



# The Women's Sports Foundation Report:

## The Status of Female Youth Health and Physical Activity in the Atlanta Metropolitan Area



**November 15, 2004**



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# The Women’s Sports Foundation Report: The Status of Female Youth Health and Physical Activity in the Atlanta Metropolitan Area

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# About the Women's Sports Foundation

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Founded in 1974 by Billie Jean King, the Women's Sports Foundation is a national charitable educational organization seeking to advance the lives of girls and women through sports and physical activity. The Foundation's Participation, Education, Advocacy, Research and Leadership programs are made possible by gifts from individuals, foundations and corporations. The Foundation is located in Nassau County, N.Y. For more information, please call the Foundation at (800) 227-3988 or visit [www.WomensSportsFoundation.org](http://www.WomensSportsFoundation.org) or AOL Keyword:WSF. The Foundation serves as a center for collecting and sharing information on girls and women in sports and physical activity. The Women's Sports Foundation also produces quality academic research on the psychological, social and physiological dimensions of sport and physical activity in the lives of girls and women.

This educational publication is made possible by the support of our members and donors. The Women's Sports Foundation is a 501(c)(3) nonprofit organization. Donations to the Foundation are tax-deductible to the full extent of the law. Please give generously to support our mission and activities.

## Authorship and Acknowledgments

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This report was authored by Lisa Zurn, Ph.D., Collaborative Initiatives, with the assistance of advisory board members Janet E. Fulton, Ph.D., Centers for Disease Control and Prevention; Carolyn Lehr, University of Georgia; Ree Lott, Atlanta WINS; Candace Meadows, SistaSpace; Don Sabo, Ph.D., D'Youville College; and Marjorie Snyder, Ph.D., Women's Sports Foundation. We are grateful to the Women's Sports Foundation for making this report a reality. Special thanks to Deana Monahan for her editorial expertise.

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# Executive Summary

This report highlights key indicators of both the status of physical activity and health for female youth, in the Atlanta metropolitan area and the state of Georgia; these indicators are then compared with national averages in order to contextualize the results.

- ◆ **Sports team participation:** Ten percent fewer female high school students, both in DeKalb County (47.6%) and the state of Georgia (47.6%), participate on one or more sports teams, compared with the national average (57.6%).
- ◆ **Vigorous physical activity:** Nearly 15% fewer female high school students, both in DeKalb County (47.8%) and the state of Georgia (50%), participate in sufficient vigorous physical activity each week, compared with the national average (62.6%).
- ◆ **Physical education class attendance:** Only 25% of female high school students, in both DeKalb County (25.5%) and the state of Georgia (26.7%), attend physical education classes – compared a national average of 55.7%.
- ◆ **Obesity and being overweight:** While DeKalb County (10%) and the state of Georgia (6.6%) have a slightly lower rate of obesity than the national average (13.5%), there is an alarming rate of obesity in Hispanic (10.5%) and African-American (13.7%) female high school populations in Georgia. Their rates of obesity are over twice the levels of Caucasian female high school students (4.6%).
- ◆ **Sedentary lifestyle:** Nearly 15% more female high school students in DeKalb County (54.9%) watched three or more hours of television than the national (38.2%) and state (40.6%) averages.
- ◆ **Nutrition:** Seven to eight percent fewer female high school students in DeKalb County (15.7%) and the state of Georgia (13.7%) consumed the recommended five or more servings of fruit and vegetables per day, compared with the national average (22%).
- ◆ **Health-risk behaviors:** Generally, fewer female high school students in DeKalb County and Georgia smoked cigarettes, used marijuana, participated in binge drinking and planned suicide, than the national average. However, Atlanta (15%) and Georgia (13%) do have slightly higher rates of teen pregnancy than the national average (11%).

Overall, this report shows that female youth in the Atlanta and Georgia areas are not getting sufficient physical activity, either through sports teams or physical education courses in school. Coupled with poor nutrition and a sedentary lifestyle, the problem is not just about failing to provide more girls with athletic and fitness opportunities—it is about endangering the public health – as indicated by comparisons with female adult populations throughout the report. If trends do not reverse in the coming years, the current high rate of medical costs associated with obesity and diseases associated with sedentary lifestyles will continue to rise.

**Figure 1: Status of Female Youth Physical Activity and Health in Georgia and Atlanta Counties/Metro Area (Compared With U.S. Averages)**

	Sports Team Participation	Vigorous Physical Activity	Phys. Ed. Class Attendance	Obesity *	Overweight: at Risk for Obesity	TV Viewing	Nutrition (Fruit & Veg. Servings)	Disordered Eating Patterns	Tobacco Smoking	Asthma	Teen Pregnancy	Drugs (Marijuana)	Binge Drinking	Suicide Attempts
<b>Georgia</b>	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎
<b>Atlanta Counties</b>	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎	👎

👎 = Better than U.S. Average; 👎 = Worse than U.S. Average

\* Black and Hispanic youth are significantly more at risk for obesity than white youth

# Introduction

The purpose of this report is to shed light on the current status of health and physical activity of girls in the Atlanta metropolitan area. Adult female data is also provided in order to illustrate possible future outcomes if current conditions are not addressed. In order to avert the current cohort of girls from future chronic disease, preventable by physical activity, it is imperative that we encourage more girls and provide opportunities for them to become physically active at a much younger age, and to stay physically active for life. Regular physical activity has many benefits, including maintenance of healthy muscles and bones, weight control, and positive psychosocial effects. Participation in physical activity also decreases the future risk of heart disease, diabetes, and other chronic conditions. Trends currently indicate that significantly fewer high school females participate in vigorous activity than males (CDC. Surveillance Summaries, May 21, 2004. MMWR 2004; 53 (No. SS-2): Table 50).

Obesity has reached epidemic proportions in the United States—the medical cost of obesity-related diseases alone has reached up to \$100 billion annually. These expenses account for nearly 5.7% of the total U.S. medical expenditures, and 6% of expenditures in the state of Georgia (Finkelstein, Fiebelkorn, and Wang, 2004). Obesity is related to such chronic diseases as diabetes, heart disease, asthma, osteoarthritis, and stroke. The prevalence of overweight and obese adults in the state of Georgia has increased 60% between 1984 and 2002 (Georgia Behavioral Risk Factor Surveillance System, 2002). Poor diet and lack of physical activity are the most prevalent reasons for the recent increase in overweight and obese Georgians. Studies show that children of overweight parents are more likely to be overweight as adults (Status of Obesity in Georgia, 2000). The number of obese and overweight children is on a dramatic rise. Recommendations to prevent overweight children need to focus on “improving the balance between caloric intake and energy expenditure” (CDC, NHANES: Overweight Among U.S. Children and Adolescents).

**Figure 2: Survey Area Demographics**

<b>Variable</b>	<b>U.S.</b>	<b>Georgia</b>	<b>Atlanta MSA</b>	<b>DeKalb County</b>
Total Population	282,909,885	8,438,203	4,386,262	659,727
Female	48.9%	49%	50.5%	51.5%
Male	51.1%	51%	49.5%	48.5%
Median Age	36.0	33.8	33.5	33.6
Under 19	28%	29.3%	29.3%	27.3%
White	77.8%	66.9%	63.3%	36.5%
Black	12.8%	28%	29.6%	57%
Hispanic	13.6%	6.3%	7.9%	8.9%
Primary School (grades 1-8)	32,706,140	1,020,326	528,869	70,807
Secondary School (grades 9-12)	16,599,058	488,067	250,008	35,109
Median household income	\$43,564	\$42,742	\$51,564	\$47,496
Mean household income	\$58,036	\$56,352	\$66,501	\$63,664
Individuals below the poverty line in the past 12 months	12.7%	13.4%	9.6%	10.2%

\* DeKalb County is the one county in the Atlanta metro area that been surveyed recently. It's use is not intended to accurately represent the entire Atlanta metro area, but rather to describe a sub-area.

Data Source: U.S. Census Bureau, American Community Survey Office, 2003.

Counties included in the Atlanta Metropolitan Area, 2003

**Figure 3: County Populations**

<b>County</b>	<b>Population</b>
Fulton	818,322
DeKalb	674,334
Gwinnett	673,345
Cobb	651,027
Clayton	259,736
Cherokee	166,639
Henry	150,003
Douglas	102,015
Fayette	98,914
Rockdale	74,941
<b>TOTAL</b>	<b>3,669,276</b>

\* The counties included in the Atlanta metropolitan area account for nearly 42% of the general population of Georgia.

Data Source: Population Division, U.S. Census Bureau, Release Date: April 9, 2004

# Findings

## I. Physical Activity

**Youth Sport Participation Rates:** High school females are less likely to participate in sports than high school males. Over the past 10 years, the gender gap has continued to decrease; however, the gap remains larger in the 12<sup>th</sup> grade – indicating that female athletes are more likely to drop out of sports before graduation (Child Trends of Monitoring the Future data, 2002). While the percentage of athletes that are male has steadily declined, the number of male athletes has been increasing each decade since 1983-84.

**Figure 4: High School Athletics Participation Survey Totals: Decade Trends**

Year	% Female	#Female	% Male	#Male
1973-74	24.2%	1,300,169	75.8%	4,070,125
1983-84	34.5%	1,747,346	65.4%	3,303,599
1993-94	38%	2,130,315	62%	3,472,967
2003-04	41.5%	2,865,299	58.5%	4,038,253

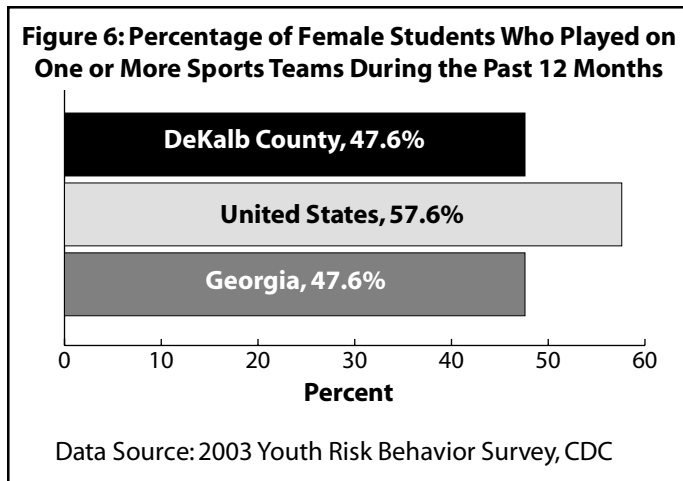
**Figure 5: Girls Participation in High School Athletics: U.S. vs. Georgia\***

Sport	National Ranking (most popular by # participants)	# Georgia Schools that offer the sport	# Georgia Female Participants
Basketball	1	374	9,171
Track & Field (Outdoor)	2	359	8,102
Softball (Fast pitch)	4	357	7,848
Soccer	5	289	7,776
Volleyball	3	231	5,127
Competitive Spirit Squad	9	232	4,929
Cross Country	7	329	3,868
Swimming & Diving	8	173	3,161
Golf	10	272	1,267
Lacrosse	13	25	1,005
Softball (Slow pitch)	18	23	516
Gymnastics	14	34	384
Wrestling	24	43	147
Football (11-player)	30	24	88

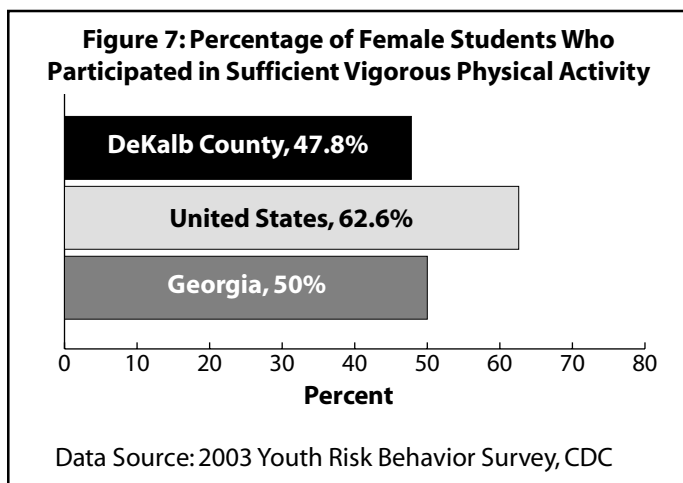
\* Only those sports reported to the NFHS survey by Georgia high schools are included in the table above. Not all sports reported on the national level are offered at Georgia high schools.  
Data Source: National Federation State High School Associations 2003-04 High School Athletics Participation Survey



**Sports Team Participation:** While the absolute increase in the number of female high school athletes since the early 1970s has been impressive, the percentage of females playing varsity sports has remained flat over the past three years (Sylwester, 2003). This pattern is due to several factors. First, the addition of new sports for girls has slowed down as school districts across the country struggle to overcome dwindling resources. Second, as school enrollments increase, the percentage of students playing sport drops even though team rosters remain full (Brady and Sylwester, 2003). Finally, as school enrollments grow larger, it becomes increasingly more difficult for females to gain membership on varsity teams. Without an expansion of opportunities for female athletes, the percentage of girls in varsity sports is likely to remain flat for the foreseeable future because it is predicted that high school enrollments will continue to rise until peaking in 2007 when 14.8 million students are expected to enroll.

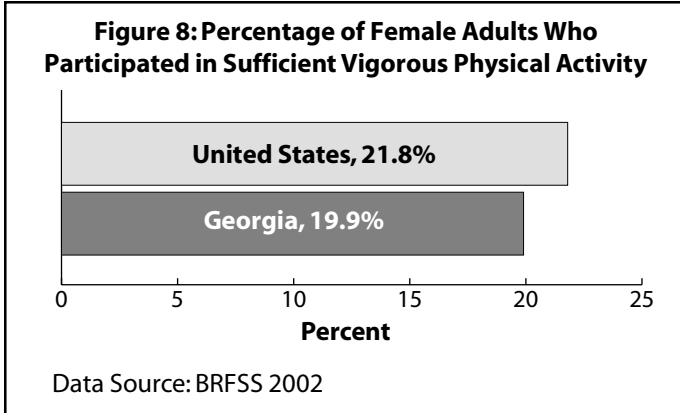


**Youth Physical Activity:** An increase in physical activity among children and adults would substantially reduce U.S. healthcare expenditures that are spent on treating obesity-related diseases (Colditz, 1999).



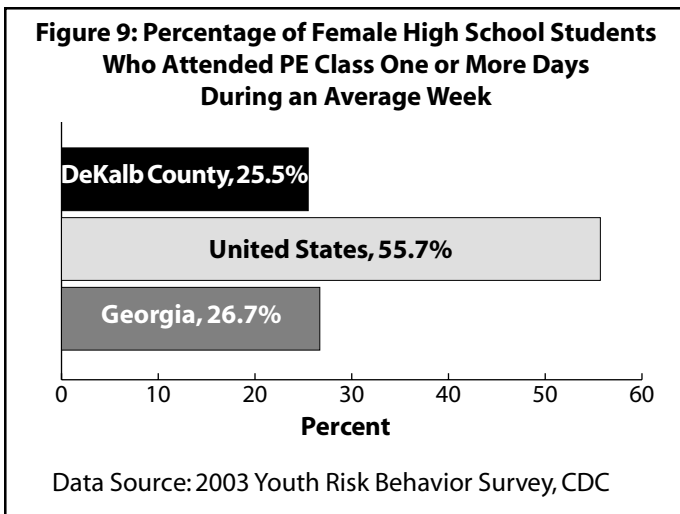
**Vigorous activity:** Exercised or participated in physical activities that made students sweat and breathe hard for 20 or more minutes on three or more of the seven days preceding the survey (i.e., basketball, running, swimming laps, fast bicycling, fast dancing or similar aerobic activities).

**Adult Physical Activity:** Benefits of physical activity can range from reduced anxiety and depression, healthy body weight, and increased quality of life. Physical inactivity can lead to increased risk of heart disease, diabetes, stroke, cancer, high blood pressure and osteoporosis.

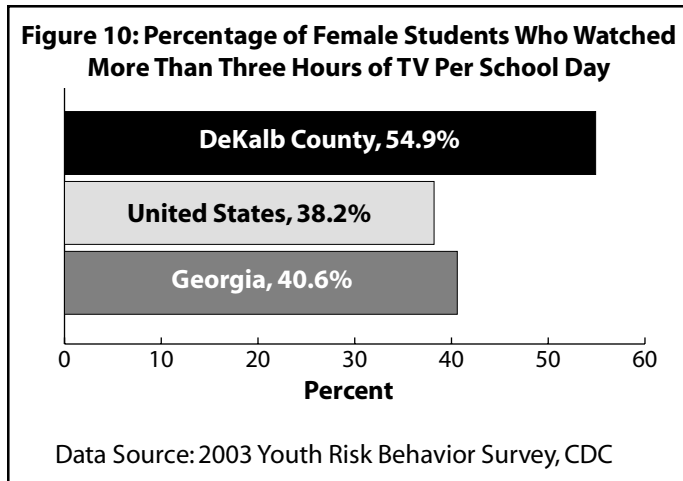


**Physical Education Class Attendance:** Nationwide, 51.7% of students are enrolled in physical education (PE) class. Approximately one-third (32.2%) of students nationwide attend PE class daily. There are no significant sex differences in participation in ninth and 10<sup>th</sup> grade, but male students in grade 11 (30%) are significantly more likely than female students (15.6%) to have attended PE classes daily. In grade 12, males (26.1%) are significantly more likely than female students (14.7%) to have attended daily PE class (Centers for Disease Control and Prevention, 2002).

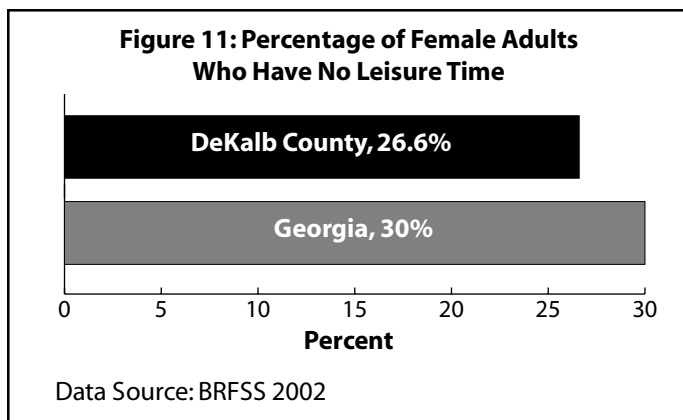
The state of Georgia no longer mandates physical education class in grades 6 and above. The State Board of Education has made physical education and health mandatory for grades K-5 for 90 hours of instruction per year. After grade 5, only one unit of health and physical education is required for graduation (Quality Basic Education Act to HB1187).



**Youth Television Viewing:** The amount of television that children view has a direct effect on activity rates and obesity. Children who watch more television tend to exercise less, and poor children spend more time in front of televisions than their well-to-do counterparts (Anderson et al, 1998). Watching television and playing video games are often associated with consuming high calories snacks. Additionally, children watching television are more exposed to advertising for fast food, sugared breakfast cereals and snacks (Status of Obesity in Georgia, 2000).

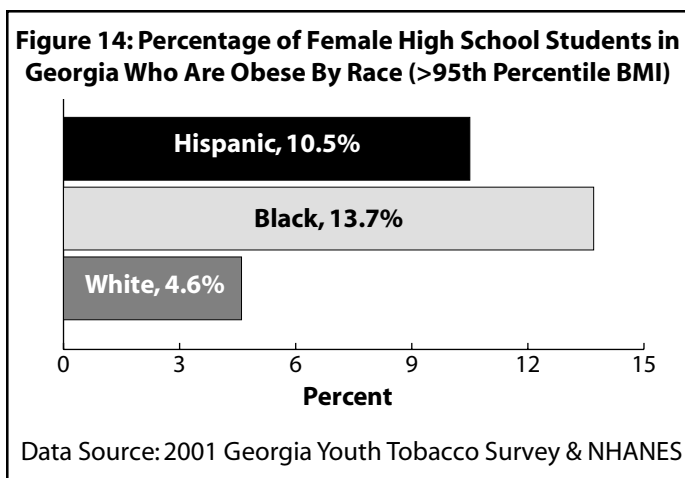
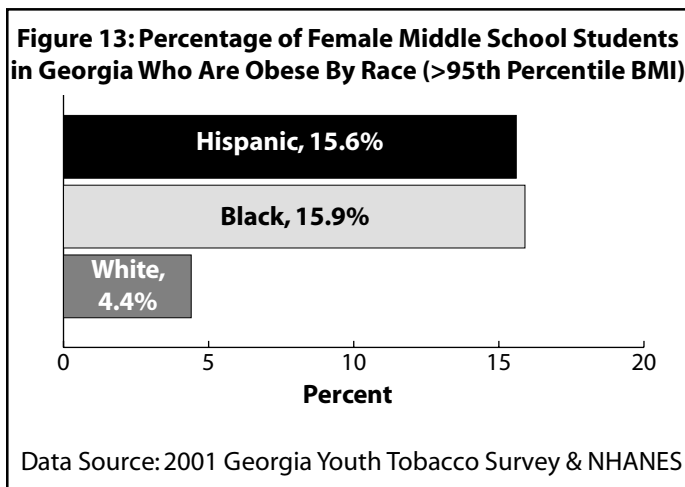
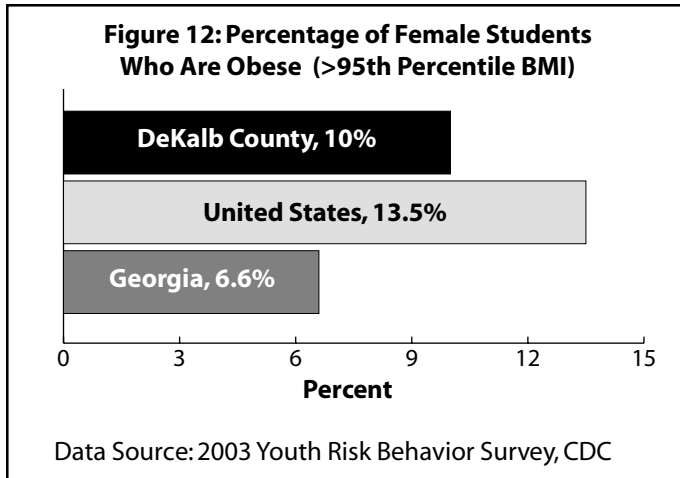


**Adults with No Leisure Time:** Lack of leisure time is a direct inhibitor to physical activity. Typically adults in lower income brackets report less available time for physical activity. Females and Hispanics report the least amount of leisure time.

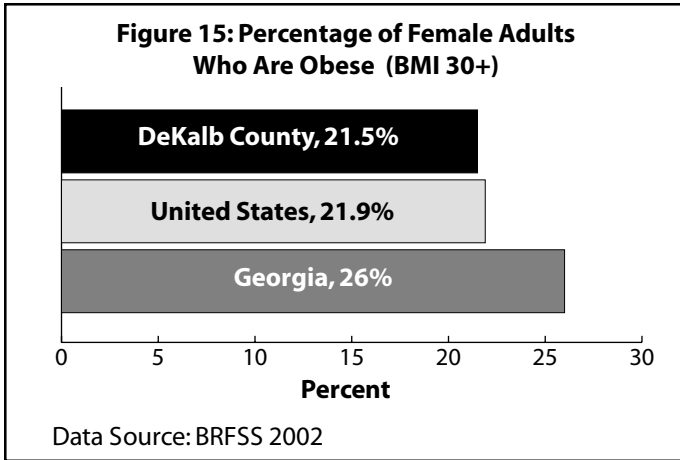


## II. Health

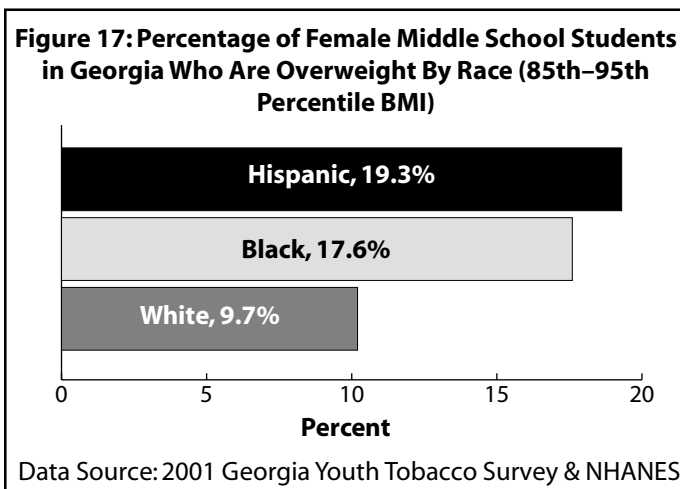
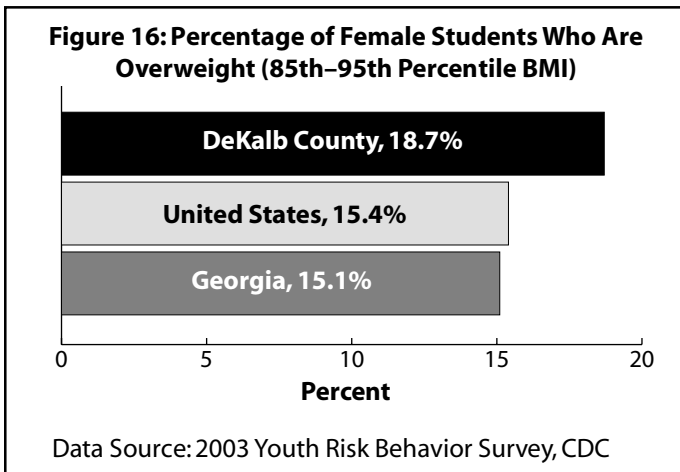
**Youth Obesity:** Defining obese youth is different than for adults. For adults, body mass index (BMI) is used (a value derived from height and weight) and is generally consistent throughout adulthood. For children, who are continuing to grow, BMI is not an accurate measurement tool. Instead, CDC growth charts are utilized, and percentile cut-offs are set – children are classified as “obese” when they reach above the 95<sup>th</sup> percentile. For adults, obesity is defined as body mass index (BMI) of 30.0 or more. Obesity is associated with many chronic health problems that can be reduced by weight loss through calorie reduction and increased physical activity.



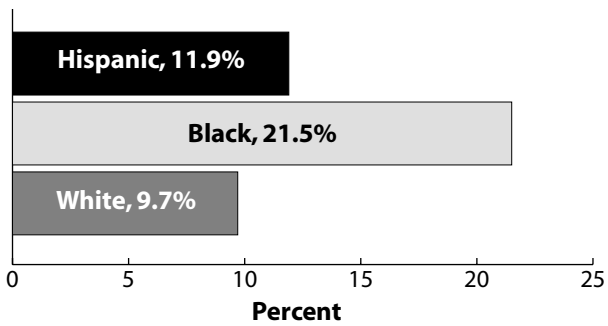
**Adult Obesity:** The prevalence of obese adults is significantly more common in blacks than whites, among adults age 25 or more than adults age 18-24, and among adults with income less than \$15,000 than adults with income \$35,000 or more.



**Youth Overweight:** Defining overweight youth is different than for adults. For adults, body mass index (BMI) is used (a value derived from height and weight) and is generally consistent throughout adulthood. For children, who are continuing to grow, BMI is not an accurate measurement tool. Instead, CDC growth charts are utilized, and percentile cut-offs are set – children are classified as “overweight” when they reach between the 85<sup>th</sup> and 95<sup>th</sup> percentile.



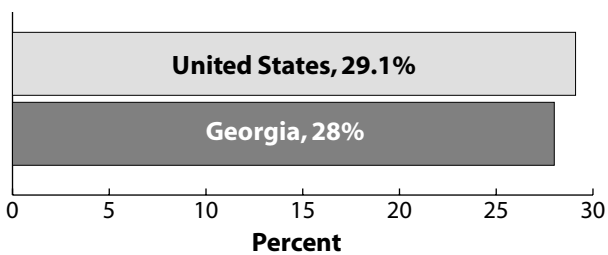
**Figure 18: Percentage of Female High School Students in Georgia Who Are Overweight By Race (85th–95th Percentile BMI)**



Data Source: 2001 Georgia Youth Tobacco Survey & NHANES

**Adult Overweight:**

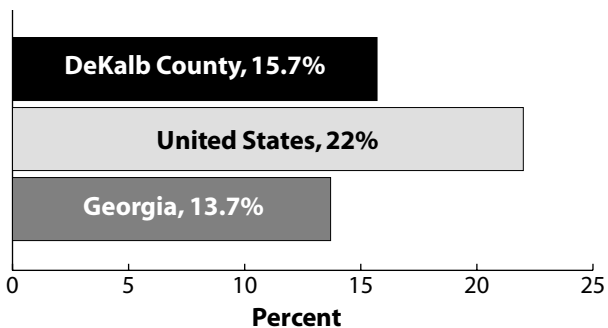
**Figure 19: Percentage of Female Adults Who Are Overweight (BMI 25–29.9)**



Data Source: BRFSS 2002

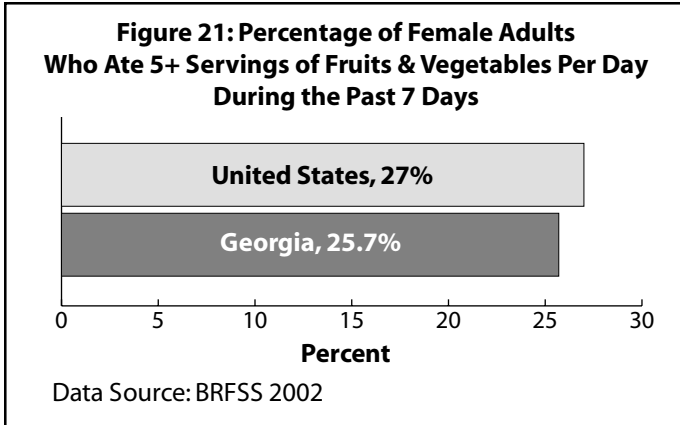
**Youth Nutrition:** A study of teenage students in Minnesota found that the more often they ate at fast food restaurants each week, the higher the percentage of fat in their average daily diet and the more soft drinks consumed. The fast food restaurant frequenters also ate less fruit, vegetables and milk (French et al, 2001).

**Figure 20: Percentage of Female Students Who Ate 5+ Servings of Fruit & Vegetables Per Day During the Past 7 Days**

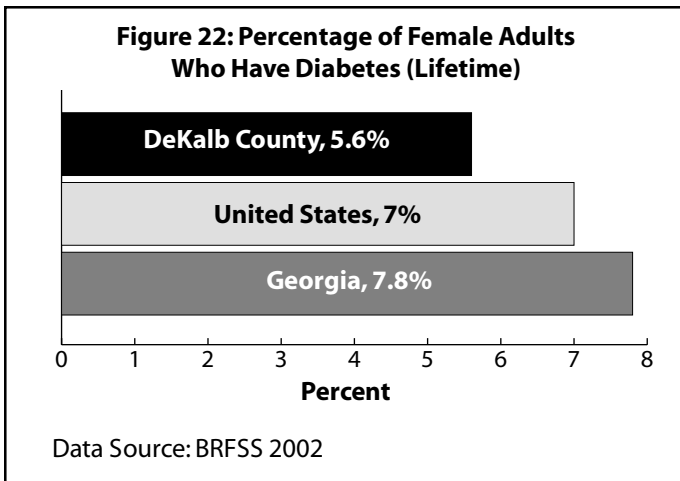


Data Source: 2003 Youth Risk Behavior Survey, CDC

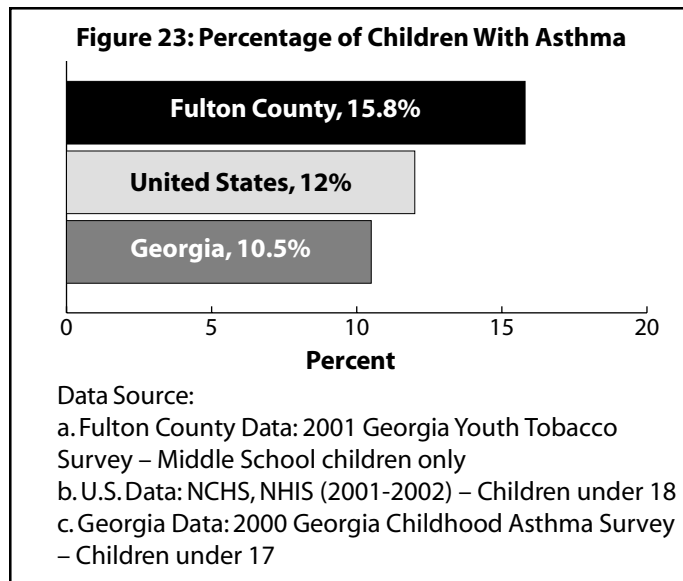
**Adult Nutrition:**



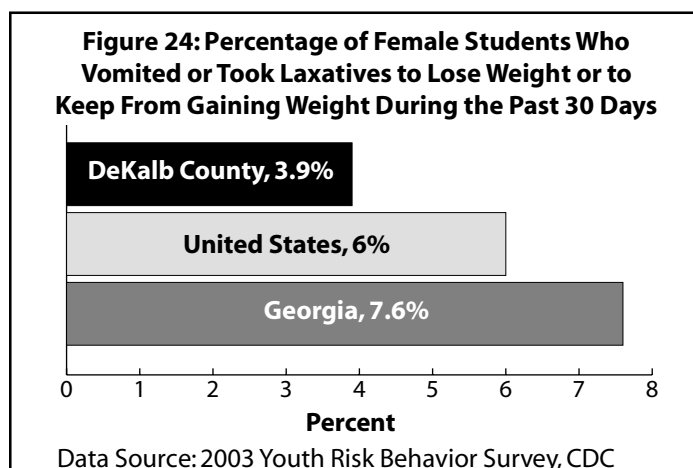
**Adult Diabetes:** Type 2 diabetes is the most common form of diabetes – typically diagnosed in adults over 40; however, recently the rates of type 2 diabetes has been increasing among children, possibly due to the increase of obesity. Diabetes was the seventh-leading cause of death in Georgia in 2002 and accounted for 2.2% of deaths in the state of Georgia in 1997. Lack of physical activity and obesity are two of risk factors associated with development of type 2 diabetes. Specific data for youth diabetes type 2 has not been consolidated at the state or local levels; however, general trends indicate that 300 families each year have children who have been diagnosed with Type 2 diabetes in the Atlanta area, according Jill H. Gonyea, National Public Outreach Coordinator, to the Juvenile Diabetes Research Foundation.



**Youth Asthma:** “A recent survey in Georgia indicates that approximately 11% (210,000) of Georgia children 0-17 years of age have asthma. Among households with children, one in six (16%) has a child with asthma. Asthma affects boys and girls of all ages, races and ethnic groups. Among Georgia children, asthma is slightly more common among boys (13%) than girls (8%) and among blacks (12%) than whites (10%). These are not statistically significant differences but similar results have been reported in other surveys. Asthma is slightly more common among Georgia children 5-12 years of age (12%) than children 13-17 (10%) or 0-4 (9%). In Georgia, children in households of low economic status are more likely to have asthma than children in households of middle or high economic status. The reason for the trend across income groups is not known. Similar findings have been noted in surveys elsewhere” (Mellinger-Birdsong AK, Powell KE, Iatrakis T. 2000).



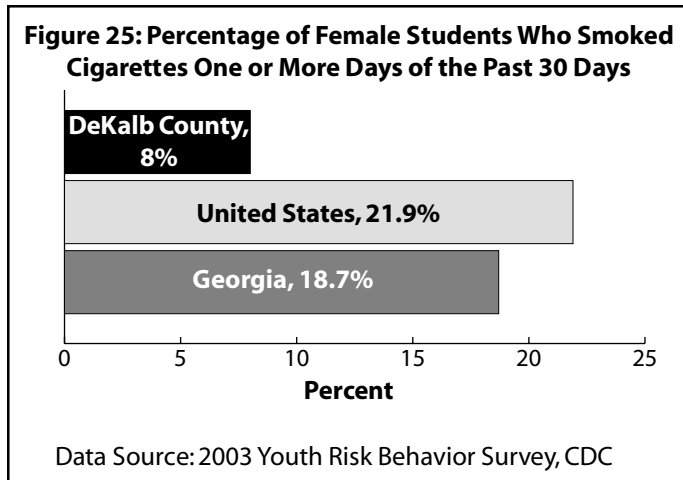
**Youth Disordered Eating Patterns:** Eating disorders are on the rise in the United States and the highest risk category is adolescent and young adult women (Taub and Blinde, 1992). Over 90% of victims are female, and 86% report onset by age 20 (National Association of Anorexia Nervosa and Associated Disorders, 2004). About 1% of adolescent girls suffer from anorexia nervosa, a condition in which a distorted body image and an intense fear of gaining weight lead to voluntary starvation. Bulimia nervosa, a pattern of binge eating and purging, affects 1-3% of adolescent girls (Hausenblas and Carron, 1999). However, a far higher proportion of girls do not meet the formal criteria for a clinical eating disorder but nevertheless engage in pathogenic weight control techniques, including self-induced vomiting, fasting, use of laxatives, diuretics or diet pills and excessive exercise (Thompson and Sherman, 1999). Pathogenic weight loss behavior is associated with nutritional deficiencies, chronic fatigue, decreased bone density, erosion of tooth enamel, menstrual and reproductive abnormalities, lowered self-esteem, anxiety and depression (Beals, Brey and Gonyou, 1999).



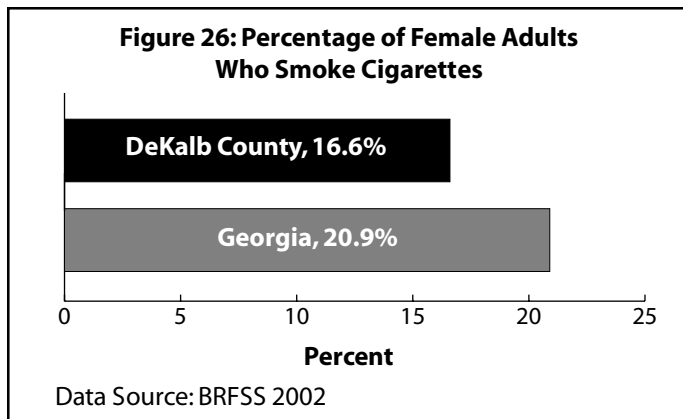


### III. Health-Risk Behaviors

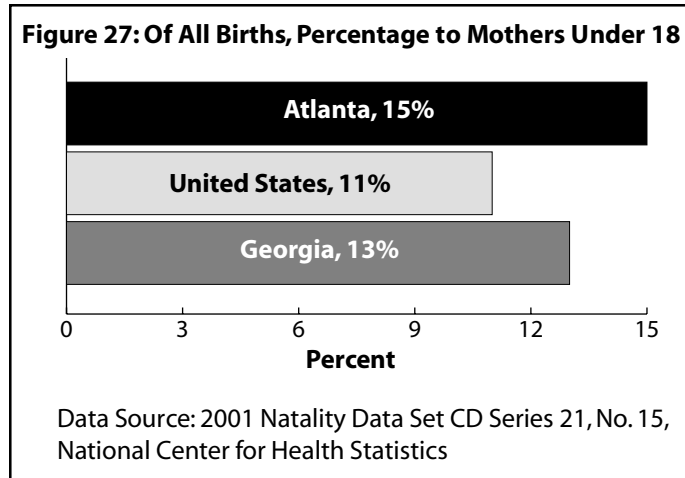
**Youth Smoking:** "Approximately 80% of adult smokers began smoking before the age of 18. The earlier tobacco use begins, the more likely a lifestyle pattern will develop that includes tobacco use, resulting in increased risk for tobacco-related illnesses. Yet, tobacco use continues to be popular among adolescents and young adults, with nearly 3,000 young people under the age of 18 becoming regular smokers, every day. Among Georgia's youth, nearly one in six middle school students and nearly one in three high school students currently use some form of tobacco product" (2001 Georgia Youth Tobacco Survey). Female athletes on one or two school or community sports teams were significantly less likely to smoke regularly than female non-athletes. Girls on three or more teams were even less likely to smoke regularly (Melnick et al, 2001).



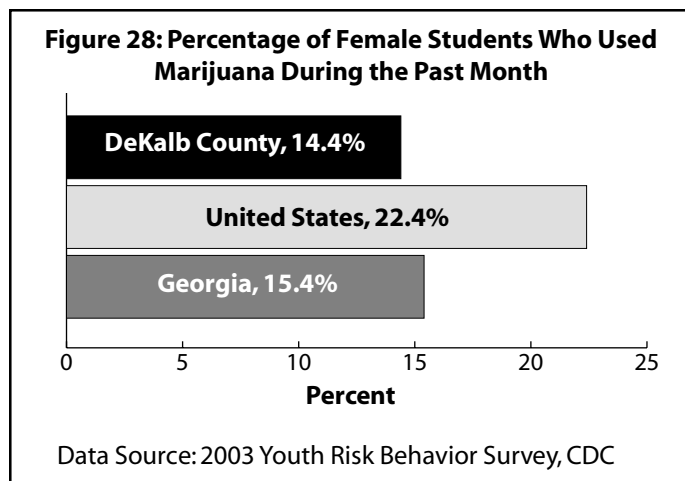
**Adult Smoking:**



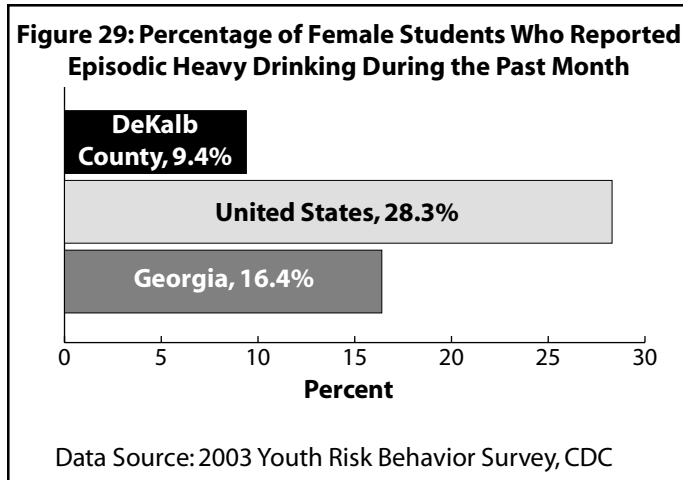
**Teen Pregnancy Rates:** “Georgia’s teen pregnancy, birth and gonorrhea rates are among the highest in the nation. In Georgia in 1995, 58% of surveyed teens ages 15 to 19 reported being sexually active, and six percent of Georgia women under 18 had had a medically-diagnosed sexually transmitted disease” (The Challenge of Change: A Mid-Decade Look at Maternal and Child Health in Georgia, 1999). Female athletes are less likely to be sexually active, in part because they tend to be more concerned about getting pregnant than female non-athletes (Dodge & Jaccard, 2002).



**Youth Drug Use:** Two nationwide studies found that female school or community athletes were significantly less likely to use marijuana, cocaine or most other illicit drugs, although they were no less likely to use crack or inhalants. This protective effect of sports was especially true for white girls (Miller et al, 2000; Pate et al, 2000).

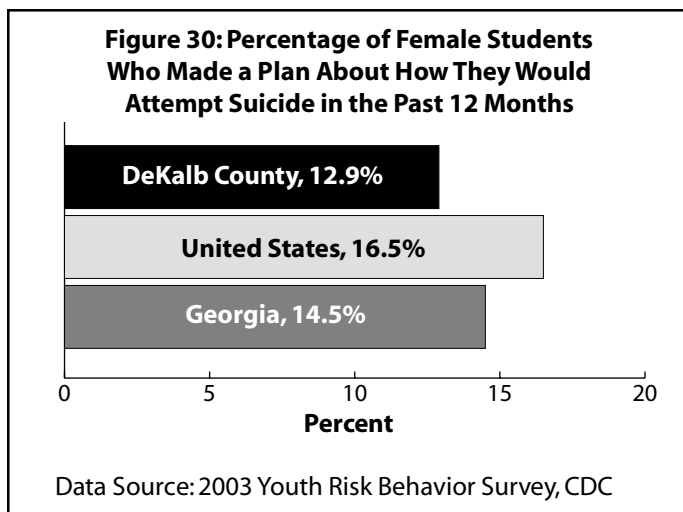


**Youth Alcohol:** Research on the relationship between youth sports and drinking is mixed. Some studies find that high school or college female sports participation is associated with alcohol consumption (Aaron et al, 1995; Hildebrand, Johnson and Bogle, 2001; Leichliter et al, 1998; Nelson and Wechsler, 2001; Rainey et al, 1996; Thombs, 2000; Wechsler et al, 1997), while others do not (Baumert, Henderson and Thompson, 1998; Carr, Kennedy and Dimick, 1996; Higgs, McKelvie and Standing, 2001; Overman and Terry, 1991; Page et al, 1998; Pate et al, 2000). Several prominent theories have been advanced to explain athlete alcohol use, including the idea that athletes drink to self-medicate or reduce the stress of competition and injuries (Heyman, 1996; Leichliter et al, 1998; Miller et al, 2002), that the advertising industry reinforces the cultural tradition of drinking to celebrate a win or console a loss (Heyman, 1996; Holman et al, 1997; Madden and Grube, 1994; Slater et al, 1996) or that athletes are exposed to subcultures that are tolerant of, and exaggerate perceived norms of, drinking (Nelson and Wechsler, 2001; Thombs, 2000).



Heavy drinking: Drank five or more drinks of alcohol in a row on one or more of the 30 days preceding the survey.

**Youth Suicide:** Female high school athletes, especially those participating on three or more teams, have lower odds of considering or planning a suicide attempt (Sabo et al, 2004).



# Conclusion

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It is clear from the current research that girls in the Atlanta area do not get enough physical activity in their daily life. This trend is highlighted by low participation rates in school sports and physical education courses. Additionally, poor nutrition and a high rate of sedentary activity (TV viewing) are only going to increase the current rate of obese and overweight youth in the Atlanta area. As obesity rates increase, we will see higher rates of medical problems such as type-2 diabetes, asthma, heart disease and other chronic conditions – not only in youth, but also in adults as the current cohort of youth ages.

The goal of Healthy People 2010, a comprehensive set of disease prevention and health promotion objectives for the nation to achieve over the first decade of the new century created by scientists both inside and outside of government, is to significantly reduce the proportion of obese and overweight youth to 5%. Currently Georgia is already at twice that level. Unless significant changes occur in the schools or health care settings, Georgia is not going to meet the 2010 goal. While it may seem overwhelming to make structural changes at the institutional level, there are opportunities at the community and grass-roots level to make a difference. Organizations at the community level, who are involved with youth on a daily basis through after-school and extra-curricular activities, have the chance to educate youth about the benefits of good nutrition and physical activity. While more nutritious school lunches, more recess time, more frequent physical education courses, and more opportunities for sports participation are the ideal solution, there are alternatives. Physical activity and good nutrition must become a lifestyle habit encouraged by the media, parents and guardians, adult leaders and peers. Girls are not receiving the same motivational messaging or opportunities to play as boys and are, therefore, at greater risk. If opportunities are increased at the community level – such as dance classes, organized sports leagues or walk-to-school programs – there is more of a chance that youth will begin to make exercise a part of their daily routine. But first the opportunities must be made available to them.

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