State of Illinois
Rod R. Blagojevich, Governor

Department of Public Health
Damon T. Arnold, M.D., M.P.H., Director

Illinois Strategic Plan: Promoting Healthy Eating and Physical Activity to Prevent and Control Obesity 2007 – 2013

Nutrition and Physical Activity Program
Illinois Department of Public Health
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Illinois Department of PUBLIC HEALTH

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Acronym List

AAC – Atherosclerosis Advisory Committee
ACSM – American College of Sports Medicine
ALED – Active Living Every Day
ASM – After School Matters
BMI – Body Mass Index
BRFSS – Behavioral Risk Factor Surveillance System
CAL – CLOCC Accelerometer Library
CARDIA – Coronary Artery Risk Development in Young Adults
CATCH – Coordinated Approach to Child Health
CCP – Comprehensive Cancer Program
CDC – U.S. Centers for Disease Control and Prevention
CHD – Cardiovascular Health Disease
CLOCC – Consortium to Lower Obesity in Chicago Children
CVH – Cardiovascular Health
CYS – Chicago Department of Children and Youth Services
DHPE – Directors of Health Promotion and Education
DOD – Department of Defense
IAHPERD – Illinois Association for Health, Physical Education, Recreation and Dance
IA/I – Insufficiently active or inactive
IDPH – Illinois Department of Public Health
IPLAN – Illinois Project for Local Assessment of Needs
ILNUPA – Illinois Nutrition and Physical Activity Program
INC – Interagency Nutrition Council
INET – Illinois Nutrition Education and Training Program
ISAT – Illinois Standards Achievement Test
ISBE – Illinois State Board of Education
ISBFTF – Illinois State Breastfeeding Task Force
MEPS- Medical Expenditure Panel Survey
MN – Millennium Neighborhoods
MVPA – Moderate to Vigorous Physical Activity
NACDD – National Association of Chronic Disease Directors
NCI – National Cancer Institute
NCSA – National Center for Supercomputer Applications
NHANES – National Health and Nutrition Examination Survey
NHLBI – National Heart, Lung and Blood Institute
NHS – National Interview Survey
NIDDK – National Institute of Diabetes and Digestive Kidney Diseases
NIDDM – Non-Insulin Dependent Diabetes Mellitus
NIS - National Immunization Survey
NUPA – Nutrition and Physical Activity
P.E. - Physical Education
PedNSS –Pediatric Nutrition Surveillance System
PRAMS – Pregnancy Risk Assessment Monitoring System
OHPm – Office of Health Promotion
OSC – Obesity Steering Committee
ROE – Regional Offices of Education
SEM – Social-Ecological Model

SOFIT – System for Observing Fitness Instruction Time
STGC – Stop The Gain Campaign
SWP – School Wellness Policies
UIUC – University of Illinois, Urbana-Champaign
USDA – U. S. Department of Agriculture
WELCOA – Wellness Councils of America
WVU –West Virginia University
WIC – Women, Infants and Children Supplemental Program
WIN – Weight-Control Information Network
YRBS – Youth Risk Behavior Survey

I. Preface

I. A. Overview of the State Plan

The Illinois Strategic State Plan to Promote Healthy Eating and Physical Activity to Prevent and Control Obesity provides a framework for action to reduce the burden of obesity. Its purpose is to provide an organized approach to obesity prevention and control efforts. The state plan is intended for use by people and organizations interested in physical activity and nutrition for the reduction of overweight and obesity. Members of the Obesity Steering Committee identified recommendations and key strategies for improving nutrition and physical activity in the school, community, worksite and health care settings. In addition, several advisory committees have provided guidance and direction for the state NUPA program and development of the state plan. They include representatives from academia, public health, science and epidemiology, the medical community and the general public.

This state plan incorporates the following:

- burden of obesity and overweight
- overall goal and measurable objectives
- an evaluation framework for guidance on measuring outcomes for strategies and interventions
- recommendations for increasing physical activity, improving healthy eating choices, improving current health care approaches for treatment and management of overweight and obesity, and improving the environment through policies conducive to behavior change
- list of partners to assist with implementation of the plan
- appendices, including a list of evidence-based programs and best practices; related public acts; resources; glossary; explanation of the socio-ecological model and framework; and references

Current understanding in the effective prevention and management of chronic diseases recommends a comprehensive and multi-faceted approach engaging multiple stakeholders. The emerging environment over the past 30 years has demonstrated that changes in lifestyle behaviors, including the proliferation of convenience eating and the advancements of technology, have had a tremendous impact on the rising rates of overweight and obese children and adults. Environmental and policy systems change can support and build awareness for prevention of further chronic disease and illness. In addition, barriers and gaps in data collection for nutrition, physical activity, overweight, and obesity exist at multiple levels throughout the state. The Obesity Steering Committee and related stakeholders identified several of these barriers and gaps during the strategic planning process. These include:

- a central reporting mechanism for environments and policy laws and regulations;
- a system to measure and report effectiveness of such laws and regulations;
- reporting mechanisms that are not compatible and may use different definitions and markers;
- measures for monitoring changes within a community following an intervention are virtually non-existent; and
- difficulty in acquiring socio-economic indicators due to privacy laws.

I. B. Priorities to Address Healthy Eating and Physical Activity

The U. S. Centers for Disease Control and Prevention (CDC) priority areas to addresses overweight and obesity include: energy balance or caloric intake and expenditure; improved nutrition including increased consumption of fruits and vegetables; increased physical activity and reduction in television and video viewing time; and increasing initiation and duration rates for breastfeeding. For recommendations and strategies in these priority areas, refer to section III of this plan.

I. C. Advisory Committees

- **Atherosclerosis Advisory Committee** - In January 2001, Public Act 91-0343 created the Atherosclerosis Prevention Act requiring the Illinois Department of Public Health (IDPH) to establish a program for the prevention of atherosclerosis and the reduction of disability and death associated with heart disease. Accordingly, the director of department appointed the 11-member Atherosclerosis Advisory Committee (AAC) to establish guidelines and standards for implementation of this act. Through a series of consensus building activities, the AAC established priorities in programmatic areas of cardiovascular health and obesity. The AAC, in January 2006, recommended that the Illinois Nutrition and Physical Activity Program (NUPA) consider utilizing the four health outcome messages, generated through the Coronary Artery Risk Development in Young Adults (CARDIA) research as part of a proposed pilot intervention for the program. After subsequent meetings with committee members, the intervention strategy plan was revised in April 2006. The current recommendation is to translate the CARDIA findings within real time, wellness-based settings and utilize acknowledged public health practices to improve lifestyle behaviors. In September 2006, the AAC suggested that the pilot sites should focus on one main CARDIA message stopping weight gain in the 18 to30-year-old population. The message focuses on maintenance of a stable or decreased body mass index (BMI) over time, which is associated with a lower incidence of the cardio metabolic syndrome by middle age.

- **Illinois Governors Council on Health and Physical Fitness** - In August 2006, Gov. Rod R. Blagojevich reconvened the Governor's Council on Health and Physical Fitness. The council members are Illinois' leading health and fitness advocates who promote exercise and good nutrition across the state. The mission of the council is to encourage Illinois citizens to participate in health and fitness activities that will help them live healthier, happier and more productive lives. The council has made recommendations that align closely with the goal and objectives included in this plan. A feasibility and level of importance survey was conducted with the council to determine areas of focus for future activities. The results were as follows: 1) develop and promote a healthy school campaign; 2) establish an information resource center or site; 3) start a state/governor's award program for physically active communities; 4) create an information exchange on community best practices for promoting health and physical activity;

and identify community-based channels to reach targeted, at-risk populations. The council's final recommendations identified through a consensus building process are:

Recommendation 1 - Establish a Healthy Hometown Award to be presented by the Governor to physically active communities in Illinois

Recommendation 2 - Establish a statewide inventory of all physical activity, nutrition, and obesity related programs in Illinois

- **Illinois School Wellness Policy (SWP) Task Force** - Recognizing that schools play a critical role in promoting and supporting children's health, the U.S. Congress passed Public Law 108-265 that required local education authorities participating in U. S. Department of Agriculture (USDA) Child Nutrition Programs to establish local wellness policies by school year 2006-2007. This federal law and the growing concern about childhood obesity led to the passage of legislation by the Illinois General Assembly Public Act 94-0199 requiring the Illinois State Board of Education (ISBE) to establish a goal that all school districts have a wellness policy consistent with recommendations of the CDC. The act also established an Illinois SWP Task Force with members representing 19 organizations including the Illinois Department of Public Health (IDPH).

  The SWP Task Force is required to submit the following reports to the Illinois General Assembly and the Governor: 1) by January 1, 2006, identify barriers to developing and implementing school wellness policies with recommendations to reduce those barriers 2) by January 1, 2007, make recommendations on statewide school nutrition standards and 3) by January 1, 2008, evaluate five to 10 school districts on the effectiveness of school wellness policies. The first two reports have been submitted and are posted on the ISBE web site. The third report is being written utilizing a comprehensive survey of six school districts.

II. Illinois Profile

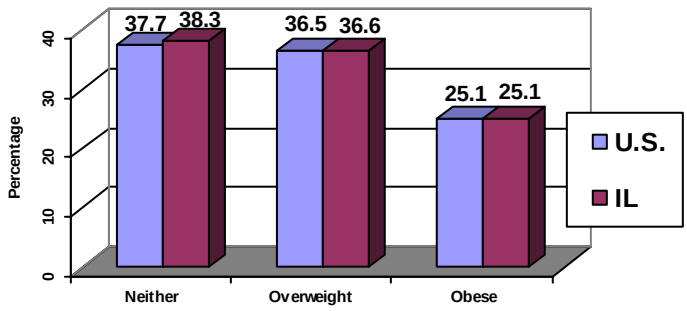
II. A. Prevalence of Overweight and Obesity

Adults

The graphs and data presented in this section highlight the most current data for overweight and obesity among adults and youth.

Data indicate that 61.1 percent of American adults are either overweight Body Mass Index (BMI) equal to 25.0 to 29.9 or obese with BMI greater than 30. According to the 2006 Behavior Risk Factor Surveillance System (BRFSS), Illinois adults are slightly higher (61.7%) than the national average in the combined category (36.6 % overweight and 25.1% obese).(Figure 1). The Illinois BRFSS annually monitors self-reported health-related behaviors in adults 18 years of age and older. This data tends to be lower than data based on actual biometric measurement.

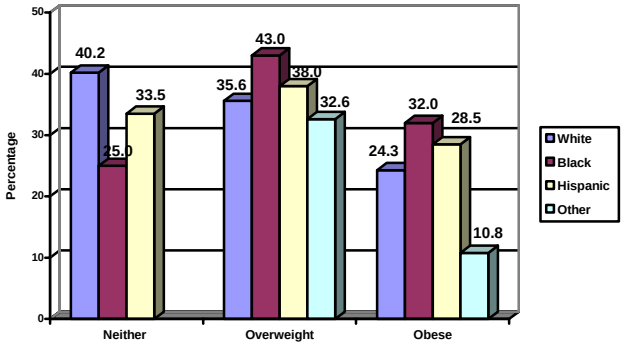
Figure 1: 2006 Nationwide (States, D.C., and Territories) vs. Illinois Overweight and Obesity (BMI)



Data Source: **http://www.cdc.gov/brfss/**

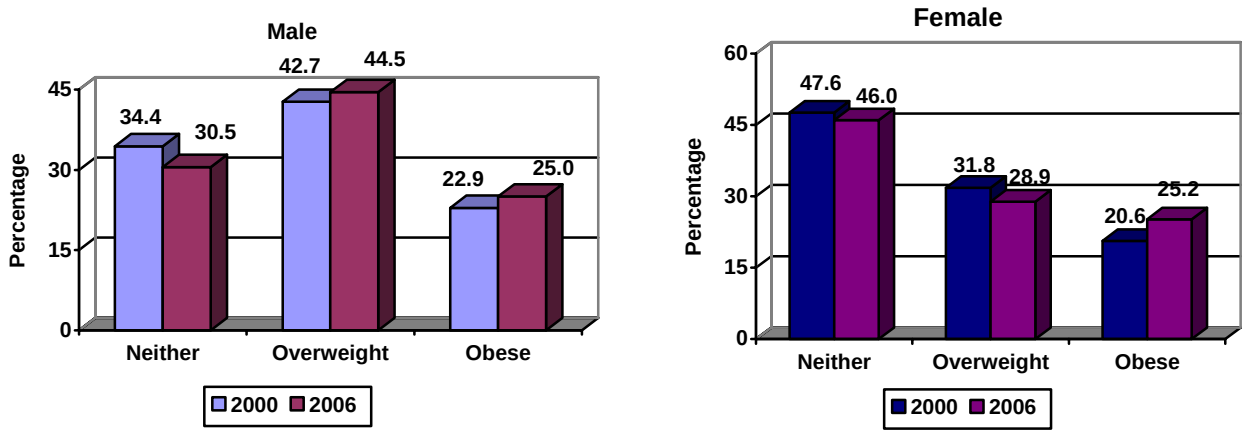
The 2006 Illinois BRFSS indicates that 59.9 percent of Caucasians, 75.0 percent blacks, 66.5 percent of Hispanics, and 43.4 percent of others are classified as overweight or obese (Figure 2). In (Figure 3), data indicates males are more likely to be overweight or obese (69.5%) compared to females (54.1%)

Figure 2: 2006 Illinois Overweight and Obesity (BMI) by Race and Ethnicity



Data Source: **http://www.cdc.gov/brfss/**

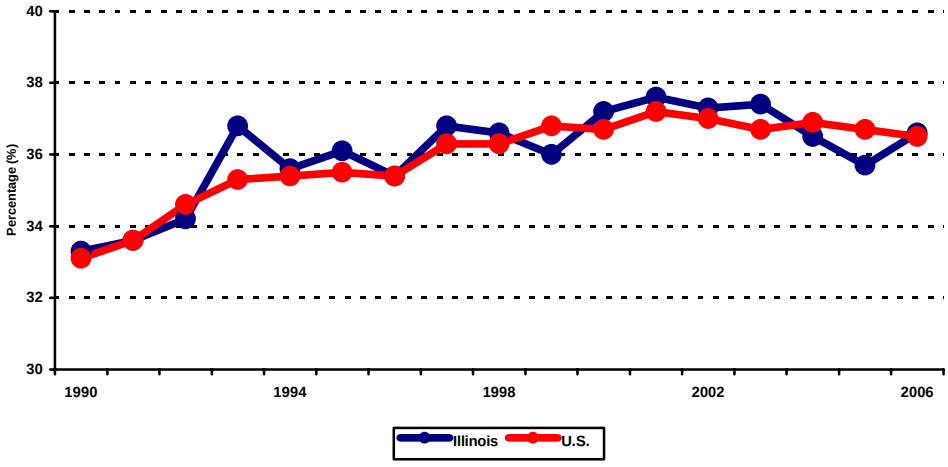
Figure 3: Comparison of Illinois 2000 and 2006 Prevalence Data for Overweight and Obesity, by Gender



Data Source: http://www.cdc.gov/brfss/

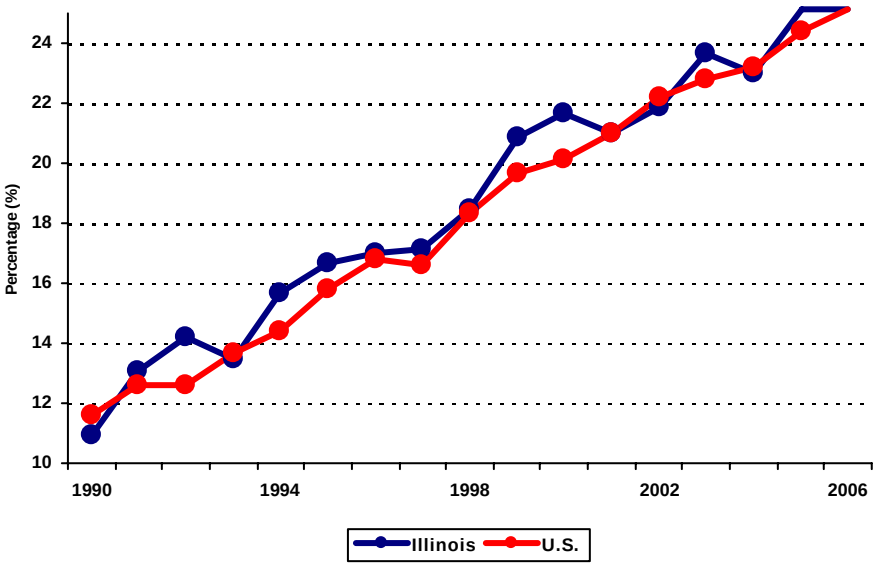
The 1999-2006 Illinois BRFSS trend data for overweight and obesity are closely aligned to the national trend data for these conditions. This data reflect that Illinois, along with the national trends, has experienced a precipitous rise in obesity rates over the past 16 years (Figure 4 and 5).

Figure 4: Overweight Trends by Body Mass Index, Illinois vs. U.S. 1990 – 2006



Data Source: **http://www.cdc.gov/brfss/**

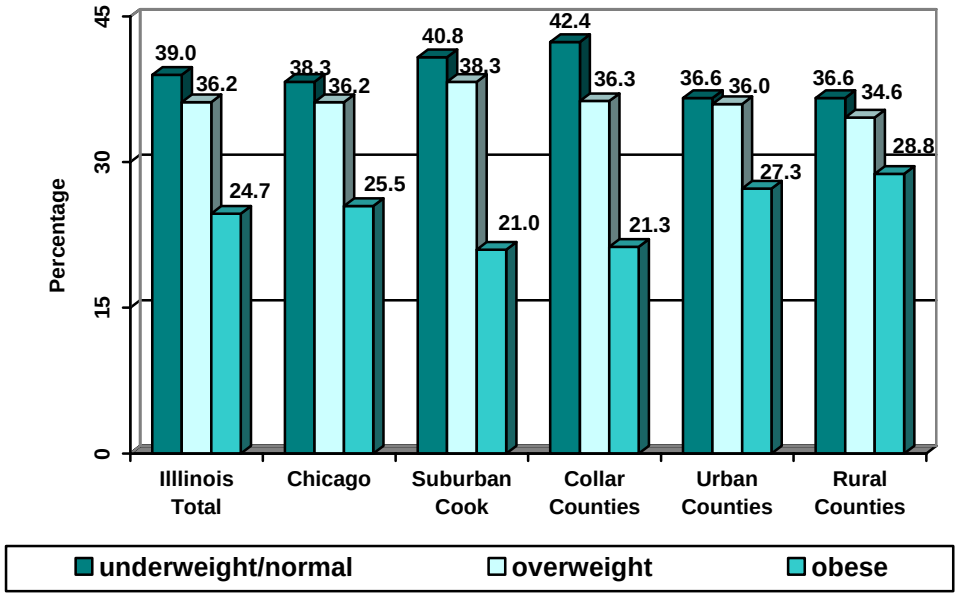
Figure 5: Obesity Trends by Body Mass Index, Illinois vs. U.S. 1990 – 2006



Data Source: http://www.cdc.gov/brfss/

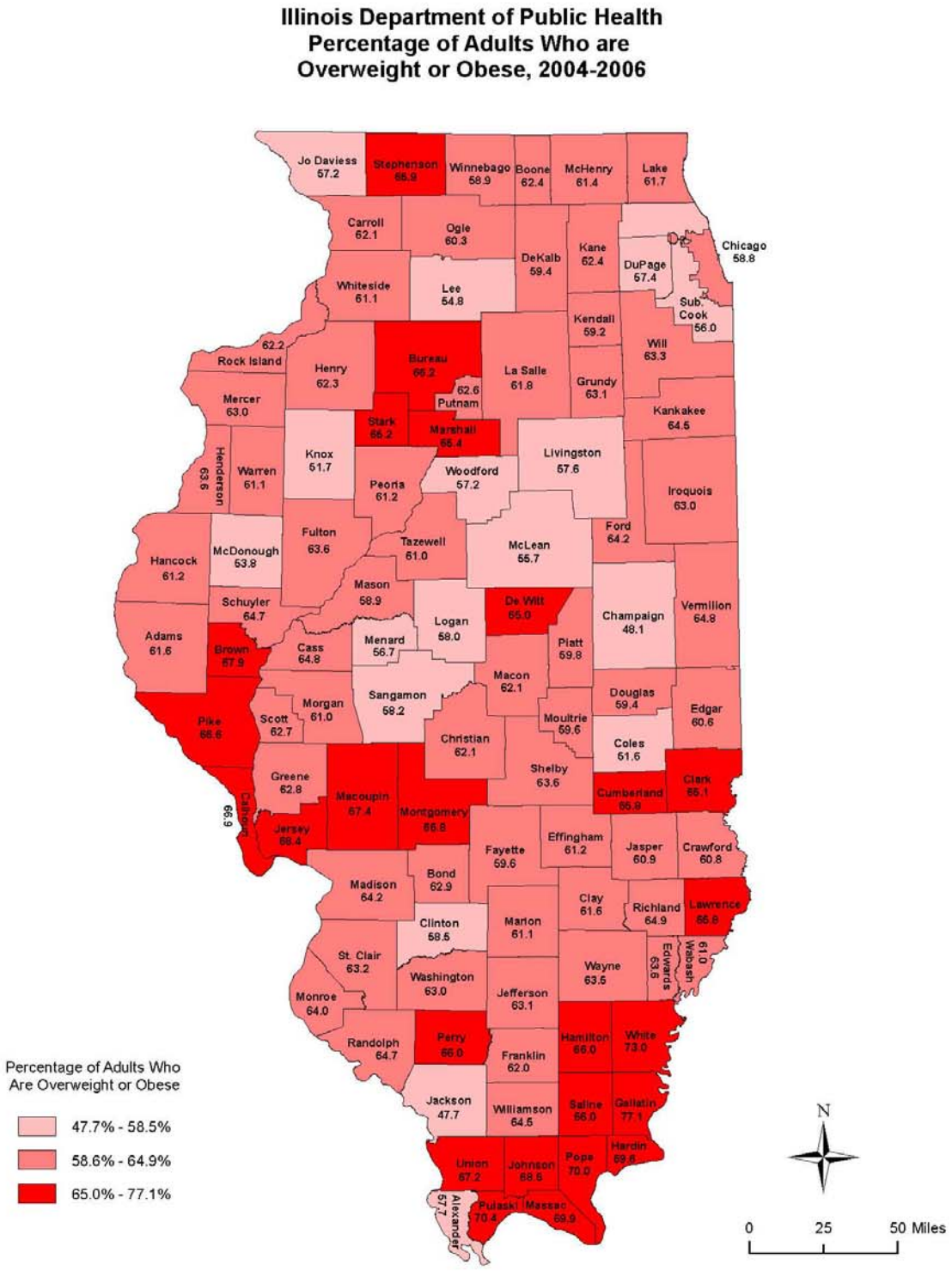
Regional comparisons of the 2006 Illinois BRFSS data indicate that for combined overweight and obesity rates, rural areas of Illinois demonstrate the highest rate (63.4%) (Figure 6). This is further illustrated by the 2001-2006 county map information provided by the Illinois BRFSS data where the highest combined rates for overweight and obesity are found in the most rural regions (Figure 7).

Figure 6: 2006 Illinois Adult Weight Prevalence by Region



Data Source: **Illinois Behavioral Risk Factor Surveillance System, 2006**

Figure 7: Percentage of Adults Who Are Overweight or Obese, Illinois, by County, 2004-2006

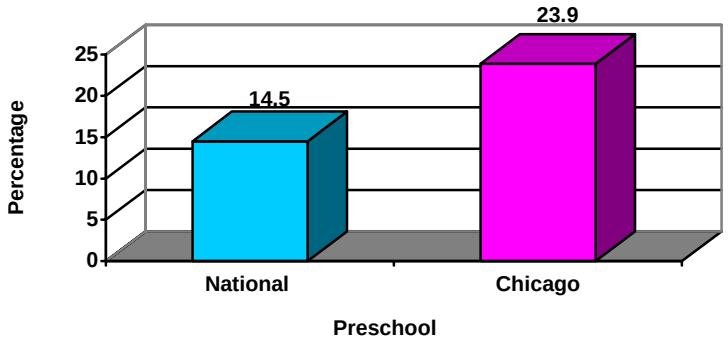


Notes: Overweight = body mass index (BMI) 25.0 to 29.9; Obese = BMI 30.0 or more.
Data Source: Illinois County Behavioral Risk Factor Survey; Round III, 2004 to 2006;
Illinois Center for Health Statistics, Illinois Department of Public Health. Created: September 11, 2007

Children and Youth

Overweight is defined and determined differently in children and adolescents than in the adult population. For adults, BMI greater than 25 is considered overweight. For children and adolescents, at risk for overweight is defined as the 85th to 95th percentile and overweight is defined as 95th percentile or higher. This is based on the World Health Organization and CDC age and sex specific growth charts. Data from the National Health and Nutrition Examinations Surveys (NHANES) Survey II 1976-1980 and NHANES 2003-2004, reinforce the seriousness of overweight in children and adolescents. For children aged 2-5 years, prevalence of overweight increased from (5%) to (13%). For children aged 6 to 11 years, prevalence increased from (6.5%) to (18.8%); and for 12-19 years of age, prevalence increased from (5.0%) to (17.5%). The 2004 Illinois Pediatric Nutrition Surveillance System (PedNSS) revealed that (14.3%) 2-5-year olds were overweight. This rate is close to the figure 14.7 percent reported for PedNSS 2005. More pre-school children in Chicago are at risk for overweight or are overweight (23.9%) than in the nation (14.5%).(Figure 8).

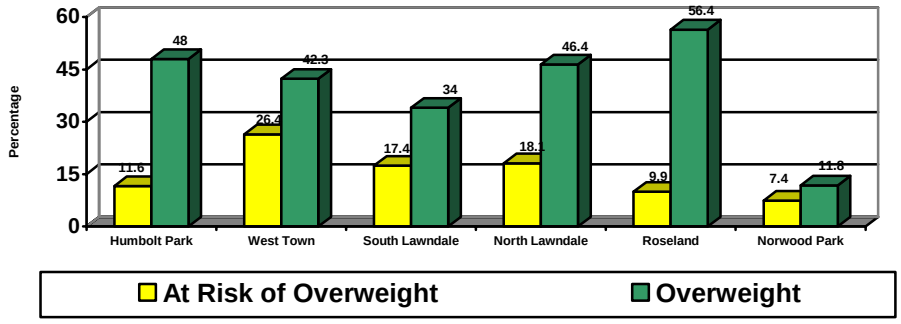
Figure 8: At Risk for Overweight and Overweight Comparisons for Preschool Children, 2003 – 2004, Chicago vs. National



Data Source: **Journal of School Health, Mason et al, 2006**

Prevalence of at risk for overweight and overweight among children 2-12 years old in selected Chicago communities found rates as high as 56.4 percent in Roseland and 11.8 percent in Norwood Park (Figure 9). Data from this 2004 study demonstrated Chicago children living in low-income communities of minority populations are more likely to be overweight.

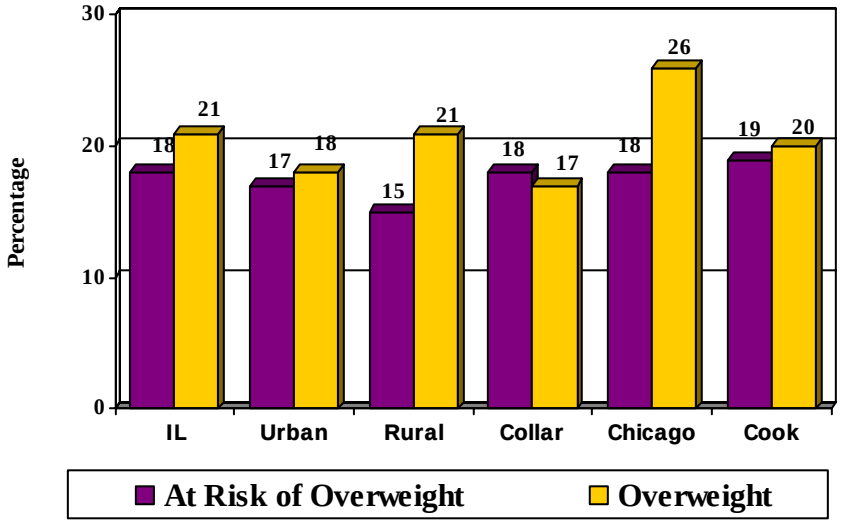
Figure 9: Prevalence of at Risk of Overweight or Overweight Among Children 2-12 years in Selected Chicago Communities, 2003



Data Source: **Margellos-Anast H., et. al., 2007. In Press**

According to the 2003-2004 Healthy Smiles, Healthy Growth data from the Illinois Department of Public Health, (39%) of third grade students are either at risk for overweight or are overweight (Figure 10).

Figure 10: Percentage of Illinois Third Grade Students at Risk for Overweight and Overweight, 2003 – 2004

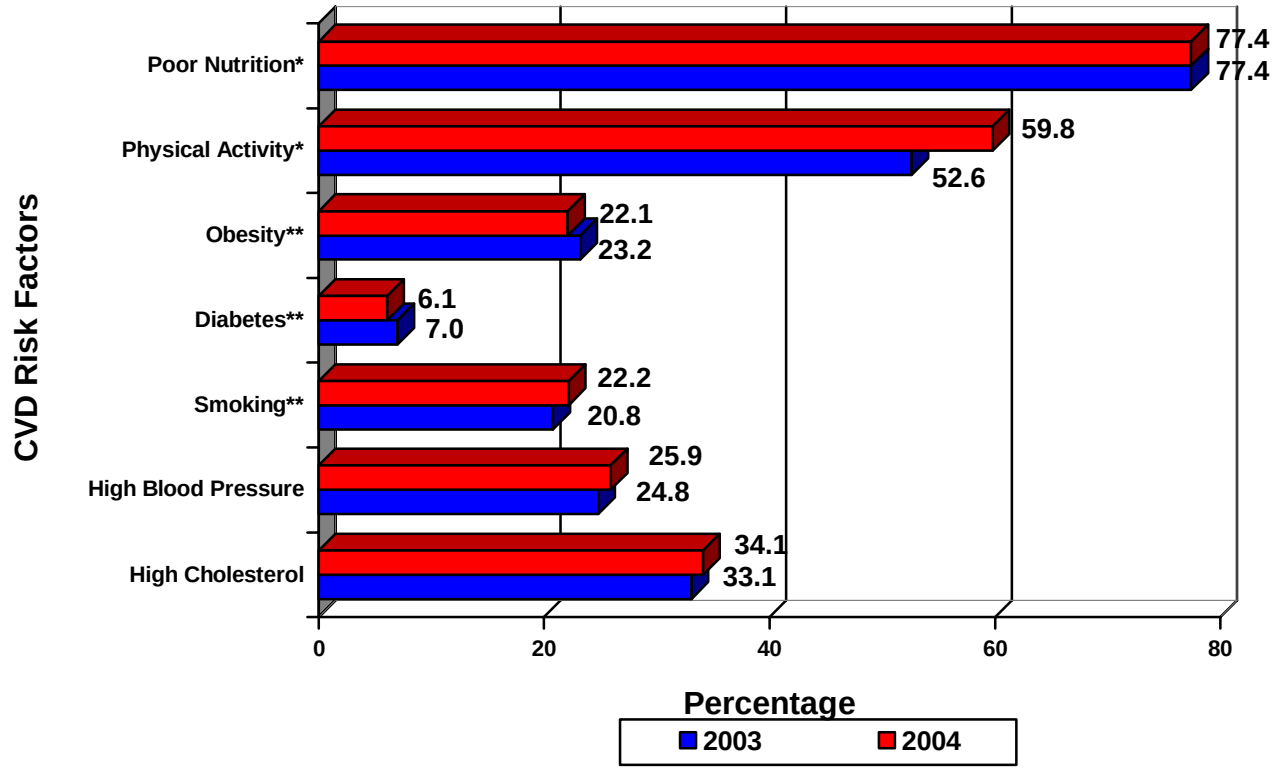


Data source: **Healthy Smiles, Healthy Growth 2003 – 2004; IDPH; Office of Health Promotion; Division of Oral Health**

II. B. Risk Factors for Overweight and Obesity in Illinois

Illinois adults who are either overweight or obese are at increased risk for cardiovascular disease, diabetes, stoke, hypertension, gall bladder disease, osteoarthritis and certain cancers. Figure 11 shows the prevalence of risk factors for overweight and obesity (poor nutrition and physical inactivity), as well as risk factors contributing to cardiovascular disease. In 2004, 77.4 percent of adults reported poor nutrition and 59.8 percent reported physical inactivity.

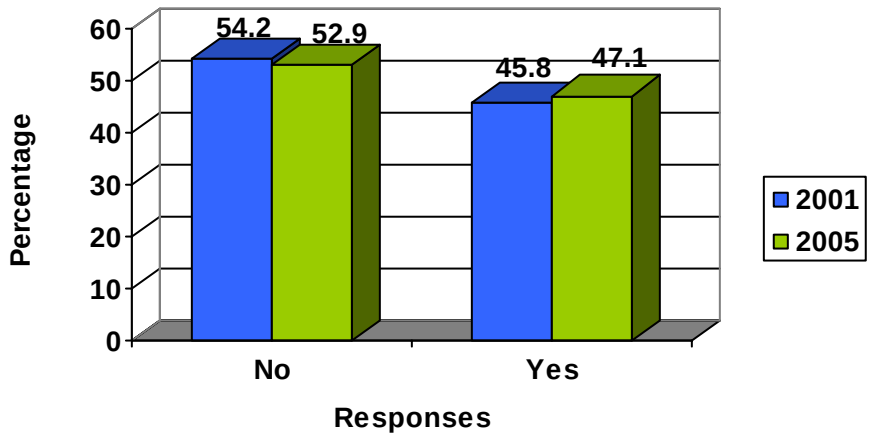
Figure 11: Percentage of Adults Reporting Cardiovascular Disease Risk Factors, Illinois, 2003 and 2004



Data Source: **U. S. Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System; Illinois Department of Public Health BRFSS; *2003, **2004**

The 2005 Illinois BRFSS data for physical activity levels indicate 54.2 percent are insufficiently active or inactive (IA/I). Males comprise 52.2 percent, while females account for 56 percent. Racial tabulation for IA/I shows similar distribution with 51.6 percent white and 61.6 percent non-white. The BRFSS data indicate a higher percentage of individuals with income levels under $15,000 are IA/I (70%) compared to persons earning more than $50,000 (47%). Higher percentages are also reported for individuals with less than a high school education (64.3%) compared to those with a college degree (49.2%). Statewide county stratification for IA/I indicates that Chicago has the highest percentage of IA/A with suburban Cook County presenting with the lowest (60.5% and 50.1% respectively). Collar, urban and rural counties are closely clustered at 54 percent, 54.6 percent, and 53.5 percent respectively. (Figure 12).

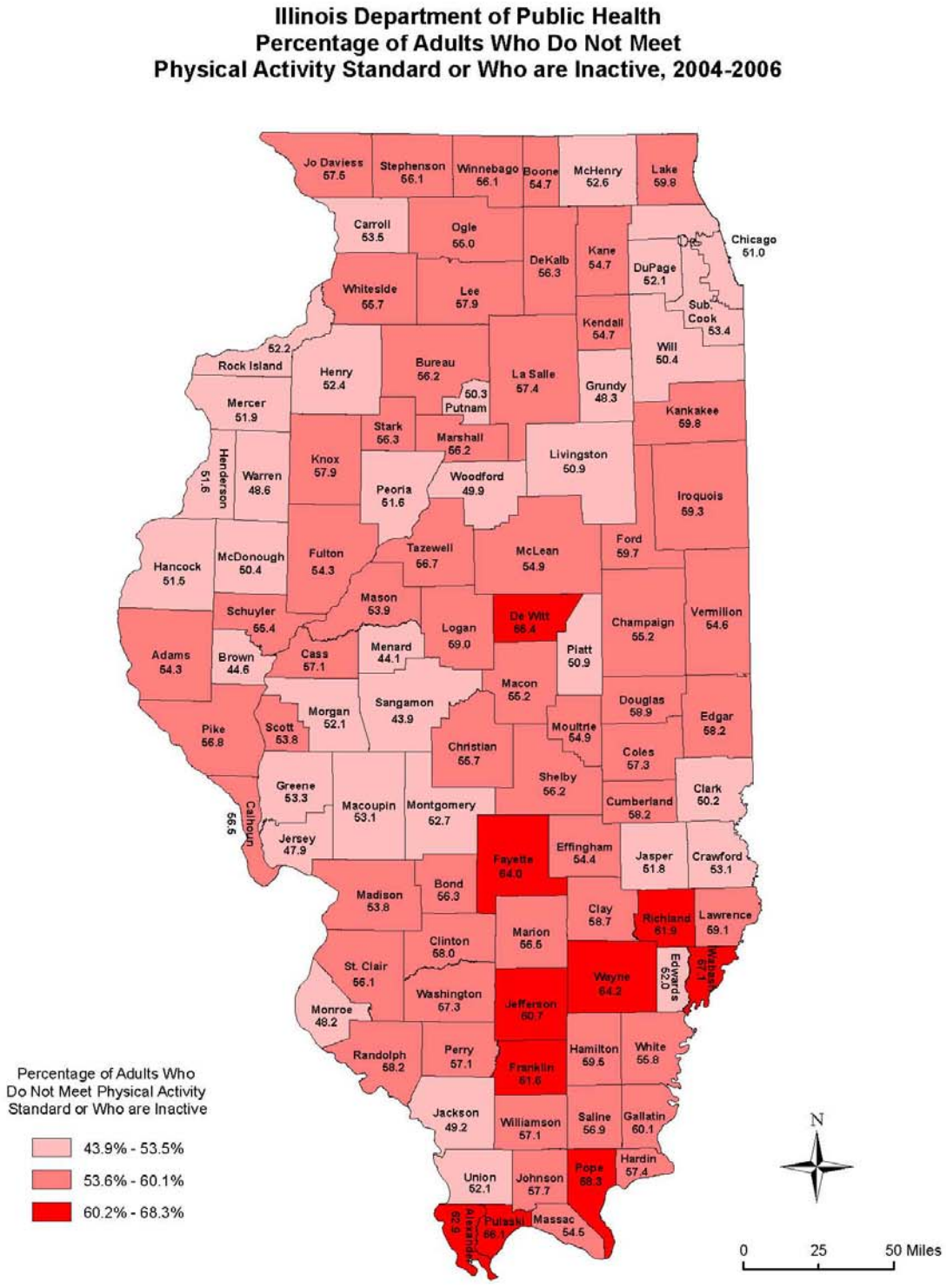
Figure 12: Comparison of Moderate Physical Activity for Illinois, 2001 and 2005



Data Source: **http://www.cdc.gov/brfss**

The percentage of Illinois adults by Illinois County 2004-2006, who do not meet the recommended level of physical activity, is illustrated in (Figure 13). The highest percentage of adults not meeting recommended levels live in Pope County (68.3%) in southern Illinois. Sangamon County in central Illinois is identified as the county representing the highest activity levels for adults in the state.

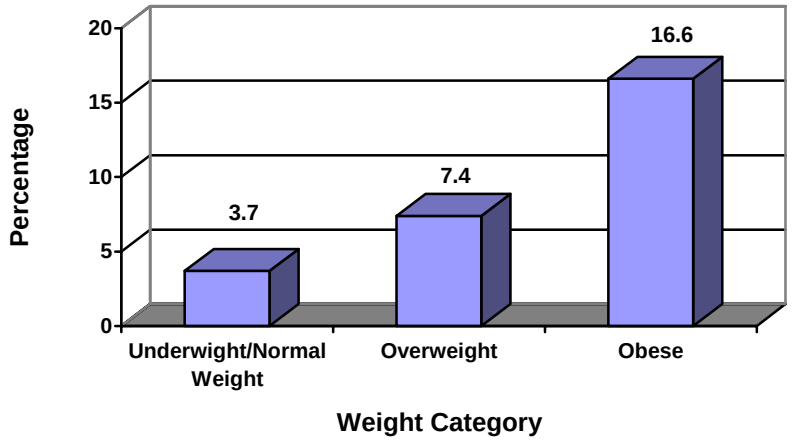
Figure 13: Percentage of Adults Who Do Not Meet the Recommended Level of Physical Activity, Illinois by County, 2004 – 2006



Physical Activity Standard: Moderate physical activity for at least 30 minutes per day or vigorous activity for 20 mintues, 3 or more days per week.
Data Source: Illinois County Behavioral Risk Factor Survey; Round III, 2004 to 2006;
Illinois Center for Health Statistics, Illinois Department of Public Health. Created: September 11, 2007

Figure 14 shows the prevalence of overweight and obesity among adults with diabetes. The majority of people with diabetes are obese (16.6%). Of adults who are either overweight or obese, 24 percent have diabetes. Diabetes is considered a co-morbidity for overweight and obesity with similar lifestyle risk factors.

Figure 14: Illinois Adults with Diabetes by Weight Category, 2006

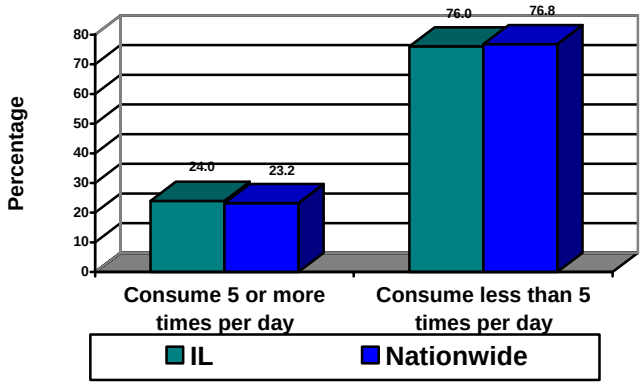


Data Source: **Illinois Behavioral Risk Factor Surveillance System, 2006**

II. C. Consumption of Fruits and Vegetables

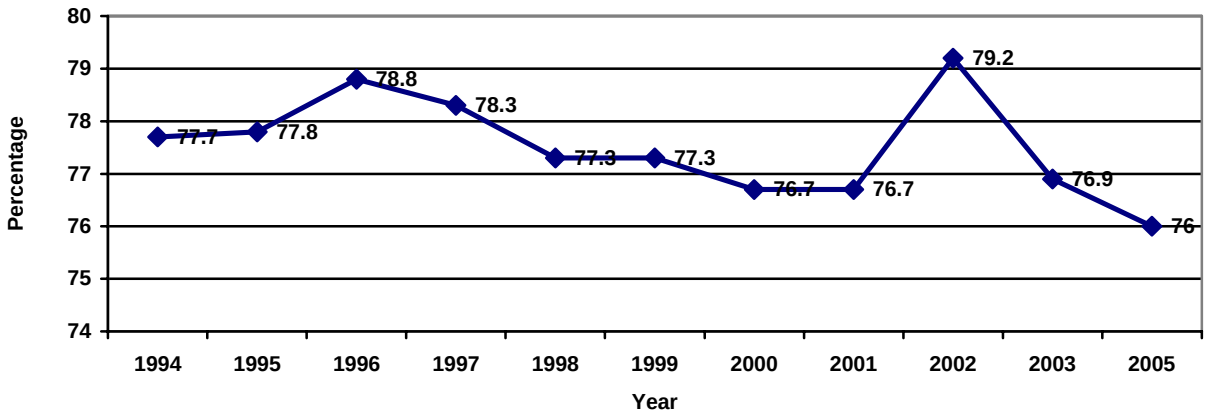
Consumption of fruits and vegetables for Illinois aligns closely with national consumption rates. Only 24 percent consume five or more serving per day and 76 percent consume less than five servings per day as reported by the 2006 BRFSS for fruit and vegetable consumption (Figure 15). CDC BRFSS trend data for adults who do not consume enough fruits and vegetables from 1994-2005 (Figure 16) shows similar findings ranging from 76.7 percent to 79.2 percent not consuming recommended amounts.

Figure 15: Consumption of Fruits and Vegetables per day Illinois versus Nationwide, 2005



Data Source: **Illinois Behavioral Risk Factor Surveillance System, 2006**

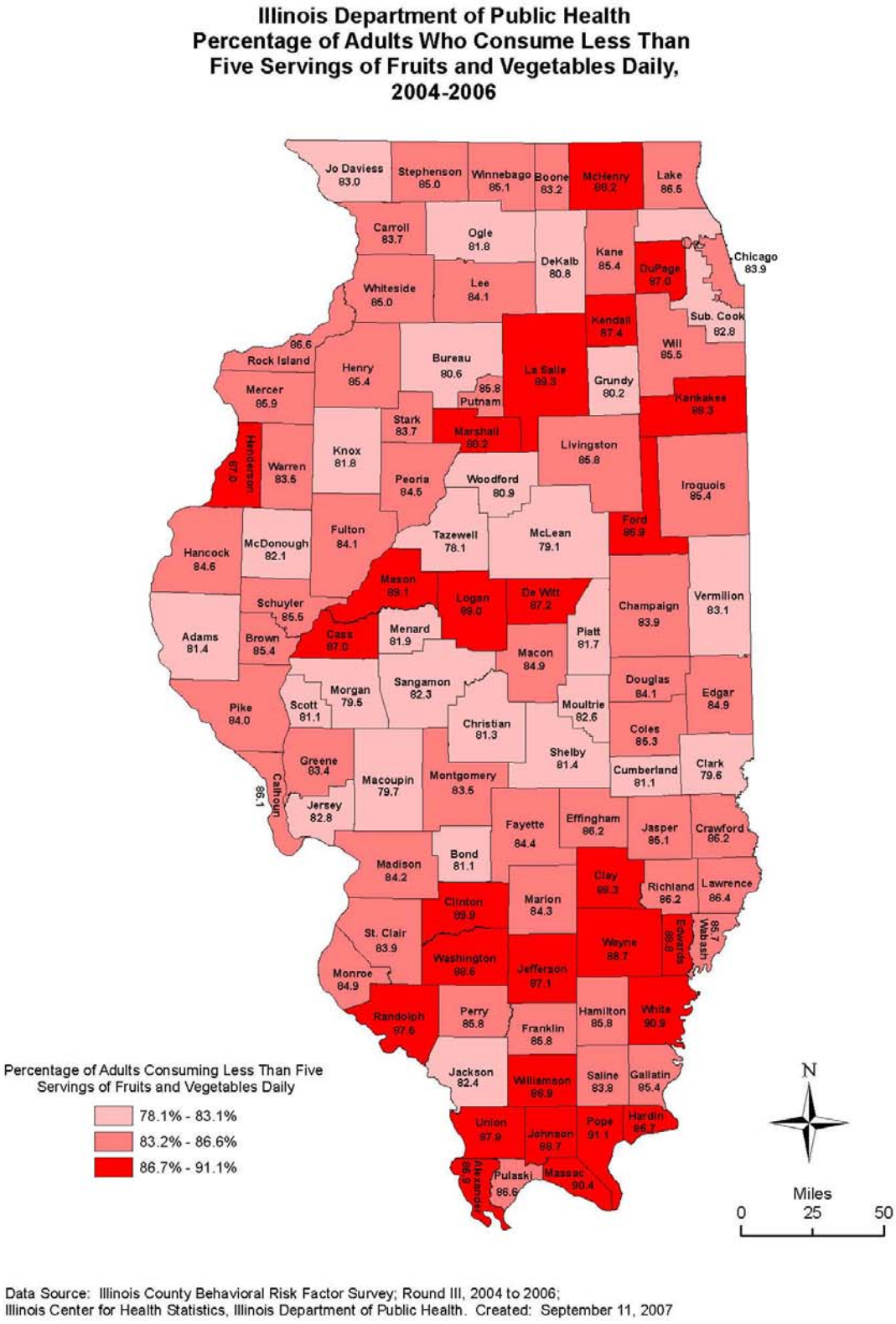
Figure 16: Trend Data for Illinois Adults, Who Do Not Consume Enough Fruits and Vegetables, 1994 – 2005* (no data 2004)



Source: CDC BRFSS Trend Data, 1994-2005

Barriers to the current recommendations for fruit and vegetable consumption, as recommended by the 2005 Dietary Guidelines and the new food guide pyramid (www.MyPyramid.gov), include limited access to fruits and vegetables, high cost or pricing concerns for fresh fruits and vegetables for minority or low-income families, and lack of produce due to seasonal availability. Illinois is not considered a "growers" state. Local farmers do not receive economic incentives to grow fresh fruits and vegetables, and local distribution varies greatly throughout the state. Research demonstrates the importance of consuming fruits and vegetables for the prevention of certain cancers and better health for individuals. In Illinois, the Millennium Neighborhood (MN) project sites have included strategies to increase consumption of fruits and vegetables addressing access and pricing barriers. MN sites have faith-based food pantries in low-income neighborhoods and expanded community gardening projects. The Interagency Nutrition Council and the Food Policy Council partner for innovative strategies for increasing access to fruit and vegetables and engaging local farmers and community agricultural advocacy groups. The 2002 Farm Bill, federal legislation intended to modify commodity distribution programs, encourages expanded use of fresh fruits and vegetables. It also encourages schools participating in the National School Lunch and School Breakfast Programs to purchase locally produced foods like fruits and vegetables from local farmers. Seasonal, Special Supplemental Food Program for Women, Infant and Children (WIC) and Seniors Farmers Markets provide coupons for produce and are located in many under-privileged communities across the state. Many other rural downstate communities also have farmers markets that support locally grown produce. The Food Produce Mobile, a project of the Greater Chicago Food Depository, distributes fresh fruits and vegetables in low-income regions and small ethnic communities in and around Chicago and the collar counties. Goals are to expand existing fruit and vegetable initiatives, and to address and overcome barriers to increased fruit and vegetable consumption. Illinois County 2004-2206 Behavioral Risk Factor Survey Round III (Figure 17) shows the average percent of adults that consume less than five servings of fruits and vegetables daily per county. The southern region of the state is primarily rural, underserved with low-income populations. Counties in this region of the state are not reaching the recommendation for fruit and vegetable consumption.

Figure 17: Percentage of Adults Who Do Not Consume Five Servings of Fruits and Vegetables, Illinois by County, 2004-2006

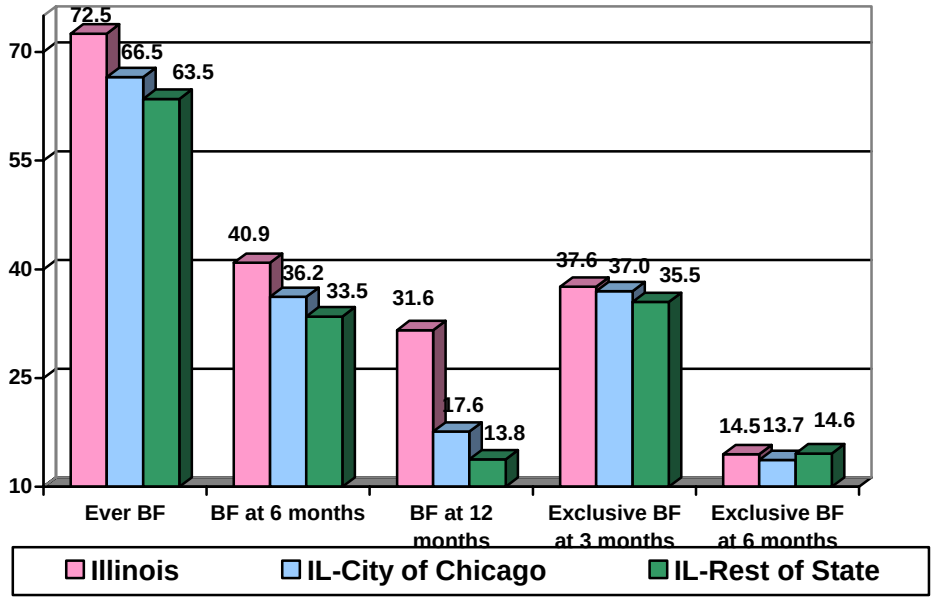


Data Source: Illinois County Behavioral Risk Factor Survey; Round III, 2004 to 2006;
Illinois Center for Health Statistics, Illinois Department of Public Health. Created: September 11, 2007

II. D. Breastfeeding Prevalence

Breastfeeding rates have increased steadily in Illinois over the last 10 years. Healthy People 2010 goals call for 75 percent breastfeeding at hospital discharge, 50 percent breastfeeding at 6 months of age, and 25 percent breastfeeding at 12 months of age. The latest data from the 2005/06 CDC National Immunization Survey reveals the following rates for breastfeeding: 72.5 percent have ever breastfeed, 40.9 percent are breastfeeding at 6 months of age and 17.6 percent are breastfeeding at 12 months of age. Figure 19 shows the trends for breastfeeding prevalence for one month after delivery taken from the PRAMS 2001 Surveillance Report, February 2005. More information is included in the high risk populations section II. E.

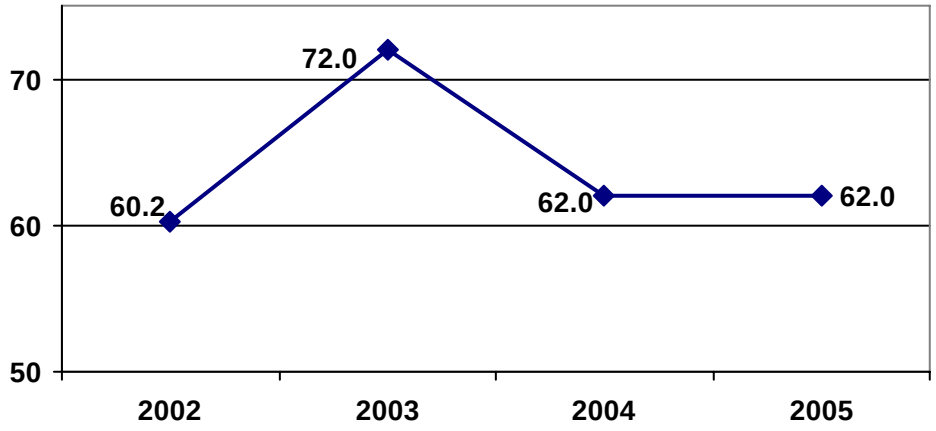
Figure 18: National Immunization Survey Breastfeeding Survey, 2005 – 2006



Source: **CDC, National Immunization Survey, 2006**

Breastfeeding education efforts in Illinois are on-going and include the adoption of evidence-based strategies for state work plans, strengthening and expanding existing breastfeeding strategies, and the development of additional obesity-prevention messages in training and education to mothers and breastfeeding professionals. State specific data for breastfeeding in Illinois include PedNSS 2003-04 data with 57.8 percent who have ever breastfeed and 19.8 percent breastfeeding at 6 months of age. Illinois Cornerstone 2005-2006 data from the Illinois WIC Program indicate about 66.8 percent initiate breastfeeding, 17.4 percent are breastfeeding at 6 months of age, and 6.2 percent are breastfeeding at age 1. Consistent with other data results and research, breastfeeding data reveal that non-Hispanic black and socio-economically disadvantaged groups continue to have lower breastfeeding rates.

Figure 19: Breastfeeding Prevalence at One Month after Delivery, 2002 – 2005



Source: **Illinois Pregnancy Risk Assessment Monitoring System (PRAMS), 2001 Surveillance Report, February 2005.**

II. E High Risk Populations

General Population Description: According to 2004 estimates, Illinois' population is 12.7 million. According to the 2000 U.S. Census, Illinois' population was 73.5 percent white, 15.1 percent black and 9.5 percent Asian and other races. Of these races, 12.3 percent were reported of Hispanic origin. The trends over the last 10 years show an increase in the Hispanic population of nearly 70 percent. The Asian and Pacific Islander population grew by nearly 60 percent and the black population grew from 10 to 14 percent from 1990 to 2000. People older than the age of 65 represent 12.1 percent of the population. In 2003, approximately 11.4 percent of the white population was uninsured compared to 25 percent of blacks and 30.4 percent of Hispanics.

Adults: Blacks have the highest (75%) prevalence of either being overweight (43%) or obese (32%). Obesity is more common among males (69.5%) than females (54.1%). Obesity is very prevalent among populations with low income and low education levels. A higher percentage of individuals are obese (33.1%) with household income level less than $15,000 compared to individuals (24%) with household incomes more than $50,000. Higher percentages of obesity also are reported for individuals with less than a high school education (28.9%) as compared to those with college education (19.3%). When compared by region, rural and urban counties combined had the highest prevalence of overweight and obesity (63.4% and 63.3% respectively) and collar counties combined had the lowest prevalence of overweight and obesity (57.6%).

Children and Youth: More children in Chicago are overweight or at risk of overweight (26%) than the state (20.4%) and the nation (18.5%). One study demonstrated that children living in low income communities of Chicago are more likely to be overweight. Chicago communities, such as Roseland, had more overweight children (53%) than Norwood Park (11%). West Town had the highest number of children at risk of overweight (20%). Another study demonstrated that 39 percent of third graders in

Illinois are either overweight or at risk of overweight with third graders from Chicago having the highest risk (44%) and Cook County having the second highest risk (39%). The other areas (rural, urban and collar counties) had a similar trend.

Breastfeeding Mothers: According to PRAMS (Figure 19), women in their mid 20s and 30s (age group 25-34 years and 35+ years) were more likely to breastfeed than younger women (20-24 years and <20 years). Non-black and Hispanic women were more likely to breastfeed at one month when compared to black women. Women with more than a high school education were more likely to initiate breastfeeding than women with high school or less education. Women with a higher annual income ($50,000 or more) were more likely to breastfeed than women with a lower annual income (less than $10,000). Among women who did not initiate breastfeeding, the most common reason given was they did not like breastfeeding. Other common reasons cited were that they had to return to school or work or had other children to care for.

II. F. Economic Consequences of Obesity

In a 2004 study of national costs attributed to both overweight (BMI 25-29.9) and obesity (BMI >30), medical expenses accounted for 9.1 percent of the total U.S. medical expenditures in 1998 and may have reached as high as $78.5 billion ($96.6 billion in 2002 dollars) (Finkelstein et. al. 2003). Approximately half of these costs were paid by Medicaid and Medicare. For Illinois, estimated adult obesity-attributable expenditures exceed $3.4 billion with $805 million paid by Medicare and $1.1 billion paid by Medicaid.

II G. Policy and Environment Challenges

Obesity and overweight are now considered public health epidemics among children and adults. Strategies and interventions that focus on individual behavior change have become ineffective, time-consuming and cost-prohibitive. More systematic approaches can be implemented that demonstrate sustainable changes across a wide spectrum of influences for improved nutrition and increased physical activity in a variety of populations and settings. These environment and policy changes can be implemented in places where individuals, live, learn and work and reflect a broader involvement of how the individual interacts in one's environment. Research (Lasater et al., 1984: Abrams 1991) has demonstrated that behavior changes are more effective when the individual and environment change at the same time. Examples of a larger environment or policy change are policies requiring students to engage in daily, meaningful physical activity at school or local government passing ordinances to create sidewalks for a more walk-able or bike-able community. Because of the importance of addressing environment and policy changes in obesity prevention, public health practitioners frequently engage non-health sectors of society to support and understand the advantages to making these changes and how this contributes to the health of a community. There can be many challenges to successfully implement environment and policy changes, including the lack of immediate benefits and outcomes.

II H. Nutrition and Physical Activity (NUPA) Program Accomplishments

Accomplishments and current activities within the NUPA Program are highlighted and include initiatives and promising practices. Each initiative targets at least one level of the socio-ecological model framework (Appendix F) to address individual as well as environment and policy changes for nutrition and physical activity.

- **The Millennium Neighborhood (MN) Pilot Project** - The MN is an initiative designed for implementation at a neighborhood level to increase nutrition and physical activity levels and increase fruit and vegetable consumption. Within a given neighborhood, all ages and ethnicity groups are targeted. The selected sites represent several minority populations that are disproportionately affected with higher rates of obesity including Hispanic, African American and rural Caucasian populations. The sites are Logan Square and North Lawndale in the northern part of the state; Oakland in the east central part of the state and Carbondale in the southern part of the state. Many of the MN sites have additional public health funding for other prevention programs. The overall goal is to impact each neighborhood or site with implementation of multiple nutrition and physical activity interventions so changes can occur within the community, including environment and policy-related changes.

- **Consortium to Lower Obesity in Chicago's Children (CLOCC -** CLOCC has served as an instrumental partner to the NUPA Program. In the summer of 2006, CLOCC initiated the *5-4-3-2-1 go!* Program or the Summer Nutrition and Physical Activity Ambassador Program. This is a partnership between CLOCC, After School Matters (ASM), and the Chicago Department of Children and Youth Service. This program was the newest summer job opportunity offered by ASM and the first to deal with health and wellness. Teens aged 13 to 19 living in Chicago public housing were recruited for this program at job fairs sponsored by ASM throughout the city. There were 160 jobs in this program at 14 different sites located in the six ASM regions across Chicago. *5-4-3-2-1 Go!* represents five servings of fruits and vegetables a day, four servings of water a day, three servings of low-fat dairy a day, two or less hours of screen time a day, and one or more hours of physical activity a day. CLOCC also has the CLOCC Accelerometer Library (CAL). This is a free resource providing Chicago-area community organizations and researchers with tools to measure physical activity in children, an important contributor to an individual's overall energy balance. The need to understand mechanisms altering energy balance are critical to advancing the field of obesity prevention. In 2004, CAL resources were created through an academic/corporate partnership between CLOCC and Actigraph, a manufacturer of accelerometers. An accelerometer is a small match book size device that utilizes piezo electric motion detection technology and compact memory to collect and store data on activity of the individual wearing it around the hip on a belt. Data from projects have been presented at national conferences, used to inform program design and for pilot data in proposals for larger projects exploring moderators of physical activity in children.

- **Coordinated Approach to Childhood Health (CATCH**)-The Illinois CATCH program initiative was implemented in January 2004 by the Department to promote healthy eating and physical activity among elementary school children. CATCH is a coordinated school health program designed to promote healthy lifestyles for children and their families to prevent cardiovascular disease and type 2 diabetes. The program features classroom activities, school-wide efforts to improve nutrition and physical activity and take-home material to encourage parent's participation. Evaluation of the Illinois program uses tools established in the initial national field trial of CATCH. To measure the effectiveness of the CATCH physical education (PE) component of Illinois schools, the PE classes were observed prior to CATCH training and again six to12 months after implementation. Evaluation completed at the end of the 2005 school year showed that the moderate to vigorous physical activity (MVPA) in CATCH PE classes increased from a baseline of 45.92 percent to 60.65 percent of class time. The time students were very active during class more than doubled from 14.46 percent to 29.58 percent of class time. In the future, Department staff will continue to provide training and technical assistance to

Illinois CATCH schools and provide guidance in soliciting potential funding sources. Currently, there are 61 elementary schools implementing the CATCH Program in Illinois.

- **Choosy Kids Motor Development and Nutrition Education Program for Pre-School Children** – This program targets pre-school age children, 3 to 5 years of age, as an early prevention program to enhance and develop basic motor skills for movement. Much of overweight in today's youth is believed to result from the combination of improper nutrition and too little physical activity. The long-term consequences of these trends concern health professionals, policy makers and parents. Lack of physical activity in children can affect fitness and functional capacity, development of normal bone mass, mood and body weight. The pre-kindergarten age is a prime window of opportunity as they are most receptive to instruction. If this window of readiness is missed, it can lead to spectator tendencies rather than an inclination to participate in physical activities. This program highlights education for the parent on how to assist development of their child's motor skills. Through parent participation, the program reaches outside of the facility and extends into the home setting. In collaboration with the Child Motor Development Center at West Virginia University (WVU) the NUPA Program conducted two initial Choosey Kids Training programs in 2005. The trainings targeted child care providers from Head Start, early childhood centers and daycare operations throughout Illinois. The WVU Choosey Kids Program has been adopted by the National Head Start Program under the program title of "I am Moving, I am Learning." In fall 2007, additional Illinois Head Start sites will participate in training.

- **Breastfeeding -** Breastfeeding in Illinois is supported through a strong network of professionals representing the Illinois State Breastfeeding Task Force (ISBFTF). As part of the ISBFTS, regional coalitions provide statewide infrastructure for breastfeeding promotion and education. Representatives on the ISBFTF include WIC nutritionists and case managers, hospital nurses and lactation specialists, and other community and maternity care nurses and lactation professionals who implement evidence-based breastfeeding strategies to increase breastfeeding initiation and duration rates. Currently, in Illinois, there are two baby friendly hospitals and several other maternity clinics that are planning to adopt some baby friendly policies within their clinics. Legislation currently supports mothers to breastfeed their babies in the work place and exempt mothers from jury duty who want to breastfeed their baby. A promising educational intervention is the Loving Support Committees development of the Grandmother's Tea Project. This initiative targets grandmothers through an educational curriculum and is delivered by a breastfeeding professional. The shower or tea includes education for grandmothers on the importance of their role in supporting a daughter's decision to breastfeed. *The CDC Guide to Breastfeeding Interventions, DHHS, National Center for Chronic Disease Prevention and Health Promotion* provides evidence-based interventions and is a resource utilized to increase and expand existing breastfeeding initiatives and interventions within the state.

- **Local School Wellness Policy Needs Assessment Workgroup** - Successful collaboration among five external agencies created the Local School Wellness Policy Needs Assessment Workgroup. The agencies included in this workgroup are the Illinois School Food Service Association, Illinois Coaches Association, Illinois Association of School Nurses, University of Illinois Extension, and Illinois Association for Health, Physical Education, Recreation and Dance (IAHPERD). The workgroup, the Illinois Nutrition Education and Training (INET), the Department and the NUPA Program created a statewide needs assessment survey to determine the training and technical assistance needs of school staff for implementation and evaluation of

local wellness policies. Based upon the survey responses, the INET Program will continue to work with the Department to develop trainings and resources to assist school districts implementing school wellness policies.

- **Body Mass Index (BMI)/Child Health Profile Project -** In 2004, Senate Bill 2940 was passed and signed by the Governor to require that BMI measures be included on the Child Health Examination Forms. Completion of the form is mandated for school age children entering first, fifth, and ninth grades. This law also provides the Department with the ability to compile child health data to create a statewide comprehensive profile that can assist and determine regional health trends and differences. Additionally, this surveillance activity could provide public health with information to assist in the allocation and distribution of resources needed to address emerging chronic disease patterns among children and youth populations. A committee including representatives from University of Illinois at Urbana-Champaign, CLOCC, Children's Memorial Hospital-Chicago, the National Center for Supercomputer Application the Illinois Department of Human Services and the Department, have facilitated a process to evaluate the most efficient method for gathering this data statewide. It is the intent of this committee to move this data collection process to an electronic reporting mechanism.

III. Priorities to Address Obesity

III. A. Overall Goal and Objectives

Goal: To prevent and control overweight, obesity and related chronic diseases among Illinois residents.

Objective 1: By December 31, 2013, decrease the prevalence of overweight among adults to 32 percent.
Baseline: 37.3 percent **Data Source**: 2002 BRFSS
Population: General, statewide
(2005 status: 35.7%)

Objective 2: By December 31, 2013, maintain the prevalence of obesity among adults at a minimum of 23.5 percent or lower.
Baseline: 21.3 percent **Data Source**: 2002 BRFSS
Population: General, statewide
(2005 status: 24.2%)

Objective 3: By December 31, 2013, increase the percentage of adults getting any exercise to 80 percent.
Baseline: 71.4 percent **Data Source**: 2002 BRFSS
Population: General, statewide
(2005 status: 74.4%)

Objective 4: By December 31, 2013, increase the percentage of adults who meets the moderate activity standards for five days a week for 30 minutes to 38 percent.
Baseline: 29 percent **Data Source**: 2002 BRFSS
Population: General, statewide
(2005 status: 34.9%)

Objective 5: By December 31, 2013, increase the number of CATCH schools to 120 where students participating in CATCH physical Education are involved in moderate-to-vigorous physical activity (MVPA) for a minimum of 50 percent of physical education class time.
Baseline: Six CATCH schools achieving MVPA in 50 percent of physical education class time
(2005 status: 19 schools)
Data Source: 2003 SOFIT data, IDPH
Population: Age 5 – 10, selected CATCH schools statewide.

Objective 6: By December 31, 2013, increase the percentage of adults consuming less than three servings of fruits and vegetables to 46 percent and those consuming more than five servings of fruits and vegetables to 28 percent.
Baseline: 41.0 percent and 20.8 percent respectively. **Data Source**: 2002 BRFSS
(2005 status: 41.5% and 24.6% respectively)
Population: General, statewide

Objective 7: By December 31, 2013, increase the proportion of mothers who continued to breastfeed at one month after delivery to 65 percent.
Baseline: 60.2% **Data Source**: Illinois Pregnancy Risk Assessment Monitoring System (PRAMS)
(2005 status: 62%)
Population: General, statewide

Objective 8: By December 31, 2013, increase the proportion of infants participating in the WIC program who are breastfed at initiation to 65 percent and at six months to 25 percent.
Baseline: 52.3 percent and 18.1 percent respectively.
Data Source: 2002 PEDNSS (2004 status: 57.5% and 19.8% respectively)
Population: Low income and high risk, statewide

Objective 9: By December 31, 2013, reduce by 1 percent the estimated adult obesity attributable medical expenditures for Medicaid population.
Baseline: $1.04 Billion **Data Source**: 1998 Medical Expenditure Panel survey (MEPS); 1996-1997 National Interview Surveys (NHS); 1998-2000 State BRFSS
(*2005 status: Medicaid $ 1.05 Billion)*
Population: Low income and high risk, statewide

III. B. Recommendation 1: Increase Physical Activity Opportunities

CDC Priority Areas: increase physical activity, energy balance, decrease television viewing

School Setting
Related Healthy People 2010 Objectives: 1-3a., 3-10h., 7-2, 7-3, 19-3, 22-6, 22-7, 22-8, 22-9, 22-10, 22-11, 22-12, 22-12
Strategies:

- Provide training to promote mandated school wellness policies on the importance of daily physical education.

- Make recommendations regarding physical education for teachers curriculum preparation.
- Develop and provide recommendations to ISBE regarding the health and physical education development testing sequence.
- Promote nationally-recognized evidence-based programs to encourage non-motorized methods of transportation for students and schools including the Safe Routes to Schools Program.
- Expand opportunities for competitive and non-competitive sports and physical activity that include team and individual sports participation, club sports and intramurals.
- Provide programs or technology to promote physical activity designed to reduce television and video time viewing like Dance Dance Revolution, a video game designed to encourage physical activity.
- Provide schools with best practice models to encourage physical activity outside of physical education class and develop tools to monitor physical activity done outside of physical education class.
- Explore opportunities for a peer-education model for grades Kindergarten -12 to increase physical activity outside the physical education class in school.
- Collaborate with IAHPERD and other organizations to eliminate physical education waivers.
- Create events and opportunities to promote National Physical Education Week.
- Coordinate school-related activities with the PE4 Life organization.
- Develop partnerships with health care providers, local fitness clubs, park districts and after school programs.
- Sponsor wellness fairs at schools through regional offices of education and IAHPERD.
- Increase the number of schools trained to implement the CATCH physical activity component to increase moderate-to-vigorous physical activity to more than 50 percent of class time.

Community Settings
Related Healthy People 2010 Objectives: 1-3a., 2-2, 2-11, 3-1, 7-12, 19-1, 19-2, 19-3, 22-1, 22-2, 22-3, 22-4, 22-5, 22-6, 22-7, 22-14, 22-15

Strategies:

- Promote evidence-based pre-K motor skill development programs (e.g., Choosy Kids) in all pre-Kindergarten and daycare settings.
- Expand MN Initiatives into other neighborhoods statewide.
- Promote the utilization of community-based facilities, including schools, to provide opportunities for the public to be physically active.
- Develop and market programs to encourage teenagers continuation of healthy travel habits as they gain access to automobiles.
- Target minority populations and address potential barriers to the adoption of regular physical activity.
- Provide low-cost programming at local YWCA or YMCA, schools and community organizations that offer additional places to be physically active.
- Encourage schools to serve as community wellness/exercise facilities or centers for indoor walking locations.
- Implement walking programs in non-traditional places like malls, churches, senior centers, community organizations and small townships.
- Encourage evidence-based, faith-based physical activity programs like Body and Soul that targets minority populations.

- Provide locations and/or community watch programs that can provide safe neighborhoods, playgrounds and communities for physical activity.
- Ensure community park boards have information and guidelines on safe equipment and safe areas for physical activity.
- Educate motorists, police officers, pedestrians and bicyclists about pedestrian and bicyclist right-of-way laws and rules of the road designed to increase safety.
- Audit access issues that prohibit walk ability and bike ability of various communities.
- Promote League of American Bicyclists' Bicycle Friendly Community Program to encourage and award towns for improving conditions for bicyclists.

Worksite Settings
Related Healthy People 2010 Objectives: 1-3, 1-3a, 7-5, 7-6, 7-12, 19-1, 19-2, 20-9, 22-1, 22-2, 22-3, 22-4, 22-5, 22-6, 22-7

Strategies:

- Build a local wellness coalition with representatives from small and large businesses, corporations and non-for-profits for physical activity efforts in worksites.
- Encourage businesses to promote and use incentives encouraging alternative methods of transportation.
- Develop partnerships with the business community to advance worksite wellness programs.
- Reach small businesses with education campaigns designed to provide resources for physical activity services and programs.
- Develop a worksite reporting system to begin collection of data on physical activity programs through the Illinois Chamber of Commerce and the Illinois Department of Commerce and Economic Development.
- Encourage businesses to increase the number of point of decision prompts to encourage the use of stairs.
- Increase the number of businesses that offer signage for walkable and bikeable paths.
- Provide bike locking facilities at businesses and workplaces.
- Encourage businesses to use "bike to work" and "shop by bike" programs to encourage adult bicycle usage.
- Increase the number of motivation programs for physical activity and provide exercise equipment to promote physical activity at worksites and businesses.
- Increase linkages with occupational health nurses and physicians to monitor health status and health risk regarding nutrition and physical activity for employees.
- Encourage small business owners to pool resources to offer physical activity and comprehensive wellness classes at worksites (e.g., Active Living Everyday).
- Disseminate best practices on nutrition and physical activity programs and activities to businesses/worksites.

III. C. Recommendation 2: Improve Healthy Eating Choices

CDC Priority Areas: increase fruit and vegetable consumption, increase breastfeeding

School Setting
Related Healthy People 2010 Objectives: 1-3,1-3b, 5-2, 7-2, 19-3, 19-5, 19-6, 19-7, 19-8, 19-9,19-10, 19-11, 19-15, 19-8

Strategies:

- Develop a network of dietitians and nutritionists for consultation to schools for nutrition education and counseling.
- Identify and contact eligible schools to encourage participation in the U. S. Department of Defense's fruit and vegetable program.
- Provide schools with a portable tool kit for training the child, family and school administrative staff including nurses, coaches and counselors on the priority areas of energy balance, portion sizes, increased fruit and vegetable consumption and sweetened beverages.
- Include families in nutrition education messages.
- Assist schools with providing healthful vending options.
- Encourage schools to utilize non-food options for school fundraising and extracurricular school activities.
- Educate school personnel on the rationale for scheduling recess before lunch.
- Increase the number of schools trained to implement the CATCH Nutrition Services component to encourage the reduction of saturated fat in school lunch menus and to promote healthy food selections for children and staff.

Community Settings

Related Healthy People 2010 Objectives: 1-3,1-3b, 5-2, 7-2, 7-11, 7-12,12-1, 12-7, 12-9, 12-10, 16-9, 16-19a,b and c, 19-1, 19-2, 19-3, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 19-11, 19-3, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 19-11, 19-15, 19-16, 19-18

Strategies:

- Enhance existing partnerships through INC to evaluate data and share information among food assistance programs.
- Educate individuals, youth and families on food advertising targeting youth and encouraging purchase and consumption of unhealthy food.
- Encourage the expansion of community-based farmers' markets into new areas and locations.
- Encourage communities to provide healthy affordable food options in vending areas and other food locations.
- Collaborate with chef and cooking associations to provide cooking demonstrations on healthy food for low-income and minority populations.
- Expand food demonstration kitchens through existing community programs.
- Encourage organizations that make home visits to include nutrition information and demonstrations in services.

- Collaborate with the local or National Grocers Association to display healthy food messaging throughout grocery and convenience food stores and monitor the sale of healthier items through sales receipt transactions.
- Provide consumer education on healthy restaurant food selections.
- Provide healthy vending options at highway rest areas.
- Encourage the Illinois State Fair to adopt "zero trans fat" policy for food options.
- Collaborate with partners and INC to promote and build awareness for the new "Fruit and Veggies—More Matters ™ Campaign."
- Collaborate with the ISBTF to educate and encourage breastfeeding for preventing childhood overweight and improving the nutritional status of the mother and child.
- Increase the proportion of low-income and minority populations who decide to breastfeed.
- Encourage the continuation of the grandmother's teas for breastfeeding education in local health departments, communities and faith-based organizations.
- Train local health department staff on the Nutrition Environment Measures Survey (NEMS) developed by the Emory University Rollins School of Public Health. It is a validated survey for assessing the nutrition environment of retail food outlets and restaurants, and measuring food cost and availability of healthy options on the menu.
- Recognize and reward eating establishments that incorporate fruits and vegetables and menu labeling on nutrient information.
- Increase the number of restaurants who provide heart healthy options in their menus.
- Encourage municipalities and cities to become involved in promoting breastfeeding during World Breastfeeding Week and breastfeeding month.
- Educate the public about the connection between formula feeding and obesity, and breastfeeding and decreased risk of obesity through a multi-faceted media campaign.
- Provide the "Bridges to Breastfeeding" training to bring hospitals and community agencies together to promote and support breastfeeding.

Worksite Settings

Related Healthy People 2010 Objectives:1-3b., 5-2,7-12,12-1,12-7,12-9,12-10,12-11,16-9,16-19a,b,c,19-1,19-2,,19-5,19-6,19-7,19-8,19-9,19-10,19-11,19-16,20-2,20-9

Strategies:

- Encourage businesses to educate employees about the importance of good nutrition for health and prevention of chronic diseases.
- Establish and conduct online surveys at worksite locations regarding nutrition options and selections and knowledge levels of employees regarding good nutrition.
- Support breastfeeding mothers returning to work by ensuring breastfeeding-friendly worksite environments (e.g., on-site lactation rooms).
- Reach small businesses with no insurance or wellness programming with resources to provide nutrition information and education.
- Provide incentives for employees that practice healthy eating at worksites.
- Offer wellness programming and events for employees (e.g., brown-bag lunch and learns).
- Implement evidence-based worksite programs that include nutrition.

III. D. Recommendation 3: Improve Health Care Approaches for the Treatment and Management of Overweight and Obese Populations

CDC Priority Areas: energy balance, increase fruit and vegetable consumption, increase physical activity, decrease television viewing, increase breastfeeding

Related HP2010 Objectives: 1-1 ,1-3a, 1-3b, 1-5, 1-6 ,1-7, 5-1 ,6-10 ,7-3 ,7-7, 7-12, 11-2 ,12-15, 19-1, 19-2, 19-3, 19-17

Strategies:

- Educate and train health care professionals and providers on the current status and best practices for the treatment of overweight and obesity.
- Provide education to health care professionals on how to recognize at-risk populations and support individuals' adoption of healthy lifestyle behaviors resulting in weight loss or maintenance and improved health outcomes.
- Train health care providers to recognize cultural barriers in minority and ethnic populations related to obesity and weight reduction behaviors.
- Educate health care providers by offering continuing education credits trainings that include how to make appropriate referrals for necessary treatment for individuals at risk for overweight and obesity.
- Provide education to increase the number of physicians, nurse practitioners and physician assistants that provide guidance to patients on weight loss or maintenance of a healthy body weight.
- Design a Center of Excellence that provides a multi-disciplinary program that focuses on lifestyle behavior change utilizing evidence-based approaches and the chronic care model.
- Transfer the Center for Excellence model to rural and urban areas that target underserved and under-insured populations.
- Encourage local health departments and other organizations collaboration with Centers for Excellence to identify individuals and to make referrals for intervention and treatment.
- Develop hospital settings that support physical activity and healthy eating behaviors for patients and staff.
- Encourage health care providers to educate all patients, not just patients at-risk for obesity, about the role of daily physical activity and healthy eating in the prevention of chronic disease and functional ability.
- Encourage hospitals and health care providers to commit resources and align strategies with local health departments to educate the community and develop evidence-based outcome-driven programming to increase daily physical activity and improve healthy eating to prevent chronic diseases.
- Increase the number and utilization of tele-health/tele-medicine Internet educational venues for at-risk individuals for education on physical activity, nutrition and healthy lifestyle behaviors.

III. E. Recommendation 4: Improve Environment and Create Policies Conducive of Behavior Change

CDC Priority Areas: energy balance, increase fruits and vegetable consumption, increase physical activity, decrease television viewing, increase breastfeeding

School Setting
Strategies:

- Enhance and expand the physical education waiver response network.
- Re-instate the physical education component in the Illinois Standards Achievement Tests (ISAT).
- Implement the Fitness gram as the standard ISAT physical education evaluation tool and the FitSmart as the standard Cognitive ISAT evaluation tool.
- Re-instate recess through legislative and/or policy initiatives.
- Promote policies that encourage the use of school-based facilities for the public when available.
- Encourage all schools to provide nutrition education and to have access to healthy food selections for students and staff.
- Coordinate and assist schools with the implementation and evaluation of the school wellness policies for a healthy school environment.
- Implement policies that monitor and assess positive nutrition changes in school food service and delivery of nutrition education.
- Promote the coordination of school health prevention programs, including nutrition education in comprehensive school health education within the food service program and other school programs.
- Encourage schools participation in the National School Lunch and Breakfast Program and After School Snack Program.

Community Settings
Strategies:

- Provide and support safe indoor and outdoor community areas for adults and youth to be physically active.
- Partner with community leaders (e.g., city planners, town councils) to address the walk-ability and bikeability of communities.
- Encourage enforcement of pet leash laws in public areas.
- Support the development of sidewalks and bicycle paths to accommodate everyday community-based transportation needs and recreation.
- Develop non-motorized transportation plans for bikes and pedestrians where needed.
- Consider changes in zoning regulations to encourage construction of on-road bike lanes and sidewalks.
- Calm traffic through built infrastructure (e.g., speed bumps) in residential and pedestrian-oriented commercial areas to provide safer environments.
- Advocate for public policies that support community-based nutrition.
- Offer grocery and convenience stores incentives for promoting and providing messages on healthy food choices and provide discounts for healthy food products purchased.

- Encourage more hospitals to adopt baby friendly policies or become a baby friendly designated hospital.
- Support breastfeeding policies and legislation allowing for breastfeeding mothers in public places.
- Include breastfeeding promotion and education in obesity prevention and treatment programs.
- Inform policy makers about the connection between breastfeeding and decreased risk for obesity.
- Ban formula company give a ways and free formula for mothers leaving the hospital.

Worksite Settings
Strategies:

- Increase the number of wellness centers operating in the state by offering tax incentives and development of grant programs.
- Encourage businesses to provide nutrition and physical activity wellness programming for employees and their families during lunch hours, breaks or after work hours.
- Advocate for worksite policies that promote healthy eating environments and have nutritious food selections available at worksites.

Health Care
Strategies:

- Work with medical education programs to increase the number of health care providers with a sub-specialty for providing comprehensive treatment to obese clients in rural or underserved areas of the state.
- Develop or enhance health care policies and guidelines encouraging healthy lifestyles and the prevention of chronic disease.
- Encourage health insurance companies to adopt policies promoting wellness and healthy lifestyle behaviors for policyholders.
- Increase the number of insurance plans within Illinois covering weight management visits and follow-up care.

IV. Evaluation

Goal: Evaluate the strategies and objectives outlined in the Illinois Strategic State Plan to Prevent and Control Obesity.

Evaluation is an essential part of evidence-based programs and policies. It can 1) allow for corrections and changes; 2) help determine if the program or policy has been effective; and 3) provide information for improving planning for the next program or policy. There are several types of evaluation, including those related to assessment of needs. In addition, there is process, impact and outcome evaluation. A needs assessment is appropriate before the development of a program and policy. Much of the data needed to do program evaluation are available through surveillance systems and national and local data sets such as those available through CDC, the U.S. census bureau, the Department, and county BRFSS and Illinois Project for Local Assessment of Needs (IPLAN) data.

Process Evaluation – Process evaluation addresses the questions of program implementation during one year. Information for process evaluation can be collected through quantitative and qualitative methods, including observations, interviews, questionnaires, focus groups, program records, pre- and post-tests and number of attendance.

Impact Evaluation – Impact evaluation assesses the extent to which program objectives are being met during three to four years of program implementation. Program objectives assessed by impact evaluation may include changes in risk factors associated with obesity.

Outcome Evaluation – Outcome evaluation assesses the extent to which program objectives are being met during five to 10 years of program implementation. Data that are collected for the purposes of outcome evaluation are more likely to be quantitative than qualitative and include indicator data collected by state BRFSS, county BRFSS, CDC, national data sets and local surveillance systems. The population could be general or statewide or it can target specific groups based on available data sources.

CDC recommends the following five steps as a practical evaluation framework for public health programs. This framework could be used for any type of evaluation including, process, impact or outcome.

Step 1- Engage Stakeholders
Stakeholders are people who have invested in the program, interested in the results and have a stake in what will be done with the results of the evaluation.

Step 2- Specify evaluation questions.

Step 3- Specify data to be collected to answer evaluation questions. Specify data source and baseline against which changes will be measured.

Step 4- Specify process to be used for data analysis.

Step 5- Use of evaluation data.
Explain how data from the evaluation will be used to improve the program or policy.

V. Implementation

V.A. Goal and General Implementation Recommendations

Goal: Implement the Strategies in the Illinois Strategic State Plan to Prevent and Control Obesity

To achieve the overall goal and recommendations outlined in the plan, the identified strategies must be implemented. The plan is a guide to mobilize individuals, organizations, health care facilities, institutions, local health departments and community-based organizations for prevention and control of obesity in Illinois. These groups can use the plan to select implementation strategies consistent with their program mission(s). Effective implementation of the diverse strategies will require ongoing, coordinated policy and/or system change efforts. All partners must implement strategies of the plan to impact obesity prevention and control.

General Implementation Recommendations:

- Prioritize strategies for implementation.
- Identify work groups to discuss recommendations and strategies.
- Identify, coordinate and secure funding resources.
- Develop and enforce written policies to improve nutrition and physical activities.
- Develop and enforce system level change using chronic care model.
- Expand partnerships and collaborations.
- Develop an evaluation mechanism.
- Review progress by on-going tracking of activities and evaluation.
- Share results with upper management, work groups and other appropriate stakeholders.
- Convene an annual summit to review progress and select new strategies.

V.B. Policy and Environmental Level Intervention

The Stop the Gain Campaign (STGC) is an example of a policy and environmental intervention. The intervention is a college, campus-based mass media campaign focusing on nutrition and physical activity. The purpose is to address policy and environmental changes to stop weight gain among college students 18 to 20 years of age at Western Illinois University. The intermediate and long term goals are to increase availability of healthy food choices and increase opportunities for physical activity. Program components included message development and determination of strategies and activities for implementation in this setting. Focus groups were conducted for message development. The expected long-term impact is lowering the incidence of cardio metabolic syndrome. The intervention also focuses on a main health message that was part of the original (CARDIA) study. The primary message is to over time maintain a stable weight or decrease BMI, which is associated with a lower incidence of cardio metabolic syndrome. This intervention was proposed based on the CARDIA study through AAC recommendations and an attempt to translate the CARDIA findings into wellness-based settings utilizing acknowledged public health practices in improving lifestyle behaviors (Kimm et. al 2005, Schmitz et. al. 2000, Bild et. al. 1996, Burke et. al. 1992, Burke et.al. 1990). Current findings are currently in review for publication (Lloyd-Jones et. al. 2006).

V.C. Coordination with Internal Programs

The NUPA Program works internally with the Department's **Asthma Control Program** to facilitate a collaborative effort between the UIUC, Office of Kinesiometrics, and Children's Memorial Hospital in Chicago to identify surveillance techniques to provide the most efficient method for capturing data from the school health examination form. This includes BMI, cardiovascular health, diabetes, asthma and other health indicators for chronic disease. This project, the BMI Pilot Dissemination Project for School Health Examinations is for kindergarten, fifth and ninth grade students, is in response to Public Act-93-0966, which requires the reporting of BMI measures from school physicals. The three pilot sites are the public schools in Decatur, Rockford and Chicago. The surveillance project plans to monitor eight to nine categories of health that are self-reported on the school physical form. The end result of this surveillance will be to establish an ongoing health profile of school children throughout the state. Data collected will be in a retrievable form for surveillance and reporting needs through the National Center for Supercomputing Application at UIUC. This project will provide a more comprehensive child health profile and a tracking mechanism for measures of asthma, diabetes, cardiovascular health and obesity.

In 2006, the NUPA Program worked with the Department's **Arthritis Program** to create a collaborative work plan for similar activities to promote physical activity and healthy eating through state wide partnerships, state plans and resources. The two programs serve on each other's partnerships, sub-committees and work groups for integration of programs activities. Physical activity related interventions and data have been included in the Illinois Arthritis State Plan and the Illinois Arthritis Data Report. Physical activity and nutrition messages are integrated into printed materials on arthritis. An evidence-based prevention grant from the Federal Administration on Aging to implement the Chronic Disease Self-Management Program includes sessions on nutrition and physical activity

The NUPA Program collaborates with the Department's **Comprehensive Cancer Program** (CCP) by assisting with the implementation of evidence-based programs and strategies (i.e., Body and Soul Program) to encourage healthy lifestyle behavior change. Common goals and objectives include increasing fruit and vegetable consumption and increasing physical activity. Program collaboration and merging delivery of evidence-based programs increases effectiveness and efficiency and maximizes resources for implementing interventions and programs.

The NUPA Program works closely with the Department's **Illinois Heart Disease and Stroke Prevention Program** overseeing the Atherosclerosis Advisory Committee (AAC), a legislatively mandated board. The AAC, comprised of 11 members, serves both rural and urban populations statewide. The AAC has participated in a planning process that enabled them to identify important and feasible project that would begin to bridge the risk factors associated with obesity, cardiovascular disease, and diabetes. As such, the AAC has recommended that the Department and, specifically, the NUPA Program develop an awareness/education model that utilizes data and strategies from the ongoing CARDIA study to emphasize weight maintenance in 18 to 30-year-olds. In addition to providing oversight to this intervention pilot, the AAC also will develop strategies to bridge and coordinate programming efforts with the state's Diabetes Prevention Program and the Illinois Department of Human Services.

The Offices of Women's Health **Heart Smart for Women Program** identifies women 18 and older at risk for cardiovascular disease. The program educates women on risk factors associated with cardiovascular disease and how to learn new, healthy preventative lifestyle behaviors. The original program curriculum came from the Cooper Institute's Project Active curriculum. The program tracks

and monitors the progress of each participant by evaluating knowledge, behavior change and risk factors, and records improvements in diet and increases in physical activity. The NUPA Program collaborates with the Department's Office of Women's Health to provide technical assistance and supportive services to local health departments implementing the program.

V.D. Partners to Improve Nutrition and Physical Activity

American Heart Association
American Lung Association
Atherosclerosis Advisory Committee
Chicago Area Transportation Study
Chicagoland Bicycle Federation
Children's Memorial Hospital, Chicago
Illinois Association for Health, Physical Education, Recreation, and Dance
Illinois Coaches Association
Illinois Dietetics Association
Illinois Department of Human Services: Diabetes, WIC and Coordinated School Health
Illinois Department of Human Services Bureau of Nutrition
Illinois Department of Transportation
Illinois Governor's Council on Health and Physical Fitness
Illinois League of Bicyclists
Illinois Nutrition Education Training
Illinois Public Health Association
Illinois School Nutrition Association
Illinois School Nurses Association
Illinois State Board of Education
Illinois State University
Interagency Nutrition Council
John A. Logan Community College
Local School Wellness Policy Needs Assessment Workgroup
Logan Square Neighborhood Association
National Society of Physical Activity Practitioners in Public Health
Oak Lawn School District
Rock Island County Health Department
Shawnee Health Services
Sinai Community Institute
Southern Illinois Healthcare
St. Louis Midwest Dairy Council
University of Illinois Extension
University of Illinois, Urbana-Champaign
University of Texas Coordinated Approach to Child Health Training Team
Wellness Councils of America
Western Illinois University

Appendix A: Steering Committee Membership

Charles Baum, M.D., Alexian Brothers Hospital

Patricia Canessa, Midwest Hispanic Health Coalition

Ralph Colao, Health Fitness Corporation

Raymond Empereur, M.P.A., Rockford Health Council

Lisa Evoy, Abbott Laboratories

Theresa Foes, Rock Island County Health Department

Jamie Gates, M.Ed., Illinois Department of Public Health

Barbara Ivens, M.S., RD, FADA, PepsiCo Beverages and Foods

Tresa Lee, R.N., Shawnee Health Service

Matt Longjohn, M.D., M.P.H., Consortium to Lower Obesity in Chicago's Children

Tom Murtha, Chicago Area Transportation Study

Sally O'Donnel, Rock Island County Health Department

Robin Orr, Ph.D., University of Illinois, Champaign/Urbana

Penny Roth, M.S., RD, LD, Department of Human Services

Lana Shepek, RD, Illinois Dietetic Association

Megan Smith, Illinois Department of Public Health

Jeff Sunderlin, M.S., ATC/L, Illinois Department of Public Health

Beth Verner, Ed.D., Illinois State University

Richard Voltz, Ph.D., Illinois Association of School Administrators

Cynthia Williams, Sinai Community Institute

Weimo Zhu, Ph.D., University of Illinois, Champaign/Urbana

State Plan Assistance and Review Work Group

Jo Ambrose, Illinois Department of Public Health

Bhibha Das, M.P.H., Human Kinetics

Jonathan Friebert, Pepsico Beverages and Foods

Woody Thorne, Southern Illinois Healthcare

Brenda Synder, Illinois Department of Human Services

Julie Doetsch, Illinois Department of Public Health

Appendix B: Examples of Evidence-Based Programs and Practices

Nutrition

5-A-Day Peer Education Program
Delivery: Small group education
Purpose: Worksite program designed to increase fruit and vegetable consumption
Behavioral Focus: Dietary change
Population Focus: Current workers
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

5-A-Day Power Plus
Delivery Channel: Family and school-based social support
Purpose: School-based program designed to increase fruit and vegetable consumption
Behavioral Focus: Dietary change
Population Focus: Elementary school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Body & Soul
Delivery: Community-based intervention
Purpose: Community-based program designed to increase fruit and vegetable consumption
Behavioral Focus: Behavior modification
Population Focus: Black church attendees
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Coordinated Approach to Child Health (CATCH)
Delivery: Family and community-based social support
Purpose: Designed to promote healthy eating habits and increase physical activity among children and adolescents
Behavioral Focus: Physical activity and dietary change
Population Focus: Elementary school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Eat Well and Keep Moving
Delivery: School-based intervention
Purpose: School-based program designed to increase physical activity and promote healthy dietary habits among fourth and fifth grade students
Behavioral Focus: Behavior modification
Population Focus: Elementary school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Eat for Life
Delivery: Community-based intervention
Purpose: Community-based program designed to promote healthy dietary habits
Behavioral Focus: Behavior modification
Population Focus: Church attendees
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Gimme 5
Delivery: Family and community-based social support
Purpose: School-based program designed to increase fruit and vegetable consumption
Behavioral Focus: Dietary change
Population Focus: Elementary school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

High 5 Fruit and Vegetable Intervention for Fourth-Graders
Delivery: Family and school-based social support
Purpose: School-based program designed to increase fruit and vegetable consumption
Behavioral Focus: Dietary change
Population Focus: Elementary school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Planet Health
Delivery Channel: School-based intervention
Purpose: School-based program designed to increase physical activity and promote healthy dietary habits among sixth-seventh-and eighth-grade students
Behavioral Focus: Behavior modification
Population Focus: Middle-school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Seattle 5-A-Day Program
Delivery Channel: Family and community-based social support
Purpose: Worksite program designed to increase fruit and vegetable consumption
Behavioral Focus: Dietary change
Population Focus: Employees
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Teens Eating for Energy and Nutrition at School (TEENS)
Delivery Channel: School-based intervention
Purpose: School-based program designed to increase fruit and vegetable consumption and to promote healthy dietary habits
Behavioral Focus: Behavior modification
Population Focus: Middle school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

The Next Step: Worksite Cancer Screening and Nutrition Intervention for High Risk Auto Workers
Delivery Channel: Small group education
Purpose: Worksite program designed to increase colorectal cancer screening and promote healthy dietary behaviors
Behavioral Focus: Awareness building and behavior modification
Population Focus: Employees
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

The Treatwell 5-A-Day Program
Delivery Channel: Family and community-based social support
Purpose: Worksite program designed to increase fruit and vegetable consumption
Behavioral Focus: Dietary change
Population Focus: Employees
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Physical Activity

Community-Wide Campaigns
Delivery: Community-based multi-media intervention
Purpose: Highly visible message campaign uses multi-media effective in getting people more physically active
Behavior Focus: Changes in individual physical activity levels
Population Focus: Large audiences
Program materials can be found at: http: www.cdc.gov
(Source: Guide to Community Preventive Services)

Point-of Decision Prompts to Encourage People to Use Stairs
Delivery: Worksite and community-based
Purpose: Encourage the use of stairs instead of elevators or escalators
Behavior Focus: Behavior modification
Population Focus: Employees and general population
Program materials found and signs downloaded http://www.cdc.gov/nccdphp/dnpa/stairwell/index.htm
(Source: Guide to Community Preventive Services)

Providing Social Support in Community Settings
Delivery: Community-based
Purpose: Changing physical activity behavior by strengthening social networks for behavior change (e.g. buddy system)
Behavior Focus: Increase physical activity levels of individuals
Population Focus: General population
Program materials can be found at: www.cdc.gov
(Source: Guide to Community Preventive Services)

Health Behavior Change Programs Adapted for Individual Needs
Delivery: Community-based
Purpose: Programs teach behavior skills like goal setting and self-monitoring to maintain behavior change and prevention of relapse into sedentary behavior
Behavior Focus: Increase physical activity levels of individuals
Population Focus: General population
Program materials can be found at: www.cdc.gov
(Source: Guide to Community Preventive Services)

Creating or Improving Access to Places for Physical Activity
Delivery: Community-based
Purpose: Increase the likelihood of individuals to become more physically active by creating or improving access like creating walking trails, building exercise facilities or providing for places for physical activity
Behavior Focus: Increase physical activity levels of individuals
Population Focus: General population
Program materials can be found at: www.cdc.gov
(Source: Guide to Community Preventive Services)

Worksite Programs Combining Nutrition and Physical Activity

Active Living Every Day
Delivery : Small group education in worksite or healthcare settings
Purpose: Assist sedentary people to become and stay physically active
Behavioral Focus: Behavior modification
Population Focus: Sedentary people
Program materials can be found at: www.activeliving.info
(Source: Human Kinetics)

Healthy Eating Every Day
Delivery: Small group education in worksite or healthcare settings
Purpose: Assist with establishing a balanced and healthy approach to eating
Behavioral Focus: Behavior modification
Population Focus: General population
Program materials can be found at: www.activeliving.info
(Source: Human Kinetics)

Aerobic Exercise and Spinal Flexibility Aerobic Exercise for Sedentary and Functionally Limited Adults
Delivery: Community-based intervention
Purpose: Designed to enhance spinal flexibility and improve physical functioning for older adults.
Behavioral Focus: Disease prevention
Population Focus: Sedentary individuals
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Commit to Quit
Delivery: Small group education
Purpose: Designed to test the efficacy of vigorous-intensity physical activity as an aid for smoking cessation for women
Behavioral Focus: Behavior modification
Population Focus: Current smokers
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Community Healthy Activities Model Program for Seniors (CHAMPS)
Delivery: Community-based intervention
Purpose: Designed to increase physical activity among sedentary individuals.
Behavioral Focus: Awareness building and behavior modification
Population Focus: Sedentary individuals
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Coordinated Approach to Child Health (CATCH)
Delivery: Family and community-based social support
Purpose: Designed to promote healthy eating habits and increase physical activity among children and adolescents
Behavioral Focus: Physical activity and dietary change

Population Focus: Elementary school children
Program materials can be found at: www.catchtexas.org and www.catchinfo.org

Eat Well and Keep Moving
Delivery: School-based intervention
Purpose: School-based program designed to increase physical activity and promote healthy dietary habits among fourth- and fifth- grade students
Behavioral Focus: Behavior modification
Population Focus: Elementary school children
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Exercise and Physical Functional Performance in Independent Older Adults
Delivery: Community-based intervention
Purpose: Designed to enhance body endurance and body strength among older adults
Behavioral Focus: Self-efficacy
Population Focus: Sedentary individuals
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Patient-Centered Assessment and Counseling for Exercise and Nutrition (PACE)
Delivery: Physician-directed intervention
Purpose: Designed to increase physical activity among sedentary individuals
Behavioral Focus: Awareness building and behavior modification
Population Focus: Sedentary individuals
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Physically Active for Life (PAL)
Delivery: Physician-directed intervention
Purpose: Designed to increase physical activity among adults 50 years of age and older
Behavioral Focus: Awareness building and behavior modification
Population Focus: Sedentary individuals
Program materials can be found at: http://cancercontrol.cancer.gov/rtips/index.asp
(Source: Research-Tested Intervention Programs, National Cancer Institute)

Appendix C: Healthy Eating and Physical Activity Related Public Acts

Obesity-Related Illinois Public Acts

During the past decade, there has been a dramatic increase in obesity in America. A complex mix of health, economic, social, cultural and behavioral factors contribute to the growing number of obese citizens. The Illinois General Assembly has been involved directly and indirectly in adopting policies that affect physical activity and healthy eating.

The following are resources for obesity-related policy in Illinois.

National Conference of State Legislatures (NCSL)
http://www.ncsl.org/programs/health/KelloggHealthOverview.htm

The National Conference of State Legislatures (NCSL) is a bipartisan organization that serves the legislators and staffs of the nation's 50 states, commonwealths and territories. NCSL provides research, technical assistance and opportunities for policymakers to exchange ideas on the most pressing state issues. This site provides an easy access to the combined resources of NCSL and other organizations about healthy eating, physical activity and food systems to support healthy communities.

National Association of State Boards of Education
http://www.nasbe.org/HealthySchools/States/states.asp?Name=Illinois

The National Association of State Boards of Education exists to serve and strengthen state boards of education in their pursuit of high levels of academic achievement for all students. This site describes current state level school policies.

U. S. Centers for Disease Control and Prevention
http://apps.nccd.cdc.gov/DNPALeg/

The CDC has complied obesity related legislation in Illinois since 2003. The following is an overview of enacted legislation from 2003 to date.

P.A. 094-0875 2006 105 ILCS 5/2-3.25g
Topics: Community, Education, Nutrition, Education, Physical, School
State URL: http://www.ilga.gov/
Abstract: Amends the School Code. Makes changes concerning the school building code, school and district improvement plans, the waiver and modification of mandates, staff development plans, local learning objectives and assessments, statements of affairs, criminal history records checks of school district employees, the limitation on administrative costs, the state aid formula, school holidays, and transportation reimbursement claims. Repeals a Section concerning latch key reports and a Section concerning school and district improvement panels. Amends the State Mandates Act to require implementation without reimbursement. Sponsor: Lightford

P.A. 094-0124 2005 20 ILCS 3933/5

Topics: Assistance Programs, Community, Education, Nutrition, Education, Physical

State URL: http://www.ilga.gov/

Abstract: Creates the Early Learning Council to coordinate existing programs and services for children from birth to 5 years of age. The council is to guide collaborative efforts to improve and expand upon existing early childhood programs including those related to nutrition and physical activity. Sponsor: Delgado

P.A. 094-0189 2005 105 ILCS 5/27, 5-9

Topics: Community, Education, Nutrition, Education, Physical, School

State URL: http://www.ilga.gov/

Abstract: Allows a school board to excuse pupils in grades ninth through 12 from engaging in physical education courses if those pupils must utilize the time set aside for physical education to receive special education support and services. Requires a physical education course of study to provide students with an opportunity for an appropriate amount of daily physical activity. Requires a physical education course of study to be part of the regular school curriculum and not extra-curricular in nature or organization. Sponsor: Cross

P.A. 094-0190 2005 105 ILCS 5/2-3.137

Topics: Community, Education, Nutrition, Education, Physical, Policy, School

State URL: http://www.ilga.gov/

Abstract: Requires the state board of education to establish a school health recognition program that publicly identifies those schools that have implemented programs to increase the physical activity of their students and that have adopted policies or implemented programs to promote healthy nutritional choices for their students and to allow recognized schools to share best practices and model programs and services with other schools throughout the state. Sponsor: Cross

P.A. 094-0077 2005 20 ILCS 605/650- 600 (12)

Topics: Cafeteria/Meals/Food service, Taskforce/Committee

State URL: http://www.ilga.gov/

Abstract: Forms the Illinois Food Systems Policy Council to develop policies around food access and security, improve individual health and well-being, promote economic incentives for Illinois farmers, agri-businesses, and other private enterprises, and encourage public/private partnerships around healthy food options. Sponsor: Delgado

P.A. 094-0687 2005 815 ILCS 645/2, 645/6, 645/8, 645/8

Topics: Community, Fitness Facility, Penalty, Policy

State URL: http://www.ilga.gov/

Abstract: Amends the Physical Fitness Services Act. Provides that in the event of the relocation of a customer's residence and under specified conditions of his or her relocation, the customer may cancel his or her contract for physical fitness services and shall be liable for only that portion of the charges allocable to the time before reasonable evidence of such relocation is presented to the center, plus a reasonable fee if so provided in the contract, but such fee shall not exceed 50 percent (instead of 10%) of the unused balance, or $150 (instead of $50), whichever is less. Provides that a contract for "personal training services" is not subject to annual fee limits when purchased by a business entity or a fraternal or charitable organization. Sponsor: Cross

P.A. 093-0084 2003 20 ILCS 1305/10-35

Topics: Dietary Supplements, Education, Nutrition, Prevention/Treatment, Vitamins/minerals

State URL: http://www.ilga.gov/

Abstract: Amends the Department of Human Services Act by requiring them to conduct a public information campaign to educate women about the benefits of consuming folic acid before and during pregnancy. Bill is pending Governor's signature. Sponsor: Department of Human Services

P.A .094-0439 2005 105 ILCS 5/29 - 3

Topics: Pedestrian, Safety, School, Transportation

State URL: http://www.ilga.gov/

Abstract: Provides that students shall receive free transportation in the event that walking to school constitutes a serious safety hazard. Provides for an annual review by the school board and determine whether or not the hazardous conditions remain unchanged. Sponsor: Patterson

P.A. 093-0848 2004

Topics: Community, Liability, Obesity/Overweight, Policy, Professional

State URL: http://www.ilga.gov/

Abstract: A limit of liability for food manufacturers, distributors, etc for claims arising out of weight gain or obesity due to long term consumption of food. Sponsor: Fritchey

P.A. 094-0407 2005 410 ILCS 225/7

Topics: Education, Nutrition, Obesity/Overweight, Prevention/Treatment, Taskforce/Committee

State URL: http://www.ilga.gov/

Abstract: Establishes the Childhood Health Promotion Program to prevent and reduce the incidence and prevalence of obesity in children and adolescents. Encourages establishment of a Child Nutrition Advisory Committee. Sponsor: Jones

P.A. 094-0493 2005 20 ILCS 2705/2705-317

Topics: Bicycle/skating, Community, Funding, Pedestrian, Safe Routes to School, Taskforce/Committee, Transportation

State URL: http://www.ilga.gov/

Abstract: Upon the enactment of federal transportation bill with available funds to states for safe routes to school programs, the department of transportation along with the state board of education and department of state police shall administer a safe routes to school construction program for the construction of bicycle and pedestrian safety and traffic calming projects using federal safe routes to schools program funds. Sponsor: Wait Companion bill: SB117

HR147 2003 Enacted

Topics: Authorization/Mandate, Cafeteria/Meals/Food service, Taskforce/Committee

State URL: http://www.ilga.gov/

Abstract: Authorizes Department of Health and Department of Education to undertake a sugar consumption study in order to determine effects on health of school children. SPONSOR: Miller

HR593 2003 Enacted

Topics: Assistance Programs

State URL: http://www.ilga.gov/

Abstract: Resolution urges U. S. Department of Agriculture to review nutritional science and Women, Infants, and Children Program participant's nutrient needs, and to update food packages at least once every 10 years. Sponsor: Cross

P.A. 094-0014 2005 105 ILCS 5/27 – 23.3

Topics: Education, Physical, Policy, Prevention/Treatment, Safety, School

State URL: http://www.ilga.gov/

Abstract: Requires a school district to provide steroid abuse prevention education to students who participate in interscholastic athletic programs. Sponsor: Sullivan

P.A. 094-0199 2005 105 ILCS 5/2 -3.137

Topics: Policy, School, Wellness

State URL: http://www.ilga.gov/

Abstract: Formation of interagency group to publish model wellness policies and sample programs consistent with CDC recommendations. School districts to establish a pilot project to implement model wellness policies. Sponsor: Hunter

P.A. 094-0200 2005 105 ILCS 5/27 -6 & 7

Topics: Education, Physical, Policy, School

State URL: http://www.ilga.gov/

Abstract: Allows a school board to excuse pupils in grades nine through 12 from engaging in physical education courses if those pupils must utilize the time set aside for physical education to receive special education support and services. Requires a physical education course of study to provide students with an opportunity for an appropriate amount of daily physical activity. Requires a physical education course of study to be part of the regular school curriculum and not extra curricular in nature or organization. Sponsor: Hunter

P.A. 094-0808 2005 625 ILCS 5/11-605.3

Topics: Recreation, Safety, Transportation

State URL: http://www.ilga.gov/

Abstract: Establishes speed limits for park zones where children are present. Sponsor: Maloney

P.A. 093-0487 2003 20 ILCS 3405/20

Topics: Trails

State URL: http://www.ilga.gov/

Abstract: Relates to an amendment to the Historic Preservation Agency Act. Creates the Freedom Trail Commission. Contains provisions concerning the membership and duties of the commission. Provides that the commission must report its activities and findings to the General Assembly by February 1, 2004. Sponsor: Trotter

P.A. 094-0015 2005

Topics: Farmers Market, Funding

State URL: http://www.ilga.gov/

Abstract: For Grants for USDA Farmer's Market Nutrition Program in the amount of $1.5 million. Sponsor: Trotter also: SB3111 and SB1378

P.A. 093-0060	2003	20 ILCS 2310/2310-321, 30 ILCS 105/5.595

Topics: Obesity/Overweight, Taskforce/Committee

State URL: http://www.ilga.gov/

Abstract: Creation of the Obesity Study and Prevention Fund. Defines obesity and requests data collection and report to general assembly data on individual cases that are actively being treated and analyze the data in order to evaluate impact. Analysis to include the effectiveness of existing methods for treatment, alternate methods for treating or preventing and fiscal impact of treating or preventing, compliance and cooperation of various methods and any reduction in serious medical problems associated with diabetes resulting from treatment of obesity. Obesity Study and Prevention Fund is earmarked for department of public health to conduct or support research regarding obesity. Sponsor: Hunter

P.A. 094-0350	2005	105 ILCS 5/24 – 5 & 6 105 ILCS 5/26 - 1

Topics: Education, Physical, Policy, Professional, School

State URL: http://www.ilga.gov/

Abstract: Amends the School Code concerning provisions regarding an employee's physical fitness and sick leave and compulsory school age exemptions, provides that when required, certain examinations may be conducted by, and certain certificates may be issued by, an advanced practice nurse who has a written collaborative agreement with a collaborating physician that authorizes the advanced practice nurse to perform health examinations or a physician assistant who has been delegated the authority to perform health examinations by his or her supervising physician (now, only certain physicians and, in some cases, spiritual healers may conduct the examinations and issue certificates). Sponsor: Ronen

P.A. 094-0663	2005	815 ILCS 645/8 & 9

Topics: Community, Fitness Facility, Policy

State URL: http://www.ilga.gov/

Abstract: Further amends the Physical Fitness Services Act. Provides that the provision prohibiting a contract for physical fitness services from requiring payment of a total amount in excess of $2500 per year does not apply to any contract for family or couple memberships or group memberships, where the purchaser is a corporation or other business entity or any social, fraternal or charitable organization not created for the purpose of encouraging this contractual arrangement. Provides that no contract for family or couple memberships for basic physical fitness services shall require payment in excess of $2,000 per year per person for the first two people covered under the membership and $1,000 per year per person for each additional person covered under the membership. Defines "basic physical fitness services", "optional physical services", "personal training services", and "non-physical fitness services." Sponsor: Harmon

P.A. 093-0321	2003	605 ILCS 5/6 – 201.14 605 ILCS 5/9 - 127

Topics: Bicycle/skating, Transportation

State URL: http://www.ilga.gov/

Abstract: Provides that highway commissioner has authority to build alleys and bike paths in unincorporated communities using funds belonging to community road district. Commissioner has authority in regards to sidewalk and curbing. Sponsor: Garrett

P.A. 094-1089 2006 105 ILCS 5/27 - 6

Topics: Education, Physical, School

State URL: http://www.ilga.gov/

Abstract: Requires a pupil whom a school board has exempted from the requirement that the pupil engage daily in physical education because he or she must utilize the time set aside for physical education to receive special education support and services, provides that the pupil's individualized education program team makes the determination that the pupil must utilize the time set aside for physical education to receive special education support and services. Sponsor: Hunter

P.A. 094-0966 2006

Topics: Taxation/Tax Credit, Transportation

State URL: http://www.ilga.gov/

Abstract: Creates Business Location Efficiency Incentive Act. Sponsor: Link

P.A. 093-0966 2004 105 ILCS 5/27 – 8.1

Topics: Obesity/Overweight, School

State URL: http://www.ilga.gov/

Abstract: Health examinations given to school children under the Department of Public Health should include the collection of data relating to obesity. The Department of Public Health will collect and maintain this data from the State School Board. Sponsor: Hunter

P.A. 093-0555 2003

Topics: Assistance Programs, Education, Nutrition, Funding, Taskforce/Committee

State URL: http://www.ilga.gov/

Abstract: Creates the Nutrition Outreach and Public Education Act. Authorizes grants to community-based organizations for outreach activities. Establishes a nutrition outreach and public education program within the Department of Public Health to enroll targeted populations in federal food and nutrition assistance programs. Sponsor: Miguel del Valle

P.A. 094-0198 2005 105 ILCS 5/2 – 3.259
105 ILCS 5/27 - 6

Topics: Authorization/Mandate, Education, Physical, Policy, School

State URL: http://www.ilga.gov/

Abstract: Makes an exception to the daily physical education requirement on block scheduled days if a school is engaged in block scheduling. Sponsor: Hunter

P.A. 094-0981 2006 105 ILCS 125/2.5 & 4
Topics: Community, Education, Nutrition, Education, Physical, School
State URL: http://www.ilga.gov/
Amends the School Breakfast and Lunch Program Act and the Childhood Hunger Relief Act. Makes changes concerning the breakfast incentive program, the report the State Board of Education provides to the Governor and the General Assembly concerning school breakfast and lunch programs, surveys to identify parental interest

in school breakfast programs and the barriers to establishing school breakfast programs, the requirement that a school district establish a school breakfast program for certain schools, and opting out of the school breakfast program requirement. Sponsor: Miguel del Valle.

House Amendment No. 1
With respect to schools that do not participate in the National School Lunch Program, provides that the board of education shall implement and operate a school breakfast program in each school building in which at least 40 percent or more of the students are classified as low income according to the Fall Housing Data from the previous year (instead of in each school building in which at least 40 percent or more of the students are eligible for free or reduced-price lunches based upon Fall Housing Data from the previous year).

23 Illinois Administrative Code Ch. 1, Section 305.15 (2006) requires that all schools participating in the free lunch and breakfast programs adhere to the following regulations regarding food and beverage sales to students in grade eight and below during the regular school day. Beverages sold to students shall include only (1) flavored, or plain whole, reduced fat (2%), low-fat (1%), or nonfat milk, (2) reduced fat and alternative dairy beverages (i.e., rice, nut or soy milk or any other USDA-approved alternative beverage), (3) fruit and vegetable drinks containing 50% or more juice, (4) non-flavored, non-carbonated water, (5) yogurt or ice based fruit smoothie that contains less than 400 calories and no added sugars and is made from fresh or frozen fruit or fruit drinks containing at least 50% fruit juice, (5) any beverage exempted from USDA's list of Foods of Minimal Nutritional Value. In addition, all schools participating in the free lunch and breakfast programs in which grades five and below are operating must prohibit the sale of all confections, candy and potato chips to students during meal periods.

Vending Machines/School Stores: The requirements outlined in 23 Illinois Administrative Code Ch. 1, Section 305.15 (2006) (see Other Food Sales) apply to foods sold in vending machines and school stores for in schools for grades eight and below. For those schools that include both grade eight and grade nine and above, schools may request an exemption based on their inability to separate access to food and beverages for grades eight and below and nine and above for the 2006-07 school year only.

Other Food Sales: 23 Illinois Administrative Code Ch. 1, Section 305.15 requires that food sold to students outside of food service areas or within food service areas other than during meal periods include only the following: (1) nuts, seeds, nut butters, eggs, cheese packaged for individual sale, fruits or non-fried vegetables, or low-fat yogurt products or (2) any food item whose total calories from fat do not exceed 35%, calories from saturated fat do not exceed 10%, total amount of sugar by weight does not exceed 35% and calories do not exceed 200.

American Dietetic Association Evidence-Based Nutrition Practice Guideline

In May 2006, the American Dietetic Association (ADA) published its *Adult Weight Management Evidence-Based Nutrition Practice Guideline*, which lists evidence-based recommendations for treatment of *o*verweight and obesity in adults. The ADA guidelines consist of systematically developed statements based on scientific evidence to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. The guideline is available online to members of the American Dietetic Association at www.eatright.org.

American Dietetic Association Position Papers

ADA position papers explain the association's stance on issues that affect the nutritional status of the public. A position statement and support paper are based on sound scientific data. In June 2006, the ADA published its position paper on individual, family, school and community-based interventions for pediatric overweight. This document can be accessed on ADA's web site at www.eatright.org .

Association of State and Territorial Public Health Nutrition Directors

The Association of State and Territorial Public Health Nutrition Directors (ASTPHND) is a 501(c) (3) non-profit membership organization that provides national and state leadership on food and nutrition policy, programs and services. For information on the organization and resources and other information, go to www.astphnd.org.

Calories Count: Report of the Working Group on Obesity

Issued by the U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, this report provides recommendations that address multiple facets of the obesity problem including developing appropriate and effective consumer messages to aid consumers in making wiser dietary choices; formulating educational strategies in the form of partnerships, to support the dissemination and understanding of these messages; specific new initiatives to improve the labeling of packaged foods with respect to caloric and other nutritional information; initiatives enlisting and involving restaurants in the effort to combat obesity; the development of new therapeutics; the design and effective research in the fight against obesity; and the continuing involvement of stakeholders in the process. This report is available at www.fda.gov/oc/initiatives/obesity.

Coordinated Approach To Child Health (CATCH)

CATCH is a coordinated school health program designed to promote physical activity, healthy food choices and prevent tobacco use in elementary school- aged children. CATCH focuses on coordinating four components: Eat Smart school nutrition program, Kindergarten - 5 classroom curriculum, physical education program and family program. The coordination of health messages between these four component areas is critical to positively impact children's knowledge and behavior. For over 10 years, CATCH, the largest school-based health promotion study in the United States, has demonstrated that behaviors such as eating foods high in saturated fat and physical inactivity can be changed. Information about the curriculum, training, evaluation and resources (including Illinois specific information) is on the Web site www.catchtexas.org.

The www.catchinfo.org Web site is dedicated to introducing CATCH to schools and communities (parents, teachers, principals or interested parties) to ensure a healthy future for our children. In the

newsletter archives there are several articles related to Illinois, especially in the February 2007 issue where Illinois program outcome data is presented.

U. S. Centers for Disease Control and Prevention

Weight Management Research to Practice Series
There are currently two papers in this series, each of which addresses particular weight management issues. The papers summarize the science on the issue and then make research-based suggestions for practice. The two papers currently in the series are titled "Can Eating Fruits and Vegetables Help People to Manage Their Weight?" and "Do Increased Portion Sizes Affect How Much We Eat?" The series is available at www.cdc.gov/NCCDPHP/dnpa/nutrition/health_professionals/.

Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults
The National Heart, Lung and Blood Institute in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), released the first federal guidelines on the identification, evaluation and treatment of overweight and obesity. Access these reports at www.nhlbi.nih.gov/guidelines/obesity/.

Dietary Guidelines for Americans 2005
The guidelines provide authoritative advice for people 2 years of age and older about good dietary habits, which promote health and reduce the risk of chronic disease. The guidelines have been published every five years since 1980 by the U. S. Department of Health and Human Services and the U. S. Department of Agriculture. These documents serve as the basis for federal food and nutrition education programs. The guidelines are available at www.health.gov/dietaryguidelines/.

MyPyramid.gov
The MyPyramid system provides many options to help Americans make healthy food choices and to be active every day. MyPyramid incorporates recommendations from the 2005 Dietary Guidelines for Americans. MyPyramid was developed to carry the messages of the dietary guidelines and to make Americans aware of the vital health benefits of simple and modest improvements in nutrition, physical activity and lifestyle behavior. The MyPyramid symbol is meant to encourage consumers to make healthier food choices and to be active every day. Visit the Web site at www.mypyramid.gov .

National Association of Chronic Disease Directors

The National Association of Chronic Disease Directors (NACDD) is a national public health association, founded in 1988, to link the chronic disease program directors of each state and U.S. territory to provide a national forum for chronic disease prevention and control efforts. With 58 voting members and more than 500 regular and associate members, NACDD works to reduce the impact of chronic diseases by advocating for preventative policies and programs, encouraging knowledge sharing and developing partnerships for health promotion. Visit the Web site at www.chronicdisase.org .

National Coalition for Promoting Physical Activity

The National Coalition for Promoting Physical Activity's (NCPPA) mission is to unite the strengths of public, private and industry efforts into collaborative partnerships that inspire and empower all Americans to lead more physically active lifestyles. NCPPA is an extraordinary group of national organizations that independently address a host of issues relating to physical activity, including

health/science, education, environments, population specific outreach, and activity behavior. To learn more about this coalition visit www.ncppa.org.

National Society of Physical Activity Practitioners in Public Health

The society represents the physical activity interests of the public health community. The society's purpose is to provide coordination and leadership to strengthen capacity in establishing and promoting evidence-based physical activity practice within and throughout public health agencies. The leadership team includes people from the Directors of Health Promotion and Education, the National Association of Chronic Disease Directors, the Physical Activity Network and the CDC Physical Activity Branch. Visit the Web site for more information at www.nspapph.org.

Guide to Community Preventive Services (Community Guide)

The community guide summarizes what is known about the effectiveness, economic efficiency and feasibility of interventions to promote community health and prevent disease. It was developed by the Task Force on Community Preventive Services, an independent decision-making body appointed by the Director of CDC. The community guide is an available at www.thecomunityguide/org/.

Institute of Medicine of the National Academies

The Institute of Medicine (IOM) is a non-profit organization chartered in 1970 as a component of the National Academy of Sciences. It provides unbiased, evidence-based and authoritative information and advice concerning health and science policy to policy-makers, professionals, leaders in every sector of society and the public at large. *Preventing Childhood Obesity: Health in the Balance* (2004) and *Progress in Preventing Childhood Obesity* (2006). Access the IOM online at www.iom.edu/.

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2001

The Surgeon General's call to action promotes the recognition of overweight and obesity as major public health problems, assists Americans in balancing healthful eating with regular physical activity to achieve and maintain a healthy or healthier body weight, identifies effective and culturally appropriate interventions to prevent and treat overweight and obesity, encourages environmental changes that help prevent overweight and obesity, and develops and enhances public-private partnerships to help implement this vision. This report is available at www.surgeongeneral.gov/library/.

Weight-Control Information Network

The National Institute of Diabetes and Digestive Kidney Diseases and the National Institutes of Health established the Weight-Control Information Network in 1994 to provide the general public, health professionals, the media and Congress with science-based information on obesity, weight control, physical activity and related nutritional issues. Access this network at http://win.niddk.nih.gov.

Appendix E: Glossary and References

Glossary

Aerobic: Conditions or processes that occur in the presence of, or require oxygen.

Agility: Ability to start, stop and move the body quickly and in different directions.

Atherosclerosis: A type of hardening of the arteries in which cholesterol and other substances in the blood are deposited in the walls of arteries, including the coronary arteries that supply blood to the heart. In time, narrowing of the coronary arteries by atherosclerosis may reduce the flow of oxygen-rich blood to the heart.

Balance: Ability to maintain a certain posture or to move without falling.

Blood pressure: The force of the blood pushing against the walls of arteries. Blood pressure is given as two numbers that measure systolic pressure (the first number, which measures the pressure while the heart is contracting) and diastolic pressure (the second number, which measures the pressure when the heart is resting between beats). Blood pressures of 140/90 mmHg or above are considered high, while blood pressures in the range of 130–139/85–89 are high normal. Less than 130/85 mmHg is normal.

Body composition: The relative amount of body weight that is fat and nonfat.

Body mass index (BMI): Weight (in kilograms) divided by the square of height (in meters), or weight (in pounds) divided by the square of height (in inches) times 704.5. Because it is easily calculated, BMI is the measurement of choice as an indicator of healthy weight, overweight and obesity.

Calorie: Unit used for measuring the energy produced by food when metabolized in the body.

Cardio respiratory function: A measure of physical fitness that relates to the ability of the circulatory and respiratory systems to supply oxygen during physical activity.

Cardiovascular disease: Includes a variety of diseases of the heart and blood vessels, coronary heart disease (coronary artery disease, ischemic heart disease), stroke (brain attack), high blood pressure (hypertension), rheumatic heart disease, congestive heart failure, and peripheral artery disease.

Cholesterol: A waxy substance, manufactured by the body from carbohydrates or fat that circulates in the bloodstream. When the level of cholesterol in the blood is too high, some of the cholesterol is deposited on the walls of the blood vessels. Over time, these deposits can build up until they narrow the blood vessels, causing atherosclerosis, which reduces the blood flow. The higher the blood cholesterol level, the greater is the risk for cardiovascular disease. Blood cholesterol levels of less than 200 mg/dL are considered desirable. Levels of 240 mg/dL or above are considered high and require further testing and possible intervention. Levels of 200-239 mg/dL are considered borderline. Lowering blood cholesterol reduces the risk of cardiovascular disease.

Community: A specific group of people, often living in a defined geographical area, who share a common culture, values, and norms and who are arranged in a social structure according to relationships the community has developed over a period of time.

Community-based program: A planned, coordinated ongoing effort operated by a community that characteristically includes multiple interventions intended to improve the health status of members of the community.

Community capacity: The characteristics of communities that affect their ability to identify, mobilize and address social and public health problems.

Community health planning or community health improvement process: Helps a community mobilizes to collect and use local data; set health priorities; and design, implement and evaluate comprehensive programs that address community health and quality of life issues.

Community health promotion program: Includes all of the following: 1) community participation with representation from at least three community sectors including government, education, business, faith organizations, health care, media, voluntary agencies, and the public; 2) community assessment, guided by a community assessment and planning model, to determine community health problems, resources, perceptions and priorities for action; 3) targeted and measurable objectives to address at least one of the following health outcomes, risk factors, public awareness, services and protection; 4) related comprehensive, multifaceted, culturally relevant interventions that have multiple targets for change; and 5) monitoring and evaluation processes to determine whether objectives are met.

Comprehensive worksite health promotion programs: Refers to programs that contain the following elements: 1) health education that focuses on skill development and lifestyle behavior change in addition to information dissemination and awareness building, preferably tailored to employees' interests and needs; 2) supportive social and physical work environments including established norms for healthy behavior and policies that promote health and reduce the risk of disease, such as worksite smoking policies, healthy nutrition alternatives in the cafeteria and vending services, and opportunities for regular physical activity; 3) integration of the worksite program into the organization's administrative structure; 4) related programs, such as employee assistance programs, and 5) screening programs, preferably linked to medical care service delivery to ensure follow-up and appropriate treatment as necessary and to encourage adherence. Optimally, these efforts should be part of a comprehensive occupational health and safety program.

Coordination: Ability to do a task integrating movements of the body and different parts of the body or coordination of planning with partners for the delivery of public health services.

Congestive heart failure (or heart failure): A condition in which the heart cannot pump enough blood to meet the needs of the body's other organs. Heart failure can result from narrowed arteries that supply blood to the heart muscle and from other factors. As the flow of blood out of the heart slows, blood returning to the heart through the veins backs up, causing congestion in the tissues. Often swelling (edema) results, most commonly in the legs and ankles, but possibly in other parts of the body as well. Sometimes fluid collects in the lungs and interferes with breathing, causing shortness of breath, especially when a person is lying down.

Coronary heart disease (CHD): A condition in which the flow of blood to the heart muscle is reduced. Like any muscle, the heart needs a constant supply of oxygen and nutrients that are carried to it by the blood in the coronary arteries. When the coronary arteries become narrowed or clogged, they cannot supply enough blood to the heart. If not enough oxygen-carrying blood reaches the heart, the heart may respond with pain called angina. The pain usually is felt in the chest or sometimes in the left arm or

shoulder. When the blood supply is cut off completely, the result is a heart attack. The part of the heart muscle that does not receive oxygen begins to die, and some of the heart muscle is permanently damaged.

Culturally appropriate: Refers to an unbiased attitude and organizational policy that values cultural diversity in the population served. Reflects an understanding of diverse attitudes, beliefs, behaviors, practices, and communication patterns that could be attributed to race, ethnicity, religion, socioeconomic status, historical and social context, physical or mental ability, age, gender, sexual orientation, or generational and acculturation status. Includes an awareness that cultural differences may affect health and the effectiveness of health care delivery. Knowledge of disease prevalence in specific cultural populations, whether defined by race, ethnicity, socioeconomic status, physical or mental ability, gender, sexual orientation, age, disability or habits.

Dietary Guidelines for Americans: A report published by the U.S. Department of Agriculture and U.S. Department of Health and Human Services that explains how to eat to maintain health. The guidelines form the basis of national nutrition policy and are revised every five years.

Energy expenditure: The energy expended by the body usually measured in kilocalories.

Excess deaths: The statistically significant difference between the number of deaths expected and the number that actually occurred.

Exercise: physical activity exertion to develop or maintain physical fitness.

Exercise Training: planned, structured, and repetitive body movement conducted to improve or maintain one or more components of physical fitness.

Flexibility: Ability to move a joint through the full range of motion without discomfort or pain.

Food Guide Pyramid: A graphic depiction of the U.S. Department of Agriculture's current food guide that includes five major food groups in its "base" (grains, vegetables, fruits, milk products, meats, and meat substitutes) and a "tip" depicting the relatively small contribution that discretionary fat and added sugars should make in U.S. diets. The Food Guide Pyramid provides information on the choices within each group and the recommended number of servings.

Functional independence: The ability to successfully and safely perform activities related to daily activities of living with sufficient energy, strength/endurance, flexibility and coordination.

Health: A state of physical, mental and social well-being and not merely the absence of disease and/or functional impairment.

Health care organizations: An administrative and functional group, facility or agency providing health care, including but not limited to hospitals, managed-care organizations, home health organizations, long-term care facilities, and community-based health care providers.

Health education: Any planned combination of learning experiences designed to predispose, enable and reinforce voluntary behavior conducive to health in individuals, groups, or communities.

Health literacy: Individuals capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions.

Health promotion: Any planned combination of educational, political, regulatory, and organizational supports for actions and conditions of living conducive to the health of individuals, groups, or communities.

Health promotion activity: Broadly defined to include any activity that is part of a planned health promotion program, such as implementing a policy to create a smoke-free workplace, developing walking trails in communities, or teaching the skills needed to prepare healthy meals and snacks.

Healthy public policy: Characterized by an explicit concern for health and equity in all areas of policy and by an accountability for health impact. The main concern of healthy public policy is to create a supportive environment for healthy lifestyles making better choices possible and easier and enhancing social and physical environments.

Heart attack (also called acute myocardial infarction): Occurs when a coronary artery becomes completely blocked, usually by a blood clot (thrombus), resulting in lack of blood flow to the heart muscle with loss of needed oxygen. As a result, part of the heart muscle dies (infarcts). The blood clot usually forms over the site of a cholesterol build up (or plaque) that has burst or ruptured.

Heart disease: Term used to describe any pathological condition of the heart.

High blood pressure: A systolic blood pressure of 140 mmHg or greater or a diastolic pressure of 90 mmHg or greater. High blood pressure causes the heart to work harder, resulting in increased risk for heart attack, stroke, heart failure, kidney and eye problems, and peripheral vascular disease.

Hypertension: High blood pressure.

Hypertriglyceridemia: Elevated levels of triglycerides in the blood.

Moderate physical activity: Activities that use large muscle groups and are at least equivalent to brisk walking. In addition to walking, activities may include swimming, cycling, dancing, gardening and yard work, and various domestic and occupational activities.

Muscular endurance: Ability of the muscle to perform repetitive contractions over a prolonged period of time.

Muscular strength: Ability of the muscle to generate the maximum amount of force.

Nutrition: The set of processes involved in utilization of food for growth, repair and maintenance of the body.

Obesity: A condition characterized by excessive body fat with a BMI greater than 30.

Osteoporosis: A bone disease characterized by a reduction in bone mass and a deterioration of the bone structure leading to bone fragility.

Overweight: Excess body weight characterized by a Body Mass Index greater than 25 but less than 30.

Physical activity: A general term for any type of muscular activity or movement.

Physical fitness: The ability to carry out daily tasks with vigor and alertness without fatigue leaving sufficient energy to enjoy leisure-time activities.

Power: Ability to exert muscular strength.

Sedentary behavior: A pattern of behavior that is relatively inactive, such as a lifestyle characterized predominately by sitting.

Settings (worksites, schools, health care sites, and the community): Major social structures that provide channels and mechanisms of influence for reaching defined populations and for intervening at the policy level to facilitate healthful choices and address quality-of-life issues. Conceptually, the overall community, worksites, schools, and health care sites are contained under the broad umbrella of "community." Health promotion and health education may occur within these individual settings or across settings in a comprehensive, communitywide approach

School health education: Any combination of learning experiences organized in the school setting to predispose, enable, and reinforce behavior conducive to health or to prepare school-aged children to cope with the challenges to their health now and in the future.

Social capital: The process and conditions among people and organizations that lead to accomplishing a goal of mutual social benefit, usually characterized by four interrelated constructs trust, cooperation, civic engagement and reciprocity.

Social ecology: Refers to the complex interactions among people and their physical and social environments and the effects of these interactions on the emotional, physical and social well-being of individuals and groups.

Stroke: Cerebrovascular disease that affects the arteries of the brain and occurs when blood vessels bringing oxygen and nutrients to the brain burst or become blocked by a blood clot or plaque.

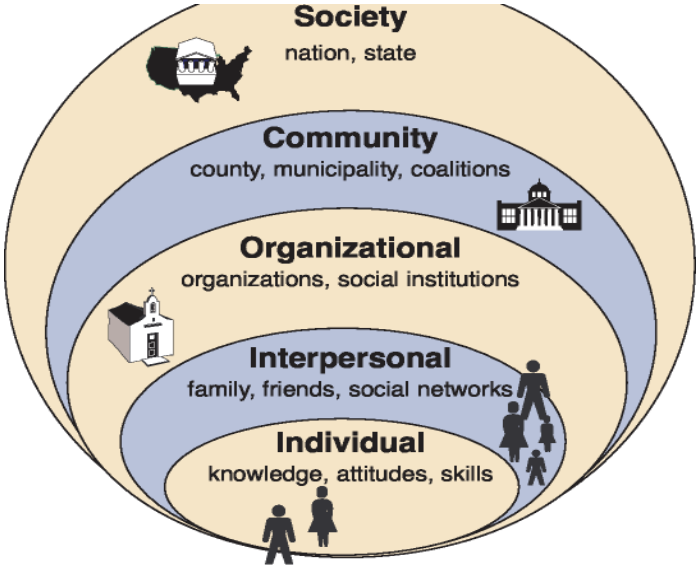
Type 2 diabetes: The most common form of diabetes resulting from insulin resistance and abnormal insulin action. Type 2 diabetes was previously referred to as noninsulin-dependent diabetes mellitus (NIDDM) and adult-onset diabetes.

Vigorous physical activity: Rhythmic, repetitive physical activities that use large muscle groups at 70 percent or more of maximum heart rate for age. An exercise heart rate of 70 percent of maximum heart rate for age is about 60 percent of maximal cardio respiratory capacity and is sufficient for cardiorespiratory conditioning. Maximum heart rate equals roughly 220 beats per minute minus age. Examples of vigorous physical activities include jogging/running, lap swimming, cycling, aerobic dancing, skating, rowing, jumping rope, cross-country skiing, hiking/backpacking, racquet sports, and competitive group sports (for example, soccer and basketball).

Appendix F: The Socio-Ecologic Model

There are many factors influencing an individual's decision to be physically active and eat an adequate and nutritious diet. A multi-level model or approach to address behavior change that provides a reciprocal relationship between the environment and the individual and how it affects health-related behaviors is known as the Social-Ecological Model of Change (SEM).

Socio-Ecologic Model



Source: Adapted from McLeroy, et, al, an ecological perspective on health promotion program. Health Education Quarterly 1988, 15:351-77

Individual: awareness, knowledge, attitudes, beliefs, values, preferences
Interpersonal: family, friends, peers who provide social support
Institutional/Organizational: rules, polices, procedures, environment, informal structures
Community: social networks, norms, standards and practices
Society/ State: state and federal governmental policies, regulations and laws

Interaction between one and any of the levels can influence an individual's ability to adopt or maintain healthy lifestyle behaviors. The five levels of the SEM model include: individual, interpersonal, organizations, community and society. The individual level addresses one's knowledge, attitudes, behaviors, self-concept and skills. At the interpersonal level, family, friends and social networks may influence an individual's lifestyle behavior choices. At the organizational level, social institutions like schools and churches are targeted for interventions. The community level of the SEM involves addressing city and local coalitions for physical activity and nutrition addressing larger community involvement. For example: a city gardening project or city walking challenge. The society level of the SEM focuses on state and national laws or policy change. The effectiveness of this unique systems change model is in the ability to systematically incorporate nutrition and physical activity strategies into as many levels of the SEM to ultimately impacting systems level behavior change.

References

Abrams, D.B., Emmons, K.M., Niaura, R.S., Goldstein, M.G., and Sherman, C.E. (1991). Tobacco dependence: An integration of individual and public health perspectives. In P.E. Nathan, J.W. Langenbucher, B.S. McCrady, & W. Frankenstein (Eds). Annual review of addiction research and treatment (Vol. 1, pp. 331–396). New York: Pergamon Press.

Bild, D.E., Sholinsky, P., Smith, D.E., Lewis, C.E., Hardin, J.M., Burke, G.L. Correlates and predictors of weight loss in young adults: The CARDIA Study. *International Journal of Obesity.* 1996; 20:47-55.

Burke, G.L, Jacobs, D.R., Jr, Sprafka, J.M., Savage, P.J., Sidney, S., Wagenknecht, L.E. Obesity and overweight in young adults: The CARDIA Study. *American Journal of Preventive Medicine.* 1990; 19:476-488.

Burke, G.L., Savage, P.J., Manolio, T.A., Sprafka, J.M., Wagenknecht, L.E., Sidney, S., Perkins, L.L., Liu, K., Jacobs, D.R., Jr. Correlates of obesity in young black and white women: The CARDIA Study. *American Journal of Public Health.* 1992; 82:1621-25.

U. S. Centers for Disease Control and Prevention. Framework for Program Evaluation in Public Health. MMWR 1999;48 (No. RR-11).

Finkelstein, E.A., Fiebelkorn, I.C., Wang, G. National medical spending attributable to overweight and obesity: How much, and who's paying? *Health Affairs* 2003; W3; 219–226.

Healthy Smiles Healthy Growth, 2003-2004. Springfield, IL; Illinois Department of Public Health (IDPH), 2006.

Illinois PRAMS Surveillance Report on Breastfeeding, 2003. Illinois Department of Public Health.

Kimm SYS, Glynn NW, Obarzanek E, et al. Relation between the changes in physical activity and body-mass index during adolescence: a multicentre longitudinal study. *Lancet* 2005; 366: 301-07.

Lasater, T., D. Abrams, L. Artz, L., et al. (1984). Lay volunteer delivery of a community-based cardiovascular risk factor change program: The Pawtucket experiment. In J. D. Matarazzo, S. M. Weiss, J. A. Herd, et al., (Eds.), *Behavioral health: A handbook of health enhancement and disease prevention*. New York: Wiley.

Lloyd-Jones, D., Lewis, C., Loria, C., Liu, K., Colangelo, L., Klein, L, Yan, L., Savage, P. Association of stable versus increasing body-mass index with changes in risk factors associated with the metabolic syndrome. *Circulation*. 2007; In press.

Margellos-Anast, H., Shah, A.M., Whitman, S. Prevalence of Obesity Among Children in Six Chicago Communities: Findings from a Health Survey. *Public Health Reports*; In Press.

Mason, M., Meleedy-Rey, P., Kaufer Christoffel, K., Longjohn, M., Garcia, M.P., Ashlaw, C. Prevalence of overweight and risk of overweight among 3- to 5-year-old Chicago children, 2002-2003. *J Sch Health* 2006; 76(3): 104-110.

McLeroy, et, al, an ecological perspective on health promotion program a Health Education Quarterly 1988, 15:351-77.

National Health and Nutrition Examination Survey (NHAHES III) 1988-1994, 2003-2004. U. S. Centers for Disease Control and Prevention.

Ogden, C.L., Carroll, M.D., Curtin, L.R., McDowel,l M.A., Tabak, C.J., Flegal, K.M. Prevalence of overweight and obesity in the United States, 1999-2004. *JAMA* 2006; 295(13):1549-1555.

Ogden, C.L, Flega, K.M., Carroll, M.D., Johnson, C.L. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *JAMA* 2002; 288(14):1728-1732.

Guide to Community Preventive Services Website. U. S. Centers for Disease Control and Prevention. www.thecommunityguide.org/pa/. Last updated: 6/18/2007. Accessed on: 8/08/2007.

Salas, M., Williams, O.D, Bian, J., Schreiner, P., Juarez, L., Kim, Y., Person, S, Kiefe, C. Self-reported medication adherence in a population-based sample of young African Americans and Whites: The CARDIA Study. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. 8/20/05. Presented – Poster.

Salas, M., Williams, O.D., Juarez, L., Kim, Y., Person, S., Kiefe, C. Racial differences in medications used in African American compared to white young adults from a population-based sample: The CARDIA Study. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. 8/20/05. Presented – Poster.

Schmitz, K., Jacobs, D.R., Jr., Schreiner, P.J., Leon, A.S., Sternfeld, B. Physical activity and body weight: Associations over ten years in the CARDIA Study. *International Journal of Obesity*. 2000; 24:1475-1487.

United States Clinical Growth Charts. U. S. Centers for Disease Control, Center for Health Statistics, 2000. Available at www.cdc.gov/nchs/about/major/nhanes/growthcharts.

Whitman, S., Williams, C., Shah, A. Sinai Health System's Community Health Survey: Report 1. Chicago, IL: Sinai Health System, 2004. Available at http://www.sinai.org/urban/publications/. Accessed 5 Sept, 2006.

Shealy,K.R., Li, R., Benton-Davis, S., Grummer-Strawn, LM. *The CDC Guide to Breastfeeding Interventions*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005.

For more information please contact:

Illinois Department of Public Health
Nutrition and Physical Activity Program
Division of Chronic Disease Prevention and Control
535 West Jefferson Street
Springfield, Illinois 62761
Phone: 217-782-3300
800-547-0466 (hearing impaired use only)
Fax: 217-782-1235
www.idph.state.il.us

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