

# Public Health Data Watch

## Overweight and Obesity in King County

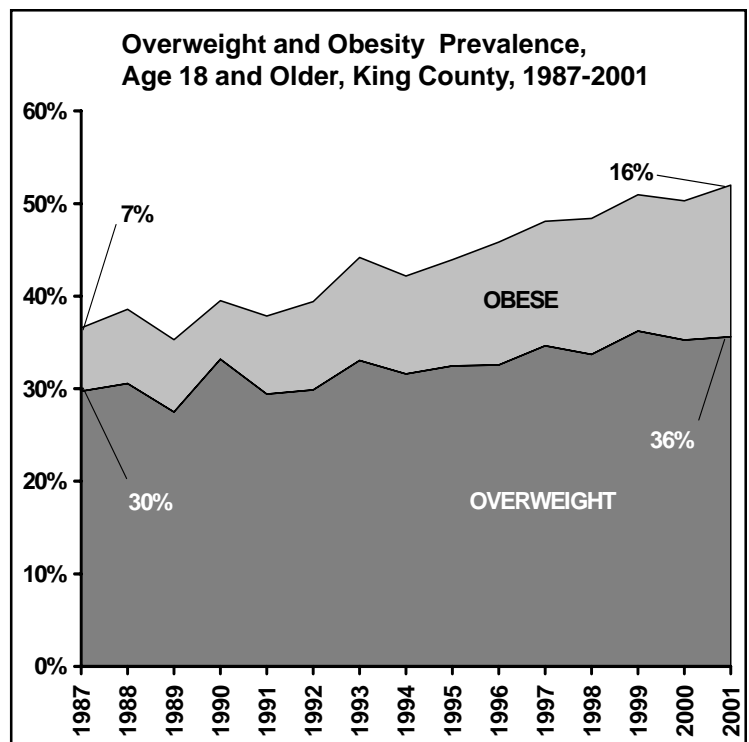
The percentage of King County residents who are overweight or obese has risen rapidly over the last 15 years. By 2001, one in every two King County adults were either overweight or obese. Obesity increases the risk of developing diabetes, hypertension (high blood pressure) and heart disease—some of the leading causes of premature death—and is related to a wide range of other diseases (see box on page 2). After smoking, excessive weight-for-height is the second leading cause of preventable death.

This issue of *Public Health Data Watch* details the magnitude of the increase and who is at greatest risk of overweight and obesity in King County, as well as the available local data on risk factors and health outcomes. We also summarize some possible explanations for how changes in the two major risk factors, excessive energy (i.e., calorie) intake and inadequate physical activity, are driving overweight and obesity prevalence upward. In addition, we provide resources for more information on the obesity problem and what steps people can take to address it.

We wish to emphasize that public health concern over unhealthy body weight is focused on preventing premature illness, disability and death, not on physical appearance. In fact, social pressure to conform to a stringent physical appearance “ideal” can result in eating disorders and other serious health risks in many individuals. Our findings on overweight and obesity follow.

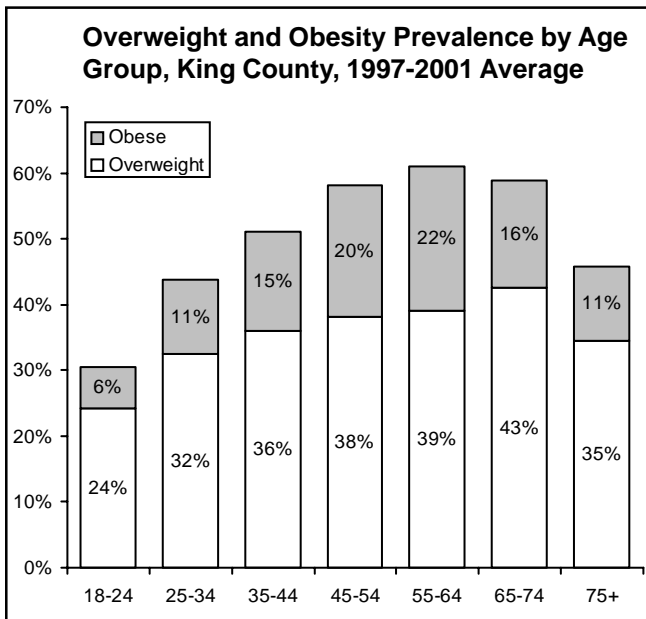
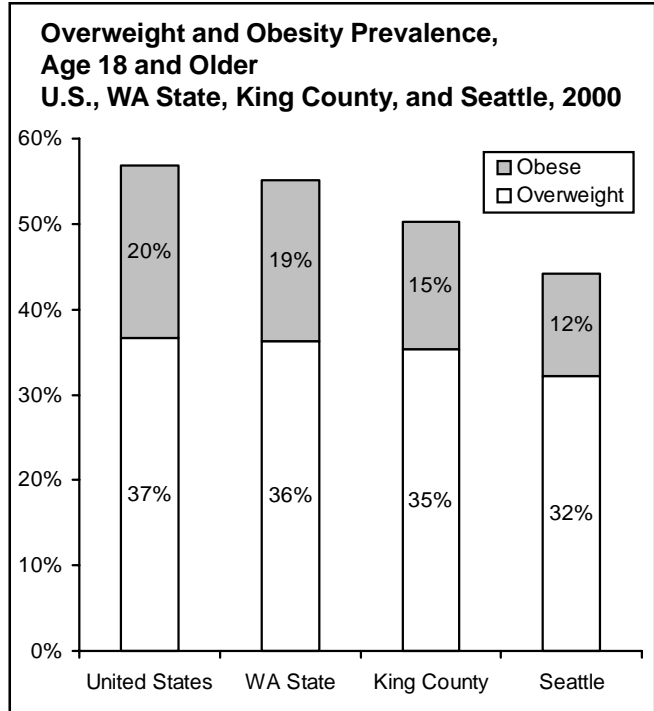
### Overweight and obesity have increased rapidly across the County's population.

- In 2001, 52% of King County residents age 18 and over (about 680,000 of the county's 1.3 million adults) were either overweight or obese. In 1987, the first year for which data are available, 37% (about 395,000) were overweight or obese.
- Between 1987 and 2001, the prevalence of obesity, which carries the greater health risk, more than doubled, rising from 7% to 16%. The number of obese adults rose even faster, from about 74,000 to about 204,000 because of the increase in the overall population.
- Obesity increased in all age groups and in both men and women (data not shown).
- The prevalence of overweight, while rising more slowly than obesity, increased from 30% (about 321,000 adults) to 36% (about 475,000).



**Although increasing, obesity is lower in Seattle and King County compared to all of Washington State and the U.S.**

- In 2000, the latest available year of U.S. data, the prevalence rate of obesity in King County (15%) was lower than the rate in the United States (20%) and Washington State as a whole (19%).
- The obesity rate in Seattle residents (12%) was lower than King County's rate.
- Obesity and overweight have also increased in Washington State and the U.S. as a whole between 1987 and 2001 (data not shown).



**The prevalence of obesity and overweight varies by age and gender.**

- Overweight and obesity peak between the ages of 45 and 64, where almost four in 10 King County residents are overweight and over two in 10 are obese (1997-2001 average).
- Prevalence rates are lowest in 18-24 year-olds, although about three in 10 people in this age group are either overweight or obese.
- Men aged 20 and older are more likely to be overweight or obese (61%) than women (51%), according to 1988-1994 national data from the National Health and Nutrition Examination Survey (NHANES). This survey takes respondents' physical height and weight measurements. An analysis of local telephone survey data, which is based on self-report, shows that the data probably often underestimate weight in female respondents and are not reported here.

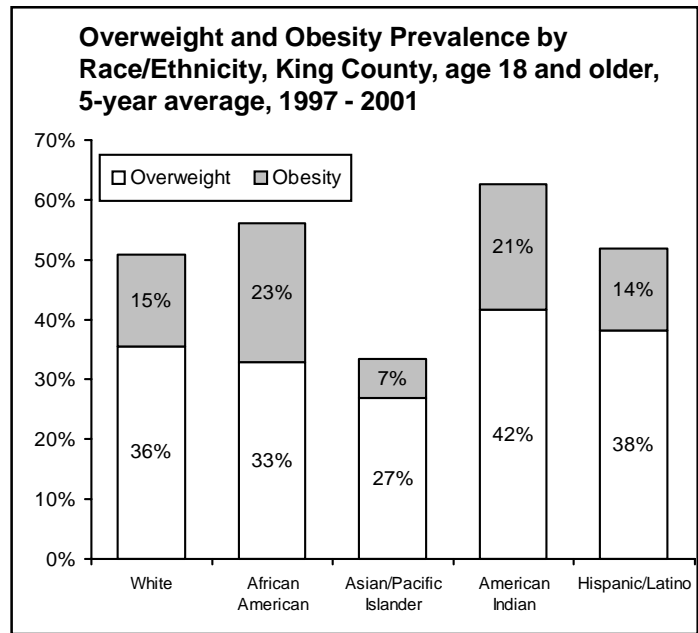
**Conditions Related to Obesity**

- |  |  |                     |
|--|--|---------------------|
| High blood cholesterol   | Complications of pregnancy               | Asthma              |
| Type 2 diabetes  | Menstrual irregularities                 | Sleep apnea         |
| Heart disease  | Hirsutism (presence of excess body hair) | Gallbladder disease |
| Stroke   | Stress incontinence                      | Depression          |
| Hypertension   | Increased surgical risk                  | Osteoarthritis      |
| Cancer (endometrial, colon, kidney, gallbladder, postmenopausal breast cancer) |  |                     |

Adapted from Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report, NIH No. 98-4083, National Institutes of Health, September 1998 [online at [http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_gdlns.pdf](http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf)]

**There are substantial disparities by race and income, especially for obesity.**

- Averaging 1997-2001, obesity prevalence in King County African Americans (23%) was one-and-a-half times the rate seen in whites (15%).
- Nationally, black, non-Hispanic female adults are at especially high risk of obesity, with a prevalence rate of 39% (1988-1994 NHANES data)—almost twice that of their male counterparts (21%). Mexican females, with a 36% obesity prevalence rate nationally, are also at especially elevated risk.
- While the obesity rate in Asians overall (7%) was less than one-half the rate seen in whites, a previous King County survey of five Asian groups (the Ethnicity and Health Survey, 1995-1996) found differences between the groups. Obesity and overweight prevalence was substantially higher in Filipino and Japanese people and lower in those of Chinese and Vietnamese heritage. Respondents of Korean heritage were about midway.



- The obesity prevalence in American Indian/Alaska Natives (20%) was equivalent to the rate seen in African Americans, while American Indians showed the highest overweight prevalence (42%). Because the number of American Indian/Alaska Native respondents was small, 10 years (1992-2001) of data were averaged.
- The prevalence of obesity was higher among lower income individuals. Averaged over 1997-2001, the prevalence of obesity among persons with an annual household income less than \$15,000 was 20%, compared to 14% among persons with a household income \$50,000 and over (data not shown).

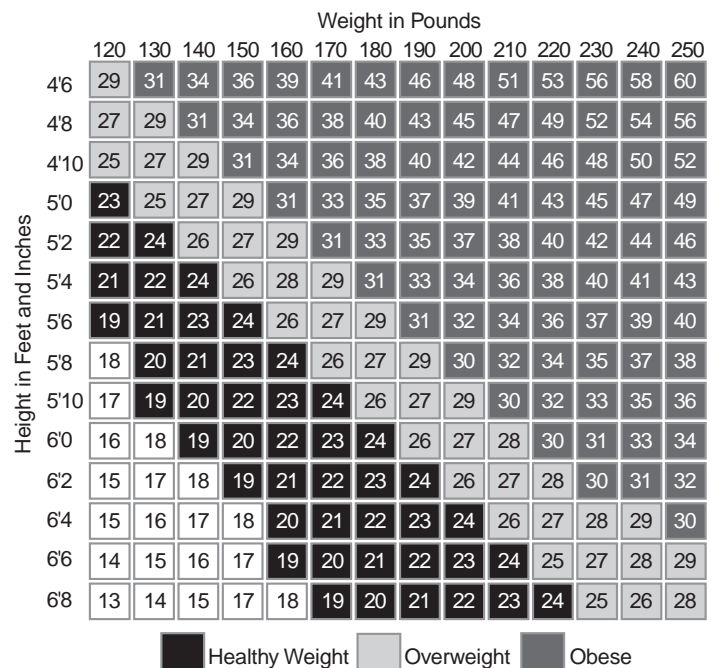
**How are the Conditions of Overweight and Obesity Defined and Measured?**

Overweight and obese are separate categories, defined in terms of weight and height, calculated in a *body mass index (BMI)*. For adults, a BMI of 25 to 29 is overweight and a BMI of 30 and over is obese.

For example, a 5-ft 8-in adult who weighs 170 lbs. has a BMI of 25.8, and is overweight. However, a 5-ft 8-in person who weighs 210 pounds has a BMI of 31.9 and is obese. To calculate your own BMI, an easy-to-use web-based BMI calculator and a BMI table can be found at <http://www.nhlbisupport.com/bmi/bmicalc.htm>. See the chart at right to check if you have a healthy BMI.

Local adult data on height and weight are collected in an anonymous random telephone survey of King County adults, the Behavioral Risk Factor Surveillance Survey (BRFSS). Adult data on overweight and obesity, physical activity, nutrition and health conditions are from the Washington State and King County BRFSS surveys, unless otherwise noted. Local data on children are from the Seattle Public Schools 1999 Teen Health Survey.

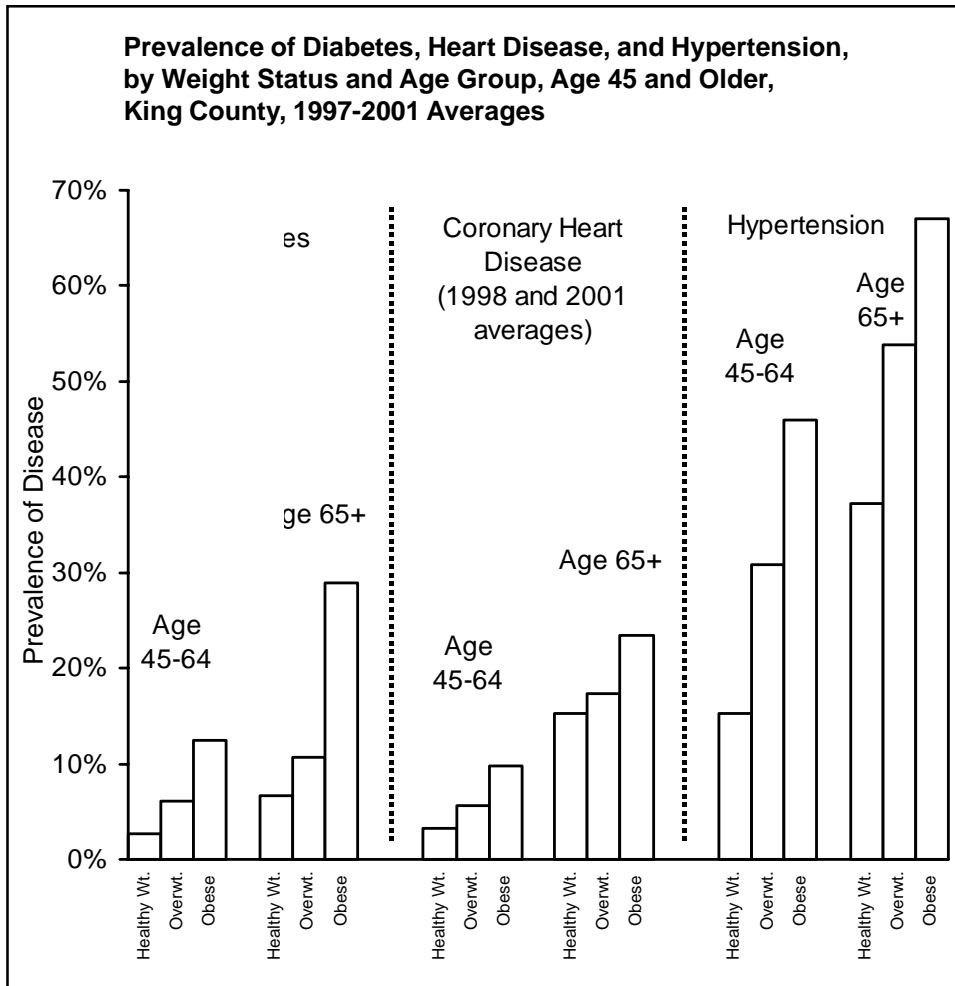
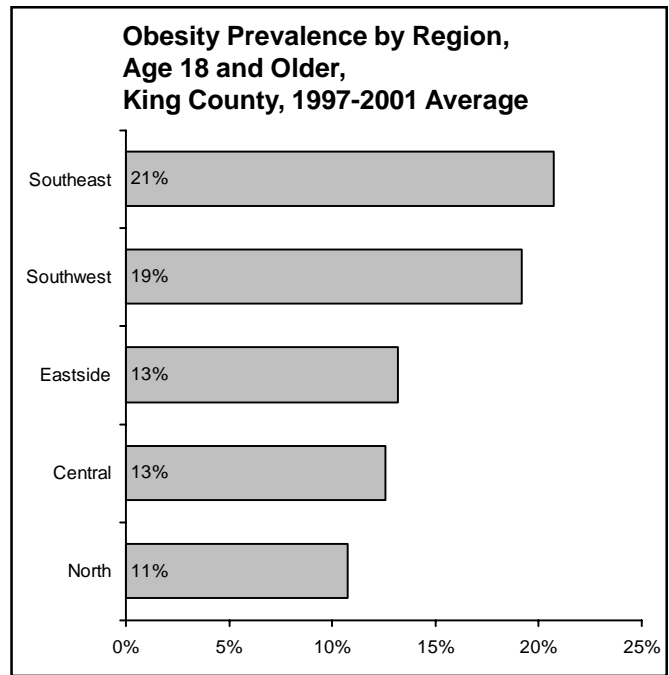
**Do you have a healthy body weight? Check your BMI in the chart below.**



Source: Overweight and Obesity, Virtual Office of the Surgeon General, [http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact\\_advice.htm](http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_advice.htm)

**There are significant differences in the adult obesity rates in different regions of King County.**

- The obesity rates in Southeast Region (which include Auburn, Kent, Renton, and Southeast County) and Southwest Region (which includes White Center/Skyway, Highline/Burien, Federal Way, and Vashon Island) were higher than for the East, Central and North Regions (1997-2001 average).
- In Southeast and Southwest King County, about two in 10 adults were obese, while slightly more than one in 10 were obese in the remaining regions.
- The prevalence of overweight ranged from 32% (North) to 36% (East, Southwest, Southeast), but the differences were not statistically significant. For the total of overweight plus obesity by region please see map on back cover.

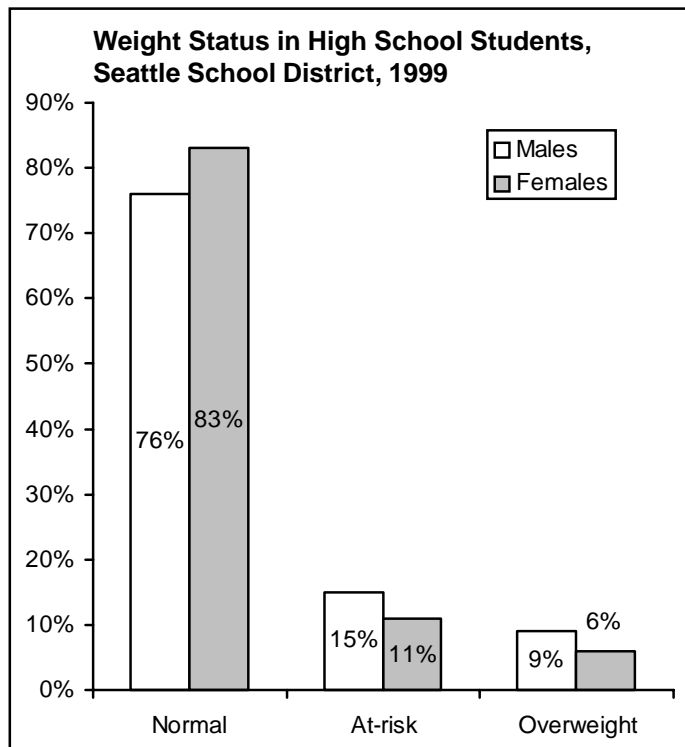
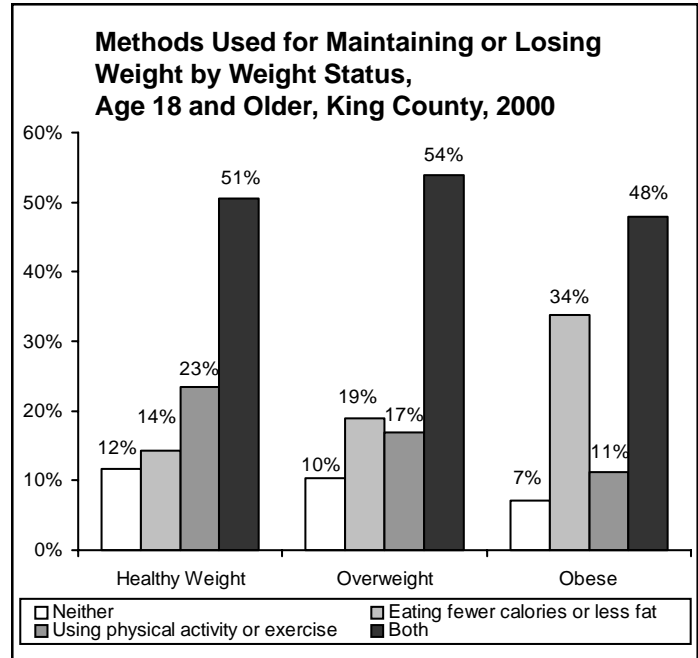


**Overweight and especially obesity are related to higher risk of diabetes, coronary heart disease, hypertension, and high cholesterol.**

- Among older adults age 65 and over, the prevalence of diabetes among those who were obese was more than 4 times the rate among those who were healthy weight. Obese and overweight older adults also had higher risk of coronary heart disease, hypertension, and high blood cholesterol (1997-2001 average) (data for cholesterol not shown).
- The increased risk of these diseases among obese and overweight persons was also observed among persons aged 45-64.

**One in two adults are using both physical activity and limiting calorie intake to prevent weight gain.**

- Among those who were either trying to lose weight or keep from gaining weight, about half were both eating less and being more physically active. This was the same in obese, overweight and healthy weight people (2000 data).
- People who were obese were more likely to rely on eating less alone (34%) and less likely to rely on physical activity alone (11%) to control weight than those in the other weight categories.



**Overweight in youth is also increasing.**

- Over the last 20 years, the percentage of U.S. children age 6-11 who are overweight has nearly doubled, while the percentage of adolescents who are overweight has increased almost three-fold. Overweight adolescents are at increased risk of becoming overweight adults (data not shown).
- There are little local data on the prevalence of overweight among children or adolescents. A 1999 survey of Seattle high school students found that 9% of males and 6% of females were overweight. No local data on the trend over time are currently available.
- The cutoff for overweight for children and adolescents is weight that is above the 95<sup>th</sup> percentile on sex- and age-specific growth charts from the Centers for Disease Control and Prevention. The "at-risk" category includes those in the 85<sup>th</sup> to 95<sup>th</sup> percentiles. There is no separate definition for obese in these age groups.

### What causes obesity and overweight and why are they increasing?

For each individual, body weight is the result of a combination of genetic, metabolic, behavioral, environmental, cultural, and socioeconomic influences. However, the vast majority of overweight and obesity is caused by excessive calorie consumption (eating too much) and/or inadequate physical activity. Although it has not been conclusively shown what has caused the increase, factors relating to nutrition, physical activity and the environment may be implicated, including:

#### **There has been an increase in energy intake.**

- Increase in size of typical food portions in fast food and other restaurants
- Increase in proportion of meals eaten away from home, where food may be higher in fat and calories and nutritional content is often not known to the consumer
- Dramatic increase in soft drink consumption (131% from 1977/1978 to 1994/1996), contributing to added sugar intake
- Increase in per capita consumption of dietary fats

#### **Physical activity is dropping or has leveled off.**

- Drop in physical activity as a daily part of high school education. Nationally, the proportion of high school students who attended physical education classes daily fell from 42% in 1991 to 29% in 1999
- Increase in time spent watching television, playing video games or using computers
- Increase in reliance on driving for transportation to work and other destinations; increasing automobile use overall, and decrease in walking or cycling to work
- Decrease in the number of physically demanding occupations and decrease in physical exertion required in many types of jobs

#### **The environment encourages unhealthy eating and discourages physical activity.**

- Intensive television advertising campaigns promoting food intake (from fast food chains and soft drink manufacturers)
- Longer working hours have left less time for preparing healthy meals at home, resulting in increased use of high fat/high calorie convenience foods
- Movement of residences and businesses to suburban communities and shopping malls, which are often not well served by public transportation or easily accessible to pedestrians and cyclists
- Residential development and zoning favoring cul-de-sac housing and discouraging mixed business-and-residential development, which increases distances traveled and reliance on automobiles
- Increased perception of crime in neighborhoods may make parents curtail outdoor activities for children and other family members

**Public Health Data Watch** monitors trends in key health indicators for King County. It is produced by the Epidemiology, Planning, and Evaluation Unit (EPE) of Public Health - Seattle & King County, with assistance from other Health Department staff. For this issue of Data Watch, Lin Song and David Solet were responsible for data analysis and write-up; Patricia Manuel, Cheza Collier and Gary Goldbaum wrote the recommendations, supplied the Information on Weight Control and Physical Activity and provided review; and Sue Spahr was responsible for layout and production. For additional copies of this report, please contact:

Public Health - Seattle & King County  
Epidemiology, Planning, and Evaluation Unit  
Wells Fargo Center, Suite 1200  
999 Third Avenue, Seattle, WA 98104-4039

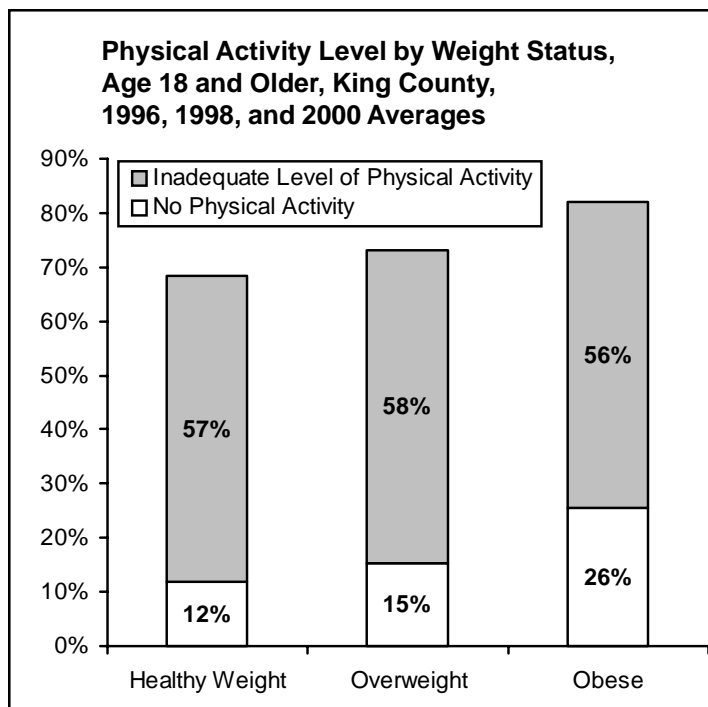
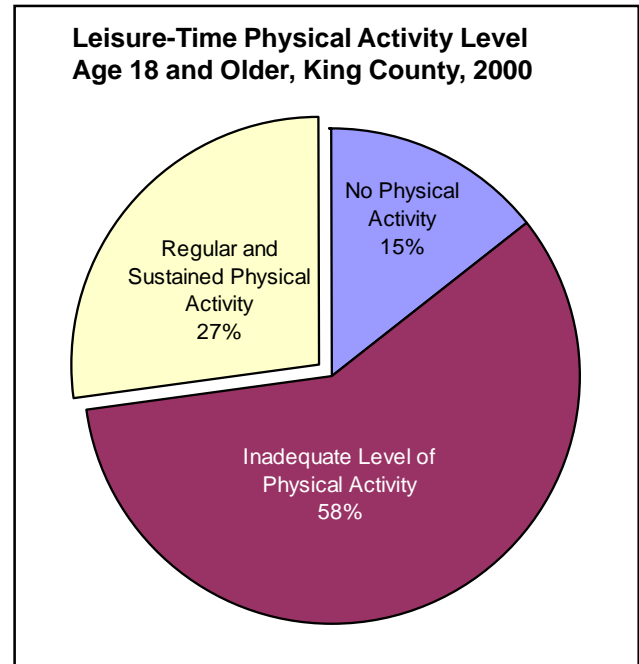
Phone: (206) 296-6817  
Fax: (206) 205-5314  
Email: [scott.jones@metrokc.gov](mailto:scott.jones@metrokc.gov)

**Note: We provide alternate formats for printed material upon request for people with special needs.**

## Related Factors: Physical Activity and Nutrition

### Most King County residents do not engage in recommended levels of physical activity.

- In their leisure time, over seven in 10 (73%) of county adults are either completely sedentary (15%) or are not physically active enough to meet guidelines from the Centers for Disease Control and Prevention (CDC) (58%).
- The CDC recommends 30 minutes of moderate physical activity at least five days a week. More may be needed to prevent weight gain, to lose weight or to maintain weight loss.
- In addition to being a strategy for controlling weight, regular physical activity reduces the risk of coronary heart disease, hypertension, and diabetes, improves mental health, increases muscle and bone strength, and helps to maintain the functional independence of older adults. People of all ages, both male and female, benefit from physical activity.
- Moderate physical activity can include walking, housework and gardening, as well as more active pursuits like cycling or jogging. Almost any form of regular physical activity can prevent heart disease and have other health benefits as mentioned above.

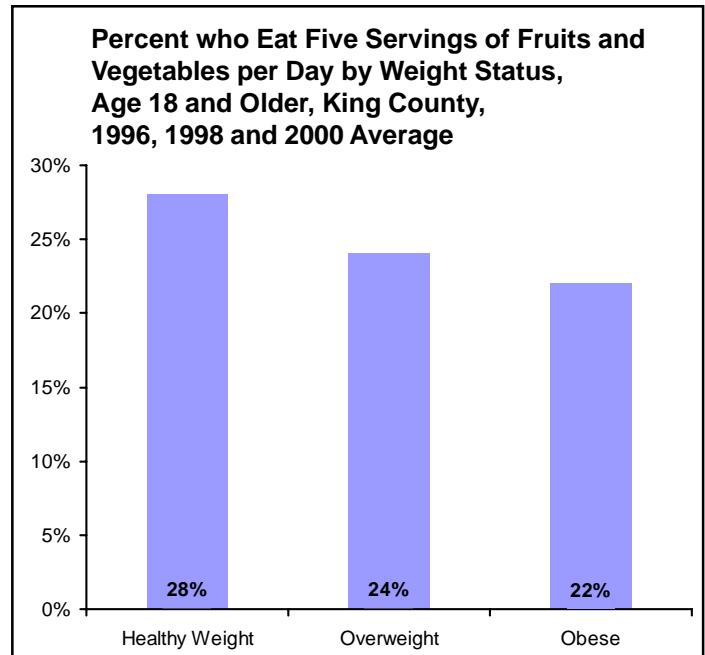


### People who are obese are more likely to be physically inactive than those with healthy weight.

- Physical inactivity is more than twice as common in obese individuals, compared to those of healthy weight. One in four obese people are completely sedentary (1996, 1998 and 2000 average).
- Physical inactivity is also more common in overweight compared to healthy weight people.

**People who are obese are less likely to have diets rich in fruits and vegetables.**

- Eating a recommended five servings of fruits and vegetables a day can help prevent overweight and obesity.
- Twenty-eight percent of adults with healthy weight reported eating five servings of fruits and vegetables per day, while only 22% of obese respondents said they met this guideline (1996, 1998 and 2000 average).
- There are little local data on calorie intake in adults and children.



**How is Physical Activity Level Defined and Measured?**

In this report, leisure time physical activity levels are classified as the following:

**No physical activity:** did not participate in any physical activity during the past month.

**No regular and sustained activity:** no physical activity or physical activities < 30 minutes per time, or < 5 times per week.

**Fast Facts on Overweight and Obesity**

- Between 1987 and 2001, the average weight of King County adults increased 11 pounds, although average height stayed the same. During this period, the average adult body mass index increased from healthy weight to overweight.
- Even a moderate weight gain of 10 to 20 pounds for a person of average height can increase the risk of death.
- An estimated 300,000 deaths per year in the U.S. are caused by obesity and lack of physical activity.
- In 1995, the national cost of obesity-related illness and death was estimated at \$99.2 billion—an average of about \$377 for each adult and child in the U.S., if spread equally across the population—including \$51.6 billion in direct medical costs. Indirect obesity costs of \$47.6 billion include lost work time and decreased productivity. The current costs may be greater, since the prevalence of obesity has risen since 1995.



## Key Recommendations

- To maintain a healthy weight, balance food intake with physical activity on a daily basis.
- Eat a total of five or more servings of fruits and vegetables each day.
- Maintain 30 minutes of moderate physical activity per day at least five days per week. Daily physical activity can be broken into 10-minute activity periods. Higher levels of physical activity may be required to lose weight.
- Increase consumption of high fiber, low fat, low sugar foods (for instance, whole grains, beans and low-fat or non-fat dairy foods).
- Be aware of large portion sizes, especially when drinking soda pop, eating convenience foods or dining out. (Avoid eating the entire serving if you feel you have had enough to eat.)
- Use physical activity workouts rather than eating high-calorie comfort foods to help manage stress and improve mood.
- If you are overweight and want to lose weight, you should decrease your energy intake *and* increase physical activity. To modify energy intake: decrease portion sizes and the fat content of foods and eliminate highly sugared foods and alcoholic beverages from your diet.
- Adopt lifelong healthy eating habits. Avoid fad diets and over-the-counter dietary supplements aimed at weight loss.
- Both children and adults can increase their physical activity by decreasing time spent in front of the TV or computer screen.
- Consult a registered dietitian if you have further nutrition questions about how to maintain or lose weight. This is particularly relevant for children with weight problems.

In *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2001*, the Surgeon General and other experts recommend many environmental changes. Some key recommendations are:

- Encourage the food industry to provide reasonable food and beverage portion sizes.
- Create community and work site environments that promote and support breastfeeding.
- Create and implement public policy related to the provision of safe and accessible sidewalks, walking and bicycle paths, and stairs.
- Ensure that school meals are healthy and that healthy foods are provided in vending machines (to which access should be restricted), school stores, and other venues within the school's control.
- Provide all children with quality daily physical education and daily recess periods for elementary school students.
- Provide extracurricular physical activity programs and encourage the use of school facilities for physical activity programs offered outside school hours.
- Establish work site exercise facilities or incentives for employees to join local fitness centers.

Many other recommendations from CDC for controlling weight and increasing physical activity can be found at <http://www.surgeongeneral.gov/topics/obesity/>.

## Information on Weight Control and Physical Activity

The following is a list of selected resources on weight control and physical activity.

- **Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion**

Centers for Disease Control and Prevention  
4770 Buford Highway, NE, Mail Stop K-46  
Atlanta, GA 30341-3724  
Phone: 770-488-5820  
Web address: <http://www.cdc.gov/nccdphp/dnpa>  
Email: [ccdinfo@cdc.gov](mailto:ccdinfo@cdc.gov)

Toll free, 24-hour faxed information line:  
1-888-CDC-4NRG or 1-888-232-4674

*Provides general information, guidelines, reports, program development information, additional resources.*

- The quarterly **Consumer Information Center Catalog** lists more than 200 helpful federal publications. For your free copy write

Consumer Information Catalog  
Pueblo, CO 81009  
Phone: 719-948-4000  
Web address: <http://www.pueblo.gsa.gov>

- **Aim for a Healthy Weight**

Web address: [http://www.nhlbi.nih.gov/health/public/heart/obesity/lose\\_wt/index.htm](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/index.htm)

*If you need to lose weight or if you need help to maintain your current weight, the tools on this National Institutes of Health site can help you get started.*

- **Active at Any Size**

Web address: <http://www.niddk.nih.gov/health/nutrit/activeatanysize/active.html>

*The Weight Control Information Network provides suggested physical activities appropriate for a large person.*

- **The Center for Weight and Health, UC Berkeley**

*Provides policy, advocacy and action resources for physical activity, nutrition, and health promotion in schools and communities.*

Web address: <http://www.cnr.berkeley.edu/cwh/resources/policytools.shtml>

- **American Obesity Association**

Phone: 800-98-OBESE  
Web address: <http://www.obesity.org/>

*This non-profit organization educates the public about obesity and its role in causing illness and unnecessary deaths.*

- **Shape Up America**

Web address: <http://www.shapeup.org>

*An interactive site providing information regarding safe weight management, healthy eating, increased activity and physical fitness.*

- **Weight Control Information Network**

Phone: 301-984-7378 or 1-800-WIN-8098  
Web address: <http://www.niddk.nih.gov/health/nutrit/win.htm>

*The Weight control Information Network (National Institutes of Health) provides science-based information on obesity, weight control, and nutrition.*

- **Sisters Together: Move More, Eat Better**

Web address: <http://www.niddk.nih.gov/health/nutrit/sisters/sisters.htm>

*Weight Control Information Network's program encourages black women to maintain their weight by increasing their physical activity and eating healthy foods.*

- **President's Council on Physical Fitness and Sports (PCPFS)**

Department W  
200 Independence Ave., SW  
Room 738-H  
Washington, D.C. 20201-0004  
Phone: 202-690-9000  
Web address: <http://www.fitness.gov>

*Assisted by the U.S. Public Health Service, the PCPFS advises the President and the Secretary of Health and Human Services on how to encourage more Americans to be physically fit and active.*

# Public Health – Seattle & King County Programs & Information

- **SNAC (Seattle Nutrition Action Consortium)**

Contact: Brenda Wolsey 206-205-5199

*Community-based nutrition education program, including cooking/tasting food demonstrations, serving low-income families and students.*

- **Maternity Support Services/Women, Infants and Children (WIC)**

Contact: WIC Office 206-296-4786

*Nutritionists, social workers and nurses provide education, counseling and community linkage to pregnant and breastfeeding women and children under age 5. WIC (Supplemental Nutrition Program for Women, Infants and Children) provides WIC checks for healthy foods.*

- **Healthy Eating For Healthy Aging (HEHA)**

Contact: Patricia Manuel 206-205-7369

*Senior nutrition education program, including "Come Taste!" cooking/tasting food demonstrations, for low income King County residents 40 and older.*

- **Lake Forest Park - City Parks, Open Spaces & Walking Routes**

Contact: Frances Green 206-296-4959

*This brochure was created to promote physical activity as a way to prevent disease and improve the city's community health. The work was accomplished through a collaboration between Public Health - Seattle & King County, the city of Lake Forest Park Parks and Recreation Commission, local citizens, and the Lake Forest Park Transportation Committee. The brochure displays low to moderately difficult walking routes within the city.*

## Other Resources and Projects

- **Land Use and Transportation Impacts on Air Quality and Health Study: Making Urban Design, Transportation and Health Connections.**

Contact: Don Ding or Karen Wolf, Office of Regional Policy and Planning, 206/296-6550 or 206/205-0704

*Many forms of urban development, especially sprawl, can work against physical activity such as walking and other forms of exercising. This King County project will pilot SmartGrowth strategies in a variety of King County communities to encourage development of local environments that encourage physical activity.*

- **The Northwest Obesity Prevention Project**

*Established to coordinate regional public health efforts to promote healthy weights. The Project maintains a web site with information from conferences and forums it has convened and links to other resources.*

Contact: Donna Johnson, Ph.D.

Email: [djohn@u.washington.edu](mailto:djohn@u.washington.edu)

Phone: 206-685-1068

Web address: <http://depts.washington.edu/obesity>

- **National Park Service**

909 First Avenue, 5<sup>th</sup> Floor

Seattle, WA 98104

Phone: 206-220-4113

*Provides information about National Parks, trails, facilities.*

- **King County Park System**

2040 – 84<sup>th</sup> Avenue SE

Mercer Island, WA 98040

Phone: 206-296-4232

Web address: <http://www.metrokc.gov/parks>

*Provides information about King County parks, trails, hours of operation, closures.*

- **Seattle Parks and Recreation**

100 Dexter Avenue North

Seattle, WA. 98109

Phone: 206-684-4075

*Provides information about Seattle city parks, hours of operation, recreation programs.*

- **For older adults:**

Phone: 1-888-4ELDERS or 1-888-435-3377

*Provides information and assistance for a wide variety of concerns of older adults, including physical activity resources.*

# Public Health Data Watch



Public Health - Seattle & King County  
Epidemiology, Planning, and Evaluation Unit  
999 Third Avenue, Suite 1200  
Seattle, WA 98104-4039

This issue of *Public Health Data Watch* reports on overweight and obesity in King County residents. Overweight and obesity are a major cause of premature illness, disability and death. In the last 15 years, obesity has more than doubled while overweight has increased by one-fifth. Currently, one in two King County adults (about 680,000 people) are either overweight or obese. National data indicate that weight problems in children and adolescents have also risen dramatically. In 1999, about one in five Seattle school children were above normal weight.

Overweight and obesity are more common in those aged 45 to 64, and African Americans and American Indians are at elevated risk. Overweight and obesity also vary by region (see map at right).

The increase is probably due to complex changes in individual lifestyle choices and environmental pressures. Key Public Health recommendations on controlling weight include: all residents, regardless of weight status, should balance food intake with physical activity on a daily basis, eat a total of five servings of fruits and vegetables per day, and maintain 30 minutes of moderate physical activity per day.

**Prevalence of Overweight and Obesity by Region, Age 18 and Older, King County, 1997-2001 Average**

