

# 1. PHYSICAL ACTIVITY AND FITNESS

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## *Goal*

Improve the health, fitness, and quality of life of all Kentuckians through the adoption and maintenance of regular, daily physical activity.

## *Terminology*

**Overweight:** Having a body mass index equal to or greater than 27.8 for men and 27.3 for women, from 1990 through 1997. In mid-1998, the definition of overweight was modified to mean a body mass index of greater than 25.0 but less than 29.9 for both genders.

**Obesity:** Having a body mass index of 29.9 or greater for both sexes. Statistics for both overweight and obesity were combined to determine the prevalence of overweight in individuals.

**Regular physical activity:** Light to moderate activity practiced for at least 20 minutes, 3 or more times per week. Those who do not engage in regular physical activity, as previously defined, are considered to have a sedentary lifestyle.

**Sound dietary practices:** Restricting dietary fat intake to an average of 30 percent or less of total calories consumed, and restricting saturated fat intake to less than 10 percent of calories consumed, among people ages two and over. Complex carbohydrates and fiber containing foods should be increased in the diets of adults to five or more daily servings of fruits and vegetables and to six or more daily servings of low fat grain products. The number of calories consumed should be balanced with those required to maintain life processes and provide energy for activities performed. In addition, consumption of salt and high-sodium products should be modified.

## *Overview*

The first Surgeon General's Report on Physical Activity and Health, released in 1996, concluded that regular sustained physical activity can substantially reduce the risk of developing or dying from heart disease, diabetes, colon cancer and high blood pressure. Additionally, research by Blair, SN, et al. (JAMA 262:2395-2401, 1989) and Paffenbarger, R.S. Jr., et al. (N Engl J Med 328:538-45, 1993) has shown that regular physical activity can reduce the risk of osteoporosis, promote weight loss and foster a sense of well-being. The Behavioral Risk Factor Surveillance Survey (BRFSS) conducted by the Division of Epidemiology and Health Planning, Kentucky Department for Public

Health (KDPH) shows 70 percent of Kentuckians engaged in a sedentary lifestyle in 1998. According to the BRFSS data, the state of Kentucky ranked second highest in the nation for sedentary lifestyle in 1997. Statewide, consistent trends show that females are slightly more likely to be sedentary than males, and whites are slightly more likely to be sedentary than non-whites. The prevalence of sedentary lifestyle increases with age.

As shown by Ryan, AS et. al. (American Journal of Public Health 78(11): 1422-1427, 1988), being overweight results when the number of calories consumed exceeds the number used by physical activity and metabolic requirements. Thus, the prevalence of overweight may increase as the prevalence of sedentary lifestyle increases. Kentucky BRFSS data reveals a clear trend of an increasing number of individuals being overweight, with 39 percent of the adult population surveyed in 1998 being overweight. Kentucky ranked second highest in the continental United States for obesity in 1997, and eighth in 1996. Consistently, males tend to have a slightly higher prevalence of overweight than females, and blacks tend to have a higher prevalence than whites. In 1995, 1997 and 1998, the 55 to 64-year-old age group exhibited the highest prevalence of overweight in the state. In 1996, the 45 to 54-year-old age group exhibited the highest prevalence of overweight.

The prevalence of overweight is a serious public health threat in Kentucky. The 1988 Surgeon General's Report on Nutrition and Health establishes that being overweight is associated with elevated serum cholesterol levels, elevated blood pressure and noninsulin-dependent diabetes, as well as being an independent risk factor for coronary heart disease. The Kentucky State Center for Health Statistics data shows cardiovascular disease to be the leading cause of death in Kentucky, with 15,000 Kentuckians dying from heart disease in 1997. BRFSS data indicates that the prevalence of hypertension has increased within the last decade, from a baseline figure of 18.5 percent of respondents in 1989 to 27 percent in 1997. Neither serum blood cholesterol levels nor prevalence of diabetes have declined in the last half of this decade.

### ***Progress Toward Year 2000 Objectives***

Sustained progress has not been demonstrated toward any of the three physical activity objectives set for the year 2000.

- 1.1 To reduce overweight to a prevalence of no more than 18 percent among Kentuckians ages 18 and older.

According to the Behavioral Risk Factor Surveillance Survey (BRFSS) data, the prevalence of overweight among Kentuckians ages eighteen and older has increased steadily from 23.5 percent in 1990 to 39 percent in 1998.

- 1.2 To increase to at least 50 percent the proportion of Kentuckians ages 18 and older who engage regularly in physical activity for at least 20 minutes three or more times per week.

The BRFSS data indicate that sedentary lifestyle decreased slightly from about 69 percent in 1990 to about 67 percent in 1994, but returned to 70 percent by 1998.

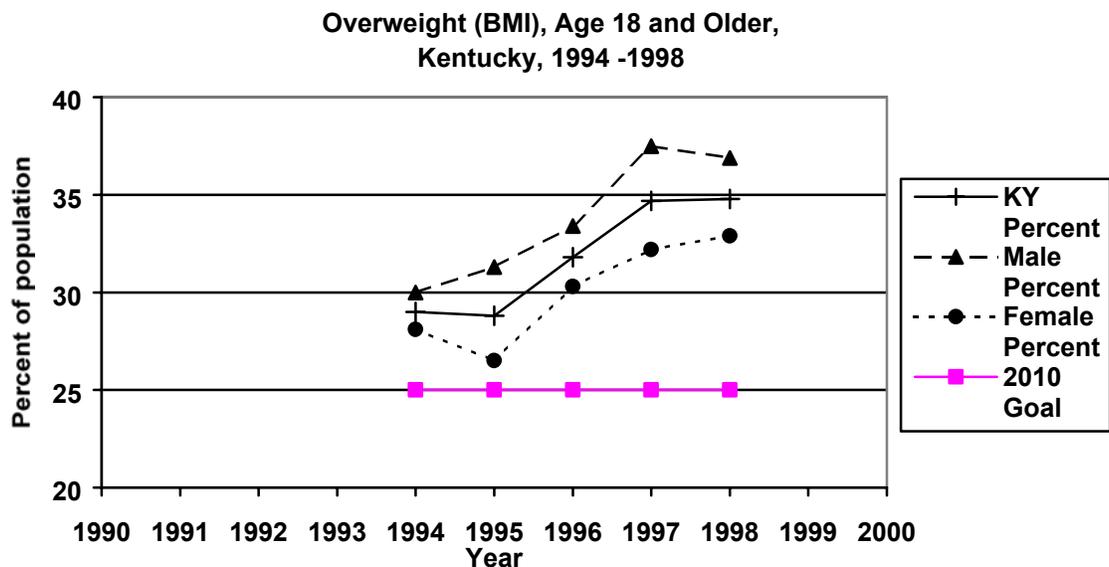
- 1.3 To increase to at least 50 percent the proportion of ages 18 and older who have adopted sound dietary practices combined with regular physical activity to attain an appropriate body weight.

According to the BRFSS, the percentage of overweight men who combine regular physical activity with sound dietary practices to attain an appropriate body weight has increased 0.8 percent from 1991 to 1996. However, the percentage of overweight women utilizing this approach decreased 8.59 percent during the same period for a net loss on objective 1.3.

## 2010 Objectives

- 1.1 To reduce overweight to a prevalence of no more than 25 percent among Kentuckians ages 18 and over.

**Baseline 1998:** 34.8 percent of adult Kentucky BRFSS respondents were overweight, based on BMI.



**Target Setting Method:** This target was adapted from *Healthy Kentuckians 2000* objectives, reflecting current rates of ethnicity, sex and aging of the population. It also reflects efforts to eliminate disparities and reduce contributing factors.

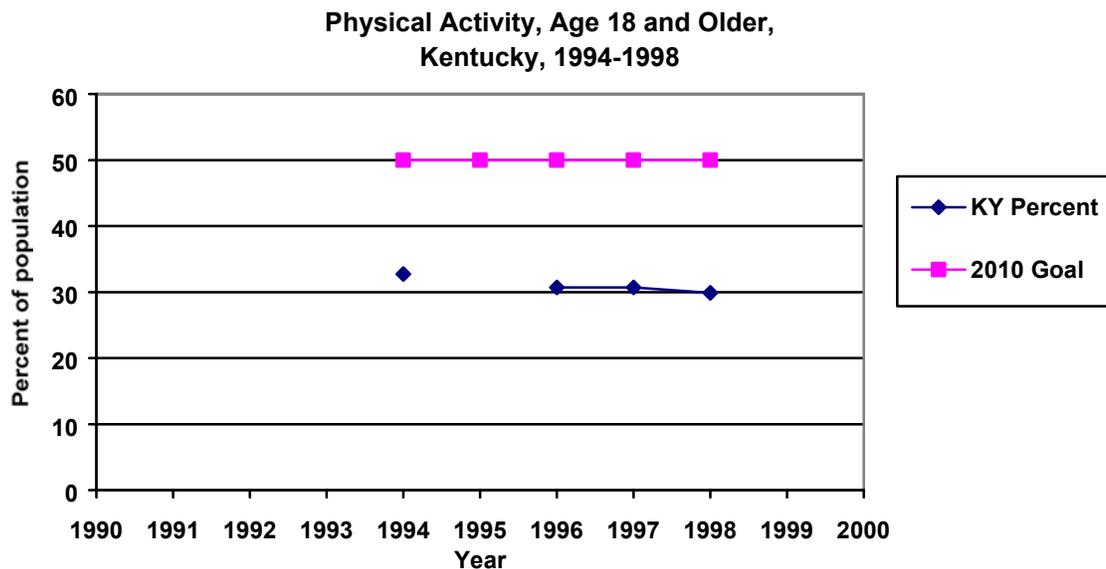
**Data Source:** The Kentucky BRFSS data were used to determine the percentage of overweight individuals from 1990 through 1998.

**Implementation Strategy:**

- Implement the work plan specified in the KDPH Cardiovascular Health Program grant application, as funded by Centers for Disease Control and Prevention. Because being overweight is a risk factor for cardiovascular disease, many initiatives of this program will target being overweight.
- A statewide Cardiovascular Health (CVH) coalition will be assembled, including leaders from both public and private sectors, to help develop and implement a plan to reduce mortality and morbidity from cardiovascular disease in Kentucky, focusing on changes in environment and policy.
- The cardiovascular disease problem in Kentucky and barriers to interventions will be evaluated through joint efforts of the KDPH staff, the CVH Steering Committee, research contracted to the University of Kentucky and assessments conducted by local health departments.
- New partnerships will be formed between the KDPH, other state agencies, and other public and private organizations to promote cardiovascular health.
- The KY Department of Education (KDE) will coordinate with KDPH staff and the CVH Coalition to strengthen and expand their capacity to plan, implement and evaluate strategies that improve cardiovascular health through the KDE Enhanced School Health Project.
- The Jefferson County Health Department will implement a Cardiovascular Health Program aimed at improving cardiovascular health of the African American community in their county through environmental and policy change. Some specific action steps will include:
  - The Health Data Branch, using BRFSS data, will analyze prevalence of overweight by sex, race and region in order to more accurately target efforts for intervention.
  - The KDE will integrate nutrition and physical activity materials and strategies into all curricula for each grade level of students.
  - The KDE will work through the nutrition programs in schools to increase students' consumption of fruits and vegetables to a minimum of five per day.

- 1.2. To increase to at least 50 percent the proportion of Kentuckians ages 18 and over who engage regularly in physical activity for at least 20 minutes 3 or more times per week.**

**Baseline 1998:** 30 percent of Kentucky respondents to the BRFSS engaged regularly in physical activity for at least 20 minutes 3 or more times per week.



**Target Setting Method:** This objective was adapted from *Healthy Kentuckians 2000* objectives, reflecting current rates of ethnicity, sex and aging of the population, as well as efforts to reduce disparities.

**Data Source:** The Kentucky BRFSS was used to determine the proportion of Kentuckians engaging in a sedentary lifestyle in 1994, and 1996 through 1998. (1995 data not available).

**Implementation Strategy:**

- Implement the work plan specified in the KDPH Cardiovascular Health Program grant application, as described above.
- The Health Data Branch will analyze prevalence of sedentary lifestyle by race, sex and region in order to more accurately target efforts for intervention.
- The Governor’s Council on Physical Activity, the KDPH and the KDE will work together to hold a Physical Activity Summit annually. The purpose of the summit is to stimulate the development of communities to encourage physical activity.
- The American Heart Association will sponsor American Heart Walks at several locations throughout the state.
- To target older adults:
  - Include weight lifting as a part of everyday functional activities through Senior Citizen programs.
  - Include weight lifting as a part of the Bluegrass State Games especially for Seniors.
  - Develop a weight lifting component of the Pacesetters Walking Program.

**1.3. To increase to at least 50 percent the proportion of overweight people ages 18 and over who have adopted sound dietary practices combined with regular physical activity to attain an appropriate body weight.**

**Baseline 1996:** 23.6 percent of overweight men and 27.01 percent of overweight women ages 18 and over had adopted sound dietary practices combined with regular physical activity to attain an appropriate body weight.

**Target Setting Method:** This objective was adapted from *Healthy Kentuckians 2000* objectives, reflecting current rates of ethnicity, sex and aging of the population, as well as efforts to reduce disparities.

**Data Source:** Kentucky BRFSS data were used to determine the proportion of overweight adults who combined sound dietary practices with regular physical activity to attain an appropriate body weight during the years between 1991 and 1996.

**Implementation Strategy:**

- Implement the work plan specified in the KDPH Request for Funding under CDC Program Announcement 98084. Because overweight and sedentary lifestyle are both risk factors for cardiovascular disease, many initiatives of this program will address proper nutrition and regular physical activity.
- All action steps listed for objectives 1.1 and 1.2 above will contribute to this objective as well.
- The KDPH will implement the Five-A-Day program which is five or more daily servings of fruits or vegetables a day.
- The KDPH will provide body composition analysis and counseling at the Kentucky State Fair annually.
- The KDE will increase the number of consolidated health education plans that include information about sound nutrition and physical activity.

**1.4. To increase to at least 20 percent the proportion of young people in grades K – 12 who engage in moderate physical activity for at least 30 minutes on five or more of the previous seven days.**

**Baseline 1997:** 18.1 percent of Kentuckians in grades 9-12 engaged in moderate physical activity for at least 30 minutes on five or more of the previous seven days. No baseline available for grades K through 8.

**Target Setting Method:** This objective was adapted from the *Healthy People 2010* document. The national baseline figure was 21 percent of young people in grades 9 through 12 in 1995. The target figure of 30 percent assumes 9 percent improvement nationally. In 1997, 18.1 percent of young Kentuckians in grades 9-12 engaged in moderate physical activity for at least 30 minutes on five or more

of the previous seven days. A nine-percent increase would result in 19.7 percent of young Kentuckians meeting this criterion.

**Data Source:** Kentucky Youth Risk Behavior Surveillance (YRBS)

**Implementation Strategy:**

- Use community assessments performed by local health departments and research performed by the University of Kentucky in the course of implementing the work plan specified in the KDPH Cardiovascular Health Program grant application to identify barriers to increased levels of moderate activity among Kentucky youth.
- Analyze the KY YRBSS data and additional data gathered through community assessments and the University of Kentucky research by sex, race, and region to more effectively target efforts for intervention.
- Encourage schools to have sports and physical education activities daily for every child four or five days a week.
- Partner with public and private, for-profit and non-profit related organizations to affect policy and environment changes to encourage an increase in frequent, moderate physical activity among Kentuckians in grades K-12.

The most recent Kentucky YRBS data show that 59.7 percent of Kentucky youths engage in vigorous physical activity on 3 out of 7 days, but only 18.1 percent engage in moderate physical activity such as riding a bike or walking, on 5 out of 7 days. Vigorous activity was described in the KY YRBSS as activity that made students sweat and breathe hard for at least 20 minutes, such as that involved in playing sports. This information is particularly important when one reflects that it is moderate physical activities, such as biking and walking, that individuals tend to carry into adulthood. Therefore, if moderate physical activity can be integrated into the lifestyles of Kentucky youth, a more active and healthier aging population may result.

- 1.5. (Developmental) Increase the proportion of the state’s public and private elementary, middle/junior high, and senior high schools that provide access to their physical activity spaces and facilities for young people and adults outside of normal school hours. (i.e., before and after the school day, on weekends, and during summer and other vacations.)**

**Potential Data Source:** No data base exists concerning the proportion of Kentucky schools that provide access to their physical activity spaces and facilities for young people and adults outside of normal school hours.

### **Implementation Strategy:**

- Develop a database to determine the proportion of KY schools that provide access to their physical activity spaces and facilities to young people and/or adults outside of normal school hours.
- Analyze the resulting data by region and compare it with data gathered through the community assessments, KY YRBS and research conducted by the University of Kentucky through contract with KDPH in order to more effectively target efforts to increase access to school physical activity spaces and facilities.
- Partner with public and private, for-profit and non-profit organizations to increase the proportion of KY schools that provide access to their physical activity spaces and facilities for young people and adults outside of normal school hours.

The relatively rural nature of many Kentucky counties limits possibilities for biking and walking as modes of transportation for young people. Many young Kentuckians ride buses or travel by car many miles on county roads to reach school and attend practice for team sports. It would not be practical for them to walk or bicycle to these areas. As farming becomes increasingly mechanized and fewer households earn at least part of their livelihood from farming activities, the physical activity associated with agricultural work is reduced among young people. The physical activity associated with playing a sport or attending physical education classes in school may be the only significant physical activity in which many Kentucky youths engage. Making school facilities available to students and their parents after regular school hours would increase opportunities for additional moderate and vigorous activity for students and parents, as well as encourage students and parents to participate in activities together.

### **1.6. (Developmental) Increase the proportion of Kentucky worksites with 50 or more employees offering employer-sponsored physical activity and fitness programs.**

**Potential Data Source:** No data sources exist concerning the percentage of Kentucky worksites offering employer-sponsored physical activity and fitness programs.

### **Implementation Strategy:**

- Develop a database concerning the proportion of worksites with 50 or more employees that offer employer-sponsored physical activity and fitness programs. This data will be gathered in the course of developing the Cardiovascular Health Plan, as described in the KDPH Cardiovascular Health Program grant application.
- Analyze the data in order to target intervention efforts more effectively.

- Partner with public and private, profit and nonprofit organizations to increase the proportion of worksites with more than 50 employees that offer employer-sponsored physical activity and fitness programs.

As stated in the *Healthy People 2010* Objectives document, worksite fitness programs have been shown to have at least short-term effectiveness in increasing the physical activity and fitness of program participants. In addition, worksite fitness programs are proving themselves to be cost effective for employers. Some benefits to employers may include reduced employer costs for insurance premiums, disability benefits and medical expenses, increased productivity, reduced absenteeism, reduced employee turnover, improved morale, enhanced company image and enhanced recruitment.

**1.7. (Developmental) Increase the proportion of primary and allied health care providers who routinely assess and counsel their patients regarding their physical activity.**

**Potential Data Sources:** The Medicare system; Research conducted by the University of Kentucky through contract; Annual physician survey by Primary Care Branch, Department for Public Health.

**Implementation Strategy:**

- Develop a database concerning the proportion of primary and allied health care providers who routinely assess and counsel their patients about their physical activity.
- Analyze the resulting data by region, level of care, size and type of practice and other relevant criteria in order to more effectively target efforts to increase the proportions of primary and allied health care providers who routinely assess and counsel their patients regarding physical activity.
- Partner with public and private, profit and non-profit organizations to encourage primary and allied health care providers to routinely assess and counsel their patients regarding their physical activity.

As reported in the *Healthy People 2010* document, randomized clinical trials of physical activity counseling support the concept that providers can have an effect on patients' physical activity levels. Because of the potential benefit, the U.S. Preventive Services Task Force recommended that clinicians counsel all patients to engage in a program of regular physical activity appropriate to their health status and lifestyle. Nevertheless, the National Ambulatory Medical Care Survey, conducted in 1995, showed that only 22 percent of the patients 18 years of age and older who presented for a routine or general checkup that year were counseled about physical activity. Clearly, physicians and other health care professionals are viewed as reliable sources of information about physical activity in the role of health. The potential for improved health among Kentuckians

makes it worthwhile to encourage providers to assess and counsel patients regarding physical activity routinely.

### ***Contributors***

- Janet C. Luttrell, Division of Adult and Child Services, Department for Public Health, Chapter Coordinator
- Joseph T. Clark, Kentucky Department of Education
- Greg Lawther, MS, Division of Adult and Child Services, Department for Public Health
- Keena Miller, Kentucky Department of Education and Governors Commission on Physical Fitness
- Kim Sampson, American Heart Association
- Jackie Walters, MBA, RD, Division of Adult and Child Services, Department for Public Health