

PUT ACTIVE PLAY IN EVERY CHILD'S DAY

LOUISIANA'S REPORT CARD ON PHYSICAL ACTIVITY & HEALTH FOR CHILDREN AND YOUTH

— 2008 —



PENNINGTON BIOMEDICAL RESEARCH CENTER
LOUISIANA STATE UNIVERSITY SYSTEM

ACKNOWLEDGEMENTS

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For online versions of this long-form report card and a shorter summary version, please visit www.louisianareportcard.org.

RESEARCH ADVISORY COMMITTEE

The development of this report card was guided by a Research Advisory Committee, composed of scientists and professionals who collaborated on the selection of indicators and the assignment of grades.

COMMITTEE CHAIR:

Peter T. Katzmarzyk, PhD, FACSM
Pennington Biomedical Research Center
Baton Rouge, LA

Leanne Redman, PhD
Pennington Biomedical Research Center
Baton Rouge, LA

COMMITTEE COORDINATOR:

Susan B. Sisson, PhD, CHES
Pennington Biomedical Research Center
Baton Rouge, LA

Pamela Romero, RD, LDN, CDE
Louisiana Council on Obesity Prevention and Management
Baton Rouge, LA

COMMITTEE MEMBERS:

Lisanne Brown, PhD
Louisiana Public Health Institute
New Orleans, LA

Heli Roy, PhD
Pennington Biomedical Research Center
Baton Rouge, LA

Stephanie T. Broyles, PhD
Pennington Biomedical Research Center
Baton Rouge, LA

Ariane Rung, PhD
LSU School of Public Health
New Orleans, LA

Stewart T. Gordon, MD
American Academy of Pediatrics, Louisiana Chapter
Baton Rouge, LA

Melinda Sothorn, PhD
LSU Health Sciences Center
New Orleans, LA

David Harsha, PhD
Pennington Biomedical Research Center
Baton Rouge, LA

INTERNATIONAL ADVISOR:

Mark Tremblay, PhD
Children's Hospital of Eastern Ontario
Ontario, Canada

Kathy Hill, MA
LSU-Kinesiology & LAHPERD
Baton Rouge, LA

AD-HOC COMMITTEE MEMBERS:

Melissa Bell (Fundraising)
Pennington Biomedical Research Foundation
Baton Rouge, LA

Bennett Hilley, BA
Center for Planning Excellence
Baton Rouge, LA

Jennifer Winstead (Fundraising)
Pennington Biomedical Research Foundation
Baton Rouge, LA

Nikki Lawhorn, MPP
Louisiana Public Health Institute
New Orleans, LA

Glen Duncan (Public Relations)
Pennington Biomedical Research Center
Baton Rouge, LA

Lilian Levitan, PhD
Pennington Biomedical Research Center
Baton Rouge, LA

GOAL OF THE REPORT CARD

The primary goal of the Louisiana Report Card on Physical Activity and Health for Children and Youth is to assess the level of physical activity and sedentary behaviors in Louisiana children and youth, the level of facilitators and barriers of physical activity behavior, and their related health outcomes.

LOUISIANA'S OVERALL GRADE 2008: **D**

The overall grade for this first annual report card suggests a poor outlook for the health of children and youth in Louisiana. However, this first comprehensive look at the status of physical activity and health provides an important benchmark from which to provide recommendations to improve the grade and to track our progress into the future.

MAKING THE GRADE

Grades were assigned for each indicator using the most recent data available and the consideration of recent published scientific literature and reports.

A	Louisiana's children and youth are physically active and achieving optimal health
B	Majority of Louisiana's children and youth are physically active and achieving optimal health; however, children who are obese, underserved, physically or mentally challenged may not have appropriate physical activity opportunities provided
C	Insufficient appropriate physical activity opportunities and programs available to large segments of Louisiana's children and youth
D	Insufficient appropriate physical activity opportunities and programs available to the majority of Louisiana's children and youth
F	Louisiana's children and youth have a sedentary lifestyle with insufficient opportunities for physical activity
INC	Incomplete. At the present time there is not enough information available for grading

LOOKING AHEAD: RECOMMENDATIONS TO IMPROVE THE GRADE

1. Increase opportunities for children and youth to engage in moderate-to-vigorous physical activity through active play and structured activity.

Children and youth should accumulate **at least 60 minutes, and up to a few hours**, of age-appropriate physical activity every day, and should avoid extended **periods of inactivity** (periods of two hours or more).

For children aged 5-12 years old, The National Association for Sports and Physical Education ¹ recommends that they:

- Accumulate at least 60 minutes, and up to several hours, of age appropriate physical activity on all, or most days of the week.
- Participate in several bouts of physical activity lasting 15 minutes or more each day.
- Participate each day in a variety of age-appropriate physical activities designed to achieve optimal health, wellness, fitness, and performance benefits.
- Avoid extended periods (periods of two hours or more) of inactivity, especially during daytime hours.

For adolescents, The American Academy of Pediatrics ² recommends that they:

- Engage in physical activity daily, or **nearly every day**, as part of play, games, sports, work, transportation, recreation, physical education, or planned exercise in the context of family, school, and community activities.
- Engage in **three or more sessions per week** of activities that last **20 minutes or more** at a time and that require **moderate to vigorous** levels of exertion.

2. Reduce ethnic and socio-economic disparities in childhood physical activity and health.

Increased access to opportunities for physical activity within schools, neighborhoods, and communities can be achieved through the incorporation of pedestrian facilities (sidewalks and crossways), bike-paths, recreational facilities and green space in community renovation and development projects that are designed to encourage active living. Given that physical inactivity and obesity are more problematic in minority and low-income populations, programs and initiatives to improve healthy lifestyle behaviors are particularly needed in these groups.

3. Improve population assessment of physical activity and health in Louisiana.

The majority of the state-wide data used to inform the development of this report card was obtained from surveys conducted in 1997 and 2003. There is a pressing need to increase and improve the frequency, regularity, and types of surveillance data collected about key indicators such as physical activity, obesity, perceived safety, family and community support, and evaluation and enforcement of health policies and legislation. There are several initiatives underway to collect up-to-date data for Louisiana and these efforts need to be encouraged, financed, and sustained in order to evaluate the current state of our population's health and to monitor future progress.

REPORT CARD DEVELOPMENT AND DATA SOURCES

An interdisciplinary team of scientists and professionals compiled and assessed the available resources for the grading of each of the indicators. The grade assignments were based on the analysis of the most recently available information from various sources.

- **LA Health³⁻⁵**
This research project is a weight gain prevention intervention in selected rural Louisiana middle schools and is conducted by the Health Psychology Laboratory at the Pennington Biomedical Research Center. There were 2,709 youth in the baseline study, however, only 278 youth wore the accelerometer to objectively measure their daily physical activity. The trial will be completed in a couple of years and the outcomes of the weight prevention intervention will be available at that time.
- **Caring Communities Youth Survey (CCYS)⁶**
The state survey was completed in 2006 with 6th, 8th, 10th, and 12th graders in Louisiana to assess problem behaviors and exposure to risk and protective factors. CCYS is designed to assess students' involvement in a specific set of problem behaviors, as well as their exposure to a set of scientifically validated risk and protective factors. The risk and protective factors have been shown to influence the likelihood of academic success, school dropout, substance abuse, violence, and delinquency among youth. Across the state of Louisiana, 106,357 youth from 746 schools participated in the 2006 survey. Coordination and administration of the Louisiana CCYS was a collaborative effort of Department of Health and Hospitals, Office for Addictive Disorders, Prevention Services; Regional Prevention Coordinators; Department of Education; the University of Louisiana at Lafayette, Center for Child Development; and Bach Harrison, L.L.C. The Louisiana State Report can be found at: http://ccd-web.louisiana.edu/Portals/0/CCYS_2006/State_of_Louisiana_Profile_Report.pdf.
- **Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD)⁷**
Founded in 1934, the aim of this organization is to improve the quality of life through health and fitness and recreational activities. LAHPERD is an affiliate of the American Alliance for Health, Physical Education, Recreation and Dance. The members of LAHPERD: teachers, administrators, dance instructors, recreation supervisors, fitness directors, college students, allied health specialists, exercise physiologists, athletic trainers, etc., are found in sixty-four parishes (counties) and twenty four universities in the state. LAHPERD also hosts an annual training and educational convention in Baton Rouge. The website for LAHPERD is: <http://www.lahperd.org/convention.html>.
- **Louisiana Department of Culture, Recreation and Tourism⁸**
A list of state parks and historic sites can be found at: <http://www.crt.state.la.us/parks/iparkslisting.aspx>.
- **Louisiana Department of Education (DOE)^{9, 10}**
The department of education published the Handbook for School Administrators for public and non-public schools that determine the requirements for elementary, middle, and high school students in the state. The handbook for public school administrators can be found at: http://www.doa.louisiana.gov/osr/lac/28v115/28v115.doc#_Toc196292677; while the handbook for non-public schools can be found at: <http://www.doa.louisiana.gov/osr/lac/28v79/28v79.doc>.
- **Louisiana Department of Transportation and Development (DOTD)¹¹**
The Louisiana Department of Transportation and Development houses the Louisiana Safe Routes to School Program (http://www.dotd.louisiana.gov/planning/highway_safety/safe_routes/).
- **National Survey of Children's Health (NSCH)^{12, 13}**
This national survey is conducted every four years by the Maternal and Child Health Bureau of the Health

Resources and Services Administration in parents of children under age 18 years with the purpose to educate stakeholders, inform decision makers, and motivate and track improvement. It provides a broad range of information about children's health and well-being collected in a manner that allows comparisons among states as well as nationally. Telephone numbers are called at random to identify households with one or more children under 18 years old. In each household, one child was randomly selected to be the subject of the interview. In 2003, there were 102,353 child-level interviews completed nationally with 2,241 being completed in Louisiana. Children in the survey were weighted to be representative of each state and the national population. The NSCH information can be found at: <http://www.nschdata.org/Content/Default.aspx>.

- **National Park Service** ¹⁴

The Louisiana state page with a listing of national parks in the state can be found on the National Park Service website: <http://www.nps.gov/state/LA/>.

- **School Health Policies and Programs Study (SHPPS)** ¹⁵

The School Health Policies and Programs Study (SHPPS) is a national survey periodically conducted by the Centers for Disease Control and Prevention to assess school health policies and practices at the state, district, school, and classroom levels. SHPPS was most recently conducted in 2006 and the next SHPPS is planned for 2012. Computer-assisted telephone interviews or self-administered mail questionnaires were completed by state education agency personnel in all 50 states plus the District of Columbia and among a nationally representative sample of districts (n = 538). Computer-assisted personal interviews were conducted with personnel in a nationally representative sample of elementary, middle, and high schools (n = 1103) and with a nationally representative sample of teachers of classes covering required health instruction in elementary schools and required health education courses in middle and high schools (n = 912) and teachers of required physical education classes and courses (n = 1194). This is an important resource for school and public health practitioners, scientists, advocates, policymakers, and all those who care about the health and safety of youth and their ability to succeed academically and socially. The information is available at: <http://www.cdc.gov/HealthyYouth/shpps/index.htm>.

- **Youth Risk Behavior Surveillance System (YRBSS)** ¹⁶⁻¹⁹

This national survey is completed every other year in high school students (grades 9 to 12) across the U.S. by the Division of Adolescent and School Health at the Centers for Disease Control and Prevention. The YRBSS monitors priority health-risk behaviors and the prevalence of obesity and asthma among youth and young adults. In 2007, there were 14,041 student surveys completed in 39 states and 22 cities the U.S. The YRBSS information is available at the following website: <http://apps.nccd.cdc.gov/yrbss/>.

Additional Data Sources used in the compilation of this report.

- Behavioral Risk Factor Surveillance System (BRFSS) ²⁰
- California Health Interview Survey ²¹
- Early Childhood Longitudinal Study ²²
- European Youth Heart Study ²³
- National Health and Nutrition Examination Survey ^{24, 25}
- National Longitudinal Study of Adolescent Health ²⁶⁻²⁸
- Study of Early Child Care and Youth Development ²⁹
- Trial for Activity of Adolescent Girls (TAAG) ³⁰

The report card development process was based on a similar initiative developed by Active Healthy Kids Canada (www.activehealthykids.ca).

For on-line versions of this long-form report card and a shorter summary version, please visit www.louisianareportcard.org.

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

PHYSICAL ACTIVITY / INACTIVITY

PHYSICAL ACTIVITY LEVELS

GRADE: D

The resources used to collect the Louisiana physical activity data included the 2003 National Survey of Children's Health (NSCH) ¹² which surveyed parents of youth 6-17 years of age and the LA Health study conducted in the fall of 2006 by researchers at Pennington Biomedical Research Center in selected rural schools in Louisiana ^{3, 4}.

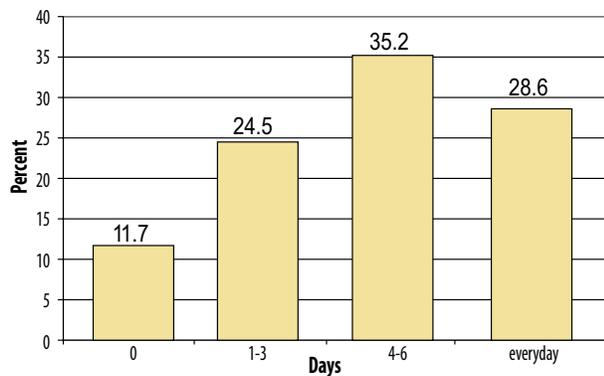
Physical activity above a moderate level is associated with decreased disease risk. According to the Centers for Disease Control and Prevention, moderate physical activity should increase your heart rate but you should still be able to talk comfortably ³¹. Activity that increases heart rate and breathing and causes sweating is probably vigorous ³¹. Many activities such as swimming or bicycle riding can be either moderate or vigorous, depending on how hard you are working. Some examples of activities that are at least moderate intensity are mowing the lawn, raking leaves, riding a bike, brisk walking, playing basketball, or shooting hoops ³¹. A large study in Europe, The European Youth Heart Study, has demonstrated the relationship between objectively monitored physical activity and decreased cardiovascular ³² and metabolic risk ²³. Higher physical activity in 9 and 15 year olds was associated with lower fatness, lower waist circumference, lower diastolic and systolic blood pressure, lower insulin resistance, lower total cholesterol ³², lower glucose, lower triglycerides ²³, and higher levels of fitness ³². Furthermore, these relationships were still significant when the fatness, or adiposity, of the child was included in the statistical analyses ²³.

LOUISIANA INFORMATION

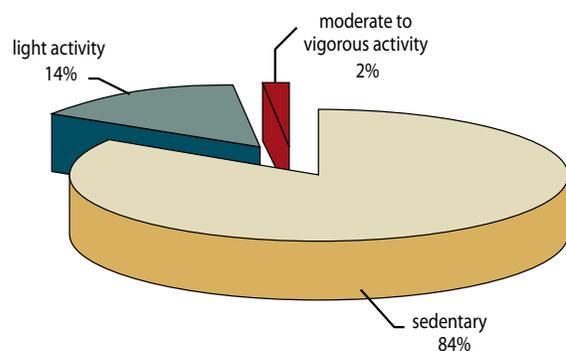
The NSCH was conducted with parents in Louisiana in 2003 and asked the number of days in the past week in which children and youth engaged in activity that made them sweat or breathe hard for at least 20 minutes ¹². Parents reported less than 30% of Louisiana children and youth are vigorously active every day ¹².

LA Health is a research project designed to prevent weight gain in selected rural middle school students in Louisiana and is conducted by scientists at the Pennington Biomedical Research Center in Baton Rouge. A group of the youth in the LA Health study were objectively measured for physical activity; they were about 10 years old, 66% female, and 75% African American ³. Moderate-to-vigorous physical activity makes up only 2% of these rural youth's entire day ³. Overweight youth spent significantly less time in moderate-to-vigorous physical activity compared to normal weight children, although the difference was only 3 minutes per day ³. There were also significant ethnic differences with rural African American youth spending nearly 20 more minutes per day in moderate-to-vigorous activity compared to White youth ⁴.

Number of Days During the Past Week That Children/Youth (Ages 6-17) in Louisiana Engaged in Vigorous Physical Activity in 2003



Percent of Time Per Day Spent in Different Levels of Activity by Rural Louisiana Youth in the LA Health Study



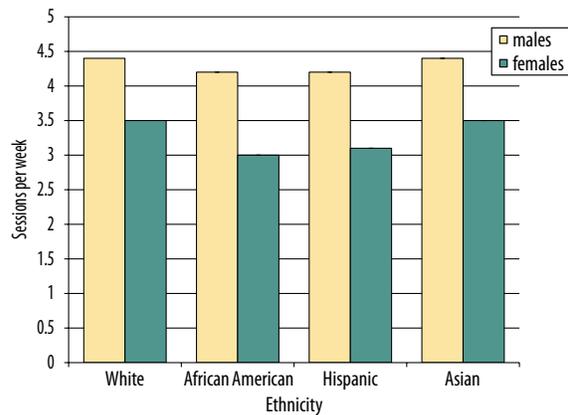
REPORT CARD CATEGORIES, INDICATORS, AND GRADES

NATIONAL INFORMATION

According to the 2007 Youth Risk Behavior Surveillance System (YRBSS), only 35% of high school youth in the United States met the recommended amount of physical activity¹⁸ (accumulation of at least 60 minutes of activity on five of the previous seven days that makes you breathe hard). Data specifically for Louisiana are unavailable since the YRBSS has not been conducted or had enough data to release state-wide figures since 1997¹⁶. National information from the NSCH reported that immigrant children were significantly more likely to be physically inactive than native-born children and youth¹³.

According to the National Longitudinal Study of Adolescent Health in 1995 and 1996, there are ethnic and gender differences in patterns of physical activity in adolescents in grades 7 to 12²⁶. Overall males engaged in more sessions of moderate-to-vigorous physical activity each week compared to females. While different from the findings in the LA Health Study, white and Asian youth engaged in more sessions of activity each week compared to African American and Hispanic youth²⁶. Disparities in physical activity and/or access and support for physical activity between groups, either gender or ethnic, is an area of concern and needs future research and investment.

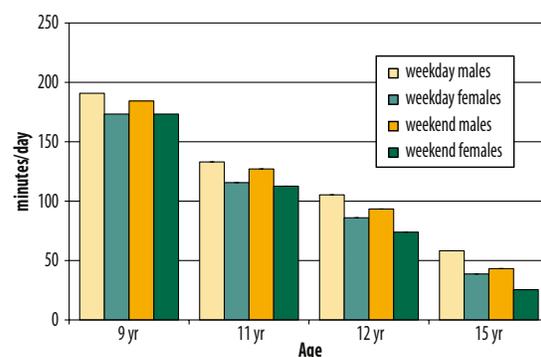
**National Longitudinal Study of Adolescent Health
Sessions of Moderate-to-Vigorous Activity Per Week by Ethnicity**



OTHER INFORMATION

Decreasing physical activity as children age is alarming since so few young children meet the recommendations for activity and even fewer adolescents and young adults meet the public health and physical activity recommendations. The Study of Early Child Care and Youth Development is a longitudinal study that started in 1991 at 10 different collection centers across the United States²⁹. These babies were followed from birth until the age of 15 years with children participating in the objective monitoring of physical activity at ages 9, 11, 12, and 15 years. At the age of nine, 99.6% and 97.6% of the children met the recommended 60 minutes per day of moderate-to-vigorous physical activity on weekdays and weekends, respectively²⁹. When these youth were aged 15 years, the percent that met the daily recommendation drastically dropped to 31% and 17% on weekdays and weekends, respectively²⁹.

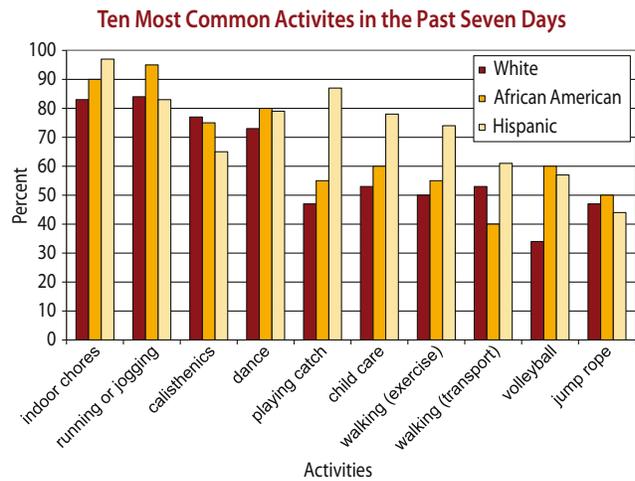
**Mean Daily Minutes of Moderate-to-Vigorous
Physical Activity in a Longitudinal Sample
of U.S. Children and Youth**



Another recent study examined the perceived benefits and most popular activities of adolescent females at several sites across the country in the Trial for Activity of Adolescent Girls (TAAG). Only slight ethnic group differences in popular activities were reported, with indoor chores, running or jogging, calisthenics or exercises, dance, and jump rope being

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

similarly reported by all ethnic groups. Higher proportions of Hispanic females reported participation in playing catch, child care, and walking for exercise with higher proportions of African American females reporting participation in playing volleyball ³⁰. Staying in shape was the most popular self-reported benefit of being active in all three ethnic groups ³⁰.



KEY FINDINGS FOR PHYSICAL ACTIVITY / INACTIVITY

- **Less than 30% of Louisiana youth get vigorous physical activity every day**
- Males are more active than females and activity decreases with age
- Physical inactivity is related to poor cardiovascular, metabolic and psychosocial health in children and youth

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

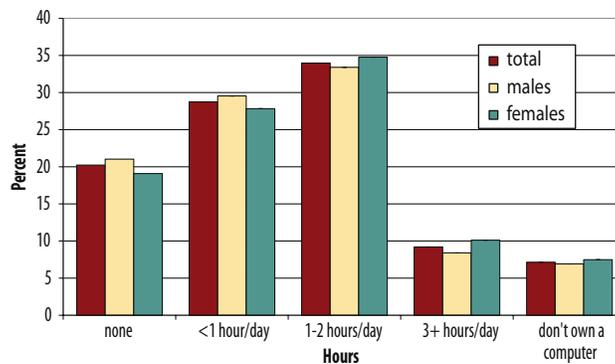
SCREEN TIME GRADE: D

Many children in the U.S. are watching more than two hours per day of television^{33, 34} which is the maximum daily recommendation from the American Academy of Pediatrics³⁵. For this report, screen time is defined as time children and youth spend watching television or videos, using the computer for non-school purposes such as Internet or games, and playing video games. Recently, some video games have become available that are physically active (ex. Nintendo® Wii™) and may not be categorized as sedentary behaviors, even though they are video games. No information is available about the usage of these games compared with traditional seated game playing, although this is an area which needs more research in coming years. Increasing screen time is of concern since hours of television watched has been linked with obesity in children³⁶ and youth³⁷. Further, television viewing has been linked with poorer eating habits compared with other sedentary activities such as reading and homework³³. Findings from the European Youth Heart Study of 1,921 youth aged 11 and 15 years have shown the association of television viewing and metabolic risk factors such as adiposity and insulin²³.

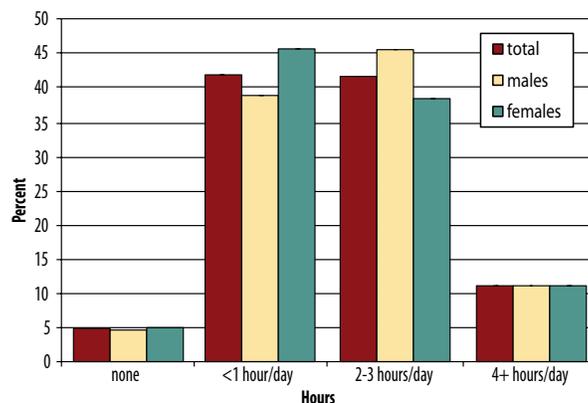
LOUISIANA INFORMATION

In Louisiana, according to the 2003 National Survey of Children's Health (NSCH), nearly 45% of children used computers for more than one hour per day for non-school purposes and 53% watched over two hours of television, videos, and video games on a daily basis¹².

Hours of Daily Computer Usage for Non-School Purposes in Louisiana Children Aged 6-17 yrs in 2003



Hours of Daily TV Watching and Playing Video Games in Louisiana Children Aged 6-17 yrs in 2003

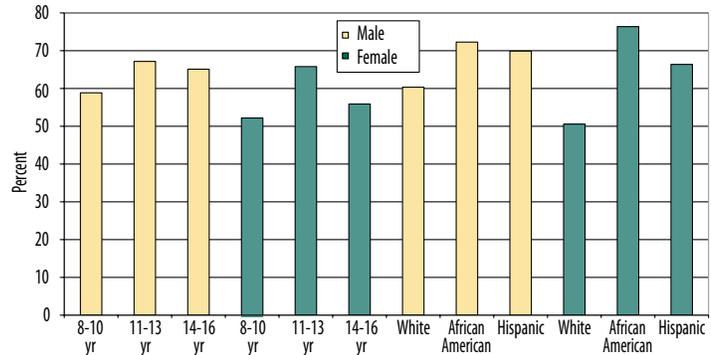


REPORT CARD CATEGORIES, INDICATORS, AND GRADES

NATIONAL INFORMATION

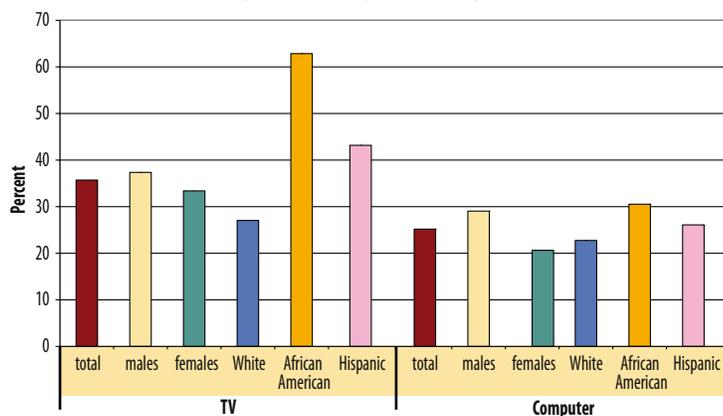
In the National Health and Nutrition Examination Survey (NHANES) that was conducted between 1988 and 1994, a nationally representative sample of children was asked how many hours of television they watched in the previous day. The American Academy of Pediatrics recommends no more than two hours per day of quality television programming³⁵, however more than 50% of youth in all age and ethnic groups exceeded the television viewing recommendations²⁴.

Age Specific Prevalence 2+ Hours of Television Watched per Day Among U.S. Children, 1988 through 1994



Ethnic and gender disparities exist between the percent of high-school students watching television and using the

Percent of U.S. High-School Students in 2007 Watching More Than 3 Hours Per Day on an Average School Day for Non-School Work



computer for non-school work on the average school day according to the 2007 Youth Risk Behavior Surveillance System (YRBSS)¹⁷.

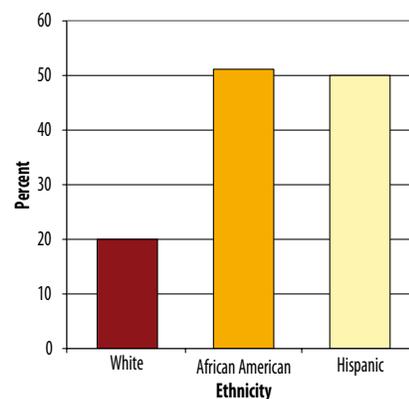
In the U.S., a higher proportion of African American adolescents are watching three or more hours of daily television and using the computer compared with White and Hispanic adolescents¹⁷. A higher proportion of males compared to females are spending three or more hours per day using computers and watching television¹⁷. Unfortunately, we do not have information for Louisiana, since recent YRBSS data have not been collected or released for our state.

OTHER INFORMATION

The presence of a television in the bedroom places children at greater risk of being overweight and obese³⁶. There are also ethnic differences in the percentage of children with televisions in their bedroom with fewer White children reporting bedroom television access³⁶. Those children with television access in their bedroom watched an additional 4.6 hours per week³⁶.

A recent Australian study examined how 2,398 families with children spent their weekly disposable income³⁸. Per week, 3.3% of the family disposable income (\$31.69/week) was spent on screen recreation including home computer equipment and televisions, while only 1.5% (\$14.58/week) was spent on active recreation such as sports lessons, sporting club memberships, and health and fitness center charges³⁸.

Percentage of Children with a Television in Their Bedroom



REPORT CARD CATEGORIES, INDICATORS, AND GRADES

It is promising to know that interventions to decrease television viewing time also have a significant positive influence on body mass index and other measures of fatness³⁹. A recent study of interviews with parents and children listed potential benefits, barriers, and strategies to limiting television use in families³⁴.

Barriers:

- Children enjoy television and it staves off boredom
- Parents enjoy watching with their children
- Loss of low-cost, effective baby-sitter
- Increased bickering
- Perceived lack of non-media in-home alternative

Benefits:

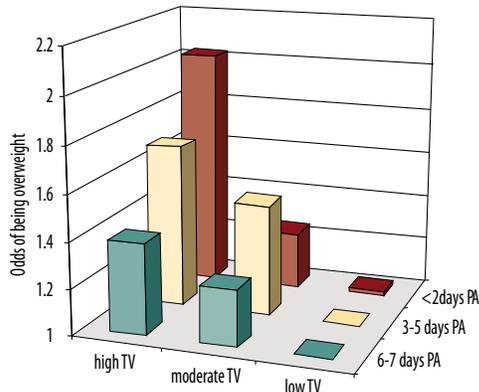
- More quality time with children
- Improved parent-child communication
- Improved educational performance
- Improved behavior

Potential strategies to limit television viewing:

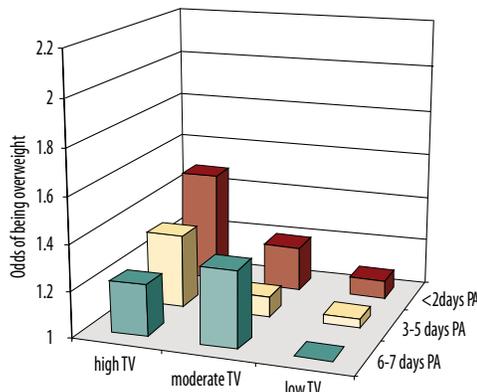
- Turning off the television when no one is actively watching
- Turning off the television during meals and no television in eating areas
- No television in children's bedrooms
- No television after school

Two studies on nationally representative samples of children and youth in the U.S. reported that fatness increased in both males and females as the amount of television watched increased^{19, 24}. Additionally, a study in elementary schools in the Midwest reported that compared to those children meeting both the recommendations for televisions (<2 hours/day) and physical activity (13,000 and 11,000 steps/day for males and females, respectively), those not meeting either recommendation were three to four times more likely to be overweight⁴⁰. As can be seen in the figures below for females and for males, the category that watches high amounts of television and participates in low levels of physical activity is 2 times (for females) and 50% more likely (for males) to be overweight than the category that watches low television and engages in moderate physical activity six or more days per week¹⁹.

Odds of Overweight Among U.S. High-School Females in 2001 by Level of Moderate Physical Activity and Television Watching



Odds of Overweight Among U.S. High-School Males in 2001 by Level of Moderate Physical Activity and Television Watching



KEY FINDINGS FOR SCREEN TIME

- 53% of Louisiana children and youth spend more than 2 hours per day watching TV or playing video games
- African American children and youth report higher levels of TV viewing than White and Hispanic children and youth.
- The odds of being overweight increase with higher levels of TV viewing in youth

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

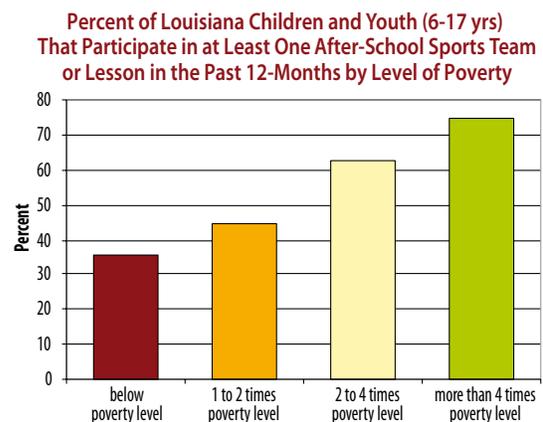
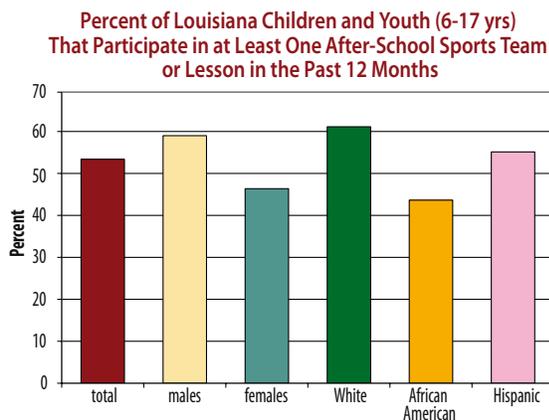
SPORTS PARTICIPATION GRADE: C

The 2003 National Survey of Children's Health (NSCH) ¹² was the only resource with information on Louisiana youth sports participation available.

LOUISIANA INFORMATION

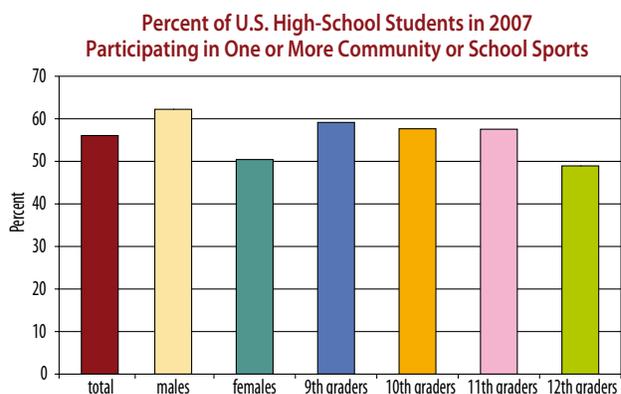
In the 2003 NSCH, approximately 53% of Louisiana youth aged 6-17 years participated in after-school sports teams or lessons during the past 12 months ¹². However, disparities exist between genders and ethnicities such that more males than females and White youth compared with African American and Hispanic youth participate in after-school athletics ¹².

There are also disparities in sports participation by level of household income ¹². Approximately 35% of children in families below the federal poverty threshold participated in after-school sports compared with nearly 75% of children in families living at four or more times the federal poverty threshold ¹².



NATIONAL INFORMATION

In the 2007 Youth Risk Behavior Surveillance System, sports participation on at least one sports team in the previous 12 months was asked of high-school students ¹⁷. There are alarming trends of decreasing sports participation as kids increased in age and for males compared to females ¹⁷.



KEY FINDINGS FOR SPORTS PARTICIPATION

- Over half 53% of Louisiana children and youth play after-school sports
- Males participate more than females
- White children and youth play more after-school sports than African American or Hispanic children and youth
- Children from families living below the Federal poverty threshold less often participate in after-school sports

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

HEALTH

OVERWEIGHT AND OBESITY GRADE: F

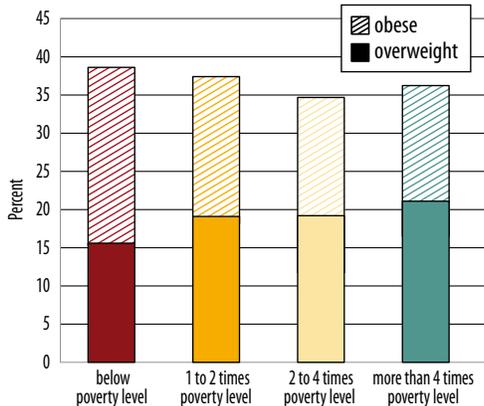
Overweight is defined as a body mass index (BMI) greater than the 85th percentile and less than the 95th percentile of children the same age ⁴¹. Obesity is defined as a BMI greater than or equal to the 95th percentile of children the same age ⁴¹. The Louisiana data came from the 2003 National Survey of Children's Health (NSCH)¹² and the LA Health research study ⁵. A major limitation to the interpretation of these figures is that the 2003 data collected from the NSCH was parental-report while the data collected from the LA Health study was actually measured by researchers. Parental report significantly underestimates the true prevalence of overweight and obesity ⁴² while it overestimates physical activity⁴³.

LOUISIANA INFORMATION

Over one-third of Louisiana children and youth are overweight or obese with obvious disparities between gender and ethnic groups ¹². Approximately 41% of males are overweight or obese while only 30% of females meet the same criterion ¹². White youth have a lower prevalence of overweight and obesity than African American or Hispanic youth in Louisiana ¹².

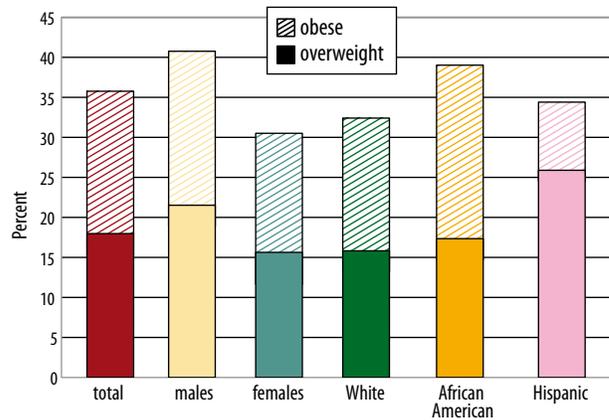
Furthermore, there are slight differences in the amount of combined overweight and obese children and youth between levels of poverty, 34-38% ¹². While the overall levels are fairly similar, with closer examination, those families below the federal poverty threshold have a greater percentage of obese children (23%) compared to those living at four or more times the federal poverty threshold (15%) ¹². This disparity is of growing concern.

Percent of Louisiana youth (10-17 Yrs) in 2003 That Were Overweight and Obese by Level of Poverty



poverty level ⁵. Nearly half of the rural youth sampled for this study were overweight or obese which places them at increased risk for chronic disease ⁵.

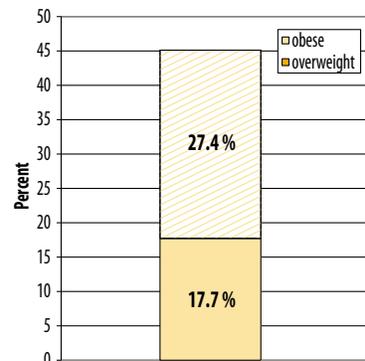
Percent of Louisiana Youth (10-17 yrs) in 2003 That Were Overweight and Obese



fairly similar, with closer examination, those families below the federal poverty threshold have a greater percentage of obese children (23%) compared to those living at four or more times the federal poverty threshold (15%) ¹². This disparity is of growing concern.

LA Health is a research project designed to prevent weight gain in rural middle schools in Louisiana and is conducted by scientists at the Pennington Biomedical Research Center in Baton Rouge. There were 2,709 kids that participated in the first measurements on the LA Health study ⁵. Participants were 57% female, 67% African American, and 77% below the

Percent of Rural Louisiana Youth That Are Overweight and Obese in the LA Health Study

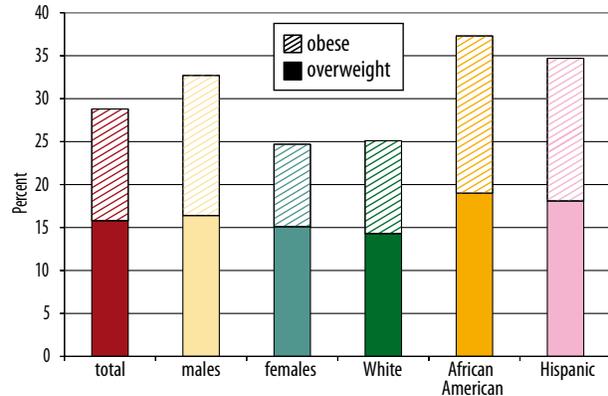


REPORT CARD CATEGORIES, INDICATORS, AND GRADES

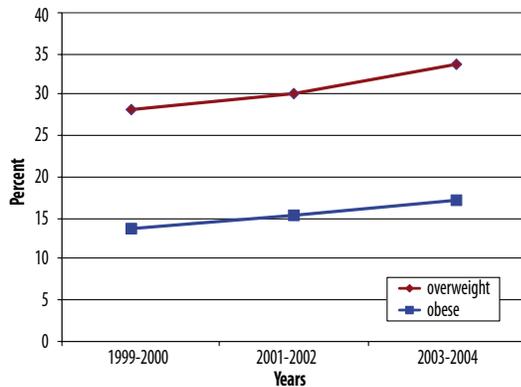
NATIONAL INFORMATION

The 2007 Youth Risk Behavior Surveillance System (YRBSS) for youth in the U.S. also shows differences similar to those found in the 2003 Louisiana data with males having a higher prevalence of overweight and obesity than females and White students having a lower prevalence than the other ethnic groups¹⁷. Obtaining recent information on the prevalence of overweight and obesity in a representative sample of Louisiana youth should be a priority.

Percent of U.S. High-School Students in 2007 That Were Overweight and Obese



Trends in Overweight and Obesity in Youth Aged 2 to 19 Years



Unfortunately we do not have trend data available for the State of Louisiana, however, nationally representative data from the 1999 to 2004 National Health and Nutrition Examination Surveys (NHANES) report an increasing number of children and youth as overweight and obese²⁵.

KEY FINDINGS FOR OVERWEIGHT / OBESITY

- Over one-third (36%) of Louisiana children and youth are overweight or obese
- Higher percentage of males are overweight or obese compared to females
- Higher percentage of African American children and youth are overweight or obese compared to White and Hispanic children and youth
- Children in poorer families have higher obesity rates than those above the poverty threshold
- Nationally increasing trends of overweight and obesity are observed

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

OVERALL PHYSICAL AND PSYCHOSOCIAL WELL-BEING GRADE: INCOMPLETE

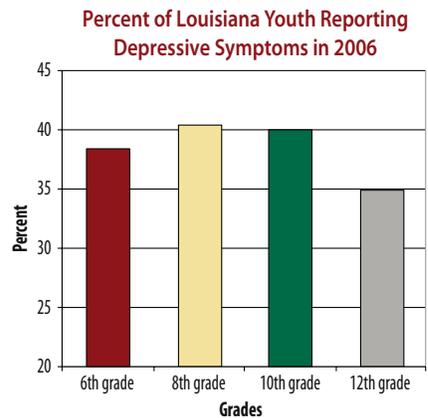
The Louisiana data came from the Caring Communities Youth Survey (CCYS) conducted in 2006⁶. The survey was designed to assess student risk behaviors as well as their exposure to protective and risk factors⁶. Young people who are depressed are overrepresented in the criminal justice system and are more likely to use drugs. Survey research and other studies have shown a link between depression and other youth problem behaviors⁶.

LOUISIANA INFORMATION

According to the 2006 CCYS, between 35 and 40 percent of Louisiana 6th, 8th, 10th, and 12th graders reported depressive symptoms⁶.

OTHER INFORMATION

A recent review of literature reported that adults who participate in organized sports and physical activity have better mental health, are more alert, and are more resilient against stresses of modern living⁴⁴. Additionally, sports participation and vigorous recreational activity has been positively associated with emotional well-being in European adolescents⁴⁵. Low levels of physical activity have also been associated with diminished psychological well-being among adolescents even when the analysis was adjusted for social class, number of parents, predicted school exam results, BMI, ethnicity, alcohol intake, and smoking status⁴⁶. Findings from the National Longitudinal Study of Adolescent Health which is representative of American adolescents in grades 7 to 12 report that participation in a wide variety of sports and physical activities was associated with reduced participation in health risk behaviors, having higher self esteem, and making better grades in school²⁸. Those students that had 1) limited decision-making related to the television and 2) regular participation in physical activity with their parents had the lowest risky behaviors, especially when compared to students that had high levels of television and video viewing and video game playing²⁸. Furthermore, more leisure-time physical activity in adolescence has been associated with psychological well-being 15 years later and predicted higher levels of self-assessed adult health⁴⁷. Given the link between physical activity and well-being there is a clear need to understand this relationship among children and youth in Louisiana and this should be a priority for future research.



KEY FINDINGS OVERALL PHYSICAL AND PSYCHOSOCIAL WELL-BEING

- Physical inactivity in teens is associated with engaging in risky behaviors, low self-esteem, poor academic performance, and poor future adult health
- Between 35 and 40% of Louisiana youth reported depressive symptoms
- Insufficient information is available for children and youth in Louisiana to grade this indicator

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

POLICY AND INVESTMENTS

PROGRESS ON GOVERNMENT STRATEGIES AND POLICIES

GRADE: B-

LOUISIANA INFORMATION

Information in this section is currently limited to state government strategies and policies and does not include local, community, or parish policies and programs. In 1999, the Louisiana State Legislature created the Louisiana Council on Obesity Prevention and Management⁴⁸. The mission of the Council is “to promote an environment that supports opportunities for all Louisiana residents to make healthy food choices and to be physically active in order to achieve or maintain a healthy weight.” In 2003 a Louisiana Obesity Task Force was also created through legislation to study obesity prevention and treatment⁴⁹. Two reports with recommendations were generated: Effectiveness of Interventions for Overweight and Obesity in Children and Adolescents and Effectiveness of Interventions for Overweight and Obesity in Adults. These reports assist in identifying best practices and have become valuable resources for legislators and health care professionals throughout the state⁴⁹. The Council conducted a Healthy Kids Wellness Policy Survey in 2007 with principals of elementary and middle schools across the state to examine the implementation of school wellness policies. In May 2008, the Council participated in the Legislative Wellness Day to bring legislator’s attention and awareness to obesity in the state⁴⁸.

In the past four years, several pieces of legislation have been passed pertaining to physical activity and obesity in children⁴⁹. In addition to the bills listed below, the Louisiana Department of Education requires 1½ years of physical education classes while attending high school for graduation⁹. The topics of these bills are:

- Requirement of children in kindergarten through sixth grade to engage in 30 minutes of moderate-to-vigorous physical activity daily (2004)
- State-wide, annual award program for outstanding physical activity programs in elementary or secondary schools (2004)
- Limited vending machine sales during specified hours (2005)
- Requirement of a state health and physical education coordinator (2007)
- Request for the state coordinator to study the feasibility of a state-wide kindergarten through twelfth grade physical fitness assessment (2007)

However, with respect to child care centers in Louisiana, the only obesity, physical activity, and nutrition legislation pertains to having water freely available, and it has not been updated since 2003⁵⁰.

The importance of urban design and land use policies to increasing physical activity has been reported in a recent review that shows these types of policies and associated allocation of funding to support these projects to have a positive impact on physical activity⁵¹. Additionally the Louisiana Department of Transportation funds the Safe Routes to School Program each year with the goal of improving the health of kids and the community by making walking and bicycling to school safer, easier and more enjoyable¹¹. Safe Routes to School projects can improve walking and cycling environments for all populations, not just the targeted children⁵². Louisiana received approximately \$9 million dollars to fund Safe Routes to School projects throughout the state over the three years starting in 2008. The Safe Routes to School Program will open its new funding cycle in January 2009¹¹.

KEY FINDINGS FOR PROGRESS ON GOVERNMENT STRATEGIES AND POLICIES

- Government policy is an effective way to increase physical activity through creating safe, walkable communities and encouraging diverse modes of transportation
- Louisiana has a Council on Obesity Prevention and Management created by state legislation
- Several laws have been passed recently that promote active living in children and youth, including the requirement of daily physical activity in elementary school

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

GOVERNMENT INVESTMENTS GRADE: INCOMPLETE

LOUISIANA INFORMATION

Government investment (\$) is a key component of enacting and enforcing health policies. Investment and allocation of funds for enforcement of legislated policy is critical for physical activity policy change to impact the levels of physical activity and obesity. We are aware of some state supported initiatives, such as supporting, in part, the development of the first annual Louisiana's Report Card on Physical Activity and Health for Children and Youth and other research and educational projects at various universities and research institutions across the state. However, an exhaustive list of these investments was unavailable at the time of the development of this report. Therefore, insufficient information is available on state-specific resources allocated to physical activity at this time.

KEY FINDINGS FOR GOVERNMENT INVESTMENTS

- Government investment (\$) is a key component of enacting and enforcing policies that impact public health.
- Insufficient information is available on state-specific resources allocated to physical activity at this time to determine a grade.

INDUSTRY AND PHILANTHROPIC INVESTMENTS GRADE: INCOMPLETE

LOUISIANA INFORMATION

Investments by corporate and philanthropic organizations and entities are of great importance for improving the physical activity and health outlook of Louisiana's children and youth. There is a growing concern about childhood physical inactivity and obesity in the community; however, data are limited as to the involvement of industry and foundations to date. This will be an important area of emphasis on future versions of the report card.

KEY FINDINGS FOR INDUSTRY AND PHILANTHROPIC INVESTMENTS

- There is a growing awareness and concern about childhood physical inactivity and obesity among corporate and philanthropic organizations
- Limited information is available
- Collection of this information will inform future grades

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

FAMILY

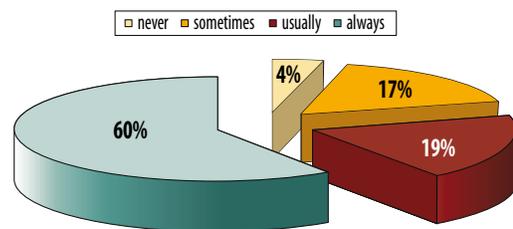
FAMILY PERCEPTIONS AND ROLES REGARDING PHYSICAL ACTIVITY GRADE: INCOMPLETE

The 2003 National Survey of Children's Health (NSCH) ¹² was the only resource with information on Louisiana family support of physical activity available for the preparation of this report. Additionally, the Behavioral Risk Factor Surveillance System (BRFSS) that is conducted by the Centers for Disease Control and Prevention was used to provide adult-only levels of physical activity ²⁰.

LOUISIANA INFORMATION

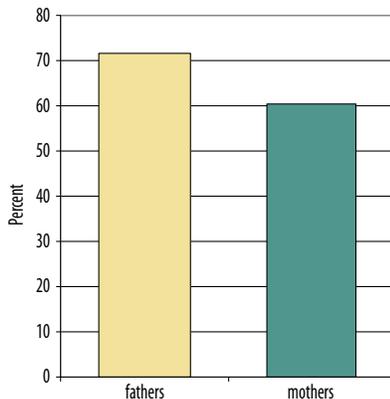
The 2003 NSCH reported nearly 80% of parents usually or always attended the events and activities of their children in the preceding 12 months ¹². While these events were not specified as sport or activity related, parental support is important for youth development across a variety of endeavors.

How Often Louisiana Parents Attend the Activities or Events of Children/Youth (6-17 yrs) in 2003



In addition to asking about their child's behavior, the 2003 NSCH asked parents if they regularly exercised for more than 20 minutes in the past month ¹². Over 70% of fathers and over 60% of mothers self-reported regular exercise.

In 2003, the Percent of Parents That Regularly Exercised in the Previous Month



In a Swedish study of over 1,000 12-year-old youth, parent's participation in sports and vigorous activity was strongly associated with the child's activity, and it was shown that mothers influenced daughters while fathers influenced sons ⁵³.

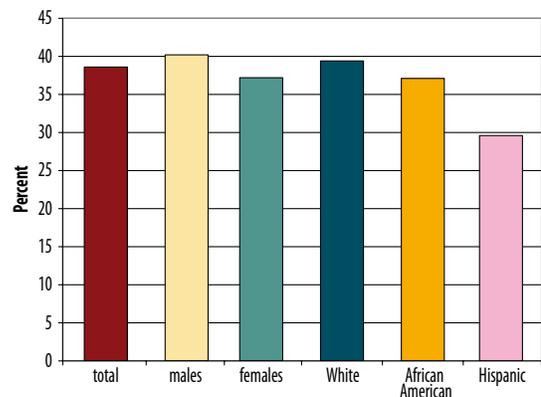
The BRFSS information was collected in 2007 from Louisiana adults, regardless of parent status ²⁰. Overall, less than 40% of Louisiana adults engaged in enough physical activity to meet the physical activity and public health recommendations ⁵⁴. Gender and ethnic disparities were also present with males being more physically active than females and White adults being more physically active than African American or Hispanic adults ²⁰. The percent of people reporting activity is smaller in the BRFSS than the NSCH because of how much physical activity was deemed enough. Since the NSCH definition of exercise was vigorous exercise for more than 20 minutes regularly, in the past month, and no number of days was necessary

to qualify, therefore the NSCH can overestimate the true number of adults meeting the physical activity and public health recommendations.

OTHER INFORMATION

Adults' levels of physical activity are reported in this report on children and youth since parent modeling behavior is important for children and youth physical activity. However, parents are important in the development of healthy physical activity and need to be more than just active role models to ensure children enjoy and value physical activity ⁵⁵. It is important for parents to provide support for activity such as allowing

Percent of Louisiana Adults in 2007 That Engaged in At Least 30 Minutes of Moderate Activity on 5 or More Days Per Week or Vigorous Activity for At Least 20 Minutes on 3 or More Days Per Week



REPORT CARD CATEGORIES, INDICATORS, AND GRADES

outdoor play time, providing access and opportunities for exercise, and providing transport to different activity lessons and/or events^{55, 56}. Parental monitoring and family cohesion was reported to be positively associated with exercise participation in adolescents while parental monitoring was negatively associated with television viewing on weekdays and weekends⁵⁷. Additionally, in a study of over 8,000 kindergarteners in the Early Childhood Longitudinal Study, the risk of becoming and remaining overweight from kindergarten or 1st grade to 3rd grade was reduced by 8% for each meal eaten as a family at home²². However, a recent study reported that parents were not concerned about the excessive time children and youth spend with electronic media and noted this as a significant barrier to decreasing sedentary time⁵⁸. In addition to the home environment and parental support for activity, dog ownership is associated with decreased odds of being overweight in 5-6 year old children⁵⁹. The active play time with the dog in addition to regular walking is another avenue in which families can support physical activity⁵⁹.

In a recent review of literature on the home environment and obesity, several avenues in which parents can provide a healthy environment (listed in box) for their children were noted and encouraged for a healthier family⁶⁰.

Another recent review of literature about active commuting to school reported individual and family characteristics that either increased or decreased the likelihood of the child actively commuting to school (*see findings below*)⁶¹. As will be discussed later in the report card (see Physical Activity Programming at School), active commuting to and from school is a viable avenue in which many children can increase their daily levels of physical activity.

PROVISION OF A HEALTHY HOME ENVIRONMENT

1. Provide a variety of healthy foods
2. Limit exposure to unhealthy foods
3. Reduce stimulus for over-eating
4. Practice regular meal and snack times
5. Provide pleasant social context while foods are presented (i.e., companionship)
6. Designate times for family meals
7. Allocate individual portions
8. Provide alternative leisure time
9. Create opportunity for physical activity
10. Limit sedentary activity
11. Encourage feeling expression
12. Emphasize the importance of fit and healthy bodies rather than thinness

INCREASE

- Ethnicity (African American and Hispanic more than White kids)
- Lower socioeconomic position
- Gender (males more than females)
- Age (older more than younger)
- Parents actively commuted to school as children
- Parents actively commute to work
- Parents value physical activity
- Parents value the social interactions that take place during the commute to school
- Parents perceive neighborhood as safe
- Greater percentage of house windows face the street
- Parents perceive that other children in the neighborhood actively commute

DECREASE

- Working parents
- Interference with parental work schedules
- Interference with child's after-school commitments

NO INFLUENCE

- Children's attitude about physical activity
- Children's eagerness to walk
- Children's enjoyment of physical activity

KEY FINDINGS FOR FAMILY PERCEPTIONS AND ROLES REGARDING PHYSICAL ACTIVITY

- Parental modeling, monitoring and family cohesion are associated with more physical activity and less TV viewing in children and youth
- Over 80% of Louisiana parents usually or always attend the events of their children
- There are many avenues to provide a healthy home environment for physical activity
- Insufficient information is available specific to physical activity to provide a grade this year

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

SCHOOL AND COMMUNITY

PHYSICAL ACTIVITY PROGRAMMING AT SCHOOL

GRADE: D

Data for Louisiana pertaining to physical activity in the schools and community was provided by the 2006 School Health Policies and Programs Study (SHPPS) ¹⁵, the 1997 Youth Risk Behavior Surveillance System (YRBSS) ¹⁷, and the Louisiana Department of Education (DOE) ⁹.

Children over the age of six spend approximately 33 hours per week at school and another four and a half hours in child care ⁶². This makes school and child care an important opportunity for children and youth to accumulate physical activity via structured physical education (PE), free-play recess, physical activity during lessons, and the daily commute to and from school.

STRUCTURED PHYSICAL EDUCATION

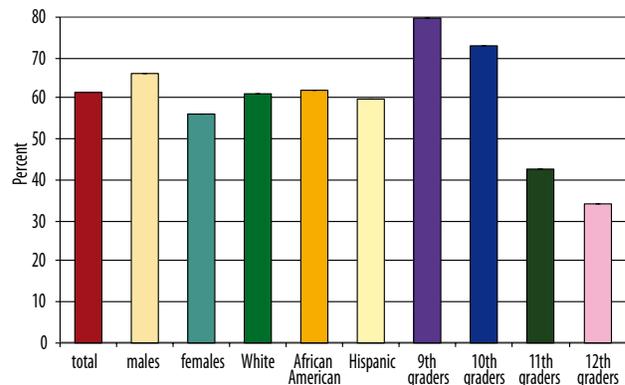
Structured PE has often been the sole source of physical activity during the school day.

LOUISIANA INFORMATION

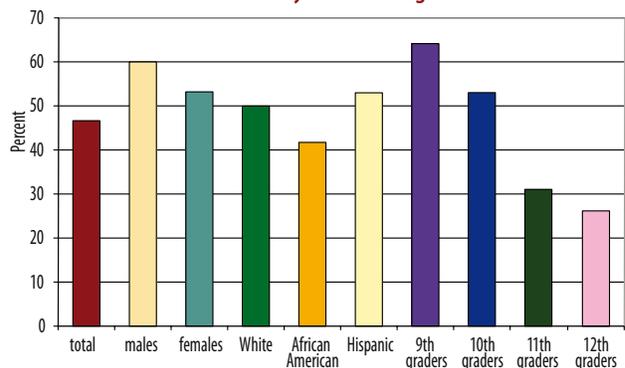
According to the 2006 School Health Policies and Programs Study conducted by the Division of Adolescent and School Health at the Centers for Disease Control and Prevention with the state Department of Education, Louisiana has a state PE coordinator and requires districts or schools to follow national or state PE guidelines ¹⁵. Additionally, Louisiana requires public elementary, middle, and high schools to teach PE and recommends that students do skills performance and fitness level tests ¹⁵. The state DOE requires that all public elementary students get 30 minutes per day of quality physical activity and the public high school students take at least 1½ years of physical education and another ½ year of health in order to graduate ⁹. Unlike many states, there are no exceptions for physical education participation for other extra curricular activities such as band or ROTC ⁹. Non-public high school students are required to attend at least two semesters of physical education for graduation ¹⁰.

Data from the 1997 YRBSS reported that 61% of high-school students in Louisiana went to PE classes at least one day in an average school-week and 46% went to PE classes five days in an average week ¹⁷. Furthermore, there was a significant decline in participation as children aged; however, encouragingly, no difference was seen between males and females. Obtaining recent physical education data for students in Louisiana should be a priority for the future.

Percent of Louisiana High-School Students in 1997 Who Went to PE on One or More Days on an Average School Week



Percent of Louisiana High-School Students in 1997 Who Went to PE on Five Days in an Average School Week



REPORT CARD CATEGORIES, INDICATORS, AND GRADES

OTHER INFORMATION

A study of 1st through 4th grade children has examined the amount of time in PE class typically devoted to physical activity per se. Unfortunately, the study found only about 1/3, or approximately 10 minutes, of the PE class is actually spent in moderate-to-vigorous, health enhancing physical activity⁶³. Currently the amount of time spent in moderate-to-vigorous activity during PE is not measured or examined in the Louisiana schools.

FREE-PLAY RECESS

LOUISIANA INFORMATION

In addition to structured PE classes, free-play is another time in which students can accumulate health enhancing physical activity. In Louisiana public schools, regularly scheduled recess is recommended for elementary schools by the state Department of Education¹⁵. Unfortunately data are currently not available to assess the degree to which this recommendation is implemented.

PHYSICAL ACTIVITY DURING ACADEMIC LESSONS

LOUISIANA INFORMATION

With increasing emphasis on academic achievement tests and scoring, the integration of physical activity into the academic class day is a novel and innovative idea that is showing promise in early research trials⁶⁴. Researchers at Louisiana State University Department of Kinesiology have recently received funding from the Governor's Council for Physical Fitness and Sports to hold a state-wide in-service training for public teachers on how to make their lessons more active and incorporate activity into daily activities such as waiting and standing in lines.

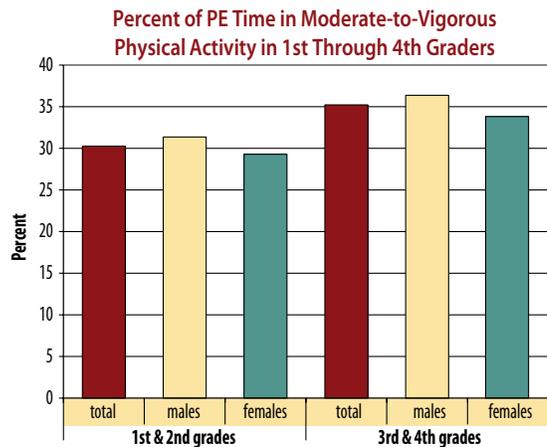
OTHER INFORMATION

Take10![®]⁶⁵ is a curriculum that has been developed to integrate physical activity into all subjects that kindergarten to fifth grade students learn at school. A group of scientists have started to study the Take10![®] curriculum in the classroom⁶⁶ and have discovered that students in the Take10![®] classes get significantly more physical activity per day than students who are in traditional classrooms⁶⁴. Teachers in the Take10![®] classes also report that "it is a great teaching strategy that helps break up the class"⁶⁴. Further, a similar study was conducted with preschoolers and showed that preschoolers in the schools with the active curriculum were significantly more active during the day than those in the traditional classroom⁶⁷.

DAILY COMMUTE TO AND FROM SCHOOL

LOUISIANA INFORMATION

The Louisiana Department of Transportation funds the Safe Routes to School Program each year with the goal to improve the health of kids and the community by making walking and bicycling to school safer, easier, and more enjoyable¹¹. Louisiana received approximately 9 million dollars to fund Safe Routes to School projects throughout the state over three years. The Safe Routes to School Program will open its new funding cycle in January 2009¹¹.



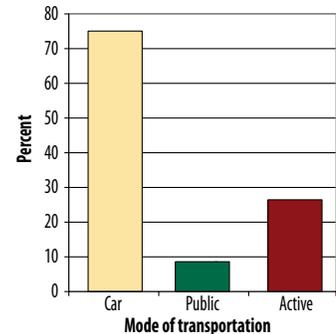
REPORT CARD CATEGORIES, INDICATORS, AND GRADES

NATIONAL INFORMATION

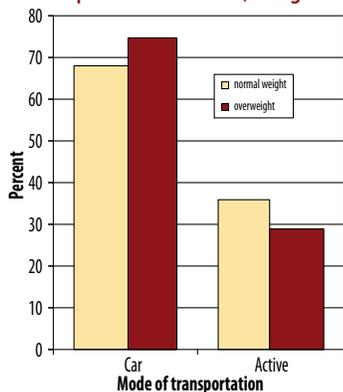
According to the National Longitudinal Study of Adolescent Health, the majority of American youth in 7th to 12th grades do not commute by active modes such as bicycling, walking, or skateboarding; with the vast majority of nearly 75% riding in a car to get to school daily²⁷.

Youth that were a healthy weight used active commuting modes to get to school more frequently than those who were overweight²⁷. Although this relationship is a correlation rather than cause-and-effect in this study, it provides encouragement for active commuting for youth as a means of weight maintenance and weight gain prevention.

Prevalence of Commuting Mode to School in a National Sample of Adolescents (7-12 Grades)



Prevalence of Modes of Transportation by Weight Status in a National Sample of Adolescents (7-12 grades)



OTHER INFORMATION

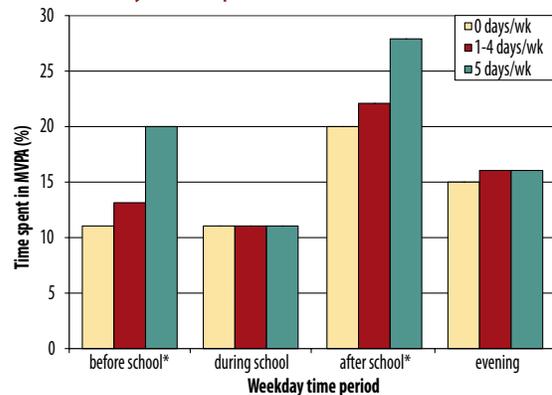
In international studies, kids that actively commute to school have been reported to accumulate more activity per day than kids who ride on a bus or in a car to school^{68, 69}. Furthermore, a study conducted in the Southern United States reported that 5th grade students that regularly (5 days/week) actively commuted to school accumulated an extra 24 minutes of health enhancing moderate-to-vigorous physical activity⁷⁰; which is nearly half of their daily minimum requirement¹. Furthermore, those students that were regular active commuters spent significantly more time before and after school (denoted in figure below by *) in moderate-to-vigorous physical activity than those that were irregular or non-active commuters⁷⁰.

In a recent review of literature on active commuting to school, several school characteristics were noted as encouraging children and youth to actively commute to school⁶¹.

- Shorter distance to the school
- Higher population density in the area immediately around the school
- Lower school enrollment levels

Distance from home to school is the greatest barrier reported by parents in the review of literature⁶¹, and children in the U.S. who lived less than one mile from school were more than three times as likely to actively commute compared to those who lived further away⁷¹.

Percent of Time in Moderate-to-Vigorous Physical Activity in the School Day in a Sample of 5th Graders in the Southern U.S.



KEY FINDINGS FOR PHYSICAL ACTIVITY PROGRAMMING AT SCHOOL

- 46% of Louisiana high school students went to PE five days per week in 1997
- Drastic decline in PE participation from 64% in the 9th grade to 26% in the 12th grade
- The most recent data available are from 1997, highlighting the importance of updating information on physical education participation in children and youth

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

TRAINING OF SCHOOL PERSONNEL IN PHYSICAL ACTIVITY GRADE: C

The 2006 School Health Polices and Programs Study (SHPPS) conducted by the Division of Adolescent and School Health at the Centers for Disease Control and Prevention ¹⁵ and the Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD) ⁷ provided the data for this section.

LOUISIANA INFORMATION

LAHPERD holds an annual convention in Baton Rouge in which over 600 elementary, middle, and high school teachers attend to learn the latest techniques in teaching and earn continuing education credits ⁷.

According to the 2006 SHPPS, Louisiana requires newly hired middle and high school PE teachers to have a college degree in PE or a related field and be certified, licensed, and endorsed by the state ¹⁵. The study also examined the staff development opportunities over the previous two years for PE instructors. Out of the 16 possible development categories, the state of Louisiana only offered the six categories listed below ¹⁵. Thirty of the 50 states, including Louisiana, offered 6 or more of the categories for continued learning ¹⁵.

- Assessing or evaluating student performance
- Recognizing and responding to chronic health conditions
- Teaching movement skills and concepts
- Teaching students with long term disabilities
- Teaching team or group activities or sports
- Using physical activity monitoring devices

KEY FINDINGS FOR PHYSICAL ACTIVITY PROGRAMMING AT SCHOOL

- Louisiana requires newly-hired middle school and high school physical education teachers have a college degree in physical education or a related field
- Several types of continuing education opportunities are offered to Louisiana physical education teachers
- Limited information is available regarding physical activity training for other school personnel

REPORT CARD CATEGORIES, INDICATORS, AND GRADES

COMMUNITY INFRASTRUCTURE, FACILITIES AND PROGRAMS GRADE: INCOMPLETE

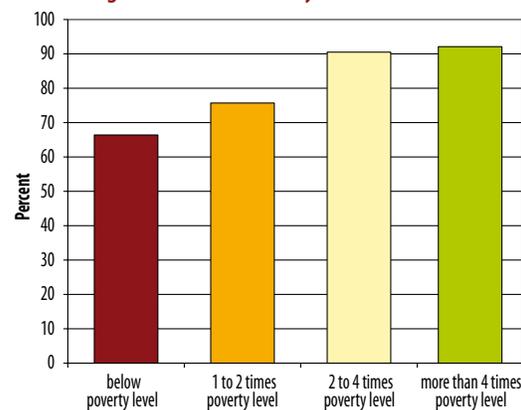
A recent review of literature showed an association between parks and recreation spaces and higher levels of physical activity⁷². Information on community parks and outdoors spaces was provided by websites developed by the National Park Service¹⁴, the Louisiana State Department of Culture, Recreation, and Tourism⁸, and the 2003 National Survey of Children's Health (NSCH)¹².

LOUISIANA INFORMATION

The Louisiana Department of Culture, Recreation, and Tourism reports that there are 20 state parks in Louisiana which have amenities such as hiking, biking, birding, nature trails, and cabins for overnight stays⁸. In addition, the National Park Service lists another six parks and historical sites on their website¹⁴.

Information from the 2003 NSCH asked parents how often they felt their community and neighborhood was safe for their children¹². According to household income status, those families that had a household income four or more times the federal poverty level felt their neighborhood was usually safe for their children 92% of the time, while those parents living below the federal poverty level felt their neighborhood was usually safe only 66% of the time¹².

In 2003, Percent of Louisiana Parents That Reported Their Community or Neighborhood Was Usually Safe for Their Children

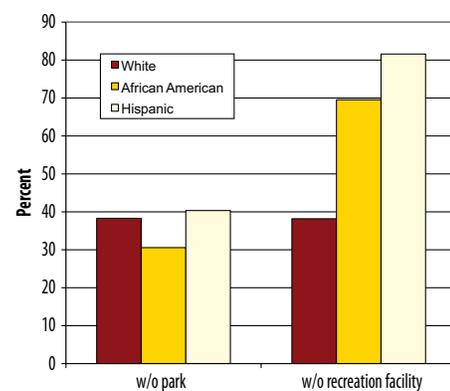


OTHER INFORMATION

Public health researchers have noted the role that parks play in promoting physical activity⁷³. For example, adolescent females who lived near more parks, particularly those with active features such as basketball courts and playgrounds, engaged in more physical activity outside of school than females who lived near fewer parks⁷⁴. Additionally, parks provide settings for parents to support active play among kids. In unpublished surveys conducted in 2006-07 among 40 New Orleans neighborhood parks, researchers from the LSU School of Public Health found that 38% of adult park users were at the park to accompany children. The proportion was higher among African American adult park users than White park users (45% versus 32%), suggesting that parks as a public good may provide valuable opportunities for physical activity in segments of the population at high risk for overweight and obesity.

Unfortunately, on a national level, access to parks and recreational areas is not equally distributed throughout all neighborhoods in a community⁷⁵. An environmental research study examined the ethnic distribution of communities (i.e., census tract) and the density (prevalence per given area of land) of recreational resources (i.e., tracts without a park) and found significant differences between ethnic neighborhoods⁷⁵. Predominantly Hispanic census tracts had a lower prevalence of parks or recreation facilities compared to African American and White census tracts.

Percent of Census Tracts Without a Park or Recreational Facility



Recent research on park usage noted that 43% of park users lived within 0.25 miles, and another 21% lived between 0.25 and 0.5 miles, while only 13% lived more than 1 mile from the park⁷⁶. Additionally, a disparity in park use was observed between males and females in both structured sports and free-play⁷⁶. Another recent study of over 4,000 adolescents in California that participated in the California Health Interview Survey reported that one in four adolescents did not have access to a safe park²¹. Access to a safe park was positively associated with regular activity and negatively associated with inactivity for adolescents in urban, but not rural areas²¹. Active commuting to school has also been examined on the greater community scale in addition to neighborhood, school, and individuals. A direct route to school, minimal navigation of steep hills, and “walkable” neighborhoods have all been reported in a recent review of literature to be associated with higher levels of active commuting to school⁷¹. A neighborhood is deemed “walkable” by the consideration of the density of houses, density of street intersections, amount of retail stores, and variety of land use such as retail, residential, and green space⁷¹. Community walkability and bikeability checklists are available for residents to examine their own neighborhood living space at www.walkinfo.org and www.bikeinfo.org, respectively.

KEY FINDINGS FOR PHYSICAL ACTIVITY PROGRAMMING AT SCHOOL

- There is a relationship between the existence of parks and recreation facilities and levels of physical activity
- Aspects of the built environment such as the walkability of neighborhoods and the amount of green space have also been associated with physical activity in children and youth
- Lower income families felt their neighborhood was usually safe 66% of the time compared with 92% for those families earning household incomes four or more times the Federal poverty level
- Very little information is available on this topic for Louisiana

ACRONYMS AND DEFINITIONS

ACRONYM	DEFINITION
AAP	American Academy of Pediatrics
BRFSS	Behavioral Risk Factors Surveillance System
BMI	Body mass index
CDC	Centers for Disease Control and Prevention
CCYS	Caring Communities Youth Survey
LA	Louisiana
LAHPERD	Louisiana Association for Health, Physical Education, Recreation and Dance
LSU	Louisiana State University
NASPE	National Association for Sport and Physical Education
NHANES	National Health and Nutrition Examination Survey
NSCH	National Survey of Children's Health
PE	Physical education
SHPPS	School Health Policies and Programs Study
TAAG	Trial for Activity of Adolescent Girls
YRBSS	Youth Risk Behavior Surveillance System

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REPORT CARD DEVELOPMENT AND DATA SOURCES

The grade assignments were based on analyses of the most recently available information from various sources, including the 2006 Caring Communities Youth Survey, 2006 LA Health research study, Louisiana Association for Health, Physical Education, Recreation, and Dance, Louisiana Department of Culture, Recreation, and Tourism, Louisiana Department of Education, Louisiana Department of Transportation and Development, National Park Service, 2003 National Survey of Children's Health, 2006 School Health Policy and Program Study, and the 1997 Youth Risk Behavior Surveillance System.

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For online versions of this long-form report card and a shorter summary version, please visit www.louisianareportcard.org.



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