



# BEHAVIORS: THE ACTUAL LEADING CAUSES OF DEATH

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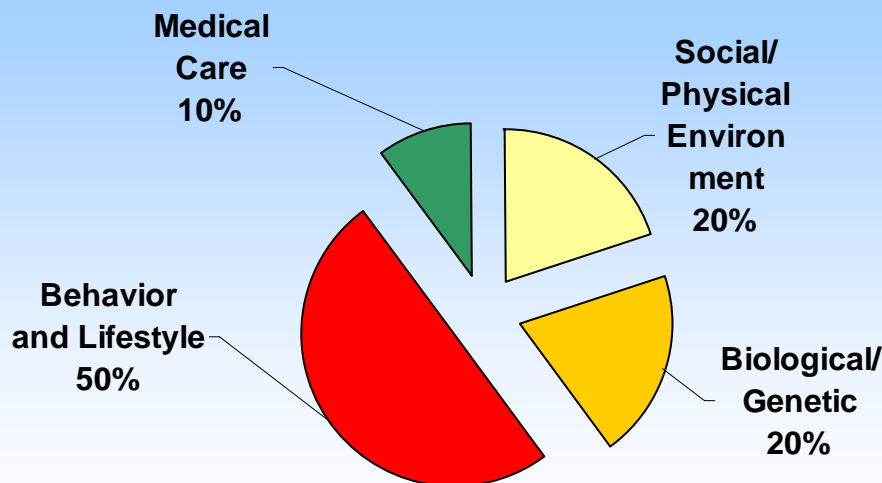
## BEHAVIORAL RISK FACTORS

In the landmark article, Actual Causes of Death in the United States, by McGinnis and Foege (1993), the authors identify and describe major modifiable factors, mostly related to lifestyle and behavior, that contribute to death. The authors term these factors “actual causes of death.”<sup>1</sup> In a 2004 article, Actual Causes of Death in the United States, 2000, Moka-dad et al. identified and quantified the leading causes of mortality in the U.S. The top three causes were 1) tobacco, 2) poor diet and physical inactivity, and 3) alcohol consumption.<sup>2</sup> These studies followed the 1979

Surgeon General’s Report, Healthy People, calling for a second public health revolution focusing on behavior and lifestyle.<sup>3</sup> This report analyzed the 10 leading causes of death, in 1976, and suggested that as much as half of U.S. mortality was due to unhealthy behavior or lifestyle; 20% to environmental factors; 20% to human biological/genetic factors; and 10% to inadequacies in health care (see Figure 1).<sup>3</sup> Behavior remains the dominant cause of premature death and disability. Today, Chronic diseases—such as cardiovascular disease (primarily heart disease and

stroke), cancer, and diabetes—are among the most prevalent, costly, and preventable of all health problems and account for 7 out of every 10 deaths in the United States.<sup>4</sup> Chronic diseases are mostly preventable but can be difficult to cure since the risk factors associated with developing chronic conditions are primarily linked to lifestyle behaviors. Health-damaging behaviors such as tobacco use, lack of physical activity and poor nutrition are major contributors to heart disease, diabetes, and cancer, our nation’s leading killers.<sup>5</sup> In addition, the medical care costs of people with chronic diseases account for more than 75% of the nation’s \$2 trillion medical care costs.<sup>4</sup>

**Figure 1 Factors that Contribute to Mortality**



Promoting healthy behavior choices and lifestyles, through education and community policies and practices, is essential to reducing the burden of chronic diseases.<sup>5</sup> Other recommendations to prevent chronic disease and related risk factors include increased recognition and understanding of the role that community networks, physical and social environments, and public policy all play in fostering healthier lifestyles. Using a broad approach to achieving and supporting healthier behaviors in individuals, which requires

*(continued on page 6)*

Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention (1979), page 1-9.



## OVERVIEW OF THE BRFSS AND PURPOSE OF STUDY

This is the second of three studies by the Center for Health Statistics showcasing data from the 2007 Duval County Behavioral Risk Factor Surveillance System. The first study, chronic disease morbidity, was released in November, 2008. This second study highlights primary prevention and risk behaviors and the third study will emphasize secondary and tertiary prevention, such as screenings for diseases and management of diseases. The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based telephone survey administered to adults age 18 and over to assess various aspects of health related behavior including health risk behaviors, preventive

health practices, and health care access primarily related to chronic disease and injury. People's behaviors can predict health outcomes as well as give insight into the attitudes, knowledge, and skills that play a part in influencing behavior. Behavioral factors have long been acknowledged as principle contributors to health throughout history. The choices people make related to their health play a significant role in premature morbidity and mortality, particularly chronic diseases, and impact the health care system substantially.

The BRFSS was established by the Centers for Disease Control and Prevention

(CDC) in 1984 and is currently administered in all 50 states. In addition, the CDC as well as some state health departments collect county level data. The BRFSS is the primary data source for all adult behaviors related to health. States use BRFSS data primarily to identify emerging health problems, establish and track health objectives, evaluate programs, and develop and evaluate public health policy. The BRFSS includes a set of core questions, modules that rotate between odd and even years, and state and county added questions.

The Florida Department of Health, with technical assistance from the Centers for Disease Control, collected county level data in 2007,

the first since the initial effort in 2002. The 2007 county-level survey was developed in collaboration with state and local representatives and was designed to meet the individual needs of the counties by offering options to increase sample size and to add questions. With input and funding from the Duval County Health Department, in 2007, the Florida Department of Health collected a sample of 1,815 in Duval County yielding the largest local sample ever conducted in the state of Florida. Data from Duval County were weighted in order to remove bias in the sample. The data set is specifically weighted by density status, geographic region, number of residential telephone numbers, number of adults, age, gender, race/ethnicity, and health zone.

## REPORTING DATA

Health-related data is reported using various measures, such as percentages, rates per 1,000, rates per 100,000, etc. Common morbidity measures such as sexually transmitted diseases, breast cancer incidence, and HIV incidence, as well as mortality measures such as heart disease death, unintentional injury death, and diabetes deaths are reported using a rate per 100,000 population. In addition, measures around infant mortality and infant related indicators are reported as a rate per 1,000 or a percentage. BRFSS reports percentages of people who respond to a

question, typically, those that respond *yes* or *no* to a question. All missing val-

ues or those answering *refused* or *don't know* are considered missing in the analysis. When observing BRFSS morbidity data presented in this report and future re-

ports, it is important to remember the translation from percentages to rates in making comparisons of disease indicators (see Table 1).

Table 1	Indicator	Percentage	Rate Per 100,000
	Adults who are sedentary	23.5%	23,500
	Adults who meet moderate physical activity recommendations	32.0%	32,000
	Adults who are overweight or obese	62.2%	62,200
	Adults who consume at least 5 fruits and vegetables per day	23.9%	23,900
	Adults who are current smokers	21.6%	21,600
	Adults who engage in heavy or binge drinking	18.8%	18,800

# NUTRITION AND OVERWEIGHT

An unhealthy diet in addition to physical inactivity, can contribute to many chronic conditions and risk factors, such as diabetes, hypertension, heart disease, and obesity.<sup>1</sup> More than one third of U.S. adults and 16% of U.S. children are obese.<sup>2</sup> In the past 20 years, obesity rates among adults have risen significantly.<sup>1</sup> According to the BRFSS, 63% of U.S. adults are overweight or obese. Adults are considered overweight if they have a Body Mass Index (BMI) between 25.0 and 29.9. Adults are considered obese with a BMI 30.0 or above. BMI is determined from a person's height and weight.<sup>3</sup> Obesity has physical, psychological,

Table 2 Indicator	Duval County	Florida	U.S.
Percent of adults who consume at least five servings of fruits and vegetables a day	23.9%	26.2%	24.4%
Percent of adults who are overweight or obese	62.2%	62.1%	63%

Source: Behavioral Risk Factor Surveillance System, 2007

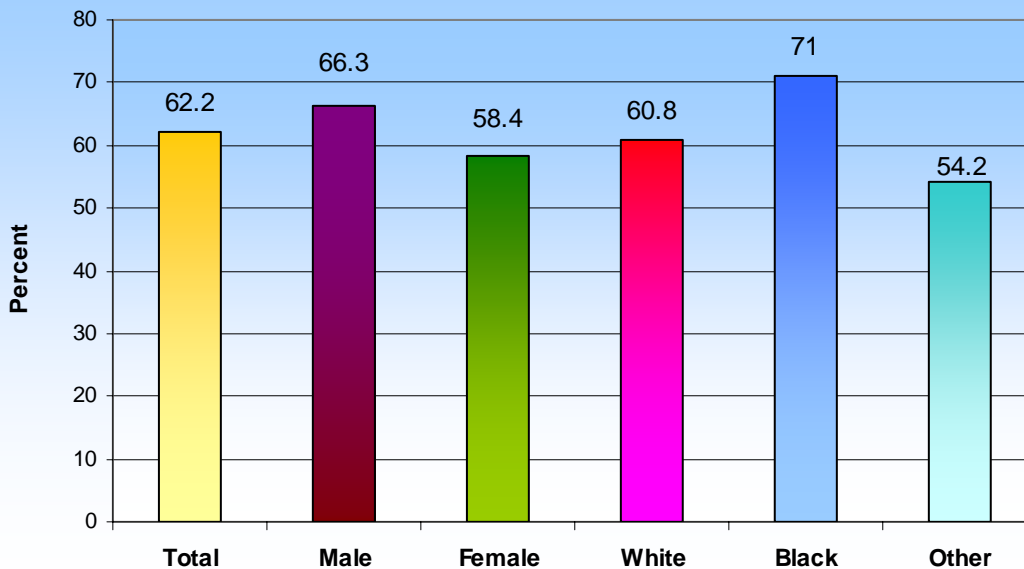
and social consequences in both adults and children. Obese children are more likely to have risk factors for chronic diseases or even develop chronic conditions such as diabetes than children who are not obese. The percentage of children who

are obese has approximately tripled since 1980. In addition, obesity is costly to our society. In 2000, obesity-related health care costs totaled an estimated \$117 billion for direct medical costs and \$56 billion for indirect costs.<sup>2</sup>

BRFSS data reveals 62.2% of Duval County adults are overweight or obese. This is similar to Florida and the U.S. (see Table 3). Males in Duval County are more likely to be overweight or obese than females and blacks are more likely to be overweight or obese than all other races (see Figure 2). As with gender and race, disparities are also noted geographically. Duval County residents residing in Health Zone 5 have the highest rate of overweight or obesity with 69.5% compared to 55.3% in Health Zone 2 (see Figure 3). Other data shows that 25.1% of Duval County residents had increased their body weight by 5 pounds within the past year. Blacks were more likely to have increased their body weight by 5 pounds in the past year with 38.0% compared to 20.2% of whites.

As mentioned earlier, an unhealthy diet contributes greatly to overweight and obesity. The benefits of fruits and vegetables is not  
*(continued on page 4)*

**Figure 2**  
**Adults Who are Overweight or Obese by Gender and Race, Duval County, 2007**



Source: Behavioral Risk Factor Surveillance System, 2007

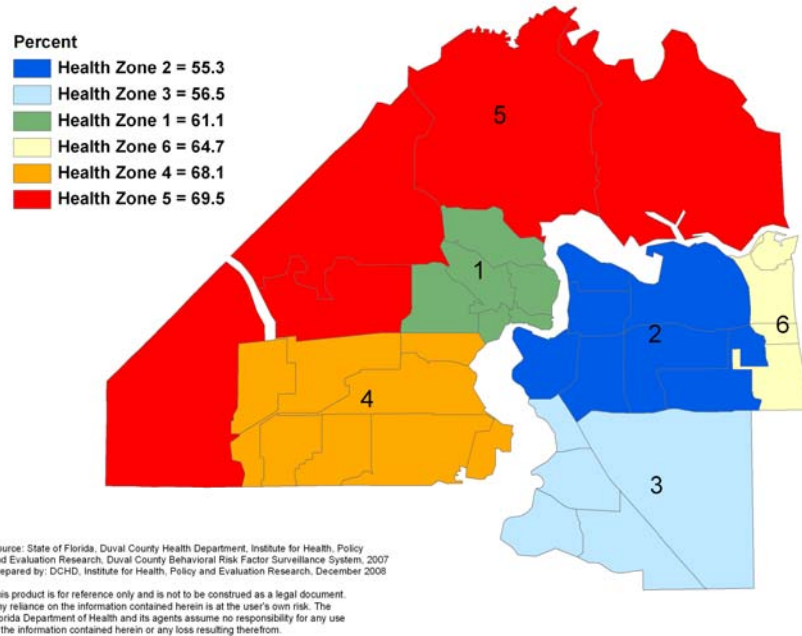
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2008

# NUTRITION AND OVERWEIGHT (CONTINUED FROM PAGE 3)

only associated with decreased risk or chronic diseases but because they are low in calories relative to volume, they are beneficial for weight management.<sup>4</sup> According to the U.S. Department of Agriculture, your daily fruit and vegetable needs depend on your calorie needs and calorie needs are determined by age, sex, and physical activity level.<sup>5</sup> The general recommendation for fruits and vegetables is to consume 5 a day. In general, a “healthy diet” emphasizes fruits, vegetables, whole grains and fat free milk and milk products; includes lean meats, poultry, fish, beans, eggs, and nuts; and is low in saturated fats, trans fats, cholesterol, salt and added sugars.<sup>5</sup>

BRFSS data results indicate that 23.9% of Duval County residents consume at least

**Figure 3** Percent of Adults Who Are Overweight or Obese by Health Zone, Duval County, 2007

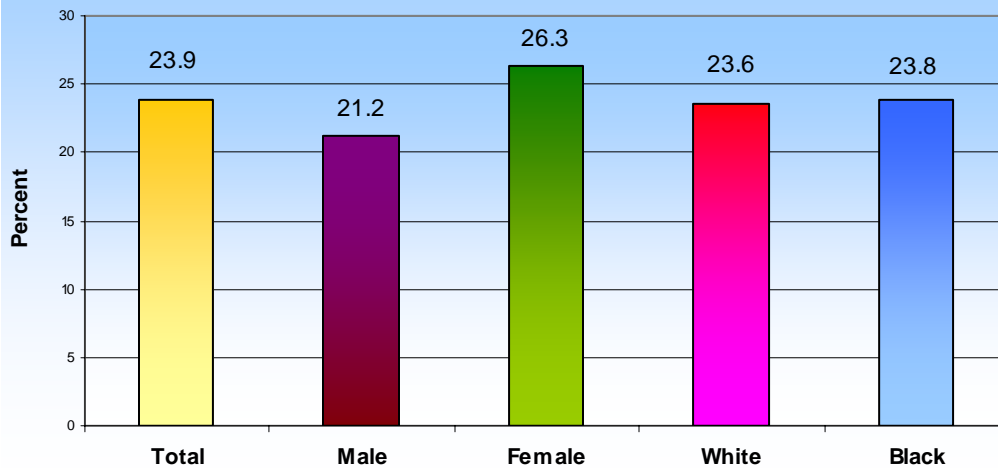


5 fruits and vegetables per day compared to 26.2 and 24.4 in Florida and the U.S., respectively (see Table 3). In addition, females

are more likely to consume at least 5 fruits and vegetables per day compared to males; however, there was not a notable difference

between black and white populations who consume fruits and vegetables daily (see Figure 4).

**Figure 4** Adults Who Consume at Least Five Servings of Fruits and Vegetables a Day by Gender and Race, Duval County, 2007



Source: Behavioral Risk Factor Surveillance System, 2007  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2008

**Sources:**

<sup>1</sup>Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Preventing Obesity and Chronic Diseases Through Good Nutrition and Physical Activity Factsheet.

<sup>2</sup>Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Obesity, Halting the Epidemic by Making Health Easier.

<sup>3</sup>[http://www.cdc.gov/nccdphp/dnpa/healthyweight/assessing/bmi/adult\\_BMI/about\\_adult\\_BMI.htm#Why](http://www.cdc.gov/nccdphp/dnpa/healthyweight/assessing/bmi/adult_BMI/about_adult_BMI.htm#Why)

<sup>4</sup>Morbidity and Mortality Weekly Report, Centers for Disease Control and Prevention, Fruits and Vegetable Consumption Among Adults—United States, 2005, March 16, 2007/56(10)|213-217.

<sup>5</sup>United States Department of Agriculture, <http://www.mypyramid.gov/>

# PHYSICAL ACTIVITY

Participation in physical activity results in a wide variety of health benefits. Two types of physical activity should be performed for optimal health improvement: aerobic activity and strength training. "Moderate activity" causes a small increase in breathing or heart rate for at least 10 minutes at a time compared to "vigorous activity" which causes a large increase in breathing or heart rate for the same amount of time. Brisk walking, bicycling, vacuuming, and gardening are examples of moderate activity whereas running, aerobics, and heavy yard work are examples of vigorous activity. Adults need a minimum of 150 minutes of moderate intensity aerobic activity weekly and separate muscle-

strengthening activity that works the major muscle groups at least 2 days a week. Vigorous activity can be substituted for moderate-intensity activity in half the time. Therefore, only 75 minutes of aerobic activity is needed weekly as long as it is of vigorous intensity. Furthermore, moderate and vigorous intensity activity can be combined and both can be done at 10 minute intervals for a positive effect. The overall weekly time spent on aerobic activity is proportional to the health benefits one receives. Muscle-strengthening activities include weight lifting, using resistance bands, yoga, etc.<sup>1</sup> By participating in physical activities one lowers the risk of: early death, stroke, high

Table 3 Indicator	Duval County	Florida	U.S.
Percent of adults who are sedentary	23.5%	25.4%	22.6%
Percent of adults who meet moderate physical activity recommendations	32%	34.6%	*

Source: Behavioral Risk Factor Surveillance System, 2007

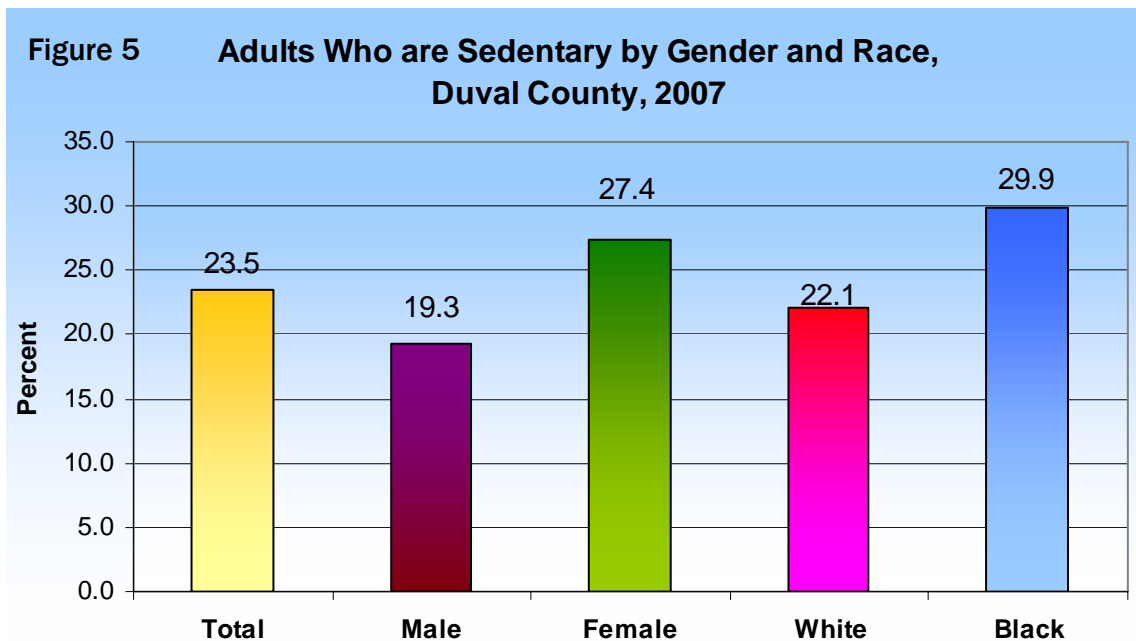
\*Calculated different than Florida and Duval County

blood pressure, heart disease, and colon and breast cancer. Weight loss, reduced depressive symptoms, and improved cognitive function are also benefits of physical activity.<sup>2</sup> If one does not participate in moderate or vigorous physical

activity they are said to be "sedentary." In Duval County, 23.5% of all adults are sedentary compared to 25.4% of adults in the state and 22.6% in the U.S. (see Table 3).

Over 27% of women were sedentary compared to 19.3% of

*(continued on page 6)*



Source: Behavioral Risk Factor Surveillance System, 2007

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## PHYSICAL ACTIVITY (CONTINUED FROM PAGE 5)

men (see Figure 5). The number of blacks who were sedentary was 35.3% higher than the same figure for whites. Additionally, activity decreased as age increased. Health Zone 1 had the highest percentage of adults reporting inactivity followed by Health Zone 5 and Health Zone 4. Residents of Health Zones 3 and 6 have the highest rates of participation in physical activities (see Figure 11). Nearly 65% of adults in Duval County are inactive at work. As one would expect, the results for those who are inactive at work are similar to the figures for overall inactivity or sedentary lifestyles as previously mentioned. Women were more likely to be inactive

at work than men with 71.3% compared to 58.9%. Whites had the highest percentage of inactivity at work followed by blacks and then Hispanics. Residents who had at least 4 years of a college education were 45% more likely to be inactive at work compared to those with a high school education and/or some college.

Only 32% of Duval County residents met moderate physical activity recommendations (see Figure 6). Alternatively, nearly 27% met vigorous physical activity recommendations. Although 33.1% of women compared to 30.8% of men met moderate physical activity recommendations, 32.8% of men compared to

21.6% of women met vigorous physical activity recommendations. More whites performed moderate physical activity compared to blacks or Hispanics. Similarly, more whites met vigorous physical activity recommendations followed by Hispanics and then blacks.

Sources:

- <sup>1</sup>Centers for Disease Control and Prevention. Physical Activity for Everyone. <http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html>
- <sup>2</sup>U.S. Department of Health and Human Services. At-A-Glance: A Fact Sheet for Professional. <http://www.health.gov/PAGuidelines/factSheetProf.aspx>

## BEHAVIORAL RISK FACTORS

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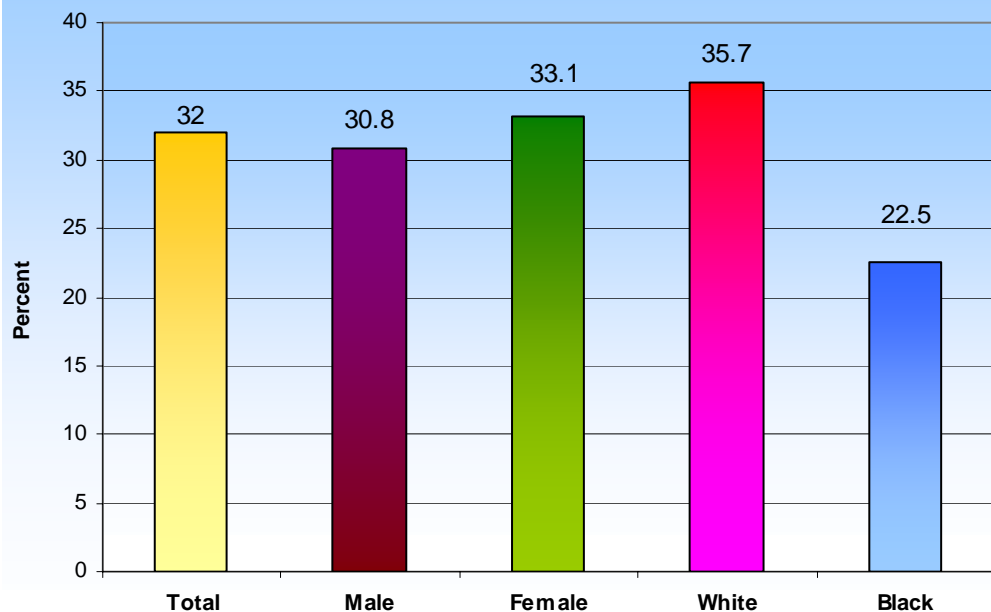
individual change, health care system redesign, as well as community, employer and payer support also helps prevent chronic disease.<sup>6</sup>

This report summarizes major lifestyle and behavioral factors that contribute to death and disability in Duval County. Some notable findings include: almost two-thirds of Duval County residents are overweight or obese, less than one-third of adults meet moderate physical activity recommendations, and almost one-quarter of residents are current smokers. In addition, this report highlights behavior by race, gender and geographic location.

Sources:

- <sup>1</sup>McGinnis, J.M., Foege, W.H. Actual causes of death in the United States. *JAMA*, 1993; 270: 2207-2212.
- <sup>2</sup>Mokdad, A.H., Marks, J.S., Stroup, D.F. et al. Actual causes of death in the United States, 2000. *JAMA*, 2004; 291 (10): 1238-1245.
- <sup>3</sup>Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention (1979), page 1-9.
- <sup>4</sup>National Center for Chronic Disease Prevention and Health Promotion, <http://www.cdc.gov/nccdphp/overview.htm>
- <sup>5</sup>The Burden of Chronic Diseases and Their Risk Factors: National and State Perspectives, Department of Health and Human Services, 2004, [http://www.cdc.gov/NCCDPHP/burdenbook2004/pdf/burden\\_book2004.pdf](http://www.cdc.gov/NCCDPHP/burdenbook2004/pdf/burden_book2004.pdf)
- <sup>6</sup>Institute for Clinical Systems Improvement (ICSI). Primary prevention of chronic disease risk factors. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Mar. p. 60.

**Figure 6 Adults Who Meet Moderate Physical Activity Recommendations by Gender and Race, Duval County, 2007**



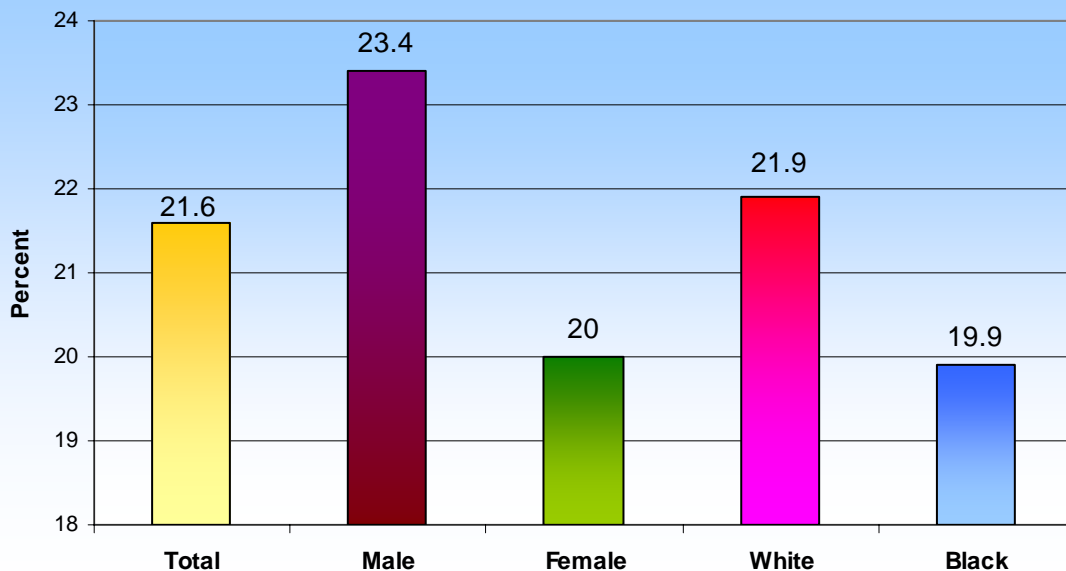
Source: Behavioral Risk Factor Surveillance System, 2007  
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2008

# TOBACCO AND ALCOHOL USE

## Tobacco Use

Approximately 45.3 million people in the U.S. engage in a behavior that is the leading causes of preventable death in the U.S.: cigarette smoking. Cigarette smoking is the cause of death for close to 20% of all adults. Nationally, 23.9% of men smoke and 18.0% of women smoke. American Indians and Alaskan Natives have the highest percentages of smoking followed by African Americans, whites, and Hispanics.<sup>1</sup> Cigarette smokers are at an increased risk for health problems compared to nonsmokers. Cigarette smokers are twice as likely to suffer from a stroke than nonsmokers, two to four times more likely to develop coronary heart disease, and more than ten times as likely to develop peripheral vascular disease (a nar-

**Figure 7**  
**Adults Who Are Current Smokers by Gender and Race, Duval County, 2007**



Source: Behavioral Risk Factor Surveillance System, 2007  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2008

rowing of blood vessels that carry blood to limbs, the stomach, and kidneys).<sup>2, 3</sup> The risk for several types of

cancer is also amplified for cigarette smokers compared to nonsmokers. Oral cancer, lung cancer, pancreatic can-

cer, lip cancer, and uterine cancer are some of the cancers that affect cigarette smokers at an unprecedented rate.<sup>2</sup> Not only are cigarette smokers at a higher risk for a wide variety of health problems, those subjected to secondhand smoke are too. Secondhand smoke is comprised of smoke exhaled from a person smoking, the smoke emitted by a lit cigarette, and related gases. Secondhand smoke has over 250 toxic chemicals in it, a fifth which are cancer causing. Nonsmoking adults subjected to secondhand smoke can develop lung cancer, heart disease, and are at an increased risk for heart attacks. Likewise, children subjected to secondhand smoke may

Table 4 Indicator	Duval County	Florida	U.S.
Percent of adults who are current smokers	21.6%	19.3%	19.8%
Percent of adults who are former smokers	23.8%	26.2%	24.6%
Percent of adults who engage in heavy or binge drinking	18.8%	16.2%	21%

Source: Behavioral Risk Factor Surveillance System, 2007

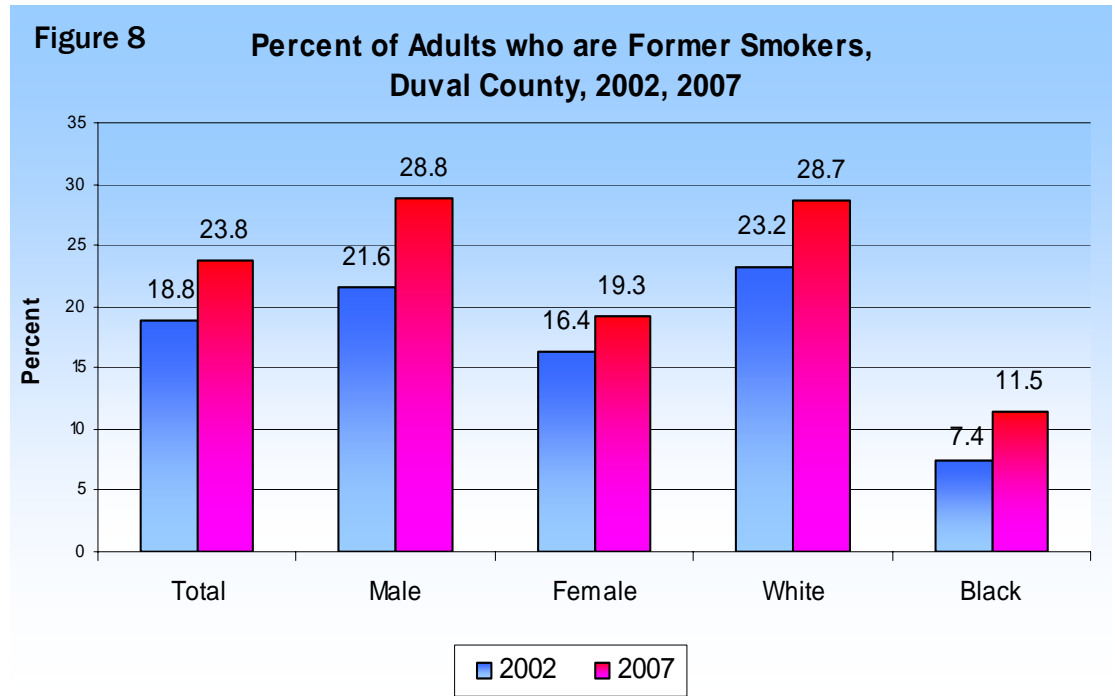
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# TOBACCO AND ALCOHOL USE (CONTINUED FROM PAGE 7)

develop respiratory problems, slow lung growth, asthma attacks, and ear problems. It is estimated over 126 million non-smoking Americans are exposed to secondhand smoke.<sup>4</sup> Smoking costs more than \$167 billion yearly for the loss of productivity and related medical expenses.<sup>5</sup>

Similar to the national figures, nearly 22% of Duval County residents currently smoke (see Table 4). Slightly more men than women smoke and unlike the national data, more whites smoke in Duval County than blacks (see Figure 7).

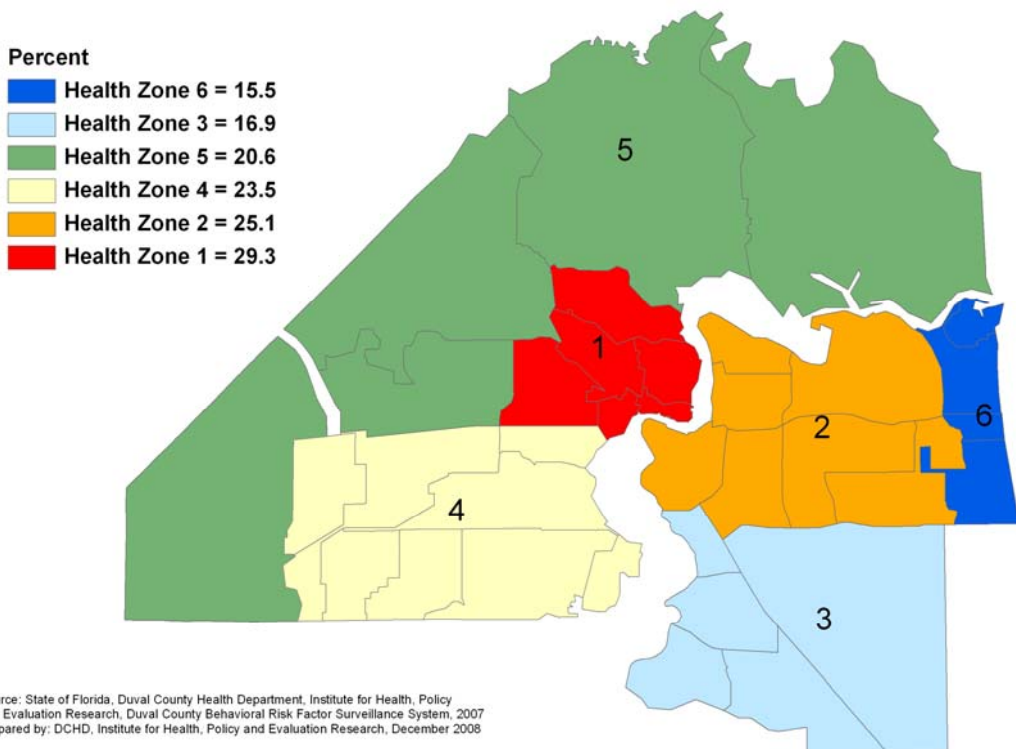
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Source: Behavioral Risk Factor Surveillance System, 2007

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**Figure 9** Percent of Adults Who Are Current Smokers by Health Zone, Duval County, 2007



Source: State of Florida, Duval County Health Department, Institute for Health, Policy and Evaluation Research, Duval County Behavioral Risk Factor Surveillance System, 2007  
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2008

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## TOBACCO AND ALCOHOL USE (CONTINUED FROM PAGE 8)

Smoking decreases with age and single people are more likely to smoke cigarettes than those who are married. Adult residents of Health Zone 1 smoke the most of the six zones followed by those in Health Zone 2 and Health Zone 4. Health Zone 6 has the least amount of adult smokers with 15.5% reporting the behavior (see Figure 9). Over 54% of adults have never smoked with a greater number of women having never smoked than men. Nineteen and a half percent of nonsmoking adults in Duval County reported being exposed to second-hand smoke within 7 days prior to the survey.

### Alcohol Use

The use of alcohol is widespread in the U.S. Over half of the adult population consumed it over a 30-day period per recent national surveys. According to the Centers for Disease Control and Prevention, a standard alcoholic drink in the U.S. is .6 ounces of pure alcohol or 5 ounces of wine, 12 ounces of beer, 8 ounces of malt liquor, or a single “shot” of 80-proof liquor such as vodka, whiskey, gin, or rum. Too much alcohol use, in the form of “heavy drinking” or “binge drinking,” is associ-

ated with a significantly higher risk of health issues. Drinking alcohol is considered “heavy” for a male when he consumes more than 2 drinks per day on average or more than 1 drink per day on average for a female. On the other hand, “binge drinking” is when a male consumes 5 drinks or more in a single sitting and when a female consumes 4 or more drinks in a single setting. In the U.S., about 15% of the population engages in binge drinking whereas 5% engages in heavy drinking. Health issues directly related to excessive alcohol consumption, during either heavy drinking or binge

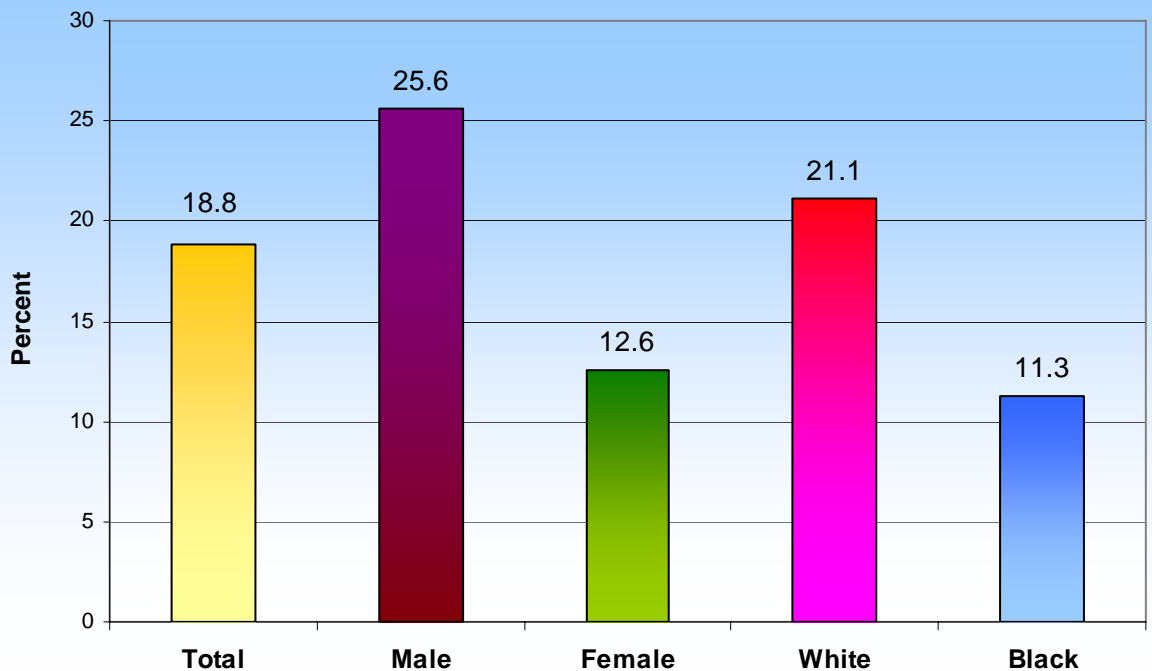
drinking, include cancer of the liver, mouth, throat, esophagus, high blood pressure, stroke and other cardiovascular problems, unintentional injuries like motor vehicle crashes, falls, drowning, homicide, suicide, and neurological damage. The prevalence of binge drinking is 2 times greater in men than women. Furthermore, approximately 75% of all alcohol consumed in the U.S. is consumed during binge drinking.<sup>6</sup>

According to the BRFSS, 18.8% of adults in Duval County engage in heavy or binge drinking (see Figure 10). Over 25% of men par-

take in the activity, which is statistically significant compared to only 12.6% of women. Whites are more likely to engage in heavy or binge drinking compared to blacks and a higher percentage of residents in the 18-44 age group binge drink or drink heavily compared to those 45 years of age and older. The Duval County percentages are higher than those for Florida, yet less than the national figures for the same indicator. Heavy or binge drinking in the county also differs geographically.

Residents of Health Zone 6 reported the highest per-  
*(continued on page 11)*

**Figure 10 Adults Who Engage in Heavy or Binge Drinking by Gender and Race, Duval County, 2007**



Source: Behavioral Risk Factor Surveillance System, 2007

Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2008

# SOCIOECONOMIC STATUS

The government's report, *Opportunity for All: Tackling Poverty and Social Exclusion*, identified poor health as one of the major problems associated with low income.<sup>1</sup> Income allows for meeting health related needs and enables healthier choices. Income also allows people to purchase goods and services, such as health care, healthy housing, or a car to drive to work.<sup>2</sup> Lack of money prevents people from getting regular health screenings, exercising and eating nutritiously. Often low socioeconomic status (SES) does not allow for savings to cover expenses

related to an emergency or catastrophic illness. Without financial reserves people with low incomes find themselves in more stressed situations leading to more health problems. This kind of instability can also lead to homelessness.<sup>2</sup> In addition, better educated people have fewer health problems, tend to live longer and have less disease than those with lower education levels.<sup>2</sup> The mechanisms by which education influences health are complex and are likely to include (but are not limited to) interrelationships between demographic and family background indicators, effects of poor health

in childhood, greater resources associated with higher levels of education, a learned appreciation for the importance of good health behaviors, and one's social networks.<sup>2</sup>

Data from the 2007 BRFSS reveals a significant difference between those with annual incomes less than \$25,000 and those who make \$50,000 or more across selected morbidities including adults who are sedentary, adults who meet moderate physical activity guidelines, adults who are current smokers and adults who

engage in heavy or binge drinking. Specifically, adults with lower incomes are more sedentary, don't get regular moderate physical activity, and are current smokers but engage in heavy drinking less than those with higher incomes (see Table 8). There was no significant difference in income for adults who consume fruits and vegetables and adults who are overweight or obese.

There were three indicators yielding a significant difference in regard to education. Data indicates that  
*(continued on page 11)*

**Table 5**  
**Income and Education Level by Selected Prevention Indicators, Duval County, 2007**

	Sedentary	Mostly Sitting or Standing at Job	Meet Moderate Physical Activity	Consume 5+ Servings Fruits or Vegetables Daily	Overweight or Obese	Current Smoker	Heavy or Binge Drinking
<i>Income Level</i>							
Annual Income less than \$25,000	39.1*	56	13*	20.3	58	28.2*	12.5*
Annual Income \$50,000 or more	14.1*	68.1	33.9*	22	65	16.5*	24.4*
<i>Education Level</i>							
Education less than high school	47.7*	42*	34.7	22.2	56.7	38.9*	12.6
4 or more years of college	16.1*	72.3*	32.4	25.4	66	15.1*	20

\*Indicates a statistically significant difference  
Source: Behavioral Risk Factor Surveillance System, 2007

## TOBACCO AND ALCOHOL USE (CONTINUED FROM PAGE 9)

centage of heavy or binge drinking followed by Health Zone 3 with 25.2% and 23.0%, respectively. Residents in Health Zones 5 and 1 have the least residents reportedly engaging in heavy or binge drinking.

### Sources:

<sup>1</sup>Centers for Disease Control and Prevention. Fact Sheet. Adult Cigarette Smoking in the United States: Current Estimates. [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/adult\\_data/adult\\_cig\\_smoking.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/adult_cig_smoking.htm)

<sup>2</sup>Centers for Disease Control and Prevention. Smoking and Tobacco Use. Health Effects. [http://www.cdc.gov/tobacco/health\\_effects](http://www.cdc.gov/tobacco/health_effects)

<sup>3</sup>American Heart Association. Peripheral Vascular Disease. <http://www.americanheart.org/presenter.jhtml?identifier=4692>

<sup>4</sup>Centers for Disease Control and Prevention. Smoking and Tobacco Use. Fact Sheet. Second hand Smoke. [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/secondhand\\_smoke/secondhandsmoke.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/secondhandsmoke.htm)

<sup>5</sup>Centers for Disease Control and Prevention. Smoking and Tobacco Use. State Data Highlights, 2006. [http://www.cdc.gov/tobacco/data\\_statistics/state\\_data/data\\_highlights/2006/index.htm](http://www.cdc.gov/tobacco/data_statistics/state_data/data_highlights/2006/index.htm)

<sup>6</sup>Centers for Disease Control and Prevention. Alcohol and Public Health. <http://www.cdc.gov/alcohol/index.htm>

## SOCIOECONOMIC STATUS (CONTINUED FROM PAGE 10)

those with less than a high school education are more likely to be sedentary and smoke tobacco. However, adults with 4 or more years of college are significantly more likely to have a job where they sit or stand. There were no significant differences in education for adults who meet moderate physical activity, consume fruits and vegetables, are overweight and obese, and engage in heavy or binge drinking.

### Sources:

<sup>1</sup>*Opportunity for All: Tackling Poverty and Social Exclusion*, Department of Social Security, 1999.

<sup>2</sup>Bell and V. Rubin, *Why Place Matters: Building a Movement for Healthy Communities*, PolicyLink.org

<sup>3</sup>David M. Cutler, Policy Brief #9: Education and Health, National Poverty Center, 2007

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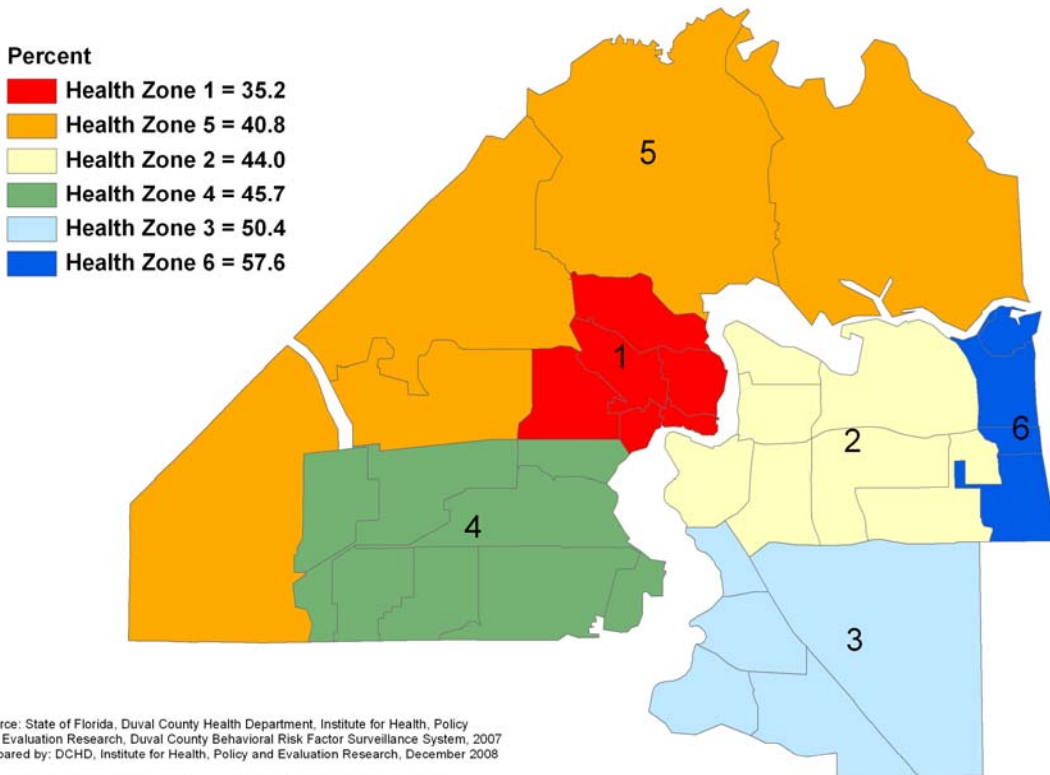
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**Figure 11** Percent of Adults Who Participate in Some Moderate Activity  
by Health Zone, Duval County, 2007



Source: State of Florida, Duval County Health Department, Institute for Health, Policy and Evaluation Research, Duval County Behavioral Risk Factor Surveillance System, 2007  
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