged about 56 percent more than medical spending by normal-weight adults. The same study also reported that from the late 1970s until 2004, total diabetes prevalence, which is clinically linked to obesity, increased 53 percent, and diagnosed diabetes prevalence increased 43 percent. Meanwhile, medical spending for diabetes has increased 79 percent due to increased prevalence of obesity.
Figure 4. Percent of overweight and obese adults by county

Nutrition in Iowa

Obesity is primarily caused by poor nutrition and inadequate physical activity. The lack of balance between calories consumed with calories expended is causing Iowans’ weight to increase. Iowa’s Comprehensive Nutrition and Physical Activity Plan targets 1) improving nutrition, particularly through increased consumption of fruits and vegetables, 2) increasing physical activity, 3) increasing breastfeeding, and 4) reducing screen time.

Iowa’s nutrition goals for this plan include increasing fruit and vegetable consumption and incidence and duration of breastfeeding. The 2005 Dietary Guidelines recommends the consumption of a sufficient amount of fruits and vegetables while staying within energy needs. Two cups of fruit and 2½ cups of vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on the calorie level.

Source: IDPH 2004 BRFSS Synthetic Estimates
Prepared 09/22/2005

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The 1997 Iowa Youth Risk Behavior Survey (YRBSS) showed that 29 percent of Iowa youth in grades 9-12 consumed fruits and vegetables five or more times per day in the week preceding the survey. This consumption dropped to 19.7 percent in 2003 (non-representative sample). The 2003 Behavioral Risk Factor Surveillance System (BRFSS) showed that 17 percent of Iowa adults overall consumed five or more servings of fruits and vegetables per day. This compares with:

- 22 percent of U.S. adults
- 24 percent of older Iowans
- 19 percent of Iowans with an income of less than $15,000 annually
- 11 percent of Iowans with less than a high school education or General Equivalency Diploma (GED)

Iowa’s breastfeeding goals in *Healthy Iowans 2010* are for 75 percent of babies to be breastfed at birth and 50 percent of babies continuing to be breastfed at six months. These goals are modeled from the *Healthy People 2010* goals.

Breastfeeding rates in Iowa were up in 2004, with 67 percent of babies breastfed at birth, according to the Iowa Newborn Metabolic Screening Profile. Iowa has had a steady increase in breastfeeding since 1991. The following table shows rates for the past 10 years:

<table>
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<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>56.4%</td>
<td>57.7%</td>
<td>59.9%</td>
<td>61.6%</td>
<td>62.7%</td>
<td>63.1%</td>
<td>64.6%</td>
<td>64.9%</td>
<td>65.8%</td>
<td>67%</td>
</tr>
</tbody>
</table>
Physical Activity in Iowa

Physical activity goals include 60 minutes of daily physical activity for youth and 30 minutes of daily physical activity for adults. Results from the 1997 YRBSS indicated that 67 percent of Iowa youth participated in at least 20 minutes of vigorous activity on three or more days in a week. That compares to 60.8 percent in 2003 (non-representative sample). Data from the 2003 National Survey of Child Health showed that Iowa boys are more active than girls, and fewer Iowa youth than U.S. youth are active every day.

![Comparison of Iowa youth and U.S. youth in frequency of physical activity](http://www.nschdata.org/)

The 2003 BRFSS showed that 43 percent of Iowa adults (men- 45 percent; women- 42 percent) met the recommended guidelines of moderate activity for 30 or more minutes per day for five or more days per week or vigorous activity for 20 or more minutes per day, three or more times per week. This compares to:

- 47 percent of U.S. adults
- 32 percent of older adults
- 38 percent of adults with incomes of less than $15,000 annually
- 36 percent of adults with less than a high school education or GED.
Too much *inactivity* may be harmful to health. In a study of U.S. youth ages 14-18, those that watched more than four hours of television per day had a higher BMI.\textsuperscript{17} On the other hand, television and video games that include physical activity participation may be part of the solution of increasing access to physical activity for all Iowans. Compared to U.S. youth (ages 6-17), Iowa youth fare better at meeting the recommended guidelines of less than two hours a day.

Figure 8. Comparison of Iowa youth and U.S. youth in duration of screen time

References

12. 2003 Pediatric Nutrition Surveilance – Iowa Data. Contact: Spohl@idph.state.ia.us

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Iowa Focus Groups

While obesity and overweight has been on the rise, Iowans have already begun to address this alarming trend. However, if changing nutrition and physical activity patterns were easy, Iowa, the nation, and many parts of the world would not be experiencing obesity epidemic.

A Community Health Needs Assessment and Health Improvement Plan (CHNA&HIP) was completed in every Iowa county in 2005 and a mid-course revision of Healthy Iowans 2010 was also completed in 2005. These two documents were used to begin establishing Iowa’s needs to address nutrition and physical activity to prevent obesity and other chronic diseases. After the Iowa Department of Public Health gained Centers for Disease Control and Prevention (CDC) funding, several more assessments occurred including community forums, key informant interviews and a survey of WIC agencies.

Community Health Needs Assessment

Each Iowa county (99) completed a Community Health Needs Assessment & Health Improvement Plan (CHNA & HIP) in the spring of 2005. Each county created a local needs-assessment process and prioritized its health-care needs with local boards of health, community residents, and health providers. Many of the counties determined that overweight is a health concern. Out of 99 counties, 75 percent (74 counties) placed overweight/obesity, nutrition, physical activity or other closely related factors among their top priorities. The map below highlights those counties in yellow.
Healthy Iowans: Charting the Course for Healthier Iowans

*Healthy Iowans 2010* is an Iowa version of the national *Healthy People 2010* plan to improve health and well-being. It is the master health plan for Iowa. “Collaboration,” it says, “is the bedrock of public health and *Healthy Iowans 2010* Planning. At the core of … *Healthy Iowans 2010* is the idea that all Iowans benefit when stakeholders decide on disease prevention and health promotion strategies and agree to work together on them.” Both *Healthy People 2010* and *Healthy Iowans 2010* are used to guide federal resource allocations for disease prevention and health promotion. Iowa’s Comprehensive Nutrition and Physical Activity Plan is closely aligned and complementary to the *Healthy Iowans 2010* objectives and strategies.

The Governor ties the *Healthy Iowans* planning into his overall plan; *Iowa 2010: the state of our future*. State Legislators receive copies of the *Healthy Iowans*
plan and a number of them serve on chapter teams. Citizens are involved in every stage of the plan and team meetings are often held over ICN –Iowa Communication Network – a fiber optic network allowing video meetings. Additionally over 550 team members are linked through listserves established at Hardin Library for the Health Sciences at the University of Iowa.

The 25 chapters of Healthy Iowans 2010 are guides for stakeholders in public health and other health fields. The Nutrition and Overweight, and Physical Activity and Fitness chapters are the foundation for Iowa’s Comprehensive Nutrition and Physical Activity Plan.

Community Forums

To begin writing the plan, the Iowa Department of Public Health began three separate assessments to gain an Iowa focus. Several approaches were used to obtain broad statewide representation. Early on, Community Health Needs Assessments and Health Improvement Plans (CHNA & HIP) were completed, and community forums were held over the winter months, followed by a series of Supplemental Nutrition Program for Women, Infants and Children (WIC) surveys in WIC agencies. Key informant interviews were held in the summer with the Office of Multicultural Health to identify barriers for minority populations.

Nine community forums were held during 2004-2005 in Bedford, Jefferson, Ames, Donnellson, Ottumwa, Estherville, Spencer, and West Union, finishing with an April forum in Cedar Rapids. Diverse community groups provided information on the signs of obesity in their communities, measures currently being used to address the problem, and ideas to create lifestyles that address overweight and related health issues. The groups discussed steps they could take in their communities and areas in which they could use help from the state. The groups also prioritized their strategies.

Responses were remarkably similar across all regions, and no appreciable differences were noted between urban and rural communities.

Ninety-six percent of forum attendees “strongly agreed” that overweight and obesity was a major threat in Iowa, and 88 percent agreed that a community approach was the best way to address the problem. Attendees were equally divided between whether or not there were sufficient opportunities for physical activity in their communities. They ranked parents as having the greatest influence on children’s lifestyles.
Community forum participants made the following suggestions/comments on Iowa’s nutrition and physical activity initiative:

- More school time should be allotted for physical education.
- Schools should devote more time to promoting healthy lifestyles.
- Exercise is important to lose weight.
- Fitness is more important than fatness.
- Weight-loss diets do not work long-term without physical activity.
- Banning/restricting access to vending machines during school hours would help curb obesity.
- Schools should promote one major event every six months. Examples are a “Kids Walk-to-School” event in October and a “No T.V. Week” in April. Public promotions would make each county’s public health organizations more recognizable.
- Each Iowa school needs a committee to develop a school wellness policy by the 2006-2007 school year.
- Public awareness should be made of all the resources available in each city/county.
- Each county should expand the developing health coalitions.
- The coalitions could establish a relationship with schools, where it could disseminate information about upcoming events or tips for healthier living.

Participants at three of the forums were surveyed on attitudes, beliefs, and barriers. Participants who completed the survey included local health stakeholders, many of whom were volunteers on health committees or school wellness committees.

Respondents believe obesity is a societal threat and that community-based approaches are necessary to combat it. They identified challenges about the level of opportunity for access to physical activity and proper nutrition. Another challenge, they believe, is the negative influence on children’s food choices.

Finally, participants were asked to rank children’s role models, from most important to least important. A majority believe the ranking is as follows:

1. Parents
2. Media
3. Classmates
4. Teachers
5. Doctors
Survey of WIC Agencies

Following the community forums in March and April of 2005 the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) agencies were used to solicit more input from across Iowa to gain their perceptions on overweight and childhood obesity specifically.

Children coming to their clinics provided WIC personnel with the greatest indication that there was an obesity problem in their communities. More children are overweight, have increased and rapid weight gain, and have increased blood pressure, and some of their parents are concerned about diabetes. Schools and families contribute to promotion of this health problem. Families on the go are major contributors due to their rushed schedules. This results in consumption of more high-calorie foods and less time for physical activity.

Several factors are promoting a healthy lifestyle. Media attention, and activity opportunities provided by trails, ballparks, water parks and recreation centers, are increasing. Pennsylvania WIC Nutrition and Physical Activity modules are being implemented in Iowa WIC clinics. Also, coalitions to combat the problem are forming statewide. Increased activity opportunities, increased community support and partnerships, and limited sales or change in products sold (i.e., dairy products instead of soda) in vending machines appear to work.

State funding is the greatest need. Clinic personnel also noted they need technical assistance and information about best practices. To help implement the state plan, communities can provide more programming, education of parents and communication with them, school personnel and other community members.

Key Informant Interviews

The final assessment conducted was a joint venture by Iowans Fit for Life and the Iowa Department of Public Health (IDPH) Office of Multicultural Health. Over 50 key informant interviews were conducted during the summer of 2005 on nutrition, physical activity, and obesity among African-American and Hispanic Iowans. They included individual interviews and a group session over the Iowa Communications Network.

Participants acknowledged obvious overweight problems in their communities through observation and personal experience. Community members were divided on whether there is a relationship between weight and illness, and they agreed that too much television, not enough physical activity, and consumption of less-nutritious foods contribute to an increase in overweight. Several participants
believed that television is a major problem since it not only contributes to
inactivity but to consumption of less nutritious foods. This occurs because people
eat while watching television or are influenced by food advertising.

Participants discussed popular activities in their communities. Children’s favorites
are playing, swimming, and running while adolescents favor more sports,
particularly basketball. Young adults favor walking and biking as well as sports
such as basketball, and older adults mostly preferred walking. Interviews also
identified barriers. The barriers most frequently mentioned were safety and
access, but participants also listed cost, lack of interest, and lack of knowledge
about physical activity.

As for eating, fried foods, including chicken, pork, and fish, and a great deal of
soul food, are among the most popular. Beef, chitterlings, macaroni and cheese,
greens, breads, and anything cooked with grease and butter were also popular,
along with food from fast food restaurants. Participants were also asked if they
ate fruits and vegetables regularly. Most said that they did, and thoroughly
enjoyed them (particularly vegetables). But they said they probably did not eat
five servings a day.

Barriers to consuming five servings of fruits and vegetables daily are similar to
barriers to being physically active. The cost of fruits and vegetables is a barrier,
as well as the lack of their consistent availability for home and work. Several
participants noted that they lack nutrition knowledge.

Participants also discussed their access to regular health care, and whether or not
that affects their weight. The group was split on the extent of their access.
Participants who had limited access said it is because of a lack of knowledge on
where to go or because their employers did not provide it. The group was split on
its impact on weight. Some believed that if they went to their health-care
provider, they would know their weight and blood lipid levels, as well as the
health-awareness benefits of having a regular check up.

Finally, participants told where they could go for information and how they would
approach losing weight. The local health department, a library, their church, their
health-care provider’s office, or the local community center were among the
sources. Most said they would take a positive approach to losing weight through
exercise and eating more nutritiously, although some said they would be reluctant
to lose weight unless it was medically necessary.
Summary of Barriers

From all of the assessments, a list of barriers was created and used in establishing the objectives and strategies of Iowa’s Comprehensive Nutrition and Physical Activity Plan. Barriers include:

- **Time**: Most adults say this is the number-one barrier to being physically active along with cooking meals with fresh fruit and vegetables.
- **Money**: “Extra value meals” are often a better bargain than regularly sized portions.
- **Environment**: built to serve automobiles rather than people.
- **Easy access to “junk food.”**
- **Lack of fresh fruits and vegetables** available in rural communities.
- **Safety** of children playing outside.
- **Reduction of physical education class** time and recess time in schools.
- **Belief that school pop and candy vending machine** money revenue is necessary.
- **Popularity of video games, television, and computers**, leading to excessive “non-purposeful” time.
- **Inclement weather**.

Collaboration, Stakeholders, and Partnerships

After completing the community forums, key informant interviews, and WIC surveys, the Iowa Department of Public Health began gathering members to form the Iowans Fit for Life Partnership. The partnership formally began in May 2005 at the Iowans Fit for Life Symposium, and was followed by work groups meeting for several months.

The partnership is made up of many partners and stakeholders across Iowa that have joined to fight this epidemic. Leaders from state and community organizations, public health, academia, government, non-profit, business, and advocacy organizations representing people affected by obesity have helped with planning and will be involved in the implementation of the Iowa’s Comprehensive Nutrition and Physical Activity Plan. Traditional public health partners and new ones have joined to help Iowans overcome poor nutrition and inactivity.

The Iowans Fit for Life Partnership was formed in May 2005 and is broad. The partnership was formed to begin writing Iowa’s Comprehensive Nutrition and Physical Activity Plan and in the future will implement the plan. It brings together...
people who help older Iowans, younger Iowans, and Iowans of diverse races/ethnicities. It includes health-care providers, educators, and nutrition and physical activity experts. It also includes partners who work primarily in Iowa agriculture, business and industry, government, and Iowa communities.

Iowans Fit for Life at the Iowa Department of Public Health also work to bring together other existing efforts. Key members of the partnership that have valuable stakes in this fight against obesity programs include the Diabetes Prevention Program, Iowa Arthritis Program, Comprehensive Cancer Control, Harkin Wellness Grants, WISEWOMAN, Five-a-Day, Iowa Nutrition Network, BASICS, Cardiovascular Risk Reduction, Women’s Health, Fit Kids Coalition, Maternal and Child Health, WIC, Healthy Child Care Iowa and Lighten Up Iowa. See the appendix for descriptions of these programs.

Finally the Iowa Department of Public Health will serve as the conduit for communication among local boards of health, national public health entities, and federal programs. Iowa’s local public health infrastructure, which exists in various forms in all the state’s counties, will be essential in working directly with communities.

Iowans Fit for Life Symposium

The Iowa Department of Public Health in May 2005 invited partners and stakeholders of Iowans Fit for Life to a symposium to discuss nutrition and physical activity. Over 300 participants attended to begin working on goals, objectives, and strategies to improve Iowans nutrition and physical activity to prevent obesity and other chronic diseases.

Participants were asked to visualize what Iowa would be like in 20 years if appropriate nutrition and physical activity changes occurred. They then discussed what it would take to get there, what barriers exist and what partnerships could overcome those barriers. They were then asked to commit to the Iowans Fit for Life Partnership.

Iowans Fit for Life Work Groups

In the summer months following the symposium, the partnership met once a month for four months to identify goals, objectives and strategies to include in Iowa’s comprehensive plan for nutrition and activity. It met in six groups: older Iowans, health care, educational settings, early childhood, community, and
business and agriculture. A list of partnership members is included in the appendix.

The Iowans Fit for Life Steering Committee also met to determine how the six work groups’ goals, objectives and strategies would come together, to identify target populations, to ensure that the strategies were meeting all levels of the socio-ecological model (policy, community, organizational, interpersonal, individual), and to identify partners to carry out the goals, objectives, and strategies. The committee comprised two to three members from each of the six work groups. A list of committee members is in the appendix.

In the future, the Iowans Fit for Life Partnership will continue to help guide Iowa’s comprehensive plan for nutrition and physical activity.

**Interagency Task Force**

Besides the work groups, an Interagency Task Force is responsible for providing input, guidance, and advice on grants of the CDC Nutrition and Physical Activity to Prevent Obesity and Other Chronic Diseases program, which in Iowa is Iowans Fit for Life. Participation is open to state agencies interested in helping develop and support Iowans Fit for Life objectives. Members include physical activity and nutrition experts, as well as other interested stakeholders from the Iowa Department of Public Health and other state agencies.

The task force reviews, approves, and gives input on draft plans of the Iowans Fit for Life Partnership. It also monitors and evaluates progress in development of the state plan and other grant activities to ensure they are implemented as intended, and provides feedback, coordination and guidance for the comprehensive state plan. A list of members is in the appendix.

**Epidemiology/Program Evaluation Committee**

One final group that is essential to Iowans Fit for Life is the Epidemiology/Program Evaluation Committee. This committee was formed at the beginning of program development for Iowans Fit for Life. The purpose of the committee is to provide recommendations in regards to the strength of the proposed interventions, program evaluation design, and statistical methodology. The committee works with the Iowans Fit for Life Epidemiologist/Program Evaluator and consists of faculty from the three state universities. The committee also facilitates access to Iowa databases that may expand the description of the problem and track changes in physical activity and nutrition. A list of the members is in the appendix.
High Priority: Target Populations

Based on disease burden prevalence and the responses from county health needs assessment, community forums, WIC agency surveys, key informant interviews and work groups, the following populations were determined to be high priority targets for steps to improve nutrition and increase physical activity:

Iowa children, especially those from rural areas, have the highest risk of disease and economic burden from obesity. They also have the potential risk of reduced quality of life. If improved nutrition and increased opportunities for activity are offered soon, Iowans have a chance of preventing the fulfillment of dire predictions, such as that 1 of 3 children today will develop diabetes in his or her lifetime. Children who live in poverty are at higher risk for overweight. Of all children born in Iowa last year, 44 percent were eligible (based on family income) for the Special Supplemental Nutrition for Women Infant and Children (WIC) program.

Older adults, particularly those with disease and disability, are at risk because they lack access to fresh produce and physical activity opportunities. Adults ages 55 to 65 have the highest prevalence of overweight and obesity of any age group, so targeted remedies are essential for this group as well. Because half of Iowa’s population is projected to be older than 50 by 2010, the health and financial condition of the entire state must increase accessible, appropriate, and low-cost nutrition and physical activity programming for older citizens. Iowa is third in the nation in percentage of people over 75 and fifth in percentage over 65. Iowa is unique in that its older population is “aging in place” with a concurrent out-migration of young people. Most other “old” states get that way from influx of retirement-age seniors. As Iowa ages ahead of the rest of the nation, Iowans Fit for Life can become a model for the rest of the country. As a rural state with strong communities, it can implement an inclusive plan to help communities build and sustain healthier lifestyles.

Iowans of lower socio-economic resources and/or minority/ethnic groups have the highest prevalence of obesity. They also have the lowest levels of physical activity. While those with incomes less than $15,000 have rates of fruit and vegetable consumption comparable to those of higher incomes, Iowans with incomes of $25,000-$49,999 have the lowest rates of fruit and vegetable consumption (BRFSS 2003). The state’s minority population, while small, has increased. People from other cultures often quickly develop problems with overweight and obesity when immersed in the U.S. environment. Since language and economics can be barriers for new Iowans, it is essential that public health offer resources in other languages as well as solutions well-matched to different cultures. The components of Iowa’s plan must be affordable to all and their educational messages easily understood.
Goals, Objectives, and Strategies

Goals, objectives, and strategies are the road map that guides us in reducing the incidence and burden of obesity in Iowa. In May of 2005, a symposium organized by the Iowa Department of Public Health was offered to individuals and organizations to discuss nutrition and physical activity. Over 300 participants attended to begin working on goals, objectives and strategies for a comprehensive state plan to address nutrition and physical activity to prevent obesity and other chronic diseases. The program was named “Iowans Fit for Life.” “Active and Eating Smart” was selected as the motto. The vision, mission, and goals of Iowans Fit for Life are:

Vision

- Iowans will enjoy balanced nutrition, lead physically active lives and live in healthy communities

Mission

- Develop and strengthen partnerships that prevent and reduce obesity

Goals/Outcomes

- Prevent and reduce the level of obesity in Iowans through improved nutrition, physical activity and supportive environments
- Reduce obesity through integration, coordination, and collaboration among organizations and entities that share expertise and maximize resources of existing programs and partnerships
The purpose of Iowans Fit for Life is to improve quality of life and reduce obesity-related diseases and medical expenditures. The intermediate objectives (as listed in *Healthy People 2010*) are to improve health behaviors and the environment. The short-term or process objectives are listed under “Infrastructure Objectives” in the Implementation section. The strategies to meet these objectives were developed by the Iowans Fit for Life Partnership through a series of work group meetings. The strategies address current efforts, the environment, barriers, and resources. This process laid the groundwork for implementing community-based approaches that will ultimately improve the health of all Iowans. The work groups included representatives of

- Older Iowans
- Health care
- Educational settings
- Early childhood
- Community
- Business and agriculture

Iowa’s work groups and partners spent many hours together to develop objectives that are SMART: Specific, Measurable, Achievable, Realistic, and Time-phased. Also, careful attention was paid to: 1) the number of people that would be reached, 2) the intervention’s efficiency, 3) the scientific evidence supporting high impact, and 4) the likelihood that the program and the results will continue after outside funding ceases.

These factors are part of a logic framework called **RE-AIM** (Reach, Efficacy, Attainability, Implementation, and Maintenance (Klesges, Estabrooks, Dzewaltowski, Bull, & Glasgow, 2005). Their purpose is to find and maximize the best ways to improve health. The methods used in the state plan also needed to be **new**, not just a continuance of existing programs.

Health interventions need to be based on scientific theory, which is a well-thought out and tested explanation for events. One of the better theories on how to improve health behavior is the Socio-ecological Model of Health Promotion.

### Socio-ecological Model of Health Promotion

Over half of Iowa deaths result from behaviors such as smoking, poor nutrition, or sedentary lifestyle. While individual choices are important, the reality is that factors such as family and environment impact our health as well. While individuals act or fail to act in a way that puts them at risk, the social environment is also a risk. The schematic here depicts the relationship among individuals, their social sphere, their social organizations, communities, and society as a whole – all of which impact health and the ability to live healthier. It recognizes the

[www.iowa.gov/iowansfitforlife](http://www.iowa.gov/iowansfitforlife)
interwoven relationship between individuals and their environment. Individual behavior is determined to a large extent by social environment – community values and norms and laws and regulations. As community barriers to healthy behavior are removed, sustained change becomes more achievable. The most effective approach to change is a comprehensive initiative for each level of the model: individual, interpersonal, organizational, community, and policy. The model level(s) is identified for each of the following work group strategies.

Focus Areas

The work group objectives were organized into four focus areas recommended by the Centers for Disease Control and Prevention to improve the energy (calorie) intake/energy expenditure balance:

- Increased Physical Activity
- Improved Nutrition
- Reduced Screen Time
- Increased Breastfeeding

There is no magic pill, miraculous surgery, or other easy short cut to balance energy intake with energy output.

These focus areas are aligned with the Healthy People 2010 objectives that will be used to evaluate the program. Short-term, intermediate, and long-term strategies are planned over ten years. The objectives and strategies reflect a statewide effort to impact Iowans across their lifespan. Working together, partners across the state can use Iowa-specific strategies and data to maximize public and private resources. All of Iowa’s Comprehensive Nutrition and
Physical Activity Plan objectives and strategies fully support the *Healthy Iowans 2010* goals. The related *Healthy Iowans 2010* goals are listed with each objective along with the level(s) of the socio-ecological model the objective will reach. The strategies primarily of the individual/interpersonal level of the socio-ecological model will be listed first followed by strategies aimed at the organizational, community, and policy levels.

### Nutrition Focus

Food is the input side of the energy balance equation. How much we eat (calories) and what we eat (nutrients) are both important in weight control.

Recommendations contained within the Dietary Guidelines¹ and MyPyramid² will aid the general public over two years of age in reducing the risk for obesity and chronic disease.

The Dietary Guidelines describe a healthy diet as one that

- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.

### Healthy People 2010 Nutrition Objectives

The work group strategies are designed to help Iowans achieve these *Healthy People 2010* nutrition objectives:

<table>
<thead>
<tr>
<th>Objective #</th>
<th><em>Healthy People 2010</em> Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-5</td>
<td>Increase the proportion of persons aged 2 years and older who consume at least two daily servings of fruit. <em>(Baseline: 28% Target: 75%)</em></td>
</tr>
<tr>
<td>19-6</td>
<td>Increase the proportion of persons aged 2 years and older who consume at least three daily servings of vegetables, with at least one-third being dark green or orange vegetables. <em>(Baseline: 3% Target: 50%)</em></td>
</tr>
<tr>
<td>19-8</td>
<td>Increase the proportion of persons aged 2 years and older who consume less than 10 percent of calories from saturated fat. <em>(Baseline: 36%)</em></td>
</tr>
</tbody>
</table>
Iowa's Comprehensive Nutrition and Physical Activity Plan

<table>
<thead>
<tr>
<th></th>
<th>Target: 75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-9</td>
<td>Increase the proportion of persons aged 2 years and older who consume no more than 30 percent of calories from total fat. <em>(Baseline: 33% Target: 75%)</em></td>
</tr>
<tr>
<td>19-15</td>
<td><em>(Developmental)</em> Increase the proportion of children and adolescents aged 6 to 19 years whose intake of meals and snacks at schools contributes to good overall dietary quality.</td>
</tr>
<tr>
<td>19-16</td>
<td>Increase the proportion of worksites that offer nutrition or weight management classes or counseling. <em>(Baseline: 55% Target: 85%)</em></td>
</tr>
<tr>
<td>19-17</td>
<td>Increase the proportion of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that include counseling or education related to diet and nutrition. <em>(Baseline: 42% Target: 75%)</em></td>
</tr>
</tbody>
</table>

**Nutrition Strategies**

Together, the Iowans Fit for Life work groups developed the following strategies. The associated *Healthy Iowans 2010* goals are noted when applicable.

1. Provide educational opportunities on healthy eating and healthy weight to targeted groups.
   *
   Healthy Iowans 2010 goals: 13-3, 13-4, 13-9
   
   Socio-ecological model: community, organizational, interpersonal, individual

   **PARTNERS:**
   Des Moines Area Community College
   Lee County Health Department
   Iowa Partners: Action for Healthy Kids
   Iowa Medicaid
   Tobacco Use Prevention & Control Division
   Hawkeye Valley Area Agency on Aging
   Diabetes Prevention and Control Program
   Heritage Area Agency on Aging
   Lee County Health Department

   **Target Population: Parents of preschool children**

   1.1 Implement programs for parents on healthy food, eating behaviors, and weight for preschool children.

   **Target Population: Child care providers**
1.2 Implement programs for child-care providers on healthy food, eating behaviors, and weight that target food service and curricula.

**Target Population: Students (pre-school through college) and school personnel**

1.3 Assist the Iowans Fit for Life Intervention schools with the implementation of Pick a better snack™ & ACT initiatives, newsletters, and media information.

1.4 Offer mini-grants to increase the number of schools offering healthy eating and improve the nutrition environment.

1.5 Identify, compile, and publicize healthy eating best practices from Iowans Fit for Life Interventions, Fresh Fruit and Vegetable Program schools, Team Nutrition/Iowa Partners: Action for Healthy Kids interventions, Farm Bureau/Wellmark Pilot Intervention Schools, and Harkin Wellness communities.

**Target Population: Parents of school age children**

1.6 Explore and/or expand partnerships with Parent Teacher Associations and Parent Teacher Organizations to encourage parents to be involved in developing and monitoring school food policies and education to promote healthy eating behaviors.

**Target Populations: Iowans by income and education level, age, gender, race/ethnicity, disability-specific, rurality**

1.7 Provide monthly education with a clear and consistent message on healthy food, eating behaviors, and weight through various media.

2. **Provide technical assistance to health care providers, hospitals and managed-care organizations that address healthy weight and healthy eating**

   *Healthy Iowans 2010 goals: 13-1, 13-7*

   *Socio-ecological model: individual, organizational, policy*

**PARTNERS:**

- Iowa Medicaid
- Tobacco Use Prevention and Control Division
- Iowa Association of Nurse Practitioners
- Iowa Dietetics Association
- State Nutrition Action Plan (SNAP) Coalition
- University of Iowa College of Medicine

**Target Population: Health Professionals, parents/family members, and individuals with obesity and related diseases**

[www.iowa.gov/iowansfitforlife](http://www.iowa.gov/iowansfitforlife)
2.1 Provide education to health care providers on nutrition, healthy weight and the providers’ role in counseling patients with obesity and related diseases by developing accessible continuing education.

2.2 Publicize resources from which medical offices can order patient information on obesity, and related diseases.

2.3 Create and distribute “prescription pads” on wellness behaviors to be signed by physicians and distributed to patients and health care providers.

3. Support work sites offering employer-sponsored nutrition education and healthy eating policies.
   
   Healthy Iowans 2010 goal: 13-3
   
   Socio-ecological model: organizational

   PARTNERS:
   Tobacco Use Prevention and Control Division
   Iowa Dietetics Association
   Lee County Health Department
   Partners of Lighten Up Iowa

   Target Population: Business owners, employees

3.1 Enhance Lighten Up Iowa by supporting scholarships for work site teams of low wage earners.

3.2 Provide education on work site wellness components and options such as nutrition, physical activity, and connected health behaviors.

3.3 Promote development of work site programs that address nutrition opportunities.

4. Increase availability of fresh produce at schools and in communities.
   
   Healthy Iowans 2010 goal: 13-5
   
   Socio-ecological model: policy, community, organizational, individual

   PARTNERS:
   United States Department of Agriculture
   Iowa Department of Education
   Hawkeye Valley Area Agency on Aging
   Heritage Area Agency on Aging
   Page County Public Health

   Target Population: Students and community members in Iowans Fit for Life Intervention Communities

www.iowa.gov/iowansfitforlife
4.1 Partner with the Iowa Department of Education and U. S. Department of Agriculture to subsidize fruits and vegetables served at schools through the Fresh Fruit and Vegetable Program and the Iowans Fit for Life school/community intervention.

4.2 Provide resources and technical assistance to intervention community and coalitions to develop community gardens.

**Target Population: All Iowans**

4.3 Through marketing and partnerships such as “Buy Fresh, Buy Local”, promote fruits and vegetables as an affordable, healthy option to high fat/low nutrient dense foods.

4.4 Develop partnerships with parish nurses, clergy organizations, and wellness coalitions to develop an initiative with faith-based communities and social/service organizations to offer fruits and vegetables at church events.

4.5 Develop a template for communities to list resources that support healthy eating.

**Target Population: Iowans in Intervention Communities**

4.6 Develop, implement, and evaluate a plan for a community initiative that increases access to fruits and vegetables outside of the school day in Iowans Fit for Life intervention communities.

**Target Population: Convenience store operators in rural areas**

4.7 Develop partnerships with convenience stores to increase the availability of fruits and vegetables in rural communities without grocery stores.

5. **Pursue the development of healthy local food systems in at least three intervention communities that 1) produce healthy foods, meeting the USDA dietary guidelines, 2) support agricultural practices producing a healthy environment for Iowans to live, and 3) support Iowa farmers.**

   *Healthy Iowans 2010 goal: 3-5*
   *Socio-ecological model: policy, community*

**PARTNERS:**

Governor’s Food Policy Council

**Target population: Targeted communities**

5.1 Form a task force with a mission of instituting public policy to improve health through healthy food systems.

[www.iowa.gov/iowansfitforlife](http://www.iowa.gov/iowansfitforlife)
5.2 Assist the task force in performing an assessment to determine regional food system changes needed that expand the local resources.

5.3 Assist the task force and communities to develop and implement a plan based on the food system assessment that institutes healthy food policies.

6. Support the development of statewide policies that improve nutrition education and healthy eating environments.

**Healthy Iowans 2010 goal: 13-3; 13-4**

**Socio-ecological model: organizational, policy**

**PARTNERS:**
- Iowa Dietetics Association
- Des Moines Area Community College
- Iowa Partners: Action for Healthy Kids
- State Nutrition Action Plan (SNAP) Coalition

**Target Population: Policy makers**

6.1 Provide resources to identify potential healthy eating environment policies.

6.2 Educate legislators, and targeted school administrators, parents, and community leaders on guidelines and rationale for policy initiatives.

6.3 Introduce and support legislation to approve third-party payer coverage of nutrition counseling for obesity, partnering with legislators at the state and federal levels to educate about covered benefits.

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**Physical Activity Focus**

Physical activity is the calorie output side of the energy balance equation, along with Resting Metabolic Rate, which is the amount of energy a body requires to function. How many calories we expend is an important aspect of weight control, and more importantly, health. Increasing physical activity is one of the top ten leading health indicators or goals for the United States.

The Centers for Disease Control and Prevention³ and the American College of Sports⁴ recommend that adults should engage in moderate-intensity physical activity for at least 30 minutes on five or more days of the week. The 30 minutes of activity can be accumulated in short bouts of activity throughout the day.

The National Association for Sport and Physical Education⁵ states that children should accumulate at least 60 minutes, and up to several hours of age-appropriate

physical activity on all, or most days of the week. This daily accumulation should include moderate and vigorous physical activity and should be accumulated in short bouts of activity throughout the day. Extended periods (two hours or more) of inactivity are discouraged for children, especially during daytime hours.

**Healthy People 2010 Physical Activity Objectives**

The work group strategies are designed to help Iowans achieve these Healthy People 2010 objectives:

<table>
<thead>
<tr>
<th>Objective #</th>
<th>Healthy People 2010 Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-12</td>
<td>(Developmental) Reduce the proportion of people with disabilities reporting environmental barriers to participation in home, school, work, or community activities.</td>
</tr>
<tr>
<td>22-2</td>
<td>Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day. <em>(Baseline: 15% Target: 30%)</em></td>
</tr>
<tr>
<td>22-6</td>
<td>Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days. <em>(Group Baseline: 27%; Female Baseline: 24%; Male Baseline: 29%; Target: 35%)</em></td>
</tr>
<tr>
<td>22-7</td>
<td>Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardio-respiratory fitness 3 or more days per week for 20 or more minutes per occasion. <em>(Group Baseline: 65%; Female Baseline: 57%; Male Baseline: 72%; Target: 85%)</em></td>
</tr>
<tr>
<td>22-8</td>
<td>Increase the proportion of Iowa's public and private schools that require daily physical education for all students. <em>(Middle/Junior High School Baseline: 17%; Target: 25%; Senior High School Baseline: 2%; Target: 5%)</em></td>
</tr>
<tr>
<td>22-10</td>
<td>Increase the proportion of adolescents who spend at least 50 percent of school physical education class time being physically active. <em>(Group Baseline: 38%; Female Baseline: 32%; Male Baseline: 45%; Target: 50%)</em></td>
</tr>
<tr>
<td>22-13</td>
<td>Increase the proportion of work sites offering employer-sponsored physical activity and fitness programs. <em>(Baseline: 46% Target: 75%)</em></td>
</tr>
<tr>
<td>22-14</td>
<td>Increase the proportion of trips made by walking. <em>(Adults 18 and older Baseline: 17% Target: 25%; Children &amp; Adolescents 5 to 15 Years Baseline: 31% Target: 50%)</em></td>
</tr>
<tr>
<td>22-15</td>
<td>Increase the proportion of trips made by bicycling. <em>(Adults 18 and older Baseline: 0.6% Target: 2.0%; Children &amp; Adolescents 5 to 15 Years Baseline: 2.4% Target: 5.0%)</em></td>
</tr>
</tbody>
</table>
Physical Activity Strategies

Together, the Iowans Fit for Life work groups developed the following strategies for various levels of the socio-ecological model and target populations to achieve Healthy People 2010 objectives. The associated Healthy Iowans 2010 goals are identified when applicable.

7. Provide educational opportunities on physical activity and healthy weight to targeted groups.
   Healthy Iowans 2010 goals: 13-3, 13-4, 13-9, 16-3, 16-4
   Socio-ecological model: individual, interpersonal, organizational, community

   PARTNERS:
   Iowa Senior Olympics
   Tobacco Use Prevention and Control Division
   Hawkeye Valley Area Agency on Aging (AAA)
   Heritage AAA

   Target Population: Parents of pre-school children

   7.1 Provide programs for parents on appropriate physical activity for pre-school children.

   Target Populations: Iowans by income and education level, age, gender, race/ethnicity, disability-specific, degree of urbanization

   7.2 Provide monthly education with a clear and consistent message for sub-populations through a variety of media.

8. Provide technical assistance to health care providers, hospitals and managed care organizations that address healthy weight and healthy eating.
   Healthy Iowans 2010 goal: 16-2
   Socio-ecological model: individual, organizational, policy

   PARTNERS:
   Iowa Association of Nurse Practitioners
   Iowa Medicaid
   Tobacco Use Prevention and Control Division

   Target Population: Health professionals, parents/family members, and individuals with obesity and related diseases
8.1 Educate health care providers on physical activity, healthy weight and providers’ roles in counseling patients with obesity and other related chronic diseases by development of accessible continuing education.

8.2 Publicize resources from which medical offices can order patient information on obesity and related diseases.

8.3 Create and distribute prescription pads on wellness behaviors to be signed by physicians and distributed to patients and health care providers.

9. Provide technical assistance to schools whose facilities are used as multi-generational hubs for physical activity outside of normal school hours.

Healthy Iowans 2010 goals: 16-6, 16-10
Socio-ecological model: organizational, policy

Target Population: School boards and school administrators

9.1 Assist schools to include access to their facilities outside normal school hours as a component of their wellness policy.

9.2 Locate model schools that allow people to use their facilities for physical activity.

10. Identify, support, promote, and encourage safe routes to school.

Healthy Iowans 2010 goal: 16-8
Socio-ecological model: organizational, community, policy

PARTNERS:
Iowa Department of Transportation
Iowa State University: Landscape Architecture Extension
Bike to Work Week

10.1 Partner with the Governor’s Traffic Safety Bureau and Safe Kids Coalition to enforce traffic safety and ensure safe travel to and from school.

10.2 Identify community resources, including neighborhood safety assessments, planning and implementation guides.

10.3 Promote walking and bicycling to school statewide and help communities promote them.

11. Provide technical assistance to work sites offering employer-sponsored physical activity and policies.

Healthy Iowans 2010 goal: 16-5
Socio-ecological model: organizational, community, policy

www.iowa.gov/iowansfitforlife
PARTNERS:
Iowa Arthritis Program
Bike to Work Week
Tri-State Medical Group

Target Population: Employers

11.1 Promote development of work site programs that address physical activity opportunities.

11.2 Increase employer knowledge of physical activity benefits and options.

11.3 Develop partnerships with third party payers so more of them provide incentives (financial or otherwise), and/or lower premiums, to employers with physical activity programming for their work forces.

12. Create more opportunities for physical activity in communities.

Healthy Iowans 2010 goals: 16-3, 16-8, 16-10
Socio-ecological model: community, policy

PARTNERS:
Bike to Work Week
Hawkeye Valley Area Agency on Aging
Heritage AAA
Hoerner YMCA
Iowa Arthritis Program
Iowa Department of Public Health
Iowa State University: Landscape Architecture Extension
Page County Public Health
University of Iowa Prevention Research Center

Target Population: policy makers

12.1 Partner with the American Society of Landscape Architects, American Planning Association, Department of Economic Development, Department of Transportation, Department of Natural Resources and other interested land-use partners to increase the number of physical activity friendly environments.

12.2 Increase the use of Iowa trails.

12.3 Increase the number of physical activity opportunities through parks and recreation services, particularly in small towns.
12.4 Develop media partnerships to establish a system to provide messages for targeted audiences.

12.5 Enhance and expand Lighten Up Iowa by increasing promotion through Iowans Fit for Life and providing mini-grants for whole communities to be involved.

12.6 Increase the number of physical activity opportunities in faith-based and other organizations.

**Target Population: Faith-based and other organizations**

12.7 Partner with parish programs, Parish Nurses Association, clergy associations, and church wellness committees to increase the number of low-cost exercise classes for adults and seniors and play and/or game opportunities for toddlers and youth.

**Target Population: Older adults**

12.8 Increase the number of wellness programs for older Iowans.

13. **Improve the walkability* of Iowa communities.**

   * or “maneuver-ability,” such as bicycling, tricycling, roller skating, skateboards, etc.

   Healthy Iowans 2010 goal: 16-8

   Socio-ecological model: policy, community

   **PARTNERS:**
   Bike to Work Week
   Tri-State Medical Group
   Floyd Co. PH/HHC

   **Target Population: Policy makers**

13.1 Implement policies that encourage the connectivity of walkways to aid Iowans in making physical activity the easy choice.

13.2 Develop mandates for walkable communities, including requiring sidewalks in new developments, adequate sidewalks leading to parks, and sidewalks in new zoning or rezoning.

13.3 Identify partners to advocate for more walkable communities.
14. Support the development and dissemination of guidelines for minimum physical activity per day for students (including recess, physical education, and alternative methods to incorporate physical activity into the class day).

*Healthy Iowans 2010 goals: 16-6, 16-10*

*Socio-ecological model: policy, organizational*

**PARTNERS:**
Iowa Association of Health, Physical Education, Recreation and Dance (IAHPERD)
University of Northern Iowa

**Target Population: Policy makers**

14.1 Provide policy makers, school administrators, parents, staff and students with evidence for the necessity of increased physical activity for children.

14.2 Recommend that schools include increased physical activity during the school day as a component of their wellness policies.

14.3 Provide mini-grants to targeted schools performing physical activity and body mass index (BMI) assessments similar to those in the Iowans Fit for Life school and community intervention and Physical Activity and Nutrition Among Rural Youth (PANARY) projects for schools.

**Breastfeeding Focus**

Breastfeeding is important in preventing childhood obesity and helping new mothers return to pre-pregnancy weight. Increasing evidence suggests that breastfeeding reduces overweight in children and nursing mothers. Increased social support for breastfeeding is important because women who have support are more likely to breastfeed than those who do not.6

Increased breastfeeding is also a major program area of the CDC State-Based Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases.

**Healthy People 2010 Breastfeeding Objective**

www.iowa.gov/iowansfitforlife
Breastfeeding objectives and strategies were developed by the Iowans Fit for Life Partnership through work group meetings. They are designed to help Iowans achieve the following Healthy People 2010 objectives:

<table>
<thead>
<tr>
<th>Goal-Objective #</th>
<th>Healthy People 2010 Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-19</td>
<td>Increase the proportion of mothers who breastfeed their babies.</td>
</tr>
</tbody>
</table>

**Breastfeeding Strategies**

Together, the Iowans Fit for Life work groups developed these objectives and strategies for various levels of the socio-ecological model and various populations to achieve the Healthy People 2010 goals. The associated Healthy Iowans 2010 goal is identified when applicable.

15. **Increase educational opportunities for families on breastfeeding and nutrition.**

   *Healthy Iowans 2010 goal: 16-2*

   *Socio-ecological model: interpersonal*

   **PARTNERS:**
   - Iowa Medicaid
   - Iowa Association of Nurse Practitioners
   - Floyd County Public Health and Home Health Care
   - Iowa Lactation Task Force
   - WIC
   - Lactation Consultants – Iowa Health Systems

   **Target Population: Parents of infants**

   15.1 Develop partnerships to assess education programs for new parents.

   15.2 Use home visiting programs, such as Empowerment, Healthy Smiles, parents as teachers, and expanded food and nutrition programs, for dissemination.

   15.3 Develop a public education campaign on breastfeeding and nutrition with a clear, consistent message for expectant mothers and families with children under two years old.

      *15.3.1 Provide culturally-sensitive, age-appropriate information.*

[www.iowa.gov/iowansfitforlife](http://www.iowa.gov/iowansfitforlife)
15.3.2 Provide messages specific to identified populations.

16. Provide technical assistance to help work sites implement policies that allow breastfeeding.
   Healthy Iowans 2010 goal: 16-2
   Socio-ecological model: policy, organizational

**PARTNERS:**
Floyd County Public Health/Home Health Care

**Target Population:** employers

16.1 Develop partnerships to develop and promote a model family-friendly work site policy
   16.1.1 Develop a family-friendly business checklist, using other national models for ideas

16.2 Disseminate a breastfeeding work site support kit.
   16.2.1 Contact corporate wellness councils in the state to notify them of the availability of the work site kit.
   16.2.2 Identify an organization or group that will keep the work site support kit current and available.
   16.2.3 Educate child care providers on policies and structure to support breastfeeding

16.3 Expand with mini-grants, a work site recognition program for family-friendly work places.
   16.3.1 Provide incentives to employers to provide flexible work schedules.

16.4 Educate employers about breastfeeding.
   16.4.1 Provide lactation kits, including information about financial savings, to employers.
   16.4.2 Provide educational materials to employers on the benefits to employees of breastfeeding.

17. Partner with Iowa Lactation Task Force to provide technical assistance to help health providers address breastfeeding with expectant parents.
   Healthy Iowans 2010 goal: 16-2
   Socio-ecological model: individual

**Target Population:** Health care providers

17.1 Partner with pediatricians, physician assistants, nurse practitioners, and nurse organizations to develop a white paper on breastfeeding.
17.2 Educate health care providers on the benefits of breastfeeding and their role in counseling patients.
   
   17.2.1 Develop accessible continuing education for health professionals on breastfeeding.
   17.2.2 Incorporate breastfeeding into the curriculum of health professionals at two universities or colleges.
   17.2.3 Increase the number of healthcare providers who provide community education and awareness on breastfeeding.

Screen Time Focus

Reducing screen time is an important component to increasing physical activity. More time in front of a screen (television, video games, computer) is less time being active. The Iowans Fit for Life intervention will include surveillance of this habit.

Healthy People 2010 Screen Time Objective

The objectives and strategies are designed to help Iowans achieve the following Healthy People 2010 objectives:

<table>
<thead>
<tr>
<th>Goal-Objective #</th>
<th>Healthy People 2010 Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-11</td>
<td>Increase the proportion of adolescents who view television 2 or fewer hours on a school day.</td>
</tr>
</tbody>
</table>

Screen Time Strategies

Together, the Iowans Fit for Life Work Groups developed these strategies for various levels of the socio-ecological model and target populations to achieve the Healthy People 2010 goals. The associated Healthy Iowans 2010 goal is identified when applicable.

18. Develop an awareness campaign to educate parents/caretakers about the hazards of inactivity of children due to screen time.

www.iowa.gov/iowansfitforlife
Healthy Iowans 2010 goal: 16-10
Socio-ecological model: interpersonal, individual

PARTNER:
Iowa Association of Nurse Practitioners

Target Population: Parents/caregivers

18.1 Investigate an established and recommended set of guidelines.

18.2 Disseminate guidelines to caretakers, such as child care providers, schools, parents.

18.3 Provide training to child care providers on alternatives to screen time.

18.4 Provide educational materials on reduction of screen time to parents/caregivers of students in the Iowans Fit for Life Intervention Communities.

19. Provide technical assistance to health care providers, hospitals and managed care organizations that provide health promotion that addresses reducing screen time.

Healthy Iowans 2010 goal: 16-2
Socio-ecological model: individual, interpersonal, organizational, community

PARTNER:
Iowa Association of Nurse Practitioners
Iowa Child Care Resource and Referral Consultants

Target Population: Health professionals; parents/family members, and individuals with obesity and related diseases.

19.1 Develop and distribute community-resource guides in health care provider offices containing referral resources for reduced screen time.
The Iowans Fit for Life plan exemplifies the “new” public health which focuses on health promotion and wellness. Strategies include:

“… community mobilization, coalition building, and community-based interventions; integration of policy advocacy and media advocacy into comprehensive interventions; collaborations with academic institutions and other partners to advance the translation of research into practice; and the adoption of the socio–ecological approach to public health interventions.” (Schwartz, p.2, 2005).

This new public health is also synergized by the re-design of the Iowa Department of Public Health. This re-designing public health initiative builds the capacities for local public health to be a health resource for citizens and businesses and assures consistent standards of services throughout the state. It serves the state as well as the community health infrastructure. The resultant coordination of these two initiatives will be a catalyst and enhancement for both.

The role of the Iowans Fit for Life program is to build capacity and strengthen the infrastructure to facilitate the work of communities, the work groups and task forces necessary to implement Iowa’s Comprehensive Nutrition and Physical Activity Plan. Implementation of some strategies is statewide and comprehensive. For other strategies, the purpose is to strengthen the system to accomplish the task and build sustainability. In order to move forward with Plan implementation, Iowans Fit for Life needs to:

- Develop and support partnerships that implement obesity prevention programs;
- Create and sustain model healthy communities around nutrition and physical activity;
- Collect and analyze data that drives decisions on program needs and effectiveness.

Considering needs, capacities and potential, Iowans Fit for Life program staff and the work groups have determined the following strategies as essential for building a program that expands and builds on the first year of plan development. See the appendix for a complete list of short-term process objectives and the respective strategies.

- Build on the current partnership network, identifying gaps and key organizations necessary to implement both specific strategies and the overall statewide initiative.
- Create an inventory of city, county, and statewide physical activity and nutrition opportunities to post on the Iowans Fit for Life website.

www.iowa.gov/iowansfitforlife
partnership with Iowa State University Health Promotion class. (www.iowa.gov/iowansfitforlife)

- Establish the task forces and advisory committees necessary to implement strategies identified in the Plan.
- Work with the governor’s office to develop/support statewide initiatives to increase healthy eating and physical activity opportunities.
- Develop a social marketing and communication plan for the nutrition and physical activity initiative.
- Provide nutrition and physical activity documents, tool kits, workbooks and resources on the Iowans Fit for Life Web site.
- Establish six new regional Community Health Consultant positions as health-promotion specialists with emphasis on physical activity and nutrition to prevent obesity and other chronic conditions.
- Identify model programs that exemplify healthy physical activity and eating environments.
- Expand and implement an Iowans Fit for Life surveillance and evaluation system to facilitate data-driven decisions.

Iowans Fit for Life Intervention

As work groups and partners developed Iowa’s Comprehensive Nutrition and Physical Activity Plan, an intervention based on scientific evidence and theory was developed for select Iowa communities. Its purpose within the context of the Nutrition and Physical Activity to Prevent Obesity and Other Chronic Diseases grant is to investigate a nutrition and physical activity intervention using all levels of the socio-ecological model. The long-range goal is to develop a model program that will support and sustain the consumption of more fruits and vegetables daily and being physically active 60 minutes per day that can be replicated in other communities. The program evaluation will include consistent measures and track outcomes over five years.

**Intervention Goal 1:** Move children towards eating more fruits and vegetables daily to meet the recommendations from the 2005 Dietary Guidelines for Americans.

www.iowa.gov/iowansfitforlife
**Intervention Goal 2:** Move children towards being physically active 60 minutes per day.

Schools and communities were selected to participate based on the following criteria:

- Previous applicant for the Fruit and Vegetable (Pilot) Program in either 2002 or 2004
- Population range of 2,000 to 12,000 (categorized by Beale Codes as non-metropolitan)
- 3rd, 4th and 5th grade students in the same building with a minimum of 23 students in each grade.
- School is in a small town that has a newspaper and a grocery store with fresh produce
- Located in a county that identified overweight, obesity, nutrition, physical activity and/or other healthy lifestyle as a priority in the Community Health Needs Assessment and Health Improvement Plan completed in the spring of 2005

Community coalitions receive mini-grants to help create or expand physical activity and fruit and vegetable opportunities outside the school day. Schools participating in the public health school and community pilot interventions are part of the USDA funded Iowa Department of Education Free Fruit and Vegetable Program for two of the four years, subject to availability of funds.

Twelve schools and their communities were randomly assigned (stratified by geographical area) to intervention groups for the 2005-06 and 2006-07 school years.

A) Three schools participate in the Free Fresh Fruit and Vegetable Program funded through USDA in cooperation with Iowa Department of Education.
B) Three schools participate in the Free Fresh Fruit and Vegetable Program plus an IDPH school and community program.
C) Three schools participate in an IDPH school and community program.
D) Three additional schools will start the full program after two years so that comparisons may be made.

Schools and communities will be offered the program components that they did not receive during the first two intervention years in the 2007-2008 and 2008-2009 school years.
The intervention will be reinforced at the community level through community or county health coalitions, after-school physical activity and nutrition programs, billboards, newspaper articles, radio public service announcements and retail points of purchase; at the institutional/organizational level through school procedures and environment; at the interpersonal level through parental involvement with initiatives, and school-to-home initiatives; and at the individual level through Pick a better snack™ & ACT curriculum and bingo cards, tasting opportunities, physical activity opportunities, incentives, and social support.

Schools alone cannot solve the pending health crisis of youth obesity. It will take the combined efforts of families, schools, communities, government agencies, health providers, the food industry, and the media. The project is designed to strengthen an alliance of parents, teachers, child nutrition personnel, school staff, and community partners to teach children and their families how to be healthy for a lifetime. A successful intervention will lead to model schools and communities so people will have balanced nutrition, lead physically active lives, and sustain healthy weights.

**Evaluation Plan: Our Road Map**

*If we are following a road map, how will we know when we arrive?*

Evaluation will give us guidance as to whether we are going in the right direction and when we have arrived at our goals. The Centers for Disease Control and Prevention recommends a six-step process for evaluation, which includes steps in the following evaluation framework diagram:
Stakeholders have been engaged to jointly describe the program. Its evaluation design focuses on the Healthy People 2010 Nutrition, Physical Activity, Breastfeeding, and Screen Time objectives. Short-term, intermediate, and long-term strategies are also included. Iowa’s Nutrition and Physical Activity Logic Model, representing this process, can be found in the appendix. The model illustrates the flow from inputs to activities, which will produce the outputs, to outcome objectives, which lead to the achievement of our goals. The outcome columns are divided into short, intermediate and long term objectives.

Short-term indicators are identified in the Goals, Objectives, and Strategies and Implementation sections. These objectives will serve as a checklist of tasks to be completed as we work towards achieving our goals. Short-term objectives span one to three years for completion.

Intermediate-term objectives and strategies (behavior, environment, or policy changes) are included with each of the four main focus areas to balance calorie intake with calorie expenditure. If these objectives are not impacted (taking into account demographics of the state), partners will need to consider the reasons and modify the Iowans Fit for Life Program to achieve these outcomes. Intermediate goals and objectives typically span four to seven years.

The objectives for adults will be measured by new “over-sampling” BRFSS questions in the intervention communities. Those will then be compared to the baseline BRFSS data collected in Iowa over the past 12 years. Expanding middle and high school participation in the Youth Risk Behavioral Surveillance System survey will improve the validity of health information in that age cohort.

**Iowans Fit for Life Intervention**

The Iowans Fit for Life Intervention will include more intensive data collection and analysis. The evaluation design will include a 4 (conditions) x 4 (times) design that assesses the program together with the USDA Fresh Fruit and Vegetable Program. The schools were selected based on data suggesting rural children are at higher risk for overweight and also to minimize variability (due to community size and socio-economic status) among communities for more accurate statistical analysis.

The evaluation will include a mix of quantitative and qualitative data. Quantitative data will include students’ BMI, physical activity (by survey and pedometer), fruit and vegetable consumption and attitudes about physical activity and fruits and vegetables (by survey with parental assistance). Qualitative data will be collected at the pilot intervention community forums, which will include youth, parents, and community members, besides a school and community assessment survey. The increased opportunities for access to physical activity and fruits and vegetables that are created by each community coalition will be documented and reported. Baseline data will be collected in the fall each year of the study and data again collected each May to determine change in attitudes and behavior. Data collection will be done in conjunction with Iowa State University. The third year will be used to provide the same opportunities to schools that were not originally included in the program. In addition, the original treatment groups will be monitored for program sustainability.

**Ensure Use and Share Lessons Learned**

The Iowans Fit for Life staff includes an epidemiologist/program evaluator whose responsibilities include analyzing the data. The epidemiologist will work with an epidemiology committee, including faculty from Iowa State University, University of Iowa, and University of Northern Iowa. Please see the appendix for more information about the people who have donated their time and energy to this project. The outcomes and evaluation will be regularly updated on the Iowans Fit for Life website [www.iowa.gov/iowansfitforlife](http://www.iowa.gov/iowansfitforlife) for review and input from stakeholders. Also, feedback from key stakeholders for special projects will be solicited. Specifically, Drake Agriculture Center of Law will be a partner for a Food Systems Intervention in three pilot communities. Refer to the appendix for a more complete list of partners and projects.

**Measurement and Evaluation – Long Term Objectives**

[www.iowa.gov/iowansfitforlife](http://www.iowa.gov/iowansfitforlife)
Measurement and evaluation are essential to ensure the plan is working. Like following a road map, if we find we are off course (e.g., fruit and vegetable consumption is not increasing), we will need to modify the plan so we can arrive at our destination: better health. We know our starting point from responses to the Behavioral Risk Factor Surveillance System. Questions on the health of individual Iowans have been tracked for over 10 years, thus a baseline is established. By continuing this survey project, we can monitor our progress. Long term objectives typically span 10 years and more. Based on research, we expect that when fruit and vegetable consumption, physical activity, and breastfeeding increases, the screen time decreases. Our expectations are summarized:

- Childhood overweight will stabilize, thus preventing potentially unprecedented diabetes incidence and other obesity-related diseases. And, active, healthy children will have enhanced mood, self-esteem, and academic success.

- Senior Iowans will have functional independence for a greater proportion of their lives, which will result in reduced costs for long term medical and assistive care.

- Iowans of lower socio-economic status and/or of minority/ethnic groups will show less health disparities in nutrition, physical activity, breastfeeding, and screen time.

- Intervention communities will show reduced diabetes, cardiovascular disease, and other obesity-related diseases compared to a predicted trajectory of these diseases based on current demographics.

**Limitations of Measurement and Evaluation**

These long term objectives may be influenced by many events out of our control, but the effort to improve nutrition and physical activity must not cease. Accordingly, healthy lifestyles are affected by complex interactions which may or may not result from the project. The BRFSS is based on self-report and may be biased (Do people have their true height and weight listed on their driver’s licenses?). More accurate measures will be taken and more sophisticated analysis performed in the pilot-intervention schools, but cause and effect relationships must be considered critically in a complex world. Despite these limitations, we must strive to reduce the negative impact of obesity on quality of life, medical expenditures, and disease. The goal to stop the increase in childhood overweight is particularly ambitious, but the potential threat to our children’s lives demands our best efforts. This is the vision for Iowans’ health.
References

5. National Association of Sport and Physical Education. www.aahperd.org/naspe
7. Schwartz, R. At the cutting edge or the center of the storm? Innovation in public health through health promotion and education in state health departments. Preventing Chronic Disease; 2005 Nov;2 Spec no:A05. Epub 2005 Nov 1.
Appendix

Definitions of Overweight, Obesity and Body Mass Index

In those aged 6 to 19 years, overweight or obesity is defined as at or above the sex- and age-specific 95th percentile of Body Mass Index (BMI) based on CDC Growth Charts: United States. In adults, obesity is defined as a BMI of 30 kg/m2 or more; overweight is a BMI of 25 kg/m2 or more.

Body mass index (BMI) is calculated as weight in kilograms (kg) divided by the square of height in meters (m2) (BMI = weight[kg]/height[m2]). To estimate BMI using pounds (lbs) and inches (in), divide weight in pounds by the square of height in inches. Then multiply the resulting number by 704.5 (BMI = weight[lbs]/height [in2] X 704.5).


Data Sources

The Behavioral Risk Factors Surveillance System (BRFSS) is a yearly telephone survey that is designed to identify and monitor risk factors for chronic diseases and other leading causes of death. Obesity and overweight are assessed yearly in the BRFSS, while nutrition and physical activity are assessed every odd year (e.g., 2001, 2003). The Youth Risk Behavior Surveillance System (YRBSS) was developed by the CDC to monitor six categories of priority health-risk behaviors among youth. It includes a national school-based survey administered to students in grades 9-12 every odd year. An inadequate number of schools have elected to distribute the survey, so there have not been reliable data available since 1997. The Child and Adolescent Health Measurement Initiative administered a national telephone survey named the National Survey of Children’s Health that includes accurate and reliable statistics of Iowa children. There are few accurate data sources for early childhood overweight. The Centers for Disease Control and Prevention supports a database (the Pediatric Nutrition Surveillance System) that collects state-data on early childhood nutrition-risk indicators. The Pediatric Nutrition Surveillance System (PedNSS) may be Iowa’s only source of reliable data on the prevalence of overweight among our youngest children. Iowa’s Special Supplemental Nutrition Program for Women, Infants, and Children (the

www.iowa.gov/iowansfitforlife
WIC Program) has participated in the PedNSS since 1984. PedNSS provides data on the prevalence of underweight, overweight, anemia, low birth weight and breastfeeding initiation and duration for children ages 0-4 years who participate in the WIC program. PedNSS data are collected, using specific techniques and equipment. The data are limited in that it describes only the population of children whose families meet the income guidelines for WIC (185% of the Federal Poverty Guideline) and choose to participate. Approximately forty three percent of all children born in Iowa participate in the WIC program during their first year of life. PedNSS data on overweight does provide insight into the growing prevalence of overweight among young children living in Iowa.

**Obesity-related Disease Burden in Iowa**

A complete review of Iowa Chronic Disease “Chronic Diseases: A Critical Issue for Iowa” can be accessed at:

**Average Heart Disease Death Rates 2000-2003**

![Heart Disease Death Rates Map]

Avg Death Rates
- 102.3 - 251.0
- 251.1 - 320.0
- 320.1 - 387.3
- 387.4 - 459.8
- 459.9 - 590.6

10 Most Populated Cities

Source: Iowa Department of Public Health Center for Health Statistics, Vital Records

www.iowa.gov/iowansfitforlife
Essential Hypertension and Hypertensive Renal Disease Deaths Comparison to State Rate
2000-2003 Average

Average BP Rate
- Less than State Rate
- 1x - 2x State Rate
- > 2x State Rate

10 Most Populated Cities

Source: Iowa Department of Public Health Center for Health Statistics, Vital Records

Average Stroke Death Rates 2000-2003

Avg Stroke Rates
- 49.3 - 66.2
- 66.3 - 85.1
- 85.2 - 105.5
- 105.6 - 124.5
- 124.6 - 161.0

10 Most Populated Cities

Source: Iowa Department of Public Health Center for Health Statistics, Vital Records
2004 BRFSS Synthetic Estimates
Percent of Iowans with Diabetes

Source:
Iowa Department of Public Health
Center for Health Statistics, Vital Records

www.iowa.gov/iowansfitforlife
Process Objectives

Considering needs, capacities and potential, Iowans Fit for Life program staff and the work groups developed the following short-term objectives for building a program that expands and builds on the first year of plan development. Strategy implementation will be subject to availability of funds.

1. **By 2007, expand relationships with partners.**
   1.1 Meet with each partner to further delineate roles and opportunities.
   1.2 Bring partners on specific strategies together to refine strategies and identify partnership gaps.
   1.3 Establish the task forces and advisory committees necessary to implement strategies identified in the Plan.
   1.4 Build partnerships to enhance current funding and assist with financing community pilot projects beginning in early 2006.

2. **By 2007, partner with an Iowa State University Health Promotion class to develop on the Iowans Fit for Life web site an inventory of area referral resources for physical activity and nutrition programs.**
   2.1 Create an inventory of nutrition and physical activity opportunities on the Iowans Fit for Life web site, including an inter-active mechanism for new programs to submit their information.
      2.1.1 Provide an opportunity for Iowans Fit for Life partners to add programs to the inventory.
      2.1.2 Post the nutrition and physical activity program inventory on the Iowans Fit for Life web site.
      2.1.3 Determine ways to notify communities of the programs that can be used for identifying healthy eating and physical activity opportunities in their areas.

3. **By 2007, create an Education Conference Task Force with members from the work groups, stakeholders and education partners to determine the need for, and identify the purpose of, a proposed bi-annual conference.**

4. **By 2007, work with the governor’s office to develop/support statewide initiatives to increase healthy eating and physical activity opportunities.**
   4.1 Work with the governor’s office to support initiatives in the intervention schools and communities
      4.1.1 Write press releases to announce and support school/community events.
   4.2 Create incentives for state employees that reinforce healthy lifestyles.
      4.2.1 Provide monthly insurance premium reduction for employees who participate in healthy behaviors and/or programs.
5. By 2007, develop a social marketing and communication plan for the nutrition and physical activity initiative.
   5.1 Assemble a task force to identify the social marketing elements in the workgroup goals and strategic partners for a social marketing campaign.
   5.2 Hire a consultant and/or communications position, subject to availability of funds.
   5.3 Facilitate task-force meetings to develop or adopt a social marketing campaign related to nutrition and physical activity.
   5.4 Direct the social marketing campaign to populations at high risk of obesity and related conditions.
   5.5 Implement and evaluate the social marketing campaign and modify the messages to meet the needs of the project to most effectively target vulnerable populations.
   5.6 Support and widely use messages developed through the Iowans Fit for Life social marketing and communication plan.
   5.7 Support a recognition program to publicize best practices for healthy eating and physical activity, targeting child care, education, work sites, health care and older Iowans, and communities.

6. By 2008, provide nutrition and physical activity documents, tool kits, workbooks and resources on the Iowans Fit for Life web site.
   6.1 Publish tool kits, information pieces and resources as appropriate and place in the state information clearing house so all materials are readily available.
   6.2 Establish a way to update and maintain the most current resources on the Iowans Fit for Life web site.

7. By 2007, establish six new regional Community Health Consultant positions as health-promotion specialists with emphasis on physical activity and nutrition to prevent obesity and other chronic conditions.
   7.1 Partner with Iowa State Extension, state colleges and universities with nutrition and physical activity/health-related programs, to facilitate the establishment health-promotion specialist positions.
   7.2 Re-submit legislation to establish funding for these positions.

8. By 2010, identify model programs that exemplify healthy physical activity and eating environments.
   Healthy Iowans 2010 goal: 13-1, 13-3, 13-4, 13-5, 16-3, 16-5, 16-6, 16-8
   Socio-ecological model: community, ,organizational

PARTNER:
University of Iowa Prevention Research Center

8.1 Provide tools for child care, education, work sites, health care and older Iowans that encourage healthy physical activity and eating.
8.2 Work with the governor’s office and an Iowans Fit for Life task force of partners who work with model programs to determine criteria for exemplary healthy eating and behaviors and a plan for recognition.
8.3 Award exemplary programs for child-care, education, work sites, health care and older Iowans, and communities.
8.4 Publish and disseminate best practices for exemplary healthy eating and behaviors.

9. By 2007, expand and implement an Iowans Fit for Life surveillance and evaluation system to facilitate data-driven decisions.

PARTNER: Epidemiology/Program Evaluation Committee

9.1 Compile and publish regular reports on nutrition, physical activity, obesity, and chronic disease in Iowa.
9.2 Establish data source guidelines.
9.3 Expand data collection partnerships.
9.5 Explore ways to increase high school participation in the Youth Risk Behavioral Surveillance System (YRBSS).
9.6 Explore ways to increase elementary and middle school participation in the Physical Activity and Nutrition Among Rural Youth (PANARY) initiative.

Integration with Existing Public Health Efforts in Nutrition Physical Activity and Chronic Disease Initiatives

Iowans Fit for Life will integrate with existing nutrition and physical activity initiatives in addition to other chronic disease prevention and control programs and programming that addresses the health of Iowans of all ages. The next few pages include a summation of some of the key programming at the Iowa Department of Public Health and with other key statewide partners.

Iowa Arthritis Program
The Iowa Arthritis Program’s goal is to reduce the impact of arthritis and improve the quality of life of Iowans affected by arthritis. The program uses several approaches to reduce the impact of arthritis in Iowa by distributing a variety of awareness materials, aid health-care providers to care for people with arthritis, and provides several opportunities to use physical activity as a treatment for arthritis through aquatic exercise, self-help courses and the Arthritis Foundation Exercise Program.
Arthritis Foundation Exercise Program (formerly known as PACE – People with Arthritis Can Exercise) is an exercise program designed for people with arthritis and is lead by trained personnel. Gentle activities are performed sitting, standing, or on the floor. The exercises help increase joint flexibility, range of motion, and maintain muscle strength. Other benefits can include reduced pain and stiffness and improved functional ability and attitude. An educational component is also included.

Arthritis Foundation Self-Help Program is a group education program lead by trained volunteers. Topics include making and carrying out action plans; pain and fatigue management; medications; exercise; dealing with difficult emotions; healthy eating, and relaxation and stress management.

Arthritis Foundation YMCA Aquatic Program is designed for people with arthritis and led by trained instructors in warm water. Exercise in water prevents excess strain on joints and muscles. Physical benefits include decreased pain and stiffness.

**Breastfeeding Promotion**

Breastfeeding promotion in Iowa occurs through a multi-channel approach. The Iowa Department of Public Health with the Iowa Lactation Task Force, the Iowa WIC program, La Leche League of Iowa, Mother’s Milk Bank of Iowa, the National Breastfeeding Campaign, and a Loving Support grant are working towards the *Healthy People 2010* goal of 75 percent of infants breastfed at birth and 50 percent breastfed at six months.

**Cardiovascular Risk Reduction**

Iowa's Cardiovascular Risk Reduction (CVRR) supports community-based approaches to serve populations at greatest risk for cardiovascular illness. Successful community-intervention strategies are shared to provide effective programming examples for targeted populations. Local agencies and organizations interact with other community and health-care leaders to enable a more holistic approach for families in high-risk environments. Local community programming, supported by cardiovascular risk reduction, assists families with multiple risk factors, and targets reducing overweight/obesity in Iowa’s communities.

All cardiovascular risk reduction activities are planned to align with other department and state health initiatives, such as *Healthy Iowans 2010*. Cardiovascular health directly and indirectly impacts several chapters and goals in *Healthy Iowans 2010*. They include: Chapter 3 - Diabetes, Chapters 5 - Educational and Community-based Programs, Chapter 9 - Heart Disease and Stroke, Chapter 13 - Nutrition, and Chapter 16 - Physical Education/Fitness.
Comprehensive Cancer Control
The Comprehensive Cancer Control program (CCC) brings together partners whose aim is to decrease cancer and the deaths and disabilities that occur because of the disease. Iowa's cancer prevention and control plan includes the following priorities related to Nutrition and Physical Activity to reduce obesity and other chronic diseases:

- Prevention strategies to reduce tobacco use, obesity, sunburns, radon exposure, alcohol use, and barriers to using cancer risk assessment and DNA testing.
- The Iowa Consortium for Comprehensive Cancer Control has formed eight implementation groups, with one specifically addressing support of statewide efforts to reduce the prevalence of obesity in Iowa.

Diabetes Prevention and Control
The Iowa Diabetes Control Program (DCP) is established and funded under a cooperative agreement with the Centers for Disease Control and Prevention. The Iowa Diabetes Network, a core capacity program, has been established. The network is a statewide coalition of health-care professionals, voluntary organizations, state governmental agencies, insurers, and interested associations. The network has established several educational opportunities and resources for local use. Adherence to National Standards of Care for diabetes is promoted through educational offerings, resources, and certified outpatient education programs.

The burden of diabetes is monitored through use of statewide data, the Behavioral Risk Factor Surveillance System, and claims data from various sources. The prevalence of diabetes in Iowa is increasing and is most likely due to the increase in the obesity rate and age of Iowans.

Early Childhood Iowa
Early Childhood Iowa is a statewide collaborative effort to build Iowa’s Early Care, Health, and Education System. The Early Childhood Iowa Stakeholders are the catalysts for developing Iowa’s comprehensive system by:

- Building linkages among early childhood initiatives.
- Identifying and fostering champions for early childhood initiatives.
- Developing results accountability for the system to support data-driven decision-making.
- Creating a commitment for broadening public will and investing resources for Iowa’s Early Care, Health, and Education System.

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• Developing and implementing a public awareness campaign to continue current efforts to raise awareness about early childhood issues. The Early Childhood Iowa Stakeholders developed a Strategic Plan for building a comprehensive Early Care, Health, and Education system for Iowa. The Early Childhood Iowa Stakeholders’ Strategic Plan includes: 1) Healthy Children, 2) Children Ready to Succeed in School, 3) Safe and Supportive Communities, 4) Secure and Nurturing Early Care Environments, 5) Secure and Nurturing Families. The Early Childhood Iowa Stakeholders are currently engaged in the process of implementing the strategic plan. The early childhood work group has been involved with the Early Childhood Iowa stakeholders. The Early Childhood Iowa Strategic Plan has specific goals and strategies that mirror the nutrition and physical activity comprehensive state plan. Current goals are:
• Increase public engagement and support for families with young children. Strategies to achieve this goal - Collaborate with organizers of community and neighborhood events to promote the development of activities for families with young children.
• Create a community family friendly work force policy. Strategies to achieve this goal - Partner with chamber of commerce in promoting family friendly policies, educate employers about early childhood issues and family friendly policies, and establish employer recognition for family friendly policies and practices.

Building Healthy Communities in Iowa through Harkin Wellness Grants
The Iowa Department of Public Health has established Harkin Wellness Grants to address disease prevention and wellness. The funding is provided through a Senator Tom Harkin earmark. The program has awarded $2,700,000 to 28 Iowa communities for local projects that will significantly impact their health. One hundred thirty-eight Iowa communities applied for funding for a wide variety of community projects coordinated by coalitions including counties, townships, education agencies, school districts, public health organizations, health-care providers, and community-based nonprofit organizations.

Grantees are charged to focus on at least one of the following wellness priorities: nutrition, physical activity, mental health, and smoking cessation. Funds will be used for projects such as building bike paths, purchasing fitness equipment, or implementing nutrition education programs for children and adults, to name but a few.

Healthy Child Care Iowa
The Healthy Child Care Iowa campaign strives to improve the health and safety of Iowa children enrolled in early care and education settings by focusing on providing health and safety consultation, technical assistance, and training to Iowa child care providers through Child Care Nurse Consultants (CCNC). The CCNC are registered nurses who have completed a nationally approved curriculum through the Iowa Training Project for Child Care Nurse Consultants, a course of
study specific to working in the specialized child care and early education industry.

Healthy Child Care Iowa has adopted the five goals outlined in the Blueprint for Action from the Healthy Child Care America campaign:

1. Safe, healthy child care environments for all children, including those with special health needs
2. Up-to-date and easily accessible immunizations for children in child care
3. Access to quality health, dental, and developmental screening and comprehensive follow-up for children in child care
4. Health and mental health consultation, support, and education for all families, children, and child care providers
5. Health, nutrition, and safety education for children in child care, their families, and child care providers

Child Care Nurse Consultants provide education and consultation to children, families, and child-care providers about appropriate physical activity and nutrition. Many consultants have been trained in Team Nutrition and have strong collaborations with their local WIC programs.

**Iowa Fit Kids Coalition**

The Iowa Fit Kids coalition was established through the Iowa Department of Public Health to address childhood obesity. The coalition began as a task force and released a white paper on Prevention of Child and Adolescent Obesity in Iowa in 1997. The coalition is currently a subcommittee of the Iowa Nutrition Network.

**Iowa Nutrition Network**

The Iowa Nutrition Network is a partnership of public agencies, private organizations, and communities dedicated to promoting healthy lifestyles among all Iowans, particularly among low-income individuals and families. The network believes that good food choices and physical activity are essential to maintaining and improving health. Primary funding for the Iowa Nutrition Network comes from the USDA Food Stamp Program. The network supports a state-level coalition of partners who meet on a quarterly basis. Three of the main initiatives of the network are Building and Strengthening Iowa Community Support for Nutrition and Physical Activity (BASICS), the Chef Charles Club and the Pick a better snack campaign.

*BASICS* provides federal funding for community coalitions to expand nutrition and physical activity education programs serving food stamp recipients and food-stamp-eligible populations. The goal of the program is to provide educational programs that increase the likelihood that low-resource audiences can make healthy food choices consistent with the dietary advice of the Food Guide Pyramid and Dietary Guidelines for Americans. To meet this goal, the Iowa
Nutrition Network provides traditional nutrition education resources combined with unique social marketing strategies. There are currently 100 schools participating in nutrition education efforts with a major focus on increasing fruit and vegetable consumption in addition to objectives related to physical activity.

The Pick a better snack™ campaign, which was funded and developed by Team Nutrition (Iowa Department of Education), the Iowa Nutrition Network (Food Stamp Nutrition Education, United States Department of Agriculture), and the Iowa Department of Public Health, was implemented in the spring of 2000.

The Pick a better snack™ aims to provide consistent nutrition messages to key target audiences of the campaign are low-income children, ages 2 to 12 years, and their parents and caregivers. The campaign includes simple messages with colorful fruit and vegetable graphics and can be applied in a variety of ways and include recipe cards, posters, grocery-store signage, bookmarks, achievement certificates, brochures, and billboards, as well as radio scripts. Venues for delivering campaign messages include activities by extension agencies, grocery stores, and schools as well as community and youth organizations. Success of this program is measured in both increased consumption of fruits and vegetables, but also increased acceptance (likeability) of fruits and vegetables.

The Chef Charles Club is a nutrition education project for older adults made possible by funding from the Iowa Nutrition Network, Iowa Department of Public Health, and Food Stamp Nutrition Education of the United States Department of Agriculture. The nutrition education program is designed for congregate meal participants.

As a result of participating in the Chef Charles Club, older adults will: eat more fruits and vegetables; be more physically active each day; prepare and cook foods safely; report fewer problems having enough money to buy the food they need. A monthly nutrition newsletter, bingo game, and instructor's guide for demonstrations are provided on the following topics:

- Fruit and vegetable intake.
- Physical activity.
- Food safety.
- Food security and resource management.

Lighten Up Iowa
Lighten Up Iowa is an annual five-month competition that encourages Iowans to develop healthy activity and eating habits. Iowans are encouraged to form teams of up to 10 people and then “go the distance!” Since its first year in 2003, over 39,300 Iowans have been involved with the program. During those two years 4.8 million miles of activity has been logged and 65,000 pounds have been lost. In addition, 25 other states have started Lighten Up programs and Lighten Up Iowa was a 2005 recipient of Iowa Medical Society’s Washington Freeman Peck Award.
Team competition is recognized in two divisions, weight loss due to healthy, appropriate diet and physical activity or accumulated activity in the form of miles. A team can enter either one division or both for their entry fee. Participants receive a training T-shirt, weekly nutrition and activity tips, and free entry into the Iowa Games fitness walk (February) or the Summer Iowa Games volkswalk (July).

Go the Distance began in 2004 as the youth component of Lighten Up Iowa. Go The Distance is a four-month team (10-30 members) competition designed to help youth increase their physical activity levels. Go The Distance is free, and teams can qualify for monetary awards at the conclusion of the program. In 2004, 2,837 Iowa youth on 1,150 teams logged 604,324 miles. Go The Distance Day is a one-day event for schools in May. The purpose is to inform youth about the benefits of physical activity every day and show them that being active is fun. Schools plan a 30-minute segment of consecutive aerobic activity. In 2004, 27,030 students from 97 schools participated in Go The Distance Day.

Office of Women’s Health
The Iowa Department of Public Health (IDPH) Office of Women’s Health works to promote healthy lifestyles for Iowa women. The office has a Women's Health Information Center web site for diverse and comprehensive women's health and family health information, http://www.womenshealthiowa.info. This site provides a wide range of topics including reproductive, parenting, mental health, and many more. The information provided is not intended for self-diagnosing or treating a health problem or as a substitute for consulting a licensed health care professional. The office also compiles an inventory of IDPH programs that address the unique health care needs of women. Twenty-eight programs incorporate women’s health-related services into their public health programming, including Iowans Fit for Life.

Special Supplemental Nutrition Program for Women, Infants and Children (WIC)
WIC is a public health program that serves pregnant and postpartum women, and children under the age of 5. WIC provides nutritious foods, nutrition education, and referrals to other health-care agencies. Last year, 44 percent of all the babies born were eligible for Iowa’s WIC program, and according to the U.S. Census, approximately 188,000 Iowans are under five years of age.

The Iowa WIC program has been using nutrition and physical activity education modules to prevent childhood obesity since 2004. The modules originally developed by the Pennsylvaninaw WIC program are used to provide caregivers of children with a variety of health messages designed to decrease the incidence of childhood obesity and promote positive parenting skills in feeding young children.
Title V
Title V Maternal and Child Health provides preventive and primary care services for pregnant women, mothers, and infants up to age one year, preventive and primary care services for children, family centered, community based services for children and youth with special health care needs and their families. There are 25 local maternal and child health agencies and 13 regional Child Health Specialty Clinics across Iowa.

Through the Title V five year needs assessment obesity was identified as one of the top priorities for the state. A state performance measure was developed using the Iowans Fit for Life project as the lead. The performance measure will use data gathered from Iowans Fit for Life pilot intervention in communities across the state.

Tobacco Use Prevention and Control
The Division of Tobacco Use Prevention and Control is a comprehensive partnership among state government, local communities, and the people of Iowa to foster a social and legal climate in which tobacco use becomes undesirable and unacceptable. Every county in Iowa has the opportunity to apply for funds, based on their population, to be used to reduce the death and disease caused by tobacco use. These grass roots based Community Partnerships focus on the four goals set by the Center for Disease Control and Prevention (CDC):

- Prevent the initiation of and establishment of tobacco use in nonsmokers, especially among children and young people;
- Reduce the number of users of tobacco products
- Eliminate exposure to secondhand tobacco smoke
- Identify and eliminate the disparities related to tobacco use and its effects among different population groups.

Tobacco use is linked to overweight and obesity, both in adults and children. The Division of Tobacco Use Prevention and Control will be key partner with Iowans Fit for Life in helping Iowans achieve a healthier lifestyle by reducing the prevalence of tobacco use, improving nutrition and increasing physical activity.

WISEWOMAN Cardiovascular Research Study
The Bureau of Chronic Disease Prevention and Management is funded by the Centers for Disease Control and Prevention to test a nutrition and physical activity behavior modification intervention for Iowa women age 40 - 64 who participate in the Breast and Cervical Cancer Early Detection Program. The study also tests the integration of cardiovascular screening services into its current system of delivering the Breast and Cervical Cancer Early Detection Program. The WISEWOMAN research study is currently running in 15 sites across the state.
Integration with Other Statewide Existing Efforts with Nutrition, Physical Activity and Chronic Disease Initiatives

State Inventory of Existing Programs coming soon on:
www.iowa.gov/iowansfitforlife

Iowans Fit for Life Partnership (work group members)

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<td>Mike Abrams</td>
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<td>Polk County</td>
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<td>Iradge Ahrabi-Fard</td>
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<td>NutriActive Healthy Lifestyle for Lower Elementary HPELS UNI</td>
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<td>Linda Albright</td>
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<td>Cecelia Arnold</td>
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<td>Larry Beaty</td>
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<td>Sheri Bowen</td>
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Mary Bracken IPTV
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Stephanie Downs  City of Ames
Jan Drury  Iowa Veteran’s Home
Chuck Dufano  Johnson County Public Health
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<td>Della Guzman</td>
<td>Iowa Health - Des Moines</td>
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<td>Sonja Haferbier</td>
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Iowa's Comprehensive Nutrition and Physical Activity Plan

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Kerry Juhl Wellness Council of Iowa
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Erin London Iowa Health - Des Moines
Randy Lueth Engineering Plus, Inc.
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Jill Gleason, Heritage Area Agency on Aging
Jean Morgan, Jasper County Elderly Nutrition

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Connie Ehlers – Vocational Rehabilitation Services
Kathy Slaughter – Communications
Ed Thomas – Physical Education/Health
Julia Thorius – Nutrition Programs and School Transportation

**Iowa Department of Human Services**
Jody Caswell – Child Care
Julie Ingersoll – Child Care

**Iowa Department of Public Health**
Joyce Allard – Communications/Health Education
Jane Borst – Family Health
Janice Edmunds-Wells – Multicultural Health
Gretchen Hageman – Early Childhood
Carol Hinton – Child Health
Arlene Johnson – Health Promotion/Cardiovascular Risk Reduction
Tim Lane – Health Promotion/Cardiovascular Risk Reduction
Louise Lex – Healthy Iowans 2010
Jeff Lobas – Health Promotion and Chronic Disease Prevention
Bonnie Mapes – Tobacco Use Prevention and Control
Julie McMahon – Health Promotion and Chronic Disease Prevention
Jill Myers-Geadelmann – Chronic Disease Prevention and Management
Don Owens – Tobacco Use Prevention and Control
Lynh Patterson – Policy, Legislation and Constituent Relations
Janet Peterson – Women’s Health
Susan Pohl – WIC
Rob Semelroth – Tobacco Use Prevention and Control
Judy Solberg – Nutrition and Health Promotion
Kevin Teale – Communications

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Roxane Joens-Matre – Evaluation
Sarah Taylor – Physical Activity
Carol Voss - Nutrition

**Iowa Department of Transportation**
Kathy Ridnour – Bicycle / Pedestrian Planning

**Iowa State University**
Ruth Litchfield - Nutrition
Katherine Thomas Thomas – Health and Human Performance

**University of Iowa**
Faryle Nothwehr – Community and Behavioral Health

**University of Northern Iowa**
Larry Hensley – Health, Physical Education and Leisure Services

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Epidemiology Committee

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- Faryle Nothwehr, Ph.D., University of Iowa
  Assistant Professor, Deputy Director, Prevention Research Center, Department of Community and Behavioral Health, Iowa City, IA.

- Daniel Russell, Ph.D., Iowa State University
  Associate Dean of Research, College of Human Sciences

- Gregory J. Welk, Ph.D., Iowa State University
  Assistant Professor, Department of Health and Human Performance. Dr. Welk serves as the Scientific Director of the FITNESSGRAM youth fitness program for the Cooper Institute

2004 Omnibus Budget Bill, SF 2298

“It is the intent of the general assembly that state agencies, local communities, and individuals begin exploring strategies and partnerships to create a statewide community network that supports health promotion, prevention, and chronic disease management. It is the expectation of the general assembly that such strategies and partnerships will energize local communities to transform their cultures into those which promote healthy lifestyles and which, collectively, transform the state of Iowa into one healthy community.”

Acknowledgements

Report prepared by:
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Jane Schadle, M.S.
Sarah Taylor, B.S.
Carol Voss, M.Ed.

We are grateful for contributions from:
Jessica Brinkmeyer
Kathleen Dickens
Iowa State University Health Promotion Class

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Increasing Physical Activity and Improving Nutrition Health for Iowans

Logic Model

**INPUTS**

- Partnerships and Stakeholders
- Interagency Task Force
- Advisory Council
- Epidemiology Committee
- Channel Work Groups
- Physical Activity Nutrition Community Partnerships Increasing Public Awareness
- Hire and Orient Project Staff
- CDC Consultation
- Continuing Education for Staff
- Service Contracts
- Communication and Public Education Plan

**ACTIVITIES**

- Establish Goals/Strategies
- Resource/Consultation Review of Plan
- Target Populations Data Inventory of Programs Interventions Social Marketing Legislative/Policy Resources/Sustainable funding
- Project Management Community Forums
- Summit – May Submission of Iowa’s Plan
- Surveillance Pick a Better Snack & ACT curriculum
- Implementation of Grant/Iowa Initiatives
- Ongoing Public Information Campaign

**OUTPUTS**

**SHORT-TERM**

Phase 1 – ’05-’06

- Youth in Intervention communities (IC) will demonstrate increased knowledge of benefits of physical activity (PA) and good nutrition
- Youth in IC will demonstrate self-efficacy and attraction for PA

**INTERMEDIATE**

Phase 2 – ’07-’10

- A higher proportion of Iowans in intervention counties will meet recommended PA levels
- A higher proportion of Iowans will consume the recommended amount of F/V
- A higher proportion of communities in Iowa will participate in the physical activity component of Lighten up Iowa
- Girls in IC will demonstrate less of a decline in PA with age

**LONG-TERM**

Phase 3 – Ongoing

- A higher proportion of Iowans will meet recommended PA levels
- A higher proportion of Iowans will consume the rec. amount of F/V
- A higher proportion of disabled adults will meet recommended PA levels
- A higher proportion of rural and low SES Iowans will consume the recommended amount of F/V
- A higher proportion of women will increase the incidence and duration of breastfeeding
- Proportion of Iowa youth that are of normal weight will increase
- Proportion of adult Iowans that are overweight or obesity will not increase

**GOALS**

- Reduce the negative impact of obesity: Medical costs QOL CDV Disease Diabetes Cancer

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