

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

2010



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PENNINGTON BIOMEDICAL RESEARCH CENTER
LOUISIANA STATE UNIVERSITY SYSTEM

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TABLE OF CONTENTS

Foreword	4
2010 Research and Advisory Committees	5
<i>Advisory Committee</i>	5
<i>Research Committee</i>	6
Goal of the Report Card.....	7
Recommendations	8
Physical Activity Guidelines and Examples for Children & Youth	10
Making the Grade.....	11
Summary of Report Card Grades: 2008, 2009 & 2010	12
Physical Activity/Inactivity	13
<i>Physical Activity Levels</i>	14
<i>Screen Time</i>	17
<i>Sports Participation</i>	21
Health and Health Behaviors	23
<i>Overweight and Obesity</i>	24
<i>Aerobic Fitness</i>	28
<i>Overall Physical and Emotional Well-Being</i>	30
<i>Fruit and Vegetable Consumption</i>	32
<i>Tobacco Use</i>	35
Family	37
<i>Family Perceptions and Roles Regarding Physical Activity</i>	38
School and Community	40
<i>Physical Activity Programming at School</i>	41
<i>Training of School Personnel in Physical Activity</i>	44
<i>Built Environment and Community Design</i>	45
Policy and Investments	48
<i>Progress on Government Strategies and Policies</i>	49
<i>Government Investments</i>	51
<i>Industry and Philanthropic Investments</i>	52
2010 Report Card Development and Data Sources	53
Acronyms and Definitions	55
References.....	56



FOREWORD

The past three years have seen some exciting developments in the field of physical activity and health. Over 50 years of research culminated in the release of the *2008 Physical Activity Guidelines for Americans*, which highlighted the important role that active living plays on maintaining good health - for both adults and children. Building upon the information provided in the federal guidelines, the *U.S. National Physical Activity Plan* was released in May of this year. The Plan is a comprehensive set of policies, programs, and initiatives that aim to increase physical activity in all segments of the American population. Also this year, President Barack Obama created the White House Task Force on Childhood Obesity, and First Lady Michelle Obama released her Let's Move! project with the goal of ending childhood obesity in one generation. These initiatives focus on creating healthy childhood environments and empowering children to become more physically active and adopt healthier diets.

This is the third annual *Louisiana Report Card on Physical Activity and Health for Children and Youth* released by the Pennington Biomedical Research Center. The development of this year's report card was guided by an Advisory Committee composed of members from across the state, and a Research Committee made up primarily of researchers with expertise in childhood and population health. We have been able to substantially update the Report Card this year with data from the 2009 Youth Risk Behavior Survey as well as aerobic fitness data provided by the Cecil J. Picard Center for Child Development and Lifelong Learning.

I hope that this year's report card continues to be a useful resource and advocacy tool for individuals and organizations engaged in promoting childhood health across Louisiana. Some readers may be concerned by the lack of improvement observed in the grades assigned to the indicators over the last three years. We are fighting a downward trend in our children's health - a trend that first needs to be slowed and then reversed. Most experts agree that this trend can only be reversed by the concerted efforts of all levels of government, non-government organizations, industry, and parents. The goal of ending childhood obesity in one generation is ambitious, and this goal will only be realized when a major commitment to these efforts are made. Please join us by doing your part to make this goal a reality - and help to improve the grade!



Peter Katzmarzyk, PhD, FASCM
Chair, Report Card Advisory and Research Committees,
Associate Executive Director for Population Science,
Pennington Biomedical Research Center,
Baton Rouge

2010 ADVISORY AND RESEARCH COMMITTEES

This year, the development of Louisiana's Report Card on Physical Activity and Health for Children and Youth was guided by two committees. The Advisory Committee, composed of stakeholders from across Louisiana, guided the selection of indicators and gave input on the start-up and direction of the Report Card. The data and content of the Report Card was assembled by a Research Committee, composed of scientists and researchers from Louisiana, who were also responsible for the grade assignments.

ADVISORY COMMITTEE

Committee Chair:

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

Julie C. Morial, MD
Blue Cross/Blue Shield
Baton Rouge, LA

Committee Coordinator:

Samaah M. Sullivan, MPH
Pennington Biomedical Research Center
Baton Rouge, LA

Jayne Nussbaum
Louisiana Public Health Institute
New Orleans, LA 70112

Committee Members:

Wilson Campbell, Ed.D.
ULL-Kinesiology
Monroe, Louisiana

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

Michael Comeaux, MS, MHSA
Louisiana Department of Education
Baton Rouge, LA

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

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

Jennifer Stenhouse
Center for Planning Excellence
Baton Rouge, LA

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

Ashley Stewart, MPH
Rapides Foundation
Alexandria, Louisiana

JiJi Jonas
LSU-Kinesiology & LAHPERD
Baton Rouge, LA

Matthew Valliere, MPA
Chronic Disease Prevention & Control Unit
Louisiana Department of Health & Hospitals
Baton Rouge, LA

John LaCour, MSW
Cecil J. Picard Center for Child Development and Lifelong Learning
Lafayette, LA

Ad-Hoc Committee Members

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

Susan Moreland, CAE
North Louisiana AHEC
Bossier City, LA

Jessica Alleyne (Fundraising)
Pennington Biomedical Research Foundation
Baton Rouge, LA

Angela W. deGravelles (Public Relations)
deGravelles and Associates
Baton Rouge, LA

RESEARCH COMMITTEE

Committee Chair:

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

Committee Coordinator:

Samaah M. Sullivan, MPH
Pennington Biomedical Research Center
Baton Rouge, LA

Committee Members:

Brandi Bourgeois, MPH
Louisiana Tobacco Control Program
Louisiana Department of Health & Hospitals

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

Raegan Carter Jones, MPH, MSW
Louisiana Department of Education
Baton Rouge, LA

Catherine Champagne, PhD, RD
Pennington Biomedical Research Center
Baton Rouge, LA

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

Holly Howat, PhD, CCC-SLP
Picard Center for Child Development and Lifelong Learning
Lafayette, LA

Robert Newton, PhD
Pennington Biomedical Research Center
Baton Rouge, LA

Ariane Rung, PhD
LSU School of Public Health
New Orleans, LA 70112

Melinda Sothorn, PhD
LSU Health Sciences Center
New Orleans, LA 70122

GOAL OF THE REPORT CARD

This 2010 publication is the third annual release of *Louisiana's Report Card on Physical Activity & Health for Children and Youth*. The primary goal of the Report Card is to assess the level of physical activity and sedentary behaviors in Louisiana's children and youth, the level of facilitators and barriers for physical activity, and their related health outcomes.

The Report Card is an authoritative, evidence-based document that provides a comprehensive evaluation of the physical activity levels and the indicators that influence physical activity among children and youth in Louisiana. Through this effort, we are able to track these behaviors and their influences over time and show progress, deficiencies, and inequities for each indicator. The Report Card is a resource for health statistics on children and youth in Louisiana, but most importantly, is an advocacy tool and provides a level of accountability and call-to-action for adult decision makers on how we, as parents, teachers, medical professionals, and community leaders can help implement new initiatives, programs, and policies that can support health behaviors and environments to improve the physical activity levels and health of our children.



RECOMMENDATIONS

The following recommendations specifically target parents, teachers and school administrators, policy makers, physicians and health care providers, and researchers to improve our children's health and increase their physical activity opportunities.

PARENTS

- Spend time with your children in healthy outdoor activities such as biking, walking, swimming, and tennis. Parents are important physical activity role models for their children.
- Ensure that your children are provided with adequate free time to be physically active. The 2008 Physical Activity Recommendations for Americans indicate that children and youth require 60 minutes of physical activity daily.
- Establish household rules for television and computer use, and set reasonable limits. The American Academy of Pediatrics recommends that children and youth watch no more than 2 hours of quality television programming each day.
- Do not place televisions in children's bedrooms. Children with a television in their bedroom are more likely to develop problems with their weight.
- Encourage, promote, and participate in school health advisory councils and parent school associations to advocate for healthy, active living environments at school.
- Volunteer to chaperone children during physically active field trips and days at school.
- Start a walk-to-school program with families in your neighborhood.

TEACHERS AND SCHOOL ADMINISTRATORS

- Incorporate and promote physical activity breaks during and between classes. Try 5 minutes of an activity such as marching in place, stretching - anything to get kids moving. Play some music and make it fun!
- Encourage and promote active commuting to school. Establish safe and accessible walking/cycling routes to and from the school and provide sufficient space for bicycle and helmet storage in the school or classroom.
- Model healthy habits for your students while in school. Eat healthy meals in the cafeteria with your students and drink healthy drinks in front of your students.
- Encourage moderate and vigorous physical activity behaviors during recess by coordinating games that can involve many children, such as tag, flag football, jumping rope, Frisbee, or soccer.
- Support intramural and interscholastic sports programs.
- Promote, coordinate, implement, and adhere to school wellness policies.
- Restructure physical education programs to teach more life-time and individual goal-based skills such as tennis, golf, dancing, martial arts, etc., in addition to competitive sports.
- Ensure that children are engaging in at least 30 minutes of moderate-to-vigorous physical activity during Physical Education class.
- Consider giving children physically active homework, such as nature walks, and reward superior academic performance with physical activity such as more time for outdoor play and active field trips.

POLICY MAKERS

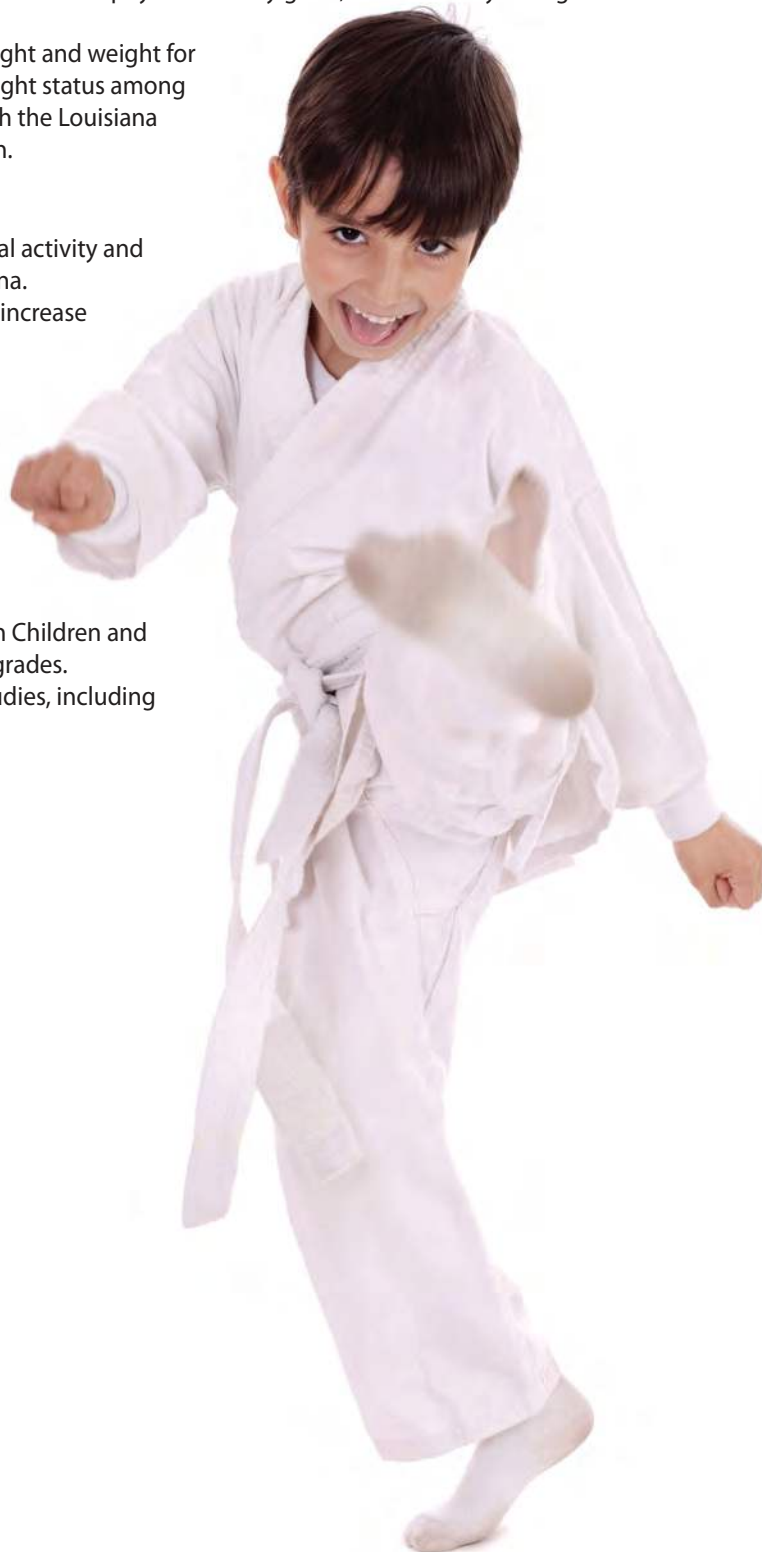
- Provide tax credits to parents whose children participate in physical activity programs (for fees, equipment, uniforms etc.).
- Increase opportunities for active transportation by legislating that appropriate levels of traffic safety are provided for pedestrians and cyclists.
- Mandate certain physical activity promoting qualities of the built environment for new home construction, such as requirement for sidewalks, bike paths, bike racks, vicinity to parks, etc.
- Ensure that children's active play areas are not marginalized in community planning and design.
- Put physical activity back into elementary schools. Bring back recess.
- Implement school health advisory councils comprised of school administrators, teachers, school staff, parents, public health community members, and others from the community at large.
- Ensure open access to sport and physical activity facilities for all people.
- Improve access to and the quality of public transportation systems.
- Implement public reporting requirements for school and local wellness policies that compel districts to report on their progress in a transparent manner.

PHYSICIANS AND HEALTH CARE PROVIDERS

- Become familiar with, and keep information on hand, with respect to the 2008 Physical Activity Recommendations for Americans.
- Include physical activity on the vital signs chart in doctor's offices. This should be especially monitored for any patient aged 6 years and over regarding their physical activity habits at every visit.
- Monitor children's BMI on pediatric body mass index growth charts and provide educational materials on physical activity and eating behaviors to parents.
- Encourage parents to participate in physical activity with their children. Set physical activity goals, such as family biking on weekends or walking after dinner.
- Encourage the development of a monitoring system to report height and weight for children and youth as a data source or surveillance system for weight status among children and youth in Louisiana that can be used alongside or with the Louisiana Immunization Network for Kids Statewide (LINKS) web application.

RESEARCHERS

- Continue to advocate for better population surveillance of physical activity and associated health behaviors among children and youth in Louisiana.
- Continue to conduct research to determine the best strategies to increase physical activity and improve health in children and youth.
- Conduct research on the effects of sedentary behaviors such as television viewing on health among children and youth.
- Conduct research on the effects of the built environment on physical activity and health among children and youth.
- Conduct research concerning the long-term health benefits of physical activity among women during and after pregnancy and among children during the early years of development from infancy to pre-puberty.
- Study the Louisiana Report Card on Physical Activity and Health in Children and Youth, and embark on research that will inform the "Incomplete" grades.
- Incorporate objective measures of physical activity in research studies, including accelerometers and pedometers.



PHYSICAL ACTIVITY GUIDELINES AND EXAMPLES FOR CHILDREN & YOUTH

Table 1: Physical Activity Guidelines and Examples for Children & Youth

Type of Physical Activity	Guidelines	Examples for Children	Examples for Adolescents
Moderate-intensity aerobic	Children and adolescents should do 60 minutes (1 hour) or more of physical activity every day. Most of the 60 or more minutes a day should be either moderate- or vigorous-intensity aerobic physical activity	• Active recreation, such as hiking, skateboarding, rollerblading • Bicycle riding • Brisk walking	• Active recreation, such as canoeing, hiking, skateboarding, rollerblading • Brisk walking • Bicycle riding (stationary or road bike) • Housework and yard work, such as sweeping or pushing a lawn mower • Games that require catching and throwing, such as baseball and softball
Vigorous-intensity aerobic	As part of their 60 or more minutes of daily physical activity, children and adolescents should include vigorous-intensity physical activity on at least 3 days a week	• Active games involving running and chasing such as tag • Bicycle riding • Jumping rope • Martial arts, such as karate • Running • Sports such as soccer, ice or field hockey, basketball, swimming, tennis • Cross-country skiing	• Active games involving running and chasing, such as flag football • Bicycle riding • Jumping rope • Martial arts, such as karate • Running • Sports such as soccer, ice or field hockey, basketball, swimming, tennis • Vigorous dancing • Cross-country skiing
Muscle-strengthening	As part of their 60 or more minutes of daily physical activity, children and adolescents should include muscle-strengthening physical activity on at least 3 days of the week	• Games such as tug-of-war • Modified push-ups (with knees on the floor) • Resistance exercises using body weight or resistance bands • Rope or tree climbing • Sit-ups (curl-ups or crunches) • Swinging on playground equipment/bars	• Games such as tug-of-war • Push-ups and pull-ups • Resistance exercises with exercise bands, weight machines, hand-held weights • Climbing wall • Sit-ups (curl-ups or crunches)
Bone-strengthening	As part of their 60 or more minutes of daily physical activity, children and adolescents should include bone-strengthening physical activity on at least 3 days of the week	• Games such as hopscotch • Hopping, skipping, jumping • Jumping rope • Running • Sports such as gymnastics, basketball, volleyball, tennis	• Hopping, skipping, jumping • Jumping rope • Running • Sports such as gymnastics, basketball, volleyball, tennis

Source: United States Department of Health and Human Services (HHS). 2008 Physical Activity Guidelines for Americans. <http://www.health.gov/paguidelines/pdf/paguide.pdf>.

MAKING THE GRADE

The grades for the 2010 Report Card were assigned by the Report Card Research Committee, composed of researchers and scientists from Louisiana, who used the most recent and accurate data available and the consideration of recently published scientific literature and reports. Below is a rubric for the assignment of grades for all of the indicators presented in the Report Card.

Grades	
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, and 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

Louisiana's Overall Grade 2010: D

SUMMARY OF REPORT CARD GRADES: 2008, 2009 & 2010

Categories and Indicators	2008 Grades	2009 Grades	2010 Grades
Physical Activity/Inactivity			
Physical Activity Levels	D	D	D
Screen Time	D	D-	D-
Sports Participation	C	C	C
Health & Health Behaviors			
Overweight and Obesity	F	F	F
Aerobic Fitness	-	-	C-
Overall Physical and Emotional Well-Being	INC	C-	C-
Fruit and Vegetable Consumption	-	D-	D-
Tobacco Use	-	C	C
Family			
Family Perceptions and Roles Regarding Physical Activity	INC	INC	INC
School and Community			
Physical Activity Programming at School	D	D	D
Training of School Personnel in Physical Activity	C	C	C
Built Environment and Community Design	INC	D	D
Policy and Investments			
Progress on Government Strategies and Policies	B-	B-	B-
Government Investments	INC	INC	INC
Industry and Philanthropic Investments	INC	INC	INC
Overall Grade	D	D	D

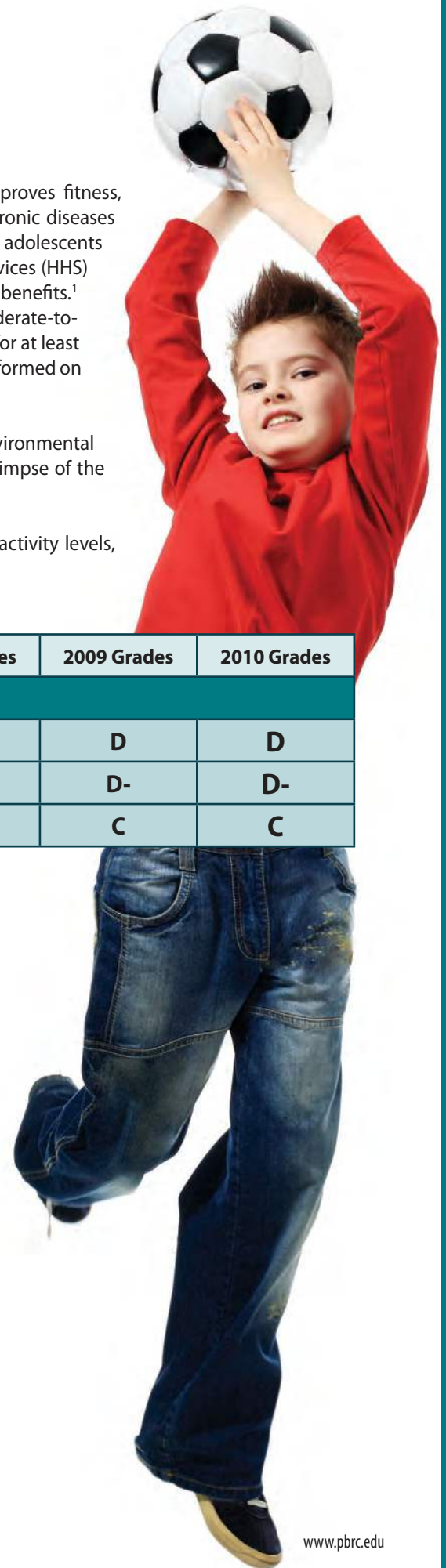
PHYSICAL ACTIVITY/INACTIVITY

Regular physical activity is an important component to overall good health, improves fitness, promotes a healthy body weight, and reduces the risk of premature death and chronic diseases such as heart disease, type 2 diabetes, and the metabolic syndrome.¹ For children and adolescents between the ages of 6 and 17 years, the U.S. Department of Health and Human Services (HHS) recommends at least 60 minutes of daily physical activity to achieve significant health benefits.¹ Of the 60 or more minutes of daily physical activity, most should come from moderate-to-vigorous physical activity (MVPA) and should also include vigorous physical activity for at least three days a week.¹ Further, muscle and bone strengthening activities should be performed on at least three days a week.¹

While the Report Card provides an overall assessment of the determinants and environmental influences on physical activity, the Physical Activity/Inactivity section provides a glimpse of the actual physical activity levels among Louisiana's children and youth.

Three indicators are included in the physical activity/inactivity category: physical activity levels, screen time, and sports participation.

	2008 Grades	2009 Grades	2010 Grades
Physical Activity/Inactivity			
Physical Activity Levels	D	D	D
Screen Time	D	D-	D-
Sports Participation	C	C	C



PHYSICAL ACTIVITY/INACTIVITY



PHYSICAL ACTIVITY LEVELS

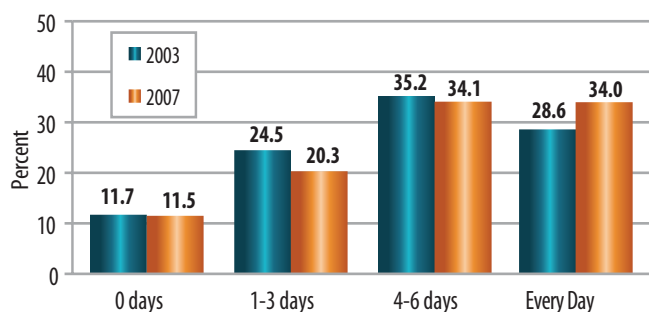
Physical activity guidelines and examples of the different types of physical activities for children and youth are described in Table 1 on page 10 and can also be found in the 2008 Physical Activity Guidelines for Americans.¹

LOUISIANA INFORMATION

Data on the physical activity levels of children and youth in Louisiana were retrieved from the 2003 and 2007 National Survey of Children's Health (NSCH)^{2,3} and the 2008 and 2009 Louisiana Youth Risk Behavior Survey (YRBS).^{4,5}

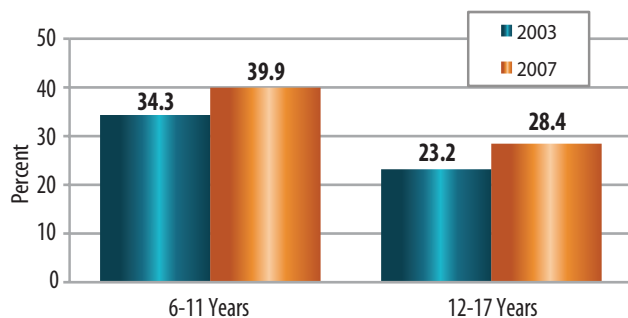
According to the 2003 and 2007 NSCH results,^{2,3} physical activity levels varied across response categories and age groups between survey years (Figures 1 & 2). Thirty-four percent of children and youth (ages 6-17) participated in at least 20 minutes of vigorous physical activity every day in 2007,³ compared to 29% in 2003 (Figure 1).² Increases between survey years were also seen across age groups (Figure 2).^{2,3} Results from both survey years showed that the percentage of children and youth who achieved at least 20 minutes of vigorous physical activity every day were lower among 12-17 years olds compared to children 6-11 years of age (Figure 2).^{2,3}

Figure 1: In 2003 and 2007, Percentage of Children and Youth (ages 6-17) in Louisiana That Engaged in Vigorous Physical Activity for at Least 20 Minutes



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 2: In 2003 and 2007, Percentage of Children and Youth (ages 6-17) in Louisiana that Engaged in Vigorous Physical Activity Every Day (at least 20 minutes) by Age Group

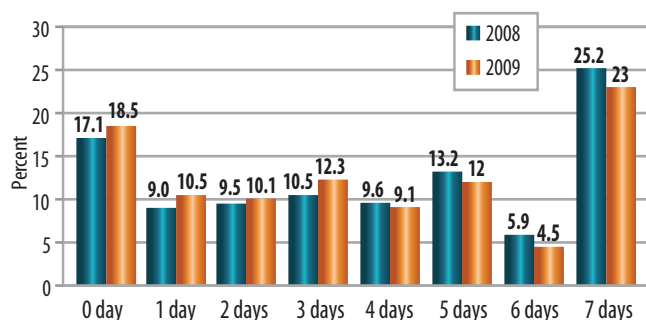


Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Results from the YRBS^{4,5} showed that in 2009, 23% of high school students engaged in at least 60 minutes of physical activity every day, similar to 25% reported in 2008 (Figure 3). In 2009, 19% of students did not achieve 60 minutes or more of physical activity on any of the seven days before the survey, compared to 17% in 2008 (Figure 3).^{4,5}

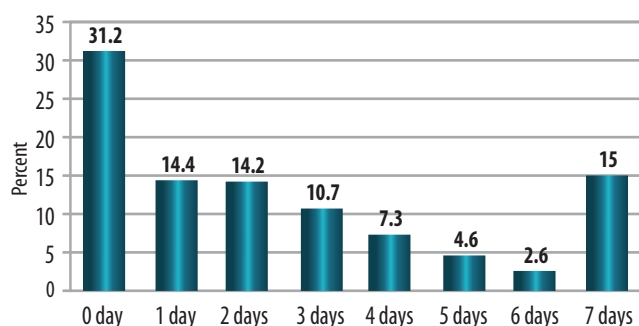
The physical activity guidelines recommend that of the 60 or more minutes of daily physical activity, most should be moderate-to-vigorous intensity and should include vigorous physical activity as well as muscle-strengthening and bone-strengthening activities on at least three days of the week.¹ Fifteen percent of high school students in Louisiana participated in at least 30 minutes of moderate physical activity every day (Figure 4).⁵ Vigorous physical activity (at least 20 minutes) and muscle-strengthening activities were achieved by 56% and 45% of high school students respectively, for three or more days during the seven days before the 2009 survey (Figures 5 & 6).⁵

Figure 3: In 2008 & 2009, Percentage of High School Students in Louisiana who were Physically Active for at Least 60 Minutes per Day During the 7 Days Before the Survey



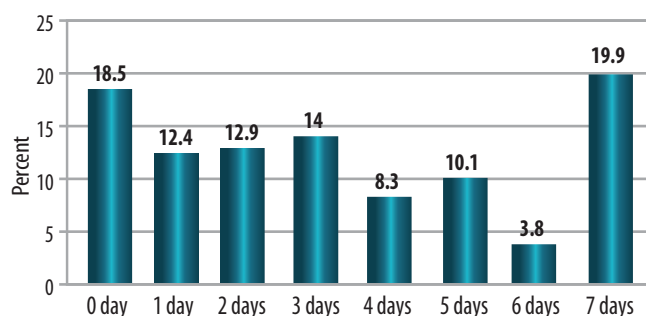
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 4: In 2009, Percentage of High School Students in Louisiana that Participated in at Least 30 Minutes of Moderate Physical Activity during the 7 Days Before the Survey



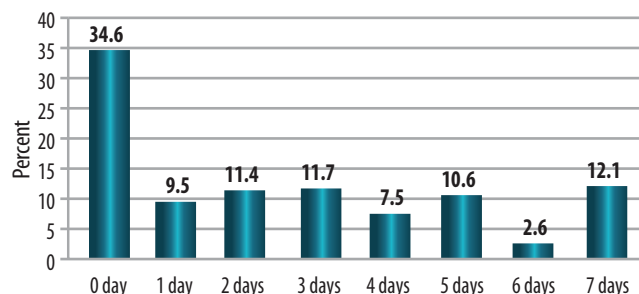
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

Figure 5: In 2009, Percentage of High School Students in Louisiana who Participated in at Least 20 Minutes of Vigorous Physical Activity during the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

Figure 6: In 2009, Percentage of High School Students in Louisiana who Exercised to Strengthen or Tone Their Muscles, Such as Push-Ups, Sit-Ups, or Weight Lifting during the 7 Days Before the Survey



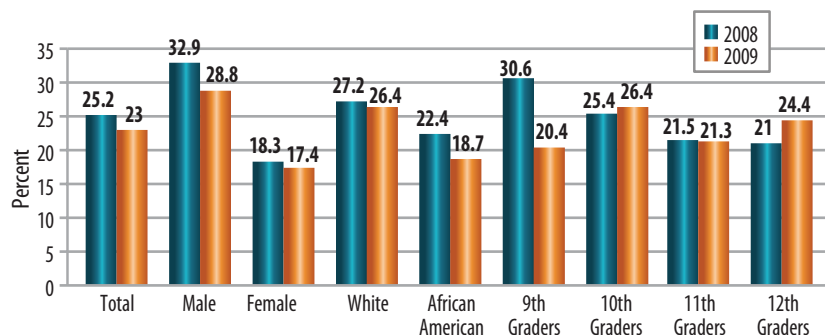
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

Higher rates of physical activity were observed among male and White high school students compared to their respective counterparts in both 2008 and 2009 (Figure 7).^{4,5} Daily physical activity levels varied by grade level across survey years (Figure 7).^{4,5}

OTHER INFORMATION

In today's society, social determinants of health such as behavior and lifestyle choices, both which are modifiable, have influenced the prevalence of many chronic diseases in the United States. Health behaviors are a main determinant of premature morbidity and mortality. Physical inactivity, in particular, leads to a plethora of negative health outcomes such as ischemic heart disease, stroke, diabetes mellitus, and certain cancers.⁶ Additionally, physical activity decreases the risk of being overweight and obese.⁷ Improving the environments in which we live so as to promote and provide ample opportunities for physical activity to achieve behavior change is imperative. Promoting physical activity among children and youth encourages them to incorporate physical activity as part of their daily routine throughout their life course, and decreases their risk for developing chronic diseases later in life.

Figure 7: In 2008 and 2009, Percentage of High School Students in Louisiana who Exercised to Strengthen or Tone Their Muscles, Such as Push-Ups, Sit-Ups, or Weight Lifting during the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

KEY FINDINGS:

- 23% of high school students in LA were physically active for at least 60 minutes every day.
- 45% of high school students met the recommendation for muscle-strengthening activities.
- Data shows that physical activity rates are similar to those presented last year; thus, there was no change between the 2009 and 2010 grade.

PHYSICAL ACTIVITY/INACTIVITY

GRADE

D-

SCREEN TIME

For this report, screen time is defined as the time children and youth spend watching television or videos, playing video games, and using the computer for non-school purposes such as for the Internet or for games. The American Academy of Pediatrics (AAP) recommends that children limit television and video use to no more than 2 hours per day.⁸

LOUISIANA INFORMATION

The 2007 National Survey of Children's Health (NSCH)³ and the 2008⁴ and 2009⁵ Louisiana Youth Risk Behavior Survey (YRBS) were used to obtain data on screen time.

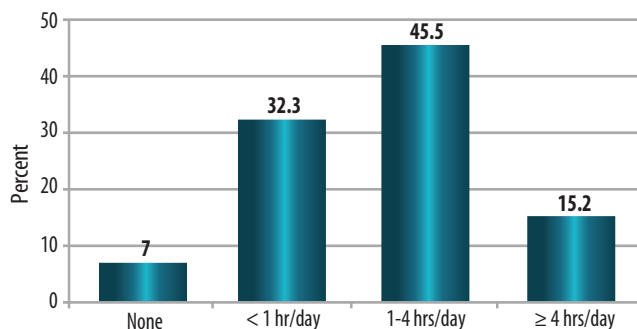
Results from the 2007 NSCH³ showed that 60% of children aged 1-5 years watched TV or videos for more than 1 hour a day, and 15% watched TV or videos for 4 or more hours a day (Figure 8).³

Fifty-seven percent of children aged 6-17 years watched TV/videos or played video games for more than 1 hour per day, representing 55% of 6-11 year olds and 58% of 12-17 year olds (Figure 9).³ Seventeen percent of 6-11 year olds and 20% of 12-17 year olds watched TV/videos and played video games for 4 or more hours per day (Figure 9).³

Fifty-two percent of children aged 6-17 years (38% of 6-11 year olds and 65% of 12-17 year olds) used the computer for at least one hour for non-school purposes. Thirteen percent of 12-17 year olds and 4% of 6-11 year olds had used a computer for three or more hours per day (Figure 10).³

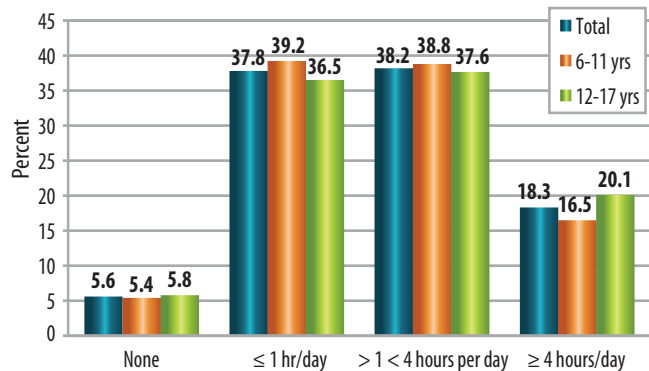


Figure 8: In 2007, Percentage of Daily TV/Video Usage among Louisiana Children (ages 1-5)



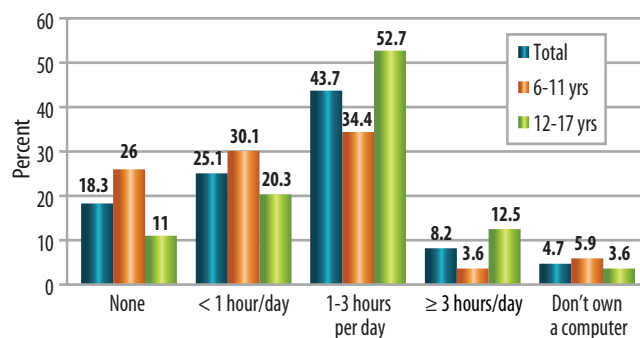
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org.

Figure 9: In 2007, Daily TV/Video and Video Game Usage among Louisiana Children and Youth (6-17 yrs) on an Average School Day by Age Group



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org.

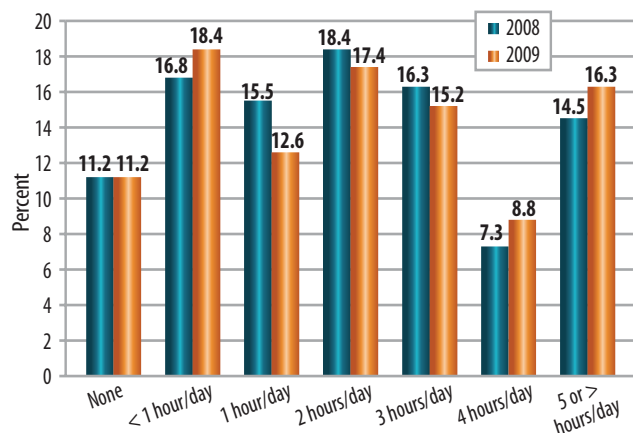
Figure 10: In 2007, Daily Computer Usage for Non-School Purposes among Louisiana Children and Youth (6-17 yrs) on an Average School Day by Age Group



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org.

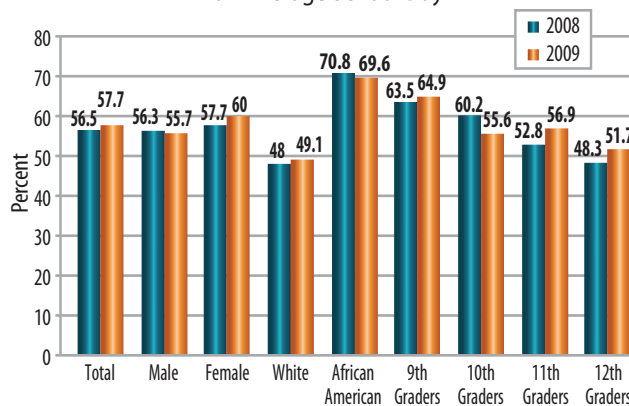
YRBS results showed that 58% of high school students watched TV for two or more hours on an average school day in 2009, similar to 57% in 2008 (Figures 11 & 12).^{4,5} During both survey years, higher rates of TV use were observed among females and among African Americans compared to their respective counterparts (Figure 12).^{4,5}

Figure 11: In 2008 & 2009, Percentage of High School Students in Louisiana who Watched TV on an Average School Day



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

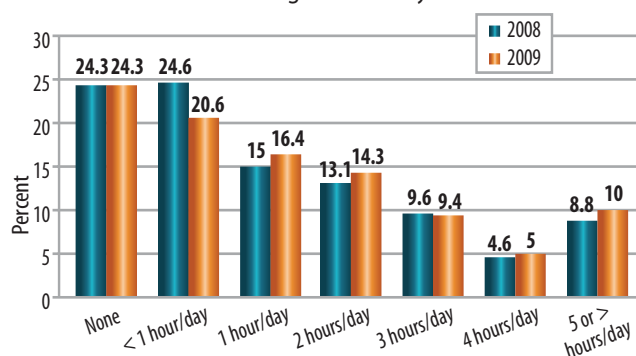
Figure 12: In 2008 & 2009, Percentage of High School Students in Louisiana who Watched Two or More Hours of TV per Day on an Average School Day



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

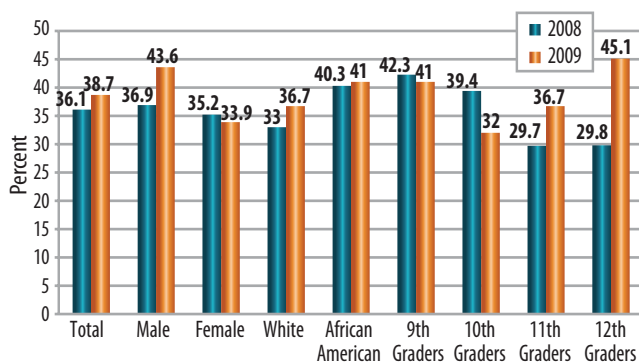
Computer use for two or more hours per day increased from 36% in 2008 to 39% in 2009 with higher rates among male students and among African American students during both survey years (Figures 13 & 14).^{4,5} The rate of video and computer use (for two or more hours/day) among 12th graders increased from 30% in 2008 to 45% in 2009 (Figure 14).

Figure 13: In 2008 & 2009, Percentage of High School Students in Louisiana who Played Video or Computer Games or Used a Computer for Something Other than School Work on an Average School Day



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 14: In 2008 & 2009, Percentage of High School Students in Louisiana who Played Video or Computer Games or Used a Computer for Something Other than School Work For Two or More Hours per Day on an Average School Day



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

OTHER INFORMATION

There is a proliferation of available media in the home environment and in children's bedrooms, contributing to the increasing amount of time that children spend in sedentary pursuits during discretionary periods throughout the day. According to the 2010 Kaiser Family Foundation Report,⁹ children (aged 8-18 yrs) are exposed to an average of 10 hours and 45 minutes of media per day, with nearly 4 ½ of those hours accrued from TV alone. In 2009, the average number of televisions, computers, and video game consoles per household was 3.8, 2.0, and 2.3, respectively.⁹ As to media availability within the child's own bedroom, results showed that 36% of children had a computer, 33% had Internet access, 50% had a video game console, and 71% had a television.⁹

Table 2: Primary Reasons Why Parents Place Televisions in the Room Where Their Child Sleeps

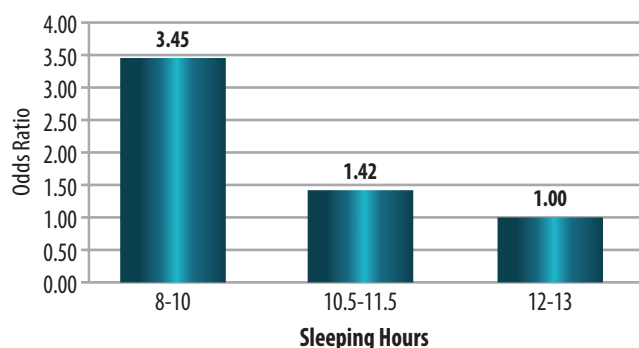
Keeps child occupied so that parent can do other things around the house	21%
Helps child sleep	17%
Frees up the other TVs so that other family members can watch their shows	16%
Is a reward for good behavior	12%
Stops fights between siblings	8%
Family had an extra TV and did not want to throw it out	7%
Serves an educational role	6%
Child deserved it	4%
Other	9%

Source: Taveras EM, Sandora TJ, Shih MC, Ross-Degnan D, Goldmann DA, Gillman MW. The association of television and video viewing with fast food intake by preschool-age children. *Obesity (Silver Spring)*. 2006;14(11):2034-2041.

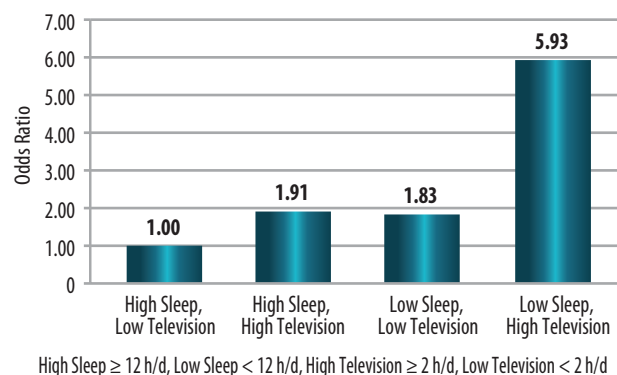
Researchers have investigated the reasons why parents allow their children to have a television in their bedroom in a study among predominately low-income and minority children.¹⁰ In this study, the primary reason why parents put televisions in their child's room was to keep their child occupied so that they could do other things around the house (21%)(Table 2).¹⁰ Seventeen percent of parents responded that they had placed a television in their child's room to help their child sleep, and 16% of parents allowed their child to have a television in their bedroom so that other family members could watch their television shows (Table 2).¹⁰ Seventy-four percent of parents in the study responded that they had not thought about removing the television from their child's bedroom while 60% of parents were not interested in removing the television.¹⁰ Effective interventions and programs will need to address these findings with appropriate information and strategies to achieve behavior change to decrease the amount of screen time among children and adolescents.



Research has shown that increased amounts of television viewing and having a television in the child's bedroom disturbs sleep and sleep duration,^{11, 12} and may influence obesity among children. One study showed that children who had obtained 8-10 hours of sleep per day were 245% more likely to be overweight and obese compared to children who obtained 12-13 hours of sleep per day (Figure 15).¹³ Another study showed that short sleep duration in infancy combined with high television increased the risk for overweight at age 3 years by 493% (Figure 16).¹² High television use has also been associated with negative health behaviors ranging from poor nutrition and low fruit and vegetable consumption,^{14, 15} fast food intake,^{15, 16} and low educational attainment.^{17, 18}

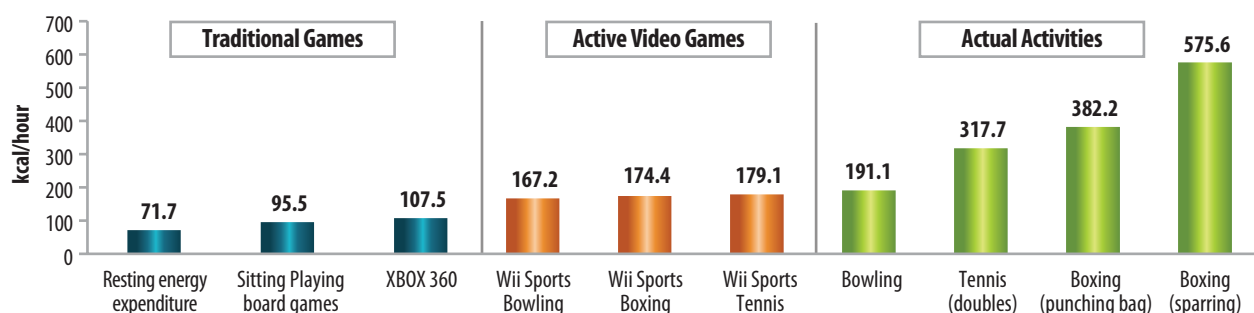
Figure 15: Association Between Sleep Duration and Overweight/Obesity

Source: Chaput JP, Brunet M, Tremblay A. Relationship between short sleeping hours and childhood overweight/obesity: results from the 'Quebec en Forme' Project. *Int J Obes (Lond)*. 2006;30(7):1080-1085

Figure 16: Association Between Infant Sleep Duration and Television Viewing with Odds of Overweight at Age 3 Years

Source: Taveras EM, Rifas-Shiman SL, Oken E, Gunderson EP, Gillman MW. Short sleep duration in infancy and risk of childhood overweight. *Arch Pediatr Adolesc Med*. 2008;162(4):305-311.

Results from the 2010 Kaiser Family Foundation Report⁹ showed that the second most prevalent form of media in children's bedrooms was video game consoles. Recently, the emergence of interactive video games has sparked some attention as they have replaced more sedentary pursuits. To determine the energy expenditures during interactive gaming compared to their actual sport or activities, researchers found that the interactive video games they tested expended more energy than playing board games, playing a traditional sedentary video game, and above resting energy expenditure, but did not replicate the amount of calories expended to perform these actual sports or activities (Figure 17).¹⁹

Figure 17: Mean Energy Expenditure during Interactive Gaming Compared to Resting Energy Expenditure and Actual Sporting Activities

Source: Graves L, Stratton G, Ridgers ND, Cable NT. Energy expenditure in adolescents playing new generation computer games. *Br J Sports Med*. 2008;42(7):592-594.

KEY FINDINGS:

- 15% of children 1-5 yrs watched TV or videos for 4 or more hours a day.
- 58% of high school students watched 2 or more hours of TV a day.
- Data shows that screen time rates are similar to those presented last year; thus, there was no change between the 2009 and 2010 grade.

PHYSICAL ACTIVITY/INACTIVITY



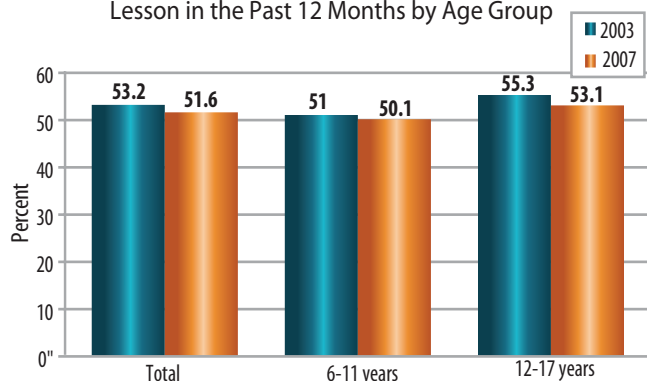
SPORTS PARTICIPATION

LOUISIANA INFORMATION

The following data sets were utilized to find information on sports participation among children and youth in Louisiana: the 2003 and 2007 National Survey of Children's Health (NSCH),^{2,3} and the 2008 and 2009 Louisiana Youth Risk Behavior Surveys (YRBS).^{4,5}

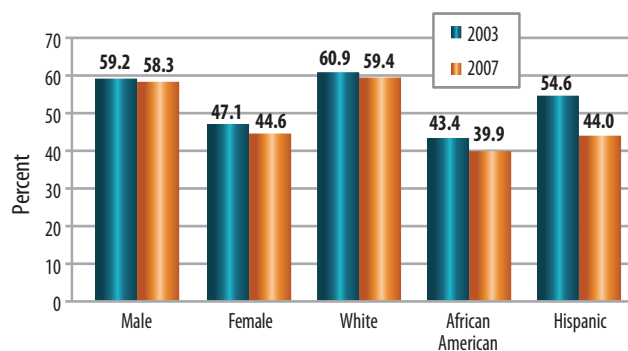
Data from the NSCH showed that sports participation ranged from 50-55% across age groups in 2003 and 2007 (Figure 18).^{2,3} Sports participation was slightly higher among 12-17 year olds compared to 6-11 year olds in both 2003 and 2007 (Figure 18).^{2,3} Sports participation was also higher among males compared to females, and African American children had the lowest sports participation compared to their White and Hispanic counterparts (Figure 19).^{2,3}

Figure 18: In 2003 & 2007, Percentage of Children and Youth that Participated in at Least One After-School Sports Team or Lesson in the Past 12 Months by Age Group



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

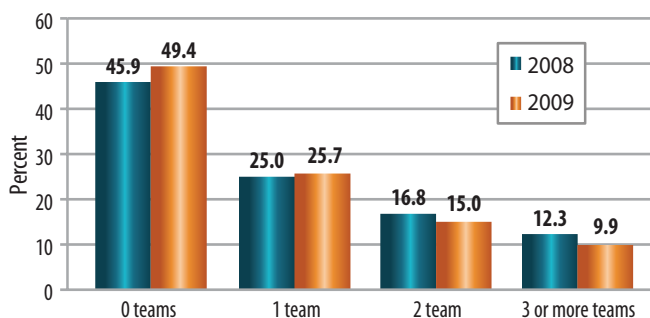
Figure 19: In 2003 & 2007, Percentage of Children and Youth that Participated in at Least One After-School Sports Team or Lesson in the Past 12 Months by Gender and Race/Ethnicity



Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

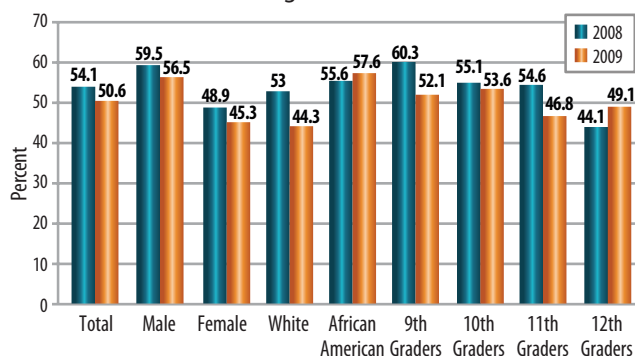
Nearly half of high school students did not participate in sports, according to the 2009 YRBS results (Figures 20 & 21).⁵ Between 2008 and 2009, sports participation decreased by four percentage points (Figure 21).^{4,5} Across both survey years, there were higher rates

Figure 20: In 2008 & 2009, Percentage of High School Students in Louisiana who Played on Sports Teams during the Previous 12 Months



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 21: In 2008 & 2009, Percentage of High School Students in Louisiana who Played on One or More Sports Teams During the Past 12 Months



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

of sports participation among males and African Americans, and sports participation among White students decreased from 53% in 2008 to 44% in 2009 (Figure 21).²⁰ Lower rates of sports participation were observed among all subgroups between 2008 and 2009 except among 12th grade students and African Americans (Figure 21).^{4,5}

OTHER INFORMATION

The scientific literature has shown that children and youth who participate in sports during their discretionary time can contribute a large proportion of physical activity^{21, 22} and energy expenditure²³ to their daily totals. One study found that 23%, or 26 minutes of their cohort's total MVPA during the day was accrued by participating in sports.²¹ The children who participated in sports increased their MVPA by 30 minutes and reduced their sedentary activity by almost 40 minutes on days that they participated in youth sports compared to days when they did not participate in sports.²¹

Researchers who collected pedometer data on adolescents found that 47% of their cohort's total physical activity came from participating in organized after-school sporting activities.²² Another study showed that youth sports contributed over half of their participants' estimated daily moderate-to-vigorous energy expenditure (MVEE) and 20.4% of males' and 16.3% of females' total daily energy expenditure (TDEE).²³ Youth who participated in organized sports had significantly greater total daily energy expenditure (TDEE) and moderate-to-vigorous energy expenditure (MVEE), and they also spent less time watching TV compared to youth who did not participate in organized sports.²³

Studies have also shown that sports participation is associated with positive health behaviors.^{24, 25} One study found that female sports participants were significantly less likely to smoke, use cocaine or other illegal drugs, engage in sexual intercourse (ever or within the past 3 months), consider suicide or attempt suicide compared to other female students who did not participate in sports.²⁴ Female sports participants were also significantly more likely to eat fruits and vegetables and engage in vigorous physical activity.²⁴ Among boys, those who participated in sports were also significantly less likely to smoke, use cocaine or other drugs, engage in sexual intercourse (ever or within the past 3 months), consider suicide or attempt suicide compared to their counterparts who did not participate in sports.²⁴ Male sports participants were also significantly more likely to eat fruits and vegetables and engage in vigorous physical activity compared to those who did not participate in sports.²⁴ Results from another study showed that participation in school sports alone and in addition to other activities decreased the odds across a range of negative health behaviors and negative psychological factors while increasing the odds for positive health behaviors.²⁵



KEY FINDINGS:

- Over 50% of children and youth participated in sports in Louisiana.
- Sports participation was higher among 12-17 year olds than 6-11 year olds.
- Data shows that the sports participation rates are similar to those presented last year; thus there was no change between the 2009 and 2010 grade.

HEALTH AND HEALTH BEHAVIORS

Children and adolescents who meet recommendations for physical activity can achieve significant health benefits.¹ One of the most widely recognized benefits of physical activity is that it helps children and adolescents maintain a healthy body weight.²⁶ Regular physical activity also improves overall health and fitness, and reduces the risk of many chronic diseases.¹

Aside from the physical and physiological benefits of physical activity, research continues to find and confirm that regular physical activity is also associated with many positive health behaviors. Studies have shown an inverse relationship between physical activity and poor psychological health,^{27, 28} and also an inverse association between physical activity and cigarette use.^{24, 29, 30} Additionally, studies have shown a significant association between certain sedentary behaviors and lower fruit and vegetable consumption.¹⁴

To assess the health and health behaviors among Louisiana's children and youth related to physical activity, four indicators are assessed in this category: overweight and obesity, aerobic fitness, overall physical and emotional well-being, fruit and vegetable consumption, and overall tobacco use. Last year's Report Card included smoking status; however, we updated this indicator to tobacco use this year to get an overall assessment of tobacco trends among children and youth in Louisiana. Also, this year we have included aerobic fitness as a new indicator in this section.

	2008 Grades	2009 Grades	2010 Grades
Health and Health Behaviors			
Overweight and Obesity	F	F	F
Aerobic Fitness	-	-	C-
Overall Physical and Emotional Well-Being	INC	C-	C-
Fruit and Vegetable Consumption	-	D-	D-
Tobacco Use	-	C	C



HEALTH AND HEALTH BEHAVIORS

GRADE

F

OVERWEIGHT AND OBESITY

The Centers for Disease Control and Prevention (CDC) 2000 growth charts³¹ provide reference data for gender and age specific BMI percentiles among children and adolescents aged 2-18 yrs. Using these growth charts, the American Academy of Pediatrics (AAP) recommend that children and adolescents whose gender-specific BMI-for-age is $\geq 85^{\text{th}}$ but $< 95^{\text{th}}$ percentile be classified as overweight and those with a BMI $\geq 95^{\text{th}}$ percentile should be considered obese.³² These BMI classifications are utilized throughout the Report Card.

LOUISIANA INFORMATION

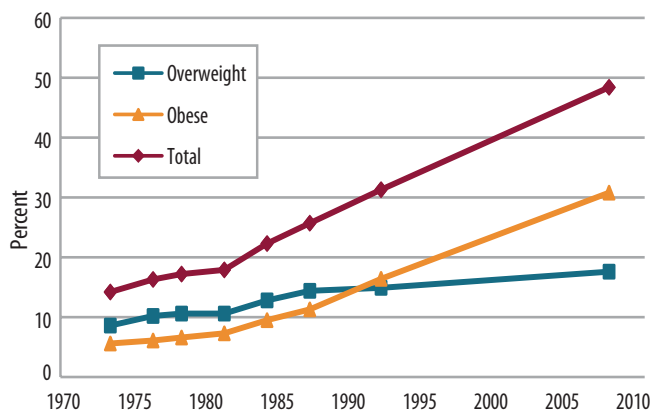
The following table (Table 3) provides a comparative list of the sources that were utilized in the 2008 and 2009 Report Cards to obtain overweight and obesity data for children and youth in Louisiana. Several new sources were available to obtain current BMI data among children and youth for the 2010 Report Card and are denoted in the table below (*). The method of data collection for each study or data source is also indicated in the table.

Table 3: Prevalence of Overweight and Obese Children and Youth (%) in Louisiana by Study or Data Source

Study/Data Source	Year	Cohort	Methodology	Overweight	Obese	Total
National Survey of Children's Health (NSCH) ²	2003	LA children & youth ages 10-17; weighted data	Parental report of child's height and weight	17.2	18.4	35.9
LA Health ³⁵	2006	2,709 Children & youth grades 4-6; Rural areas of LA	Actual measure of height and weight	17.7	27.4	45.1
National Survey of Children's Health (NSCH) ³	2007	LA children & youth ages 10-17; weighted data	Parental report of child's height and weight	15.2	20.7	35.9
*Louisiana School-Based Health Centers ³⁶	2007-2008	12,000 LA children & youth ages 2-19 seen at school based health centers	Actual measure of height and weight	17.7	28.8	46.5
Louisiana Youth Risk Behavior Survey (YRBS) ⁴	2008	LA high school students grades 9-12; weighted data	Student report of their height and weight	17.7	15.6	33.3
*Louisiana School-Based Health Centers ³⁶	2008-2009	13,000 LA children & youth ages 2-19 seen at school based health centers	Actual measure of height and weight	18.6	28.0	47.5
* Health-Related Physical Fitness Assessments ³⁵	2008-2009	6,500 children & youth grades K-12 in 6 participating parishes	Actual measure of height and weight	18.0	22.0	40.0
*Bogalusa School-Based Health Clinics ³⁸	2008-2009	509 middle and high school students ages 10-17 in Bogalusa, Louisiana	Actual measure of height and weight	17.6	30.8	48.4
*Louisiana Youth Risk Behavior Survey (YRBS) ⁵	2009	LA high school students grades 9-12; weighted data	Student report of their height and weight	18.0	14.7	32.7
* Health-Related Physical Fitness Assessments ³⁷	2009-2010	19,695 children and youth grades K-12 in 14 parishes	Actual measure of height and weight	19.0	31.0	50.0

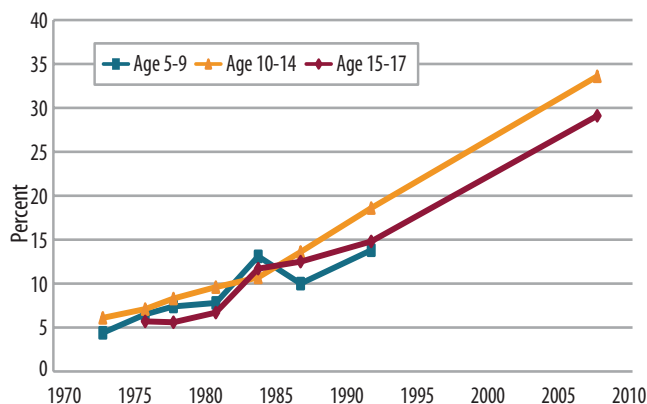
Researchers recently published BMI data that they pooled from seven cross-sectional surveys of the Bogalusa Heart Study and from the Bogalusa school-based health clinics.³⁶ They were able to examine trends in the prevalence of children and adolescents (aged 5-17 years) who were overweight or obese in Bogalusa, Louisiana between 1973-1974 and 2008-2009.³⁶ Across 35 years, the rate of overweight children and adolescents doubled (8.6% to 17.6%), and the rate of obesity increased five and one-half times (5.6% to 30.8%) (Figure 22).³⁶ In 2009, the rate of overweight or obese children and adolescents reached 48% (Figure 22).³⁶ Available data also showed obesity trends among children and youth by age group (Figure 23). For children aged 5-9, obesity rates tripled from 1973-1974 (4.4%) to 1992-1994 (13.8%) (Figure 23).³⁶ Obesity rates increased from 6.1% in 1973-1974 to 33.6% in 2008-2009 among 10 to 14 year olds, and increased from 5.7% in 1976-1977 to 29.1% in 2008-2009 among 15-17 year olds (Figure 23).³⁶

Figure 22: Prevalence of Overweight & Obese Children and Adolescents (5-17 yrs) in Bogalusa, Louisiana from 1973-2009



Source: Broyles S, Katzmarzyk PT, Srinivasan SR, et al. The pediatric obesity epidemic continues unabated in Bogalusa, Louisiana. *Pediatrics*. 2010;125(5):900-905.

Figure 23: Obesity Trends among Children and Adolescents in Bogalusa, Louisiana from 1973-2009 by Age Group

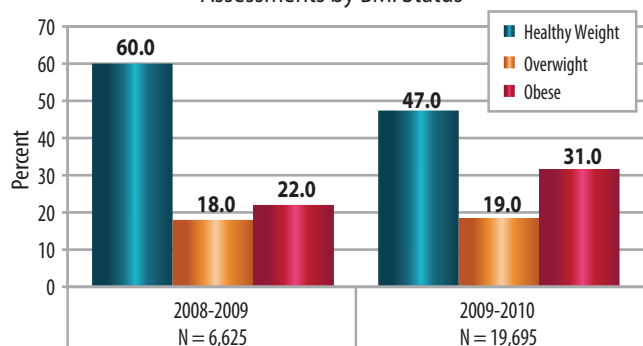


Source: Broyles S, Katzmarzyk PT, Srinivasan SR, et al. The pediatric obesity epidemic continues unabated in Bogalusa, Louisiana. *Pediatrics*. 2010;125(5):900-905.

The Cecil J. Picard Center for Child Development and Lifelong Learning in collaboration with the University of Lafayette's Kinesiology Department analyzed BMI data collected from students (grades K-12) who participated in Health-Related Physical Fitness Assessments during both 2008-2009 and 2009-2010.^{35, 37} The BMI results of the Fitness Assessments are presented in this section of the Report Card while the Aerobic Fitness results are presented in a subsequent section.

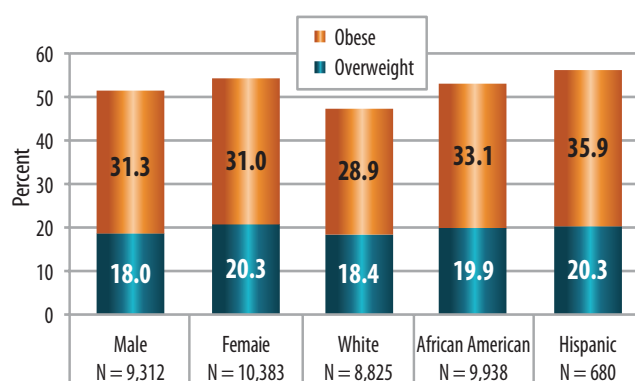
In 2008-2009, 40% of the students (K-12) who participated in Fitness Assessments were either overweight or obese, and in 2009-2010, the prevalence rate of overweight and obesity was 50% (Figure 24).^{35, 37} In 2009-2010, a slightly higher proportion of female

Figure 24: In 2008-2009 & 2009-2010, Percentage of Children and Youth (K-12) That Participated in Fitness Assessments by BMI Status



Source: Cecil J. Picard Center for Child Development and Lifelong Learning. 2008-2009 & or 2009-2010 Health-Related Physical Fitness Assessments.

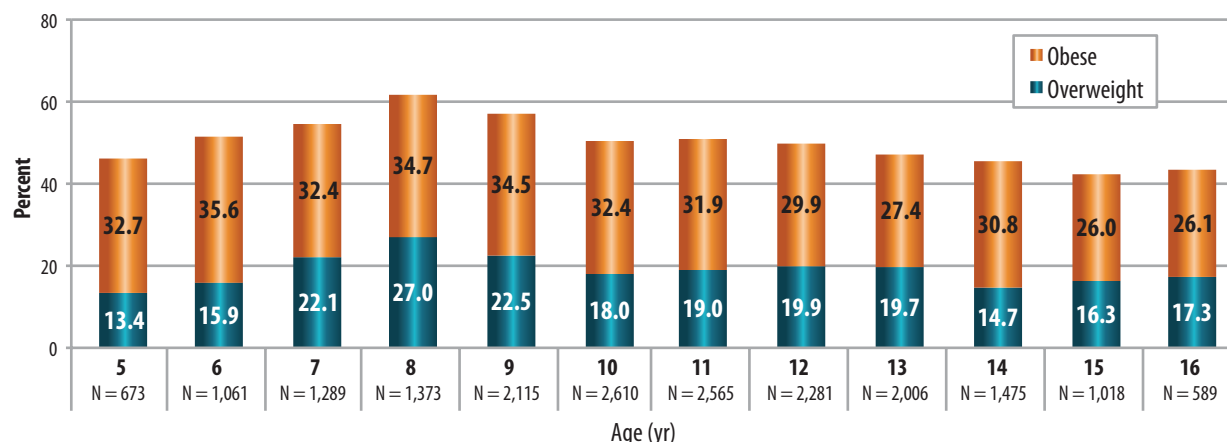
Figure 25: In 2009-2010, Percentage of Children & Youth in Louisiana (K-12) who Participated in Fitness Assessments who Were Overweight and Obese by Gender and Race/Ethnicity



Source: Cecil J. Picard Center for Child Development and Lifelong Learning. 2009-2010 Health-Related Physical Fitness Assessments.

participants were overweight or obese (51%) compared to male participants (49%) (Figure 25).³⁷ BMI results varied by race/ethnicity, with higher rates of overweight and obesity among Hispanic children and youth (56%) compared to White children (47%), or African American children (53%) (Figure 25).³⁷ BMI results also varied by age with the highest rates of overweight and obesity occurring among children between 6 and 9 years of age (Figure 26).³⁷

Figure 26: In 2009-2010, Percentage of Children & Youth in Louisiana (K-12) who Participated in Fitness Assessments who Were Overweight and Obese by Age

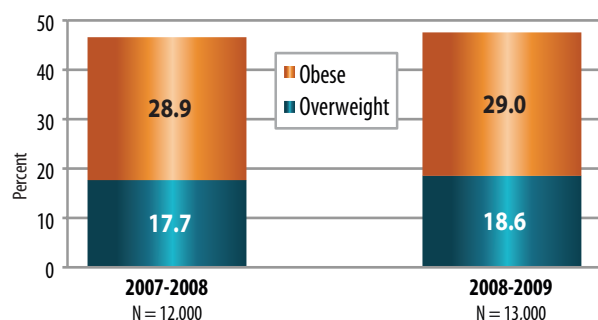


Source: Cecil J. Picard Center for Child Development and Lifelong Learning. 2009-2010 Health-Related Physical Fitness Assessments.

School-Based Health Centers (SBHCs) in Louisiana also collected BMI on children and youth. During the 2007-2008 school year, BMI was collected for 12,000 children and youth between the ages of 2 and 19 years.³⁴ Forty-seven percent of this cohort was either overweight or obese (Figure 27).³⁴ During the 2008-2009 school year, 48% percent of the 13,000 students seen in the school based health centers were either overweight or obese (Figure 27).³⁴

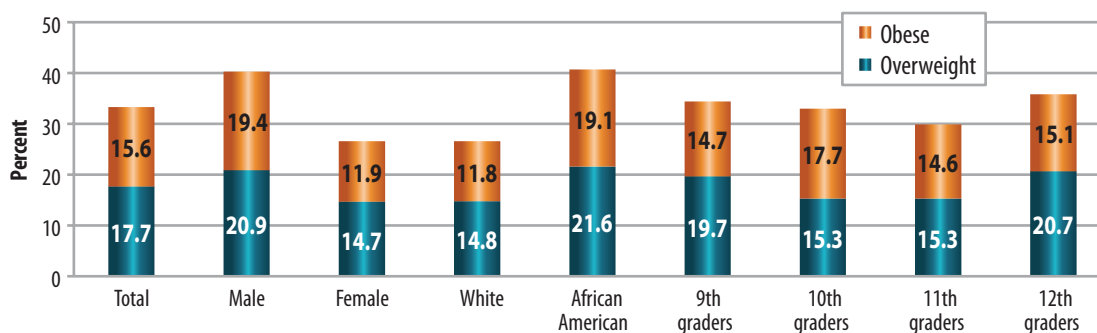


Figure 27: Percentage of Overweight or Obese Children and Youth (2-19 yrs) in Louisiana who were Seen in School Based Health Centers



Source: Romero P, Louisiana Council on Obesity Prevention and Management. Overweight and Obesity Data from the Department of Health and Hospitals Adolescent School Health Program - Louisiana School Based Health Centers 2010.

Results from the YRBS showed that the rate of overweight and obese high school students in Louisiana were similar in 2008 and 2009 (33%) (Figures 28 & 29).^{4, 5} Rates varied between survey years within each sub-group; however, male high school students and African American students had higher rates of overweight and obesity compared to their respective

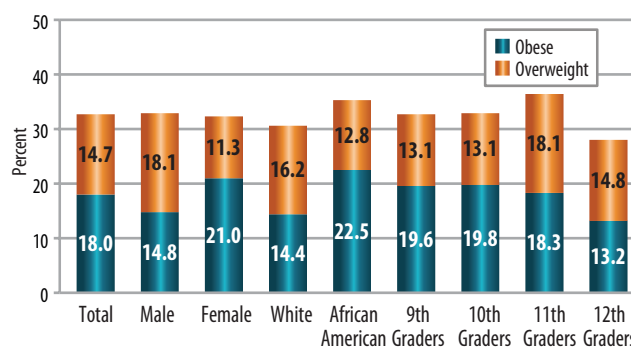
Figure 28: In 2008, Percentage of High School Students in Louisiana who Were Overweight and Obese

Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 Youth Risk Behavior Survey (YRBS).

counterparts in both 2008 and 2009 (Figures 28 & 29).^{4,5} It will be important to continue to monitor rates of overweight and obese children and youth to determine if any obesity trends are indeed occurring and if any contextual or environmental factors may account for changes in the data. It should be noted that the data from the Fitness Assessments and school-based health clinics were directly measured BMI whereas the YRBS relies on self-reported data, which results in a lower estimate of the prevalence.

OTHER INFORMATION

The prevalence of obesity has steadily increased over the past 35-40 years among children and youth in the U.S.³⁸⁻⁴¹ Data from the National Health and Nutrition Examination Survey (NHANES)^{39, 41} showed that obesity rates in the U.S. increased from approximately 4% in 1971-1974 to approximately 19% in 2003-2004 among children (6-11 yrs) and increased from approximately 6% to 17% during the same time period among adolescents (12-19 yrs).

Figure 29: In 2009, Percentage of High School Students in Louisiana who Were Overweight and Obese

Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

KEY FINDINGS:

- Over 35 years, the rate of overweight and obese children has doubled and the rate of obesity increased five and one-half times in Bogalusa, LA.
- BMI data from a variety of sources continue to show that the percentage of children and youth who are overweight and obese is increasing, and thus the grade has not improved from last year.

HEALTH AND HEALTH BEHAVIORS



AEROBIC FITNESS

LOUISIANA INFORMATION

Aerobic fitness data were obtained from Health-Related Physical Fitness Assessments that were conducted by the Cecil J. Picard Center for Child Development and Lifelong Learning and the University of Lafayette's Kinesiology Department during the 2009-2010 school year. The Fitness Assessments included use of the Fitnessgram, developed by the Cooper Institute in Dallas, Texas, which is a measurement tool that uses age-specific and sex-specific cutoff values, or criterion-referenced health standards, to place children within a Healthy Fitness Zone (HFZ).⁴² The HFZ is used to determine if a child has achieved the minimum level of fitness performance needed for good health and reduced risk of a poor health outcome.⁴²

The Progressive Aerobic Cardiovascular Endurance Run (PACER) is used to measure aerobic capacity.⁴² The PACER, which is a 20-meter shuttle run, is paced to music which progressively increases after each run.⁴² The music denotes the time to which students should have completed each run, and students continue to complete each trial until they can no longer complete the run before the music times out.⁴²

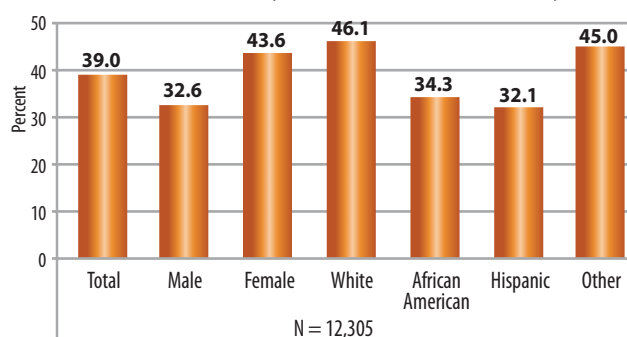
Overall, 39% of the children and youth who completed 2009-2010 Fitness Assessments performed within the Healthy Fitness Zone (HFZ) on the PACER (Figure 30).³⁷ A higher rate of performance within the HFZ for the PACER was achieved by female students (44%) compared to males (33%) and among White students (46%) compared to African Americans, Hispanics, or students other than White, African American or Hispanic (Figure 30).³⁷

Results from the PACER also showed that the percent of children and youth who performed within the HFZ decreased with increasing age (Figure 31).³⁷ While 53% of 10 year olds achieved a HFZ on the PACER, only 13% of 18 year olds performed within the HFZ (Figure 31).³⁷

OTHER INFORMATION

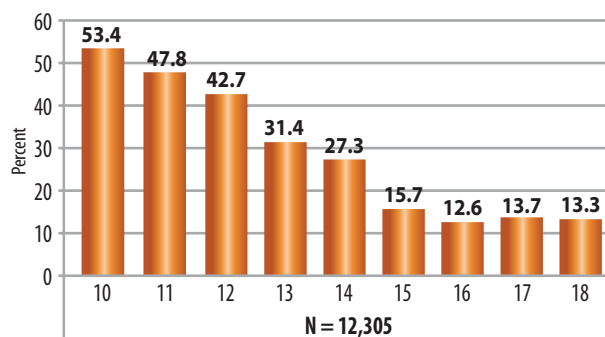
Several cross-sectional studies have found associations between fitness and academic achievement.⁴³⁻⁴⁵ Results from one study showed that after controlling for demographic variables and weight status, there was a significant positive relationship

Figure 30: In 2009-2010, Percentage of Children & Youth (ages 10-18) who Participated in Fitness Assessments that Performed within the Healthy Fitness Zone (HFZ) on the PACER Sub-Test by Gender and Race/Ethnicity



Source: Cecil J. Picard Center for Child Development and Lifelong Learning.
2009-2010 Health-Related Physical Fitness Assessments.

Figure 31: In 2009-2010, Percentage of Children and Youth (ages 10-18) who Participated in Fitness Assessments that Performed within the Healthy Fitness Zone (HFZ) on the PACER Sub-Test by Age



Source: Cecil J. Picard Center for Child Development and Lifelong Learning.
2009-2010 Health-Related Physical Fitness Assessments.



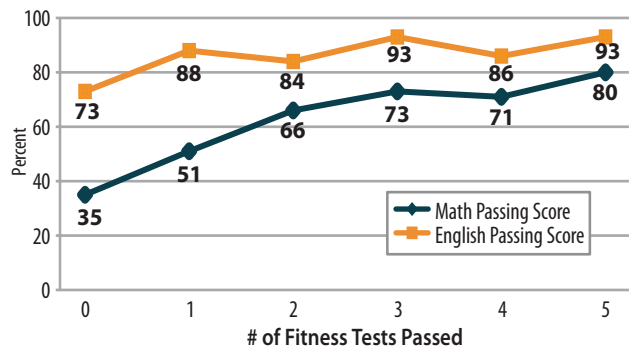
between physical fitness and achievement on standardized tests in both Math and English among elementary and middle school students (Figure 32).⁴⁴ The odds of passing the Math and English tests increased by 38% and 24% respectively, for each 1-unit increase in the number of fitness tests passed.⁴⁴

Fitnessgram results were analyzed among elementary school students to determine if there were associations between any of the individual sub-tests and academic achievement.⁴³ While there was an overall positive association between physical fitness and academic achievement on standardized tests in Reading and Math, further analysis showed that higher aerobic fitness, as determined by the PACER sub-test and lower BMI were significantly and positively related to total academic achievement, Reading achievement, and Math achievement.⁴³ Significant associations were not found between academic achievement and any of the other sub-tests of fitness.⁴³

Recently published findings also showed a positive association between aerobic fitness and higher achievement scores on standardized tests in Math, Reading, and Language and a negative association between BMI and the same test scores.⁴⁵ In this particular study, aerobic fitness was measured using a 1-mile run/walk test.⁴⁵ After controlling for BMI and other demographic variables, test scores in Math and Reading dropped 1.9 and 1.1 points, respectively, for every additional minute required to complete the test.⁴⁵ Findings from this study also showed that the association between academic achievement and BMI may have been mediated by fitness, although not completely independent of obesity status since excess weight and adiposity may have affected the time to complete the mile.⁴⁵

These studies show the importance of promoting physical activity to achieve fitness among children and adolescents. In particular, physical activity that promotes good aerobic fitness not only is associated with academic benefits, but may provide protective benefits for cardiovascular diseases, diabetes, hypertension, and the metabolic syndrome.⁴⁶

Figure 32: Percentage of Students Passing English and Math Tests by Fitness Achievement



Source: Chornitz VR, Slining MM, McGowan RJ, Mitchell SE, Dawson GF, Hacker KA. Is there a relationship between physical fitness and academic achievement? Positive results from public school children in the northeastern United States. *J Sch Health*. 2009;79(1):30-37.

KEY FINDINGS:

- Only 39% of LA children and adolescents achieved the Healthy Fitness Zone on the PACER.
- HFZ achievement for aerobic fitness decreased with increasing age.
- Large segments of LA children are not meeting the minimum level of aerobic fitness performance needed for good health and reduced risk of health outcomes.

HEALTH AND HEALTH BEHAVIORS



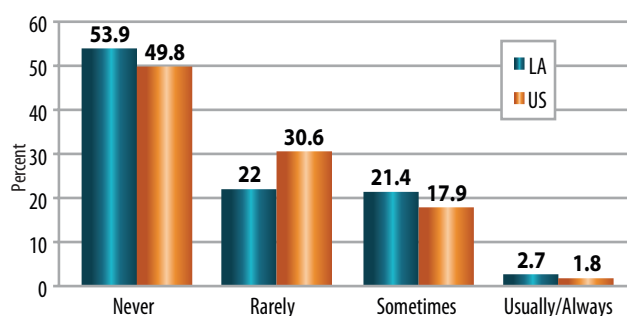
OVERALL PHYSICAL AND EMOTIONAL WELL-BEING

LOUISIANA INFORMATION

The data on overall physical and emotional well-being were obtained from the 2007 National Survey of Children's Health (NSCH),³ and the 2008 and 2009 Youth Risk Behavior Surveys (YRBS).^{4,5}

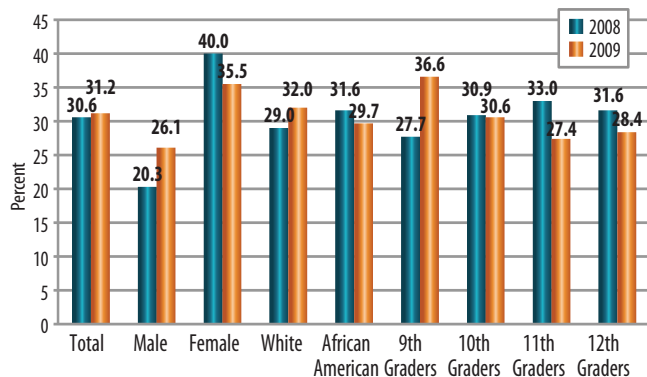
According to the 2007 NSCH,³ 24% of children and youth aged 6-17 years in Louisiana were either unhappy, sad, or depressed sometimes or usually/always during the month before the survey (Figure 33).

Figure 33: In 2007, Percentage of Children and Youth (6-17 yrs) in Louisiana that Were Unhappy, Sad, or Depressed During the Past Month



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

Figure 34: In 2008 & 2009, Percentage of High School Students in Louisiana who Felt So Sad or Hopeless Almost Every Day for Two Weeks or More in a Row that They Stopped Some Usual Activities during the Past 12 Months



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

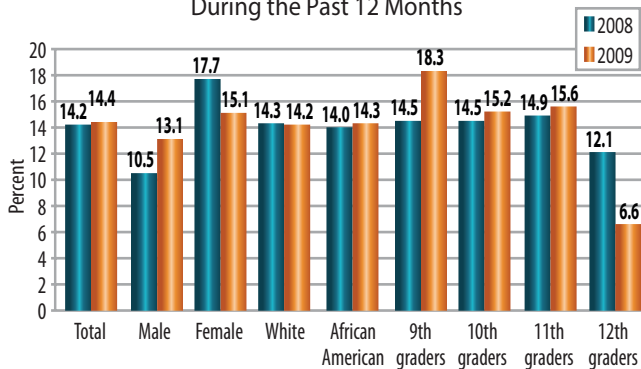


YRBS results showed that in both 2008 and 2009, 31% of high school students felt so sad or hopeless almost every day for two weeks or more in a row that they stopped some usual activities (Figure 34).^{4,5} In 2009, there were higher rates of hopelessness and sadness among female high school students compared to males and among 9th graders compared to students in other grades (Figure 34).⁵

Fourteen percent of high school students reported that they had seriously considered attempting suicide, according to results from the 2008 and 2009 YRBS (Figure 35).^{4,5} Eleven percent reported on the 2009 YRBS that they actually attempted suicide, a small increase from 9% in 2008 (Figure 35).^{4,5} Rates of suicide considerations and suicide attempts varied between subgroups and between survey years with no distinct trend (Figures 35 & 36).^{4,5}

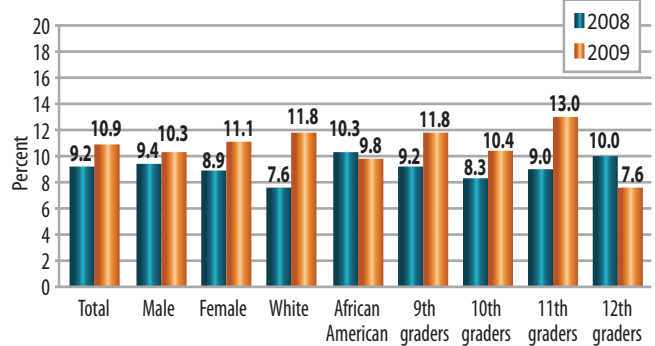
Fifty-one percent of students rated their physical health as not good on one or more days during the 30 days before the YRBS survey (Figures 37).⁵ Higher rates were reported among females, Whites, and 12th graders compared to their respective counterparts (Figure 38).⁵

Figure 35: In 2008 & 2009, Percentage of High School Students who Seriously Considered Attempting Suicide During the Past 12 Months



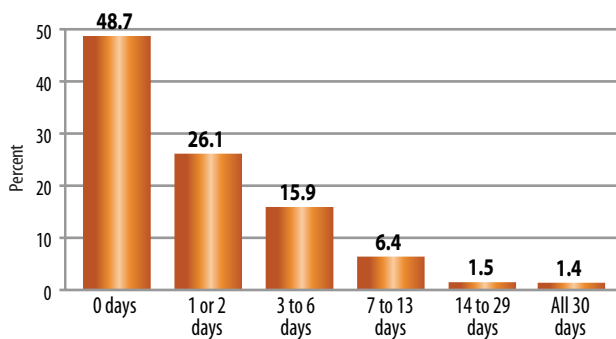
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 36: In 2008 & 2009, Percentage of High School Students who Reported Attempting Suicide One or More Times During the Past 12 Months



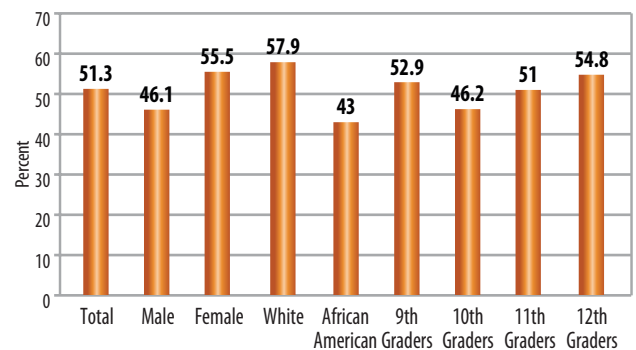
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 37: In 2009, Percentage of High School Students in Louisiana Who Rated Their Physical Health as Not Good during the 30 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

Figure 38: In 2009, Percentage of High School Students in Louisiana Whose Physical Health was Not Good one One or More of the 30 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

OTHER INFORMATION

Research has shown that physical activity may offer protective benefits for poor mental health and adverse risky behaviors.²⁷⁻²⁹ Additionally, when researchers studied the health-related quality of life (HRQOL) of obese children and adolescents, they found that when compared to healthy children, their cohort reported significantly lower impairment on their physical and psychosocial health.⁴⁷ Interestingly, they found that their obese cohort was 5.5 times more likely to have impaired HRQOL compared to healthy children and was similar to the HRQOL of children with cancer.⁴⁷ These research findings are important in that physical activity can reduce the risk of overweight and obesity among children and adolescents, an approach that may indirectly improve the HRQOL of children and their total health.

KEY FINDINGS:

- 31% of high school students in LA felt sad or hopeless almost every day for two weeks or more.
- 9% of LA high school students had poor physical health for more than 7 days.
- Data shows that the rates of physical and emotional well being are similar to those presented last year; thus there was no change between the 2009 and 2010 grade.

HEALTH AND HEALTH BEHAVIORS



FRUIT AND VEGETABLE CONSUMPTION

The U.S. Department of Health and Human Services (DHH) and the U.S. Department of Agriculture (USDA) produced recommendations for fruit and vegetable consumption in the 2005 Dietary Guidelines for Americans.⁴⁸

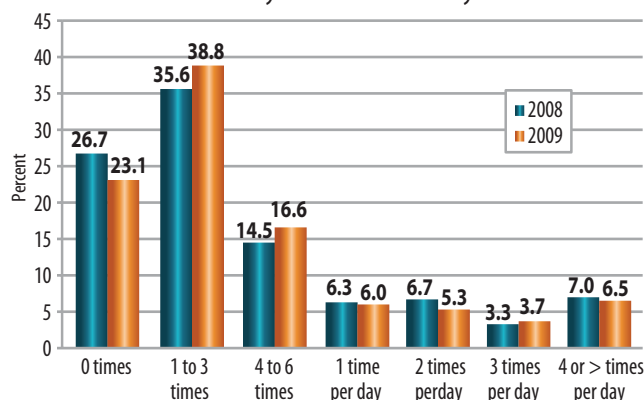
According to the guidelines, Americans aged 2 and up should consume a variety of fruits and vegetables every day that add up to 2 cups or 4 servings of fruit and 2 ½ cups or 5 servings of vegetables (based on a 2,000 calorie diet).⁴⁸

LOUISIANA INFORMATION

The 2008 and 2009 Louisiana Youth Risk Behavior Surveys (YRBS)^{4, 5, 20} were utilized to obtain information on fruit and vegetable consumption among children and youth in Louisiana.

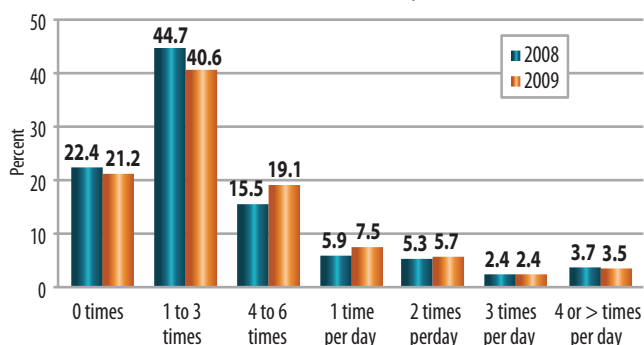
Seventy-seven percent of high school students drank 100% fruit juice one or more times during the seven days before the 2009 survey, an increase from 73% in 2008 (Figure 39).^{4, 5} Nearly 79% of students ate fruit during the 7 days before the survey in 2009 (Figure 40); however less than 4% of students ate fruit four or more times a day (Figure 41).⁵ Twenty-one percent of students reported that they did not consume any fruit during the seven days before the 2009 survey (Figure 40).⁵ Across both survey years, males, African Americans, and 9th graders had higher rates of fruit consumption compared to their respective counterparts (Figure 41).^{4, 5}

Figure 39: In 2008 & 2009, Percentage of High School Students in Louisiana who Drank 100% Fruit Juice During the 7 Days Before the Survey



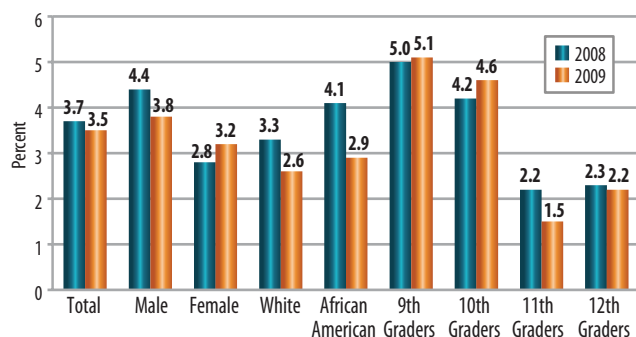
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 40: In 2008 & 2009, Percentage of High School Students in Louisiana who Ate Fruit during the 7 Days Before the Survey



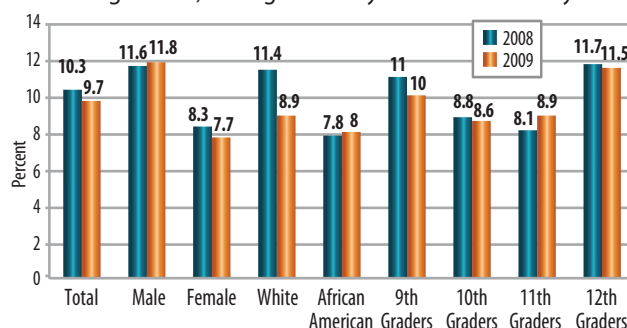
Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 41: In 2008 & 2009, Percentage of High School Students in Louisiana who Ate Fruit 4 or More Times a Day during the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

Figure 42: In 2008 & 2009, Percentage of High School Students in Louisiana that Ate Vegetables Three or More Times Per Day (Green Salad, Potatoes [Excluding French Fries, Fried Potatoes, or Potato Chips], Carrots, or Other Vegetables) during the 7 Days Before the Survey

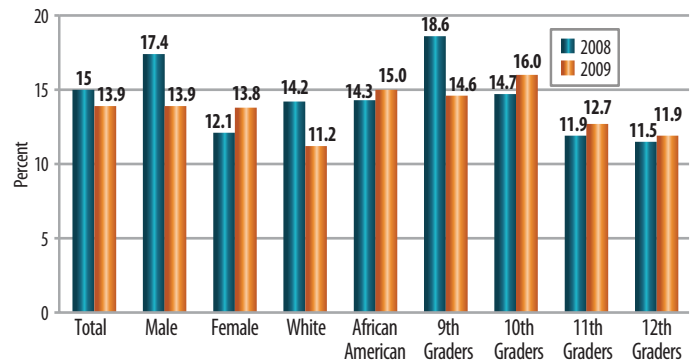


Source: Centers for Disease Control and Prevention (CDC), 2008-2009 High School Youth Risk Behavior Survey Data <http://apps.nccd.cdc.gov/youthonline>

When high school students were asked about their vegetable consumption, 10% of high school students reported that they ate vegetables (excluding French fries, fried potatoes, or potato chips) three or more times per day in 2009, similar to the 2008 results (Figure 42).²⁰ In both 2008 and 2009, higher rates of vegetable consumption (3 or more times/day) were observed among males and among White high school students compared to their respective counterparts (Figure 42).²⁰ When looking at the data by grade level, the highest rates of vegetable consumption were observed among students in grade 12 during both survey years (Figure 42).²⁰

When the fruit and vegetable response categories were combined, 2009 results showed that 14% of high school students ate fruits and vegetables for five or more times per day during the seven days before the survey (Figure 43).⁵ Rates varied between survey years within each of the sub-groups (Figure 43).^{4, 5}

Figure 43: In 2008 & 2009, Percentage of High School Students in Louisiana who Ate Fruits and Vegetables Five or More Times Per Day During the 7 Days Before the Survey



Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

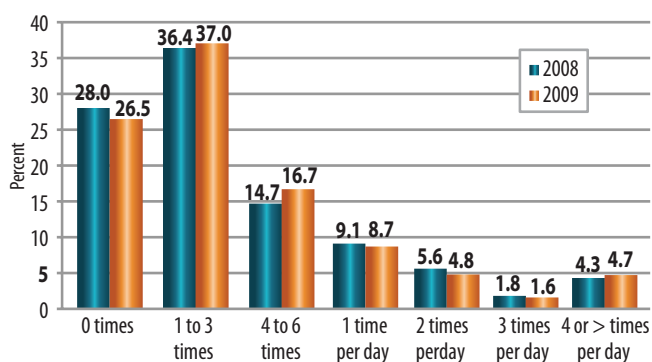
OTHER INFORMATION

In 2005, Senate Bill No. 146/Act 331 of the Louisiana Legislature enacted a vending bill which limited certain food items sold during elementary and secondary schools in Louisiana. Foods of minimal nutritional value, pastries, snacks or desserts that exceed one hundred fifty calories per serving, have more than thirty-five percent of their calories from fat, or have more than thirty grams of sugar per serving are prohibited from being sold during the school day (beginning one-half hour before the start of the school day and ending one-half hour after the end of the school day) in all public elementary and secondary schools.⁴⁹ While there were also restrictions on beverages offered during the school day, House Bill No. 767/Act No. 306 of the 2009 Legislative Session amended Act 331 to further restrict beverages offered in public high schools to include only: bottled water, no-calorie or low-calorie beverages that contain up to ten calories per eight ounces, up to twelve ounce servings of beverages that contain one hundred percent fruit juice with no added sweeteners and up to one hundred twenty calories per eight ounces, up to twelve ounce servings of any other beverage that contains no more than sixty-six calories per eight ounces, no-calorie or low-calorie options that contain up to ten calories per eight ounces, and low-fat milk, skim milk, and non dairy milk.⁴⁹



Results from the Louisiana YRBS^{4,5} showed that 72% of high school students in 2008 and 74% of high school students in 2009 had purchased snack foods or soda at least once at school during the 7 days before the survey (Figure 44). Interestingly, in 2009, 11% of high school students frequented vending machines more than 1 time a day to buy snack foods or soda at school (Figure 44).⁵ These results must be interpreted with caution; however, since some chips and pretzels offered for sale may meet recommended criteria, and we are unable to determine the time of day that the item was purchased as some restrictions are only applicable during certain hours of the day.

Figure 44: In 2008 & 2009, Percentage of High School Students in Louisiana who Purchased Snack Foods (such as chips, doughnuts, or candy) or soda (including diet soda or pop) at School during the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

KEY FINDINGS:

- Less than 4% of high school students ate fruit 4 or more times a day.
- Less than 10% of high school students ate vegetables 3 or more times a day.
- 74% of high school students purchased snack foods or soda at school.
- Data shows that rates of fruit and vegetable consumption are similar to those presented last year; thus there was no change between the 2009 and 2010 grade.

HEALTH AND HEALTH BEHAVIORS



TOBACCO USE

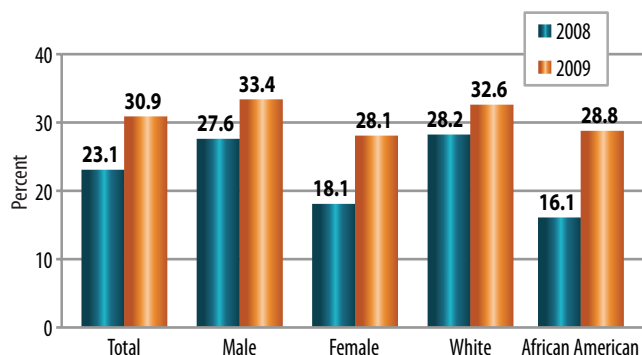
LOUISIANA INFORMATION

The data on tobacco use among children and youth in Louisiana were obtained from the 2008 and 2009 Louisiana Youth Tobacco Surveys (LYTS)^{50, 51} and the 2008 and 2009 Louisiana Youth Risk Behavior Surveys (YRBS).^{4, 5}

Results from the LYTS showed that tobacco use (cigarettes, smokeless tobacco, pipe, bidis, cigars, or black/mild cigars) increased from 23% in 2008 to 31% in 2009 among middle and high school students in Louisiana (Figure 45).^{50, 51} During both survey years, there was a higher prevalence of tobacco use among males compared to females and among White students compared to African American students (Figure 45).^{50, 51}

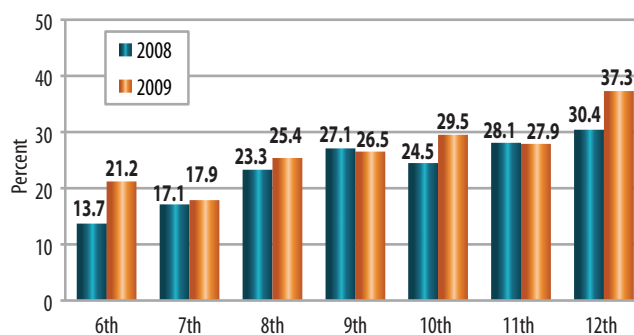
Tobacco use varied by grade level, and increased seven percentage points among both 6th graders and 12th graders from 2008 to 2009 (Figure 46).^{50, 51} Cigarettes were the most prevalent form of tobacco used among both middle and high school students combined in 2008 (15%) which was similar to 2009 results (16%)(Figures 47 & 48).^{50, 51} Between 2008 and 2009, the use of cigars, cigarillos, or little cigars increased from 11% to 17%, and smokeless tobacco (chew, spit, or dip) increased from 7% to 9% (Figures 47 & 48).^{50, 51}

Figure 45: In 2008 & 2009, Percentage of Middle and High School Students in Louisiana That Used Some Form of Tobacco on One or More of the Past 30 Days by Gender and Race/Ethnicity



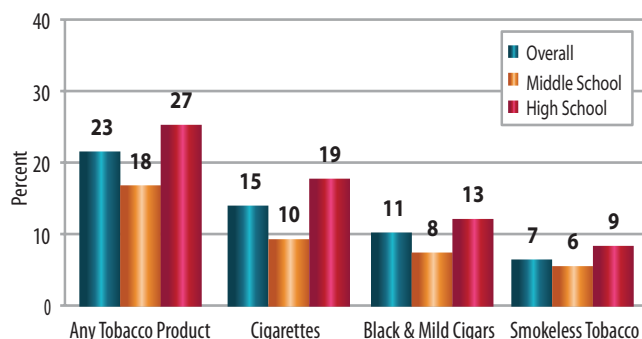
Source: Centers for Disease Control and Prevention, Louisiana Department of Health and Hospitals, Chronic Disease Prevention & Control Unit, Louisiana Tobacco Control Program. 2008 & 2009 Louisiana Youth Tobacco Survey (LYTS). www.latobaccocontrol.com.

Figure 46: In 2008 & 2009, Percentage of Middle and High School Students in Louisiana That Used Some Form of Tobacco (Cigarettes, Smokeless Tobacco, Cigarillos, and Bidis) on One or More of the Past 30 Days by Grade Level



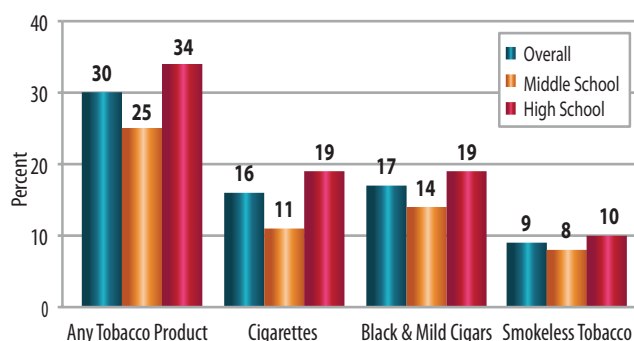
Source: Centers for Disease Control and Prevention, Louisiana Department of Health and Hospitals, Chronic Disease Prevention & Control Unit, Louisiana Tobacco Control Program. 2008 & 2009 Louisiana Youth Tobacco Survey (LYTS). www.latobaccocontrol.com.

Figure 47: In 2008, Percentage of Middle and High School Students in Louisiana who Indicated Tobacco Use on One or More of the Past 30 Days by Product



Source: Centers for Disease Control and Prevention, Louisiana Department of Health and Hospitals, Chronic Disease Prevention & Control Unit, Louisiana Tobacco Control Program. 2008 Louisiana Youth Tobacco Survey (LYTS). www.latobaccocontrol.com.

Figure 48: In 2009, Percentage of Middle and High School Students in Louisiana who Indicated Tobacco Use on One or More of the Past 30 Days by Product

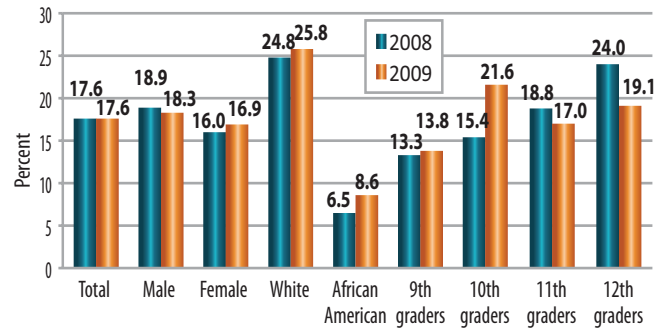


Source: Centers for Disease Control and Prevention, Louisiana Department of Health and Hospitals, Chronic Disease Prevention & Control Unit, Louisiana Tobacco Control Program. 2009 Louisiana Youth Tobacco Survey (LYTS). www.latobaccocontrol.com.

In 2009, black and mild cigars were the most common form of tobacco product among middle school students (14%), while high school students had higher rates of cigarette (19%) and cigar use (19%)(Figures 47 & 48). In 2008, cigarettes were the most common form of tobacco product among middle school students (10%) and high school students (19%)(Figures 47 & 48).

Results from the YRBS showed that the prevalence of cigarette use among high school students was similar in both 2008 and 2009 (18%) (Figure 49).^{4, 5} Cigarette use was highest among males compared to females and White students compared to African American students during 2008 and 2009.^{4, 5} Rates varied for each grade between survey years (Figure 49).^{4, 5}

Figure 49: In 2008 & 2009, Percentage of High School Students in Louisiana who Smoked Cigarettes on One or More of the Past 30 Days

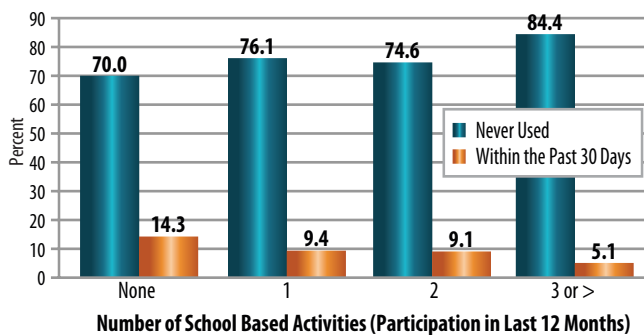


Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).

OTHER INFORMATION

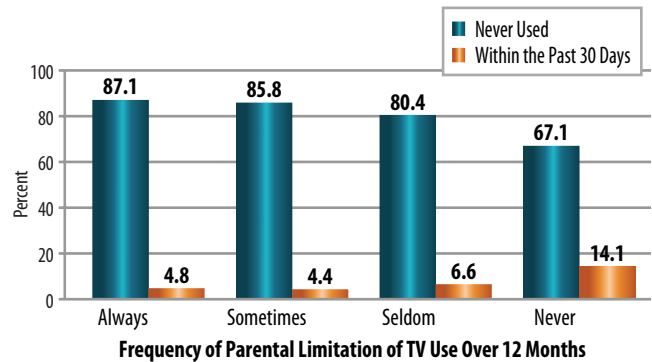
Results from the 2008 National Survey on Drug Use and Health⁵² showed that cigarette use among children aged 12-17 declined (ever and within the past 30 days) by increasing participation in number of school based activities (Figure 50). Yet, these results pertain to any school based activity (team sports, cheerleading, choir, band, student government, or clubs) and are not exclusive of actual sporting activities. Results also showed that the percentage of children who had used cigarettes (ever and within the past 30 days) decreased with increasing frequency of parental limitation of TV use (Figure 51).⁵² Thus, participation in school based activities and limitation of TV use may provide protective benefits for cigarette use among children and youth.

Figure 50: Percentage of Children (12-17 yrs) that Reported Cigarette Use by Participation in Number of School Based Activities in the Last 12 Months



Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies. National Survey on Drug Use and Health, 2008. Research Triangle Park, NC: Research Triangle Institute, 2009. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2009-11-16. <http://www.icpsr.umich.edu/SAMHDA/>. Accessed January, 2010.

Figure 51: In 2008, Percentage of Children (12-17 yrs) that Reported Cigarette Use by Parental Limitation of TV Use



Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies. National Survey on Drug Use and Health, 2008. Research Triangle Park, NC: Research Triangle Institute, 2009. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2009-11-16. <http://www.icpsr.umich.edu/SAMHDA/>. Accessed January, 2010.

KEY FINDINGS:

- 34% of high school students and 25% of middle school students indicated they were current tobacco users.
- 18% of high school students indicated they were current cigarette smokers.
- Data shows that tobacco rates are similar to those presented last year; thus there was no change between the 2009 and 2010 grade.

FAMILY

Children spend the majority of their early childhood years and after-school time in the home environment, an opportunity for parents to establish household rules and restrictions to help their children meet recommendations for physical activity, screen time, fruit and vegetable consumption, and other healthy behaviors. A recent study showed that certain household routines decreased the odds of childhood obesity by 40%.⁵³ Parental control of screen time and other sedentary activities can be restricted to promote physical activity during discretionary periods during the day. In addition, parents can influence physical activity patterns through family cohesion,⁵⁴ social support,⁵⁵ encouragement,⁵⁶ and parental modelling.^{57, 58} It is important that parents not only promote physical activity and healthy behaviors for their children, but that they too model healthy behaviors. Children adapt the lifestyles of their parents; not only by exposure, but by learned behavior. Thus, parental lifestyles and behaviors can both directly and indirectly influence children and the decisions they make regarding physical activity. To assess the family environment, both family perceptions and roles regarding physical activity were assessed.

	2008 Grades	2009 Grades	2010 Grades
Family			
Family Perceptions and Roles Regarding Physical Activity	INC	INC	INC



FAMILY



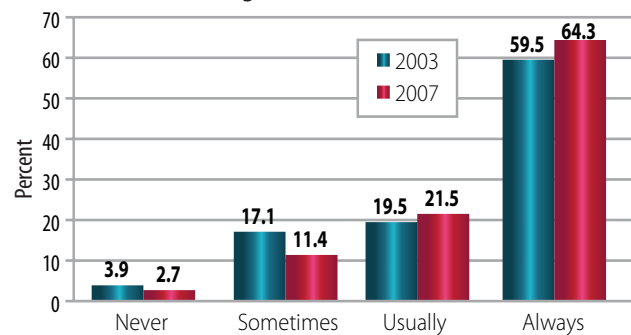
FAMILY PERCEPTIONS AND ROLES REGARDING PHYSICAL ACTIVITY

LOUISIANA INFORMATION

The data on family perceptions and roles regarding physical activity were obtained from the 2003 National Survey of Children Health (NSCH),² the 2007 NSCH,³ and the 2009 Behavioral Risk Factor Surveillance System (BRFSS) for Louisiana.⁵⁹ The data from the 2003 and 2007 NSCH are consistent with the information presented in the 2009 Report Card since these are the most current survey cycles available until 2011.

Sixty-four percent of parents indicated that they always attended their child's activities or events during the 12 months preceding the survey, and another 22% indicated that they usually attended their child's activities or events, according to the 2007 NSCH. These two particular response categories showed increases when compared to results from 2003 (Figure 52).^{2,3} It is important to note that the NSCH survey question used to assess parent's attendance at their child's events did not ask whether these events were specifically "physical activity" related.

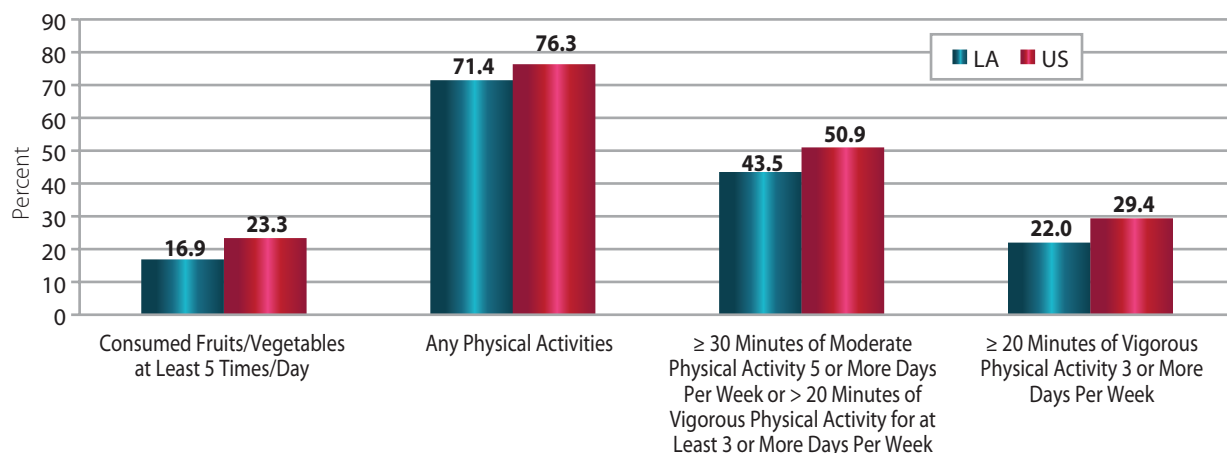
Figure 52: In 2003 and 2007, Percentage of Louisiana Parent's Attendance at Their Child's (ages 6-17) Activities or Events during the Past 12 Months



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

The 2009 BRFSS⁵⁹ assessed physical activity and dietary behaviors among adults in Louisiana. Results showed that 17% of adults consumed fruits and vegetables for at least 5 times a day, and 71% participated in physical activity.⁵⁹ However, only 51% actually participated in at least 30 minutes of moderate physical activity for 5 or more days per week or at least 20 minutes of vigorous physical activity for 3 or more days per week (Figure 53). These prevalence rates are consistently lower than the national averages.⁵⁹

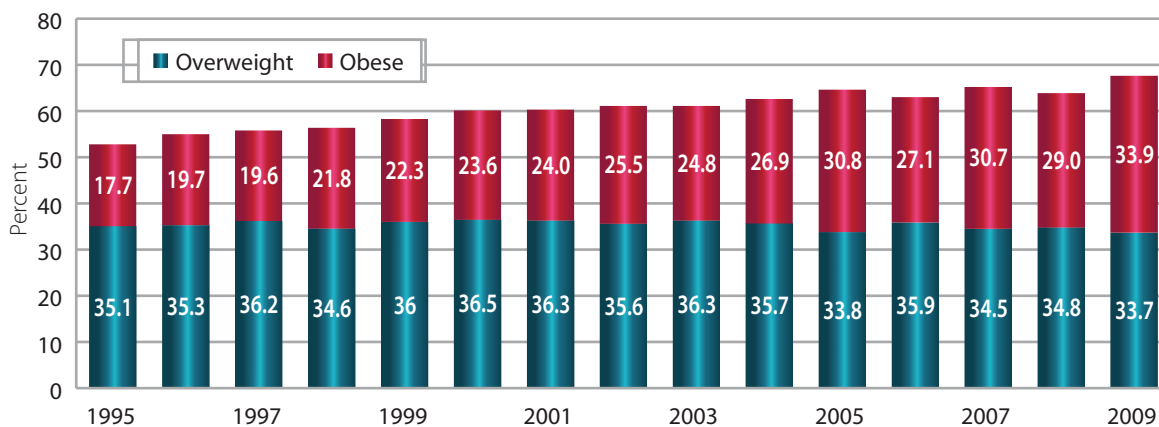
Figure 53: In 2009, Percentage of Adults That Engaged in Physical Activity and Consumed Fruits and Vegetables



Source: Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; October 2009. Retrieved from <http://apps.nccd.cdc.gov/brfss/>. Accessed May 2010.

The rate of adults who were either overweight or obese increased from 53% in 1995 to 68% in 2009, according to results from the 2009 BRFSS.⁵⁹ While the rate of overweight adults may seem to have reached some stabilization between 1995 and 2009, it is important to notice the increased rate of obesity during this time (Figure 54).⁵⁹

Figure 54: Percentage of Adults in Louisiana That Were Overweight or Obese 1995-2009.

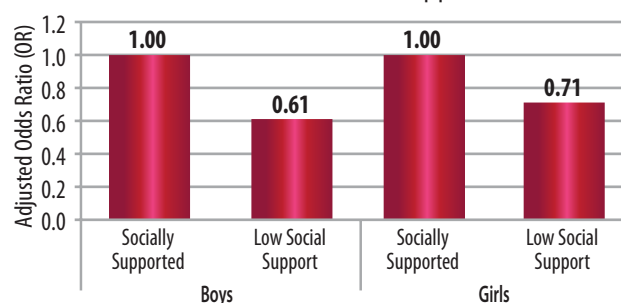


Source: Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; October 2009. Retrieved from <http://apps.nccd.cdc.gov/brfss/>. Accessed May 2010.

OTHER INFORMATION

Parental lifestyles and behaviors can both directly and indirectly influence children and the decisions they make regarding physical activity. Studies have shown that certain household rules and restrictions,⁵³ family cohesion,⁵⁴ parental monitoring,⁵⁴ social support,⁵⁵ and encouragement⁵⁶ are features of the family and home environment that can influence physical activity and other healthy behaviors. Examples of these influences can be found in many recent studies. For example, a Canadian study showed that boys and girls who did not receive social support were 40% and 30%, respectively, less likely to participate in physical activity compared to students who did receive social support (Figure 55).⁵⁵ A study conducted in New Zealand showed that parental monitoring and family cohesion were both independently associated with eating healthy foods, eating breakfast, and physical activity.⁵⁴ Data from the 2005 Early Childhood Longitudinal Study⁵³ found that certain household routines (eating dinner as a family, getting adequate amount of sleep, and limiting screen time) decreased the odds of obesity among a cohort of preschool-aged children.⁵³ Specifically, children who ate dinner with their family for five or more nights per week, obtained at least 10.5 hrs/night of sleep, and had less than 2 hours of screen time per day were 40% less likely to be obese compared to children who were not exposed to any of these routines.⁵³

Figure 55: Adjusted Odds Ratio of Children's Physical Activity as a Function of Social Support



Source: Kurc AR, Leatherdale ST. The effect of social support and school- and community-based sports on youth physical activity. *Can J Public Health*. 2009;100(1):60-64.

KEY FINDINGS:

- 86% of Louisiana parents usually or always attended the activities or events of their children.
- Although there is data on physical activity and BMI of adults, there is not any new data on their roles regarding physical activity; thus, the grade will remain as incomplete.

SCHOOL AND COMMUNITY

Since children spend a large proportion of their day in school, this is an avenue that can be utilized to provide physical activity opportunities for children. Schools enroll the majority of the child population where physical activity opportunities and health programs can have tremendous impact. In 2008, public schools in Louisiana (pre-k through 12th grade) enrolled 690,340 students, and non-public schools enrolled an additional 125,844 students.⁶⁰ Children can accrue a notable contribution of their total daily physical activity during the school day by participating in PE classes, recess, physical activity breaks during the school day, and by active commuting (i.e. walking, biking) to and or from school. One study found that PE and recess accounted for 30 minutes of their cohort's total MVPA.²¹

The Institute of Medicine's (IOM) 2005 report, *Preventing Childhood Obesity: Health in the Balance*,⁶¹ recommends that schools provide at least 30 minutes of MVPA during the school day for all students. Unfortunately, physical activities offered during the school day are often compromised by other educational priorities. In the U.S., less than 4% of elementary schools, 7.9% of middle schools, and 2.1% of high schools provided daily physical education, and only 67.8% of elementary schools provided daily recess, according to the 2006 School Health Policies and Programs Study (SHPPS).⁶² However, research has shown that neither physical education⁶³⁻⁶⁵ nor physical activity breaks⁶⁶ offered during the school day hinders academic performance. Some studies have even shown improved academic performance among students who received more time in physical education^{63,64} and among those with higher fitness levels.⁴³⁻⁴⁵

	2008 Grades	2009 Grades	2010 Grades
School and Community			
Physical Activity Programming at School	D	D	D
Training of School Personnel in Physical Activity	C	C	C
Built Environment and Community Design	INC	D	D

SCHOOL AND COMMUNITY



PHYSICAL ACTIVITY PROGRAMMING AT SCHOOL

LOUISIANA INFORMATION

Data on physical activity programming in Louisiana's schools were provided by the 2008 and 2009 Louisiana Youth Risk Behavior Survey (YRBS),^{4,5} the 2006 School Health Policies and Program Study (SHPSS),⁶² and the Department of Education's (DOE) 2010 Annual Report on the Status and Compliance of Physical Education in Louisiana's Public Schools.⁶⁷

Structured Physical Education

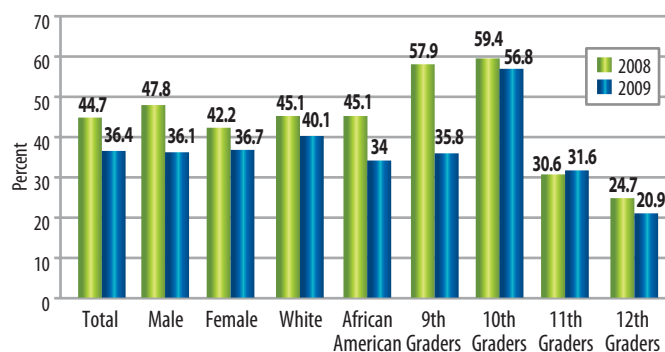
In 2007, Senate Bill No. 362/Act 180 created a state health and physical education coordinator within Louisiana's Department of Education (DOE) to develop, implement, and monitor health and physical education classes in all public elementary and secondary schools in Louisiana.⁴⁹ PE standards for Louisiana are aligned with the National Physical Education Standards developed by the National Association for Sport and Physical Education (NASPE), and in 2009, the DOE produced grade level expectations and benchmarks for grades K-12 to reflect these PE content standards.⁶⁸

All public elementary and middle schools are required by the Louisiana Department of Education (DOE) to provide a minimum of 150 minutes of physical education (PE) per week for students in grades 1-8.⁶⁹ The DOE also requires all public high school students to take at least one and one-half units of PE and another one-half unit of health instruction as graduation requirements.⁶⁹ Students who attend non-public high schools are required to take two units of physical education with at least 30 minutes of health instruction taught in each of the physical education classes.⁷⁰ It is recommended that the physical education classes in both public and non-public high schools are taught during the ninth and tenth grade years.^{69,70}

In March of 2010, the DOE presented data in their annual report to the Senate and House Committees on Education and on Health and Welfare on the number of schools meeting physical activity and physical education requirements which they were able to obtain from an internet survey administered to each school district in Louisiana.⁶⁷ The survey obtained a 78% response rate, representing 54 of the 69 school districts (67% of Elementary Schools, 91% of Middle Schools, 63% of High Schools, and 58% of Combination Schools) in Louisiana.⁶⁷ Results from the survey showed that 94% of the responding Elementary and Middle Schools (grades K-8) provided at least 30 minutes of daily MVPA, and 81% provided at least 150 minutes of weekly physical education.⁶⁷ There were 22 schools that provided less than 150 minutes of weekly physical education to students in grades K-8 due to either limited time in the school schedule (10 schools), limited financial resources (5 schools), limited number of qualified staff (4 schools), or limited facilities (3 schools).⁶⁷ According to the report, physical education is offered daily in 96% of high schools (grades 9-12).⁶⁷ The report also included the following findings: 94% of school districts indicated that physical activity at school is aligned with state standards, 100% indicated that students are active more than 50% of the time in physical education class, 90% indicated professional development is provided for teachers who implement or monitor health and physical education, and 52% indicated that students participate in annual health-related fitness assessments.⁶⁷

Data from the YRBS showed that the proportion of high school students in Louisiana who went to physical education classes 5 days a week decreased from 45% in 2008 to 36% in 2009 (Figure 56).^{4,5} There was a higher rate of 9th and 10th graders who attended PE (5 days/week) compared to 11th graders and 12th graders during both survey years.^{4,5} It is important to use caution when interpreting trends in PE attendance. Changes in school policies (i.e., requirements for time spent in PE per week and credits needed to graduate) and scheduling conflicts or recommendations can influence PE attendance and whether students would be more likely to take physical education in certain grades. For example, the DOE recommends that high schools provide the required PE classes during the 9th or 10th grade levels,⁶⁹ which explains higher rates of PE attendance among these students.

Figure 56: In 2008 & 2009, Percentage of High School Students in Louisiana who Attended Physical Education (PE) Classes Daily in an Average School Week

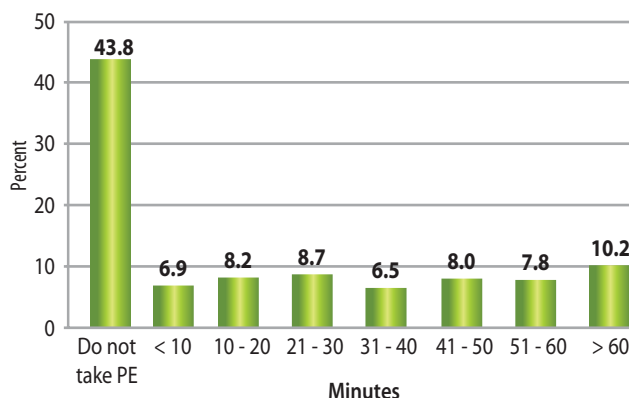


Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 & 2009 Youth Risk Behavior Survey (YRBS).



When students were asked about the time they spent in physical activity during PE class, 33% of students reported that they were active for more than 30 minutes (Figure 57).⁵

Figure 57: In 2009, Percentage of High School Students in Louisiana who Spent Time Actually Exercising or Playing Sports during an Average Physical Education Class



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2009 Youth Risk Behavior Survey (YRBS).

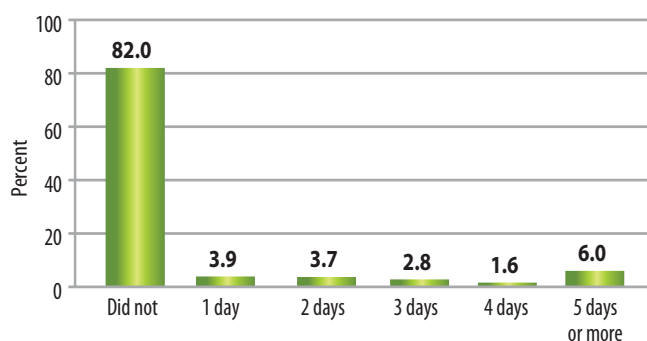
Free-Play Recess

Recess is an important component of child development and provides time for unstructured play. The National Association for Sport and Physical Education (NASPE) recommends at least 20 minutes of daily recess for all elementary school students.⁷¹ According to the 2006 SHPPS, recess is recommended by the DOE, but it is not a requirement for elementary schools in Louisiana.⁶² However, all public schools that include any of the grades K-8, are required by House Bill No. 400/Act 286 of the 2009 Louisiana Legislature, to provide 30 minutes of MVPA per day (which can be in addition to or met by time in PE) for their students.⁴⁹

Physical Activity during Academic Lessons

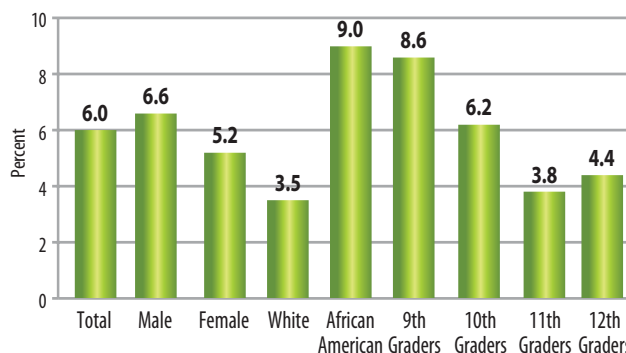
While some states or districts have requirements or recommendations for physical activity breaks at school during academic lessons, there are currently none for Louisiana.

Figure 58: In 2008, Percentage of High School Students in Louisiana who Walked or Rode a Bicycle to School during the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 Youth Risk Behavior Survey (YRBS).

Figure 59: In 2008, Percentage of High School Students in Louisiana who Walked or Rode a Bicycle to School 5 or More Days during the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention (CDC), Louisiana Department of Education, Division of Student and School Learning Support, Health and Wellness Services Section, 2008 Youth Risk Behavior Survey (YRBS).

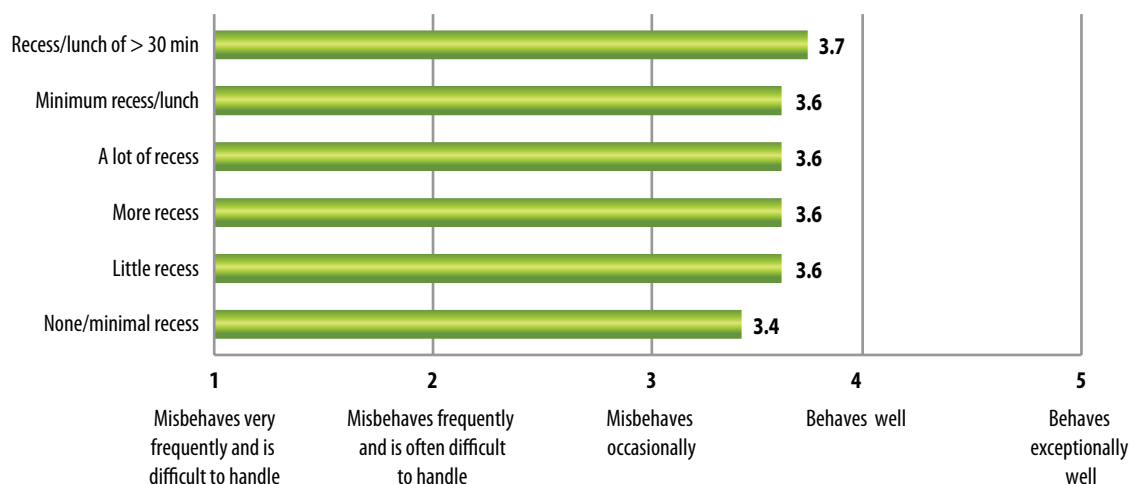
Daily Commute to and From School

The only available data on the percentage of students who walked or rode a bicycle to school is from the 2008 Louisiana YRBS and is consistent with the information presented in last year's Report Card. The 2008 YRBS showed that 18% of high school students walked or rode a bicycle to school at least 1 day during the seven days before the survey (Figure 58). Six percent of students walked or rode a bicycle to school for 5 or more days (Figure 59). Males, African Americans, and 9th graders were more likely to walk or bike to school compared to their respective counterparts (Figure 59).

OTHER INFORMATION

Since children and youth spend 50% of their day in school, the school environment is an ideal place to provide opportunities for children and youth to engage in physical activity.⁷² Allowing time during the school day for students to participate in recess and physical education are practical strategies to help them reach physical activity recommendations. Yet, schools across the United States have reduced or eliminated recess and physical education from the school day with pressures to improve standardized test scores and thereby allocating more time to student learning.^{73, 74} While there are concerns that physical education and recess in school curricula reduces time devoted to student learning and improving standardized test scores, many studies have shown that physical education does not negatively affect academic performance despite having less instructional time for academic classes,^{63, 65} and recess may have a positive influence on classroom behavior (Figure 60).⁷⁵ Furthermore, researchers have found that students with higher levels of fitness perform better on standardized tests.⁴³⁻⁴⁵ Thus, allocating time towards physical activity during the school day does not compromise grades or test scores, and may have benefits on academic achievement. More information on academic achievement and fitness can be found under the *Aerobic Fitness* indicator of the Report Card.

Figure 60: Children's Mean Classroom Behavior Scores on a 5-point Likert Scale by Time Spent in Recess



Source: Barros RM, Silver EJ, Stein RE. School recess and group classroom behavior. *Pediatrics*. 2009;123(2):431-436.

KEY FINDINGS:

- 36% of high school students in LA attended PE class daily.
- 33% of high school students in LA were active for more than 30 minutes during PE class.
- Data shows that physical activity programming in schools is similar to data presented last year; thus there was no change between the 2009 and 2010 grade.

SCHOOL AND COMMUNITY

GRADE



TRAINING OF SCHOOL PERSONNEL IN PHYSICAL ACTIVITY

LOUISIANA INFORMATION

Data pertaining to the training of school personnel in physical activity were provided by the 2006 School Health Policies and Programs Study (SHPPS),⁶² the Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD),⁷⁶ the Department of Education's (DOE) School Health Index,⁷⁷ and the Department of Education's (DOE) 2010 Annual Report on the Status and Compliance of Physical Education in Louisiana's Public Schools.⁶⁷

According to the 2006 SHPPS,⁶² all newly hired middle and high school PE teachers in Louisiana are required by the DOE to have either undergraduate or graduate training in PE or a related field and must be certified by the state. Certification is offered through the DOE in physical education or a combination of physical education and health education at either the elementary, middle, or high school level.⁶² Physical education teachers who are certified after 2003 must obtain continuing education credits to maintain their certification.⁷⁷ The Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD) offers continuing education credits at their annual conference for health professionals, teachers, and PE teachers while offering health sessions, workshops, and discussions on the latest techniques in teaching and promoting physical activity.⁷⁶

The DOE has undertaken several strategies to provide training and assistance for PE teachers to help them implement the new Physical Education Grade-Level Expectations (GLEs) that were developed and published in 2009.⁶⁷ The DOE developed a physical education handbook and conducted regional teacher workshops that were attended by over 300 physical education professionals from 50 districts in Louisiana who will provide training in their respective school districts.⁶⁷ Louisiana's health and physical education coordinator also provides guidance and assistance to school districts to help implement the physical education GLEs.⁶⁷

KEY FINDINGS:

- All newly hired middle and high school PE teachers in Louisiana must be certified and have a college degree in physical education or a related field.
- Training and assistance for PE teachers were provided to implement the new Physical Education Grade-Level Expectations (GLEs).
- Information on training of school personnel in physical activity is similar to last year; thus, there was no change between the 2009 and 2010 grade.



SCHOOL AND COMMUNITY



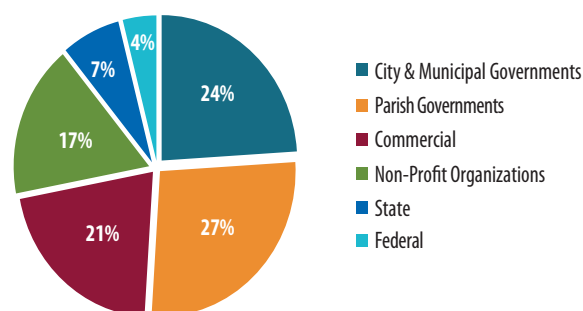
BUILT ENVIRONMENT AND COMMUNITY DESIGN

LOUISIANA INFORMATION

Data pertaining to the built environment and community design for Louisiana were provided by the 2009-2013 Louisiana Statewide Comprehensive Outdoor Recreation Plan (SCORP)⁷⁸ and the 2007 National Survey of Children's Health (NSCH).³ The NSCH is unique in that it assesses neighborhood and community characteristics, a feature that is not included in other surveys.

According to the 2009-2013 SCORP,⁷⁸ public schools in Louisiana provide 8,500 acres of land for outdoor recreation use. A large percentage of schools (92% in 1990) have cooperative agreements to share their facilities and/or use park facilities for students.⁷⁸ Although a state-wide comprehensive account of recreational facilities provided by schools in Louisiana is currently lacking, the SCORP identified the percentage of other providers and their contribution to the total number of recreational facilities in Louisiana.⁷⁸ Excluding schools, the three largest providers of recreational facilities in Louisiana are parish governments (27%), city and municipal governments (24%), and commercial organizations (21%) (Figure 61).⁷⁸ Non-profit organizations provide another 17% of recreational facilities, while state and federal governments provide the smallest contribution of recreational areas, with 7% and 4%, respectively (Figure 69).⁷⁸ Although state and federal governments have fewer recreational facilities, they each supply over one million acres of land for recreation in Louisiana and provide 37% and 33%, respectively, of the total recreational acreage available while parish and city/municipal governments provide less than 1% of the land used for recreation in Louisiana.⁷⁸

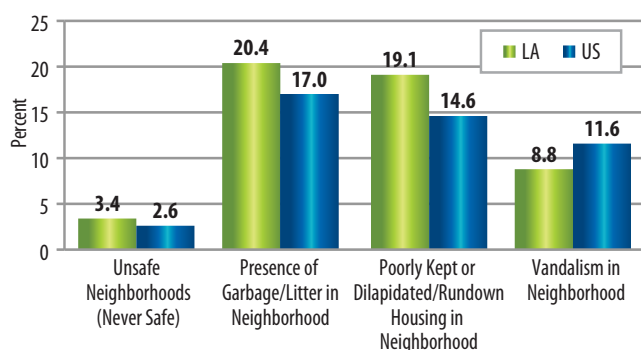
Figure 61: Providers of Recreational Facilities in Louisiana (excluding school facilities)



Source: Louisiana Statewide Comprehensive Outdoor Recreation Plan (SCORP) 2009-2013: Louisiana's Department of Culture, Recreation and Tourism, Office of State Parks, Division of Outdoor Recreation; 2009. http://www.crt.state.la.us/Parks/LWCF/SCORP%20FINAL_V2%207-29-09.pdf. Accessed March 2010.

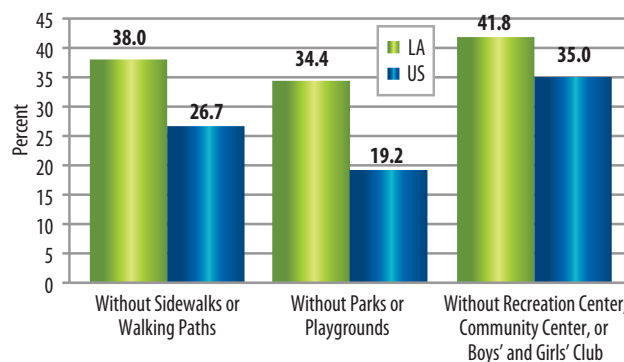
Unfavorable socioeconomic conditions and the lack of neighborhood amenities can be determinants of children's physical activity behaviors. For example, children's playtime and place of play can be limited and restricted by parental concern of neighborhood safety, and children's participation in physical activity can be hindered by the lack of parks and inaccessible recreational facilities in their neighborhoods. Results from the 2007 NSCH showed that 3% of children and youth (ages 0-17) lived in neighborhoods that were unsafe, 20% lived in neighborhoods with garbage and litter on sidewalks and streets, 19% lived in neighborhoods with poorly kept or dilapidated housings, and 9% lived in neighborhoods with acts of vandalism such as broken windows or graffiti (Figure 62).³ Thirty-eight percent of children lived in neighborhoods without sidewalks or walking paths, 34% lived in neighborhoods without parks or playgrounds, and 42% lived in neighborhoods without recreational facilities (Figure 63).³

Figure 62: In 2007, Percentage of Children and Youth (ages 0-17) in Louisiana That Lived in Neighborhoods with Unfavorable Socioeconomic Conditions



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

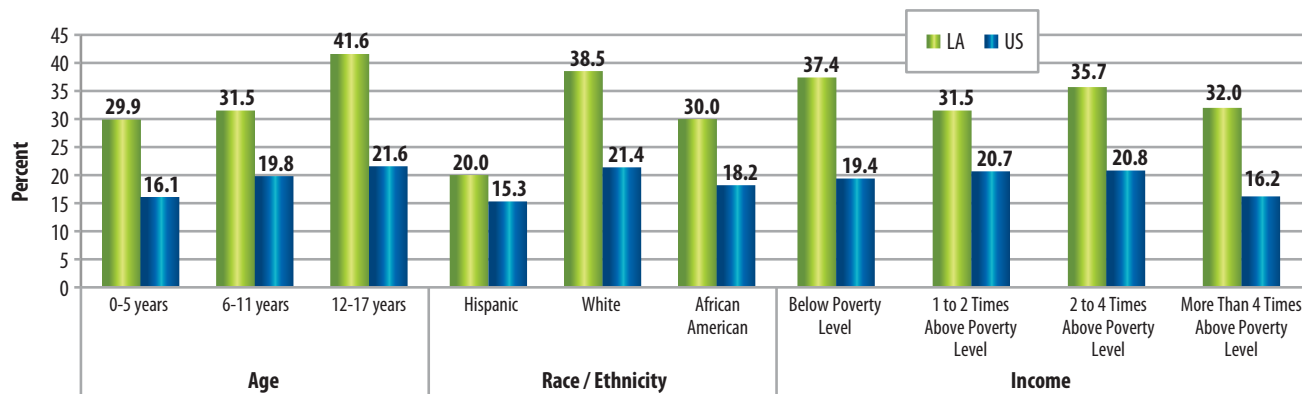
Figure 63: In 2007, Percentage of Children and Youth (ages 0-17) in Louisiana That Lived in Neighborhoods without Amenities



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

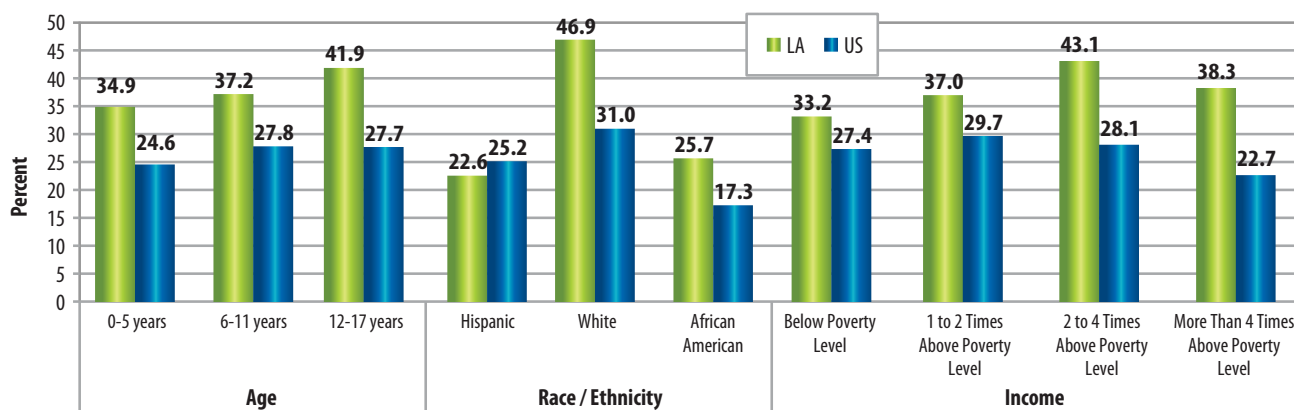
Results from the 2007 NSCH also showed disparities in neighborhood amenities by age group, race/ethnicity, and income level (Figures 64 & 65).³ Access to sidewalks or walking paths and access to parks and playgrounds decreased with increasing age group (Figures 64 & 65).³ White children had lower rates of parks or playgrounds and sidewalks or walking paths in their neighborhoods (Figures 64 & 65).³ Children whose household income was below the federal poverty level had less access to parks and playgrounds (Figure 64).³ Interestingly, children whose household income was above the poverty level had less access to sidewalks or walking paths (Figure 65).³ Secluded and safer neighborhoods occupied by families with higher income levels would be less likely to need sidewalks and walking paths, which may explain this trend. However, the lack of sidewalks or walking paths can reduce children's physical activities outdoors and their ability to walk or bike to school or other destinations.

Figure 64: In 2007, Percentage of Children (ages 0-17) That Lived in Neighborhoods without Parks or Playgrounds



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

Figure 65: In 2007, Percentage of Children (ages 0-17) That Lived in Neighborhoods without Sidewalks or Walking Paths

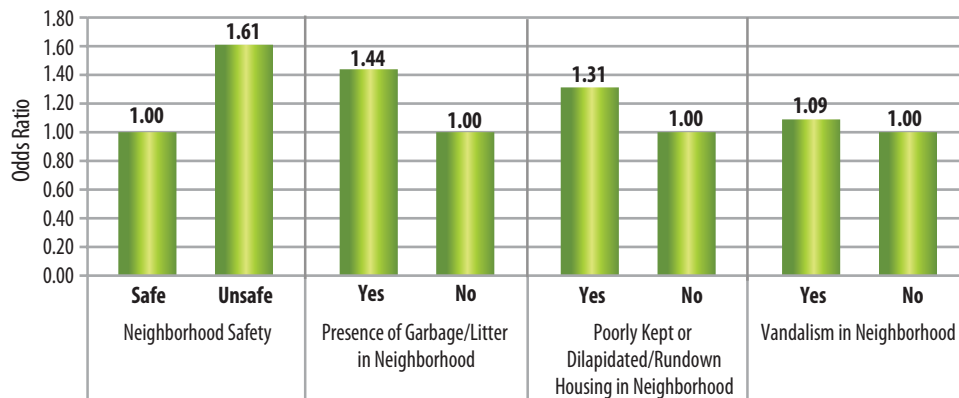


Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschedata.org

OTHER INFORMATION

Recently published research using the 2007 National Survey of Children's Health (NSCH) analyzed conditions of the built environment and found that certain neighborhood socioeconomic conditions and lack of neighborhood amenities increase the odds of obesity (BMI $\geq$ 95th percentile) among children and youth (ages 10-17).⁷⁹ Adjusting for age and gender, children who lived in unsafe neighborhoods had a 61% higher odds of being obese compared to children living in safe neighborhoods (Figure 66).⁷⁹ In addition, the odds of obesity increased 44%, 31%, and 9% for children who lived in neighborhoods with garbage or litter, poorly kept or dilapidated housing, and vandalism, respectively, compared to children who did not live in neighborhoods with these conditions (Figure 66).⁷⁹ Using an index of these neighborhood socioeconomic conditions, the results showed that children who lived in the most unfavorable socioeconomic conditions had a 45% increased odds of obesity, and were 50% more likely to be physically inactive,

Figure 66: Odds of Obesity among US Children Ages 10-17 (Adjusted for Age & Gender)
By Neighborhood Socioeconomic Conditions using the 2007 NSCH



Source: Singh GK, Siahpush M, Kogan MD. Neighborhood socioeconomic conditions, built environments, and childhood obesity. *Health Aff (Millwood)*. 2010;29(3):503-512.

52% more likely to watch TV for more than 2 hours per day, and 65% more likely to use the computer for more than 2 hours per day for non-school purposes compared to children who lived in the most favorable socioeconomic conditions.⁷⁹

The odds of obesity among children and youth also increased among certain characteristics of the built environment. Adjusting for age, gender, demographic characteristics, and behaviors, the odds of obesity among children increased 32% for children living in neighborhoods with no access to sidewalks or walking paths, 26% for children living in neighborhoods without parks or playgrounds, and 20% for children who did not have access to recreation or community centers in their neighborhoods compared to children who did have these amenities in their neighborhoods (Figure 67).⁷⁹ Children who lived in neighborhoods with the lowest amenities, using an index of the neighborhood built environment, had a 34% increased odds for obesity, were 61% more likely to be physically inactive, and 25% more likely to watch TV for more than 2 hours per day compared to children who lived in neighborhoods with the highest amenities.⁷⁹

Figure 67: Odds of Obesity among US Children Ages 10-17
(Adjusted by Age, Gender, Demographics, & Behaviors)
by Neighborhood Built Environmental Characteristics
Using the 2007 NSCH



Source: Singh GK, Siahpush M, Kogan MD. Neighborhood socioeconomic conditions, built environments, and childhood obesity. *Health Aff (Millwood)*. 2010;29(3):503-512.

KEY FINDINGS:

- 38% of children in LA live in neighborhoods without sidewalks or walking paths.
- 34% of children in LA live in neighborhoods without parks or playgrounds.
- Neighborhood conditions and lack of amenities can increase the risk of obesity among children and youth.
- Data on the built environment and community design are similar to those presented last year; thus there was no change between the 2009 and 2010 grade.

POLICY AND INVESTMENTS

Creating healthy environments that support and promote children's physical activity through policy is an important concept in ecological models. Policies are important in that they can achieve behavior change at the population level. State-level policies enact laws and regulations that are more concentrated on specific populations, geographic areas, and behaviors unique to each state and can involve collaboration with local level organizations and programs. However, turning political strategies into action requires more than enacting a bill – regulation and funding are required to realize political efforts. Thus, to assess state-level policies and investments related to physical activity or obesity among children and youth, three indicators are included in this section: Progress on Government Strategies and Policies, Government Investments, and Industry and Philanthropic Investments.

	2008 Grades	2009 Grades	2010 Grades
Policy and Investments			
Progress on Government Strategies and Policies	B-	B-	B-
Government Investments	INC	INC	INC
Industry and Philanthropic Investments	INC	INC	INC



POLICY AND INVESTMENTS

GRADE

B-

PROGRESS ON GOVERNMENT STRATEGIES AND POLICIES

LOUISIANA INFORMATION

Information in this section identifies state specific policies rather than those at the federal, local, or parish level.

A total of 9 bills have been passed since 2004 in the Louisiana Legislature relevant to physical activity or the prevention of obesity among children and youth. These bills are described below in Table 4 along with progress notes. It is important to note that during the 2010 Legislative Session, no specific bills were passed relevant to physical activity or the prevention of obesity among children and youth.

The Louisiana Department of Health and Hospitals houses the Louisiana Council on Obesity Prevention and Management (LA Obesity Council) which was created by the Louisiana State Legislature in 1999 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."⁸⁰ With this mission as its foundation, one of the LA Obesity Council's goals include advocating for policy and environmental change to support healthy food choices and physical activity. Through this approach, the LA Obesity Council has worked with the Louisiana Legislature and community organizations on strategies to improve health and promote physical activity opportunities in Louisiana. In addition, the Louisiana Task Force which was created by legislation in 2003, compiled two reports: 1) Effectiveness of Interventions for Overweight and Obesity in Children and Adolescents⁸¹ and 2) Effectiveness of Interventions for Overweight and Obesity in Adults⁸² to help guide legislation related to the prevention and treatment of obesity. The LA Obesity Council and the Louisiana Task Force has been instrumental in supporting and assisting with policy changes relevant to the treatment and prevention of obesity and improving health in Louisiana.

Table 4: Louisiana Policies for Physical Activity and Related Behaviors

Bill No. Act No.	Session	Description of Bill	Progress to Date (2010)
S.B. 871 Act 734	2004	Requirement of 30 minutes of MVPA each school day in all public schools grades K-6.	H.B. 400/Act 286 of the 2009 Legislative Session increased the grades required to provide 30 minutes of MVPA from K-6 to K-8.
		Establishes an award program for outstanding physical activity programs in elementary or secondary schools.	School Health Awards have been presented annually through the DOE.
		Provides for establishment and implementation of a pilot program for baseline assessment of physical fitness of students.	The Cecil J. Picard Center for Child Development and Lifelong Learning, the DOE, and DHH implemented the Health-Related Physical Fitness Assessments. This legislation created a three year pilot program that began during the 2005-2006 school year. The pilot program was legislatively expanded by Act 256 of the 2009 Session.
S.B. 146 Act 331	2005	Restriction of certain beverages and food sales during specified hours in public elementary and secondary schools.	The PBRC, the DOE, and the LA Obesity Council developed and published a vending list of foods that meet the criteria set forth in this act, and the PBRC provides assessments of nutritional value of individual food items contemplated for sale at public schools. The list is available on the PBRC website (http://www.pbrc.edu).
S.B. 362 Act 180	2007	Requirement for the state of Louisiana to have a state health and physical education coordinator to develop, implement, and monitor health and physical education curricula in all public elementary and secondary schools.	In 2008, the DOE hired a state health and physical education coordinator and in 2009, developed physical education grade-level expectations (GLEs). Two reports were produced on the status of health and PE in Louisiana's public schools (2009 & 2010).

LOUISIANA'S REPORT CARD ON PHYSICAL ACTIVITY AND HEALTH FOR CHILDREN AND YOUTH - 2010

H.B. 400 Act 286	2009	Requirement of 30 minutes of MVPA each school day for students in grades K-8 attending public schools.	Grades K-6 were already required to provide 30 minutes of MVPA by Act 734 of the 2004 session and this legislation mandated that 30 minutes of MVPA are also provided for grades 7 and 8.
		Establishes school health advisory councils to advise the board on physical activity for students, physical and health education, nutrition, vending restrictions, physical fitness assessment results, and recess policies.	Grants have been made available (July 2010) by the DHH, CDC, the Recovery Act, and the Louisiana School Boards Association (LSBA) to fund 27 school districts to increase implementation of this law by developing school health advisory councils to address strategies in obesity and tobacco prevention.
S.B. 299 Act 252	2009	Establishes the Healthy Food Retail Act, a financing program to stimulate investment in healthy food retail providers in underserved areas of LA to increase access to fresh fruit and vegetables.	This program was created in the Louisiana Department of Agriculture and Forestry (LDAF); however, no state appropriations were allocated.
S.B. 309 Act 256	2009	Provides for the review and expansion of a current health-related physical fitness assessment pilot program that will provide baseline and subsequent measures to evaluate effectiveness of interventions to impact childhood obesity in Louisiana.	During the 2009-2010 school year, health related physical fitness assessments were expanded to 109 schools in 14 parishes. Over the next 3 years, the NFL Saints will be providing 35 Fitnessgram kits to Louisiana schools through the NFL Play 60 Program.
H.B.725 Act 147	2009	Protects bicyclists on the road by prohibiting drivers of certain actions and providing penalties, publications, signage, and a public awareness campaign.	The Dept. of Public Safety's LA Highway Safety Commission (LHSC) in collaboration with the LA DOTD has produced bicycle radio commercials and print ads for a public awareness campaign and The Office of Motor Vehicles has updated its drivers guide to include information on bicycle safety and sharing the road with bicyclists.
H.B. 767 Act 147	2009	Restriction of certain beverages offered for sale in public high schools.	A list of approved beverages has been made available by the PBRC, the DOE, and the LA Obesity Council that meet criteria enacted. The list is also available on the PBRC website.
H.B. 802 Act 226	2009	Establishes the Walking the Walk for Our Kids Fund for the diagnosis, prevention and treatment of childhood obesity.	This fund was created; however, received no state funding.

During the past six years (2004-2010), many House and Senate Resolutions were also passed relevant to physical activity and the prevention of obesity among children and youth in Louisiana. In 2007, SCR No. 104 requested the DOE to study the feasibility of developing and implementing a statewide health education curriculum and physical fitness assessments for grades K-12.⁴⁹ The Louisiana Healthy Food Retail Study Group was created by SR No. 112 during the 2008 Legislative Session and SCR No. 110 created the Complete Streets Work Group in the Department of Transportation and Development (DOTD) in 2009.⁴⁹ During the 2010 Legislative Session, HCR No. 209 requested the State Board of Elementary and Secondary Education (BESE) to study the feasibility of increasing P.E. units required for high school graduation, and SR No. 172 requested childhood obesity groups in Louisiana to report the status of their ongoing efforts.⁴⁹ Additionally, Obesity Awareness Days and Legislative Wellness Days have been recognized in both chambers of the Louisiana Legislature.⁴⁹

KEY FINDINGS:

- 9 bills have been passed since 2004 in the Louisiana Legislature relevant to physical activity or the prevention of obesity among children and youth.
- The Louisiana Council on Obesity Prevention and Management has been instrumental in assisting with strategies and policies to reduce obesity and promote physical activity opportunities.
- Data on government strategies and policies are similar to those presented last year; thus there was no change between the 2009 and 2010 grade.

POLICIES AND INVESTMENTS

GRADE

INC

GOVERNMENT INVESTMENTS

Policies can have a huge impact on behavior change, but political strategies for increasing and promoting physical activity and prevention of obesity among children require more than enacting a bill. Funding is necessary for implementation and regulation to realize political efforts. While some progress and implementation is noted in the table on the bills that were passed since 2004 on physical activity and related behaviors among children, it will be important to evaluate which of these Acts have actually received state funding. At the current time an exhaustive list of state appropriations towards each of these Acts is not available. In the future, it will be important to analyze these bills and state appropriations to understand the extent of government investments in these political strategies. Due to the lack of information available at this time, we are unable to determine a grade.



KEY FINDINGS:

- Funding to support policies that impact physical activity and health for children are important for implementation and regulation.
- Insufficient information is available at this time on state funding allocated towards these policies to determine a grade.

POLICIES AND INVESTMENTS



INDUSTRY AND PHILANTHROPIC INVESTMENTS

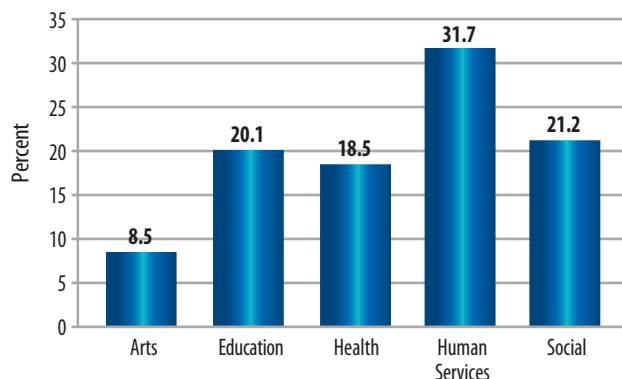
The data on industry and philanthropic investments were obtained from the 2009 Louisiana Nonprofit Sector Fiscal Health Survey,⁸³ developed by the Louisiana Association of Nonprofit Organizations (LANO).

Through an online survey, LANO obtained 375 respondents from Louisiana's nonprofit sector on their service areas, funding sources, and their budget forecasts. Data from the survey showed that of the responding nonprofit organizations, 18.5% provided health and wellness services (Figure 68).⁸³ The largest funding sources for nonprofit organizations that provided health services were the state government and earned income with 19% and 20%, respectively (Figure 69).⁸³ Individual donations accounted for 17% of their funding, foundations and endowments accounted for 11%, and United Way/Corporate Giving provided another 11% of funding to non-profit organizations who provided health services (Figure 69).⁸³

The health and wellness category comprised of the following sub-groups: 1) Health, 2) Mental Health & Crisis Intervention, 3) Health Association, Diseases, and Disorders, 4) Medical Research, and 5) Food, Nutrition, and Agriculture.⁸³ Although we cannot ascertain non-profit services for children exclusively in food, nutrition, and agriculture, or services related to physical activity and obesity, the information provided in the Louisiana Nonprofit Sector Fiscal Health Survey provides some degree of funding information pertaining to health until a more comprehensive account of industry and philanthropic investments is available in those more specific categories. The cornucopia of non-profit organizations, foundations, and philanthropic organizations makes finding a comprehensive list of funding and funded projects difficult without investigating each entity or organization separately and even more difficult to locate readily available information.

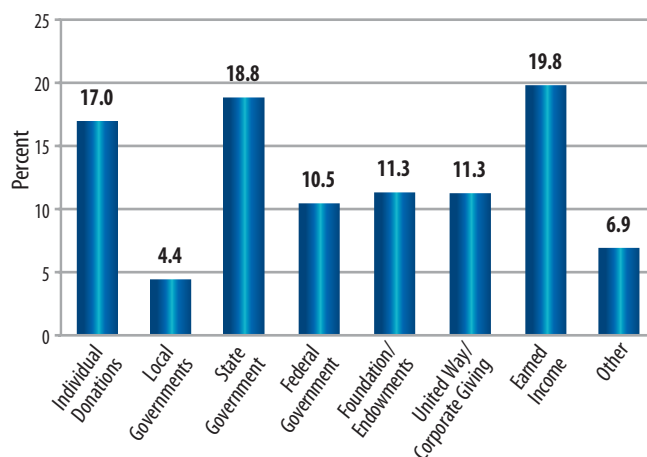
The data that we have been able to present this year on industry and philanthropic investments is still limited. By grading each indicator in the Report Card, we are able to determine which areas require further research and evaluation, such as in this section. Philanthropic investments in projects and programs specifically related to physical activity and health for children in Louisiana and more information on investments in other areas in addition to the non-profit sector will be of great importance to track, monitor, and assign a grade in the future.

Figure 68: Nonprofit Services in Louisiana



Source: Louisiana Association of Nonprofit Organizations (LANO). Louisiana Nonprofit Sector Fiscal Health Report. http://www.lano.org/AM/Template.cfm?Section=Nonprofit_Fiscal_Health_Report&Template=/CM/ContentDisplay.cfm&ContentID=8167, June 2010.

Figure 69: Funding Sources for Non-Profit Organizations in Louisiana that Provided Health Services



Source: Louisiana Association of Nonprofit Organizations (LANO). Louisiana Nonprofit Sector Fiscal Health Report. http://www.lano.org/AM/Template.cfm?Section=Nonprofit_Fiscal_Health_Report&Template=/CM/ContentDisplay.cfm&ContentID=8167, June 2010.

KEY FINDINGS:

- The largest funding sources for non-profit organizations providing health and wellness services were from state government and earned income.
- There is a lack of information on industry and philanthropic investments in projects and programs specifically related to physical activity and health for children.
- Insufficient information is available at this time on industry and philanthropic investments to determine a grade.

2010 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 for Louisiana from the following sources.

Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD)⁷⁶

Founded in 1934, the aim of this organization is to improve the quality of life through health, fitness, and recreational activities. LAHPERD is an affiliate of the American Alliance for Health, Physical Education, Recreation and Dance. LAHPERD offers continuing education credits at their annual conference for health professionals, teachers, and PE teachers while offering health sessions, workshops, and discussions on the latest techniques in teaching and promoting physical activity. The members of LAHPERD include teachers, administrators, dance instructors recreation supervisors, fitness directors, college students, allied health specialists, exercise physiologists, athletic trainers, etc., and are found in sixty-four parishes (counties) and twenty-four universities in Louisiana. More information on LAHPERD can be found at: <http://www.lahperd.org/>.

Louisiana Department of Culture, Recreation, and Tourism (CRT)⁷⁸

Louisiana's Statewide Comprehensive Outdoor Recreation Plan (SCORP) 2009-2013 can be assessed at http://www.crt.state.la.us/Parks/LWCF/SCORP%20FINAL_V2%207-29-09.pdf.

Louisiana Department of Education (DOE)⁶⁸⁻⁷⁰

On-line education bulletins on regulatory policies for Louisiana's education system such as requirements for public and non-public schools and the physical education content standards are available on the following webpage: <http://www.doe.state.la.us/1de/bese/1041.html>.

Louisiana Youth Tobacco Survey (LYTS)^{50, 51}

The Louisiana Tobacco Control Program which is housed within Louisiana's Department of Health and Hospitals in collaboration with the Centers for Disease Control and Prevention (CDC) administers and collects the LYTS. Survey results and data used in this Report Card were provided by The Louisiana Tobacco Control Program. The LYTS is administered every other year among public middle and high school students in Louisiana to obtain data on tobacco use (cigarettes, smokeless tobacco products, cigars, cigarillos, little cigars, bidis, and kreteks). The LYTS also obtains information on second hand smoke, cessation attempts, tobacco advertising, school tobacco prevention education, and access and availability of tobacco products. The 2009 LYTS was completed by 2,839 middle and high school students, representing a

student response rate of 88.2%. The LYTS results are weighted to be representative of all middle and high school students in Louisiana. Some of the LYTS results are also available online: <http://www.800quitnow.com/surveysdata/>.

National Survey of Children's Health (NSCH)^{2, 3}

The NSCH is a national survey that is conducted every four years by the Maternal and Child Health Bureau within the U.S. Department of Health and Human Services, with the last survey cycle conducted in 2007. Telephone numbers are called at random to identify households with one or more child less than 18 years of age. The NSCH is administered to the parent concerning one child randomly selected to be the subject of the interview. Thus, child health measures are collected by proxy report. The NSCH collects data on over 100 indicators of child's health including: BMI, physical activity, screen time, and their environment to track data, educate stakeholders, and inform decision makers. Although the NSCH is a national survey, data is collected and available from each state to allow comparisons between states and to national rates. There were 91,642 completed interviews in the United States, while 1,868 interviews were completed in Louisiana between April 2007 and July 2008 for the 2007 NSCH. Survey responses were weighted to be representative of each state and the national population. The NSCH data can be found at: <http://www.nschdata.org>.

School Health Policies and Programs Study (SHPPS)⁶²

The Centers for Disease Control and Prevention (CDC) conducts the School Health Policies and Program Study (SHPPS), a national survey to assess school health policies. Data is collected at the state, district, school, and classroom levels through computer-assisted telephone interviews or self-administered mail questionnaires to obtain a nationally representative sample. The most recent survey cycle of the SHPPS was conducted in 2006 with the next administration planned for 2012. The 2006 SHPPS included data collected from 50 states and the District of Columbia, 538 districts, 1103 personnel in elementary, middle, and high schools, 912 health instructors, and 1194 PE instructors. SHPPS can be assessed at the following website: <http://www.cdc.gov/HealthyYouth/shpps/index.htm>.

Youth Risk Behavior Survey (YRBS)^{4, 20}

The Louisiana YRBS is conducted by the Louisiana Department of Education (DOE), Division of Student and School Learning Support, Health and Wellness Services Section who also provided the 2008 and 2009 survey results for this Report Card. National data is collected by the Centers for Disease Control and Prevention (CDC) under the Division of Adolescent and School Health's Youth Risk Behavior Surveillance System (YRBSS) and coordinates and assists with state-level surveys. The YRBS is administered every other year

(odd years) and is designed to assess health-risk behaviors and the prevalence of obesity and asthma among middle and or high school students. For the first time since 1997, weighted data was collected for Louisiana during the spring of 2008 (off its normal survey cycle). The 2008 Louisiana YRBS was administered to 1,349 students in 25 public high schools, and in 2009, was administered again during its normal survey cycle completed by 1,035 students in 25 public high schools. Survey results are weighted to be representative of all high school students in Louisiana. National and state level YRBS data can also be found at: <http://apps.nccd.cdc.gov/youthonline>.

The 2010 Report Card also obtained data from the following sources:

- Bogalusa Heart Study³⁶
- 2008 National Survey on Drug Use and Health⁵²
- LA Health³³
- National Health and Nutrition Examination Survey (NHANES)
38-41
- 2009 Behavioral Risk Factor Surveillance System (BRFSS)⁵⁹
- 2005 Early Childhood Longitudinal Study⁵³
- The Annie E. Casey Foundation, Kids Count Data Center⁶⁰
- Louisiana Department of Education's (DOE) School Health Index⁷⁷
- The DOE's 2010 Annual Report on the Status and Compliance of Physical Education in Louisiana's Public Schools⁶⁷



ACRONYMS AND DEFINITIONS

Acronym	Definition
AAP	American Academy of Pediatrics
BESE	Louisiana State Board of Elementary and Secondary Education
BMI	Body Mass Index
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CRT	Louisiana Department of Culture, Recreation, and Tourism
DHH	Louisiana Department of Health and Hospitals
DOE	Louisiana Department of Education
DOTD	Louisiana Department of Transportation and Development
GLEs	Grade-Level Expectations
HFZ	Healthy Fitness Zone
HHS	United States Department of Health and Human Services
HRQOL	Health-Related Quality of Life
IOM	Institute of Medicine
LA Obesity Council	Louisiana Council on Obesity Prevention and Management
LAHPERD	Louisiana Association for Health, Physical Education, Recreation and Dance
LANO	Louisiana Association of Nonprofit Organizations
LDAF	Louisiana Department of Agriculture and Forestry
LHSC	Louisiana Highway Safety Commission
LSBA	Louisiana School Boards Association
LYTS	Louisiana Youth Tobacco Survey
MVEE	Moderate-to-Vigorous Energy Expenditure
MVPA	Moderate-to-Vigorous Physical Activity
NASPE	National Association for Sport and Physical Education
NFL	National Football League
NHANES	National Health and Nutrition Examination Survey
NSCH	National Survey of Children's Health
PACER	Progressive Aerobic Cardiovascular Endurance Run
PBRC	Pennington Biomedical Research Center
PE	Physical Education
SBHCs	School-Based Health Centers
SCORP	Louisiana Statewide Comprehensive Outdoor Recreation Plan
SHPPS	School Health Policies and Programs Study
TDEE	Total Daily Energy Expenditure
USDA	United States Department of Agriculture
YRBS	Youth Risk Behavior Survey

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REPORT CARD DEVELOPMENT AND DATA SOURCES

The 2010 Report Card grade assignments were based on the analysis of the most recently available information for Louisiana from the following sources: Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD), Louisiana Department of Culture, Recreation, and Tourism (CRT), Louisiana Department of Education (DOE), the 2008 and 2009 Louisiana Youth Tobacco Survey (LYTS), the 2003 and 2007 National Survey of Children's Health (NSCH), the School Health Policies and Programs Study (SHPPS), and the 2008 and 2009 Louisiana Youth Risk Behavior Survey (YRBS).

The development of the 2010 Report Card was guided by two committees: an Advisory Committee, composed of stakeholders from across Louisiana, who guided the selection of indicators and gave input on the start-up and direction of the Report Card and a Research Committee, composed of scientists and researchers from Louisiana, who assembled the data and content for the Report Card and were also responsible for the grade assignments. The 2010 Advisory Committee (in alphabetical order) included: Wilson Campbell (ULL-Kinesiology), Michael Comeaux (Louisiana Department of Education), David Harsha (Pennington Biomedical Research Center), Kathy Hill (LSU-Kinesiology & LAHPERD), Jiji Jonas (LSU-Kinesiology & LAHPERD), Peter T. Katzmarzyk (Pennington Biomedical Research Center), John LaCour (Cecil J. Picard Center for Child Development and Lifelong Learning), Susan Moreland (North Louisiana AHEC), Julie C. Morial (Blue Cross/Blue Shield), Jayne Nussbaum (Louisiana Public Health Institute), Pamela Romero (Louisiana Council on Obesity Prevention and Management), Heli Roy (Pennington Biomedical Research Center), Jennifer Stenhouse (Center for Planning Excellence), Ashley Stewart (Rapides Foundation), Samaah M. Sullivan (Pennington Biomedical Research Center), and Matthew Valliere, (Louisiana Department of Health & Hospitals) The 2010 Research Committee included: Brandi Bourgeois (Louisiana Department of Health and Hospitals), Stephanie Broyles (Pennington Biomedical Research Center), Raegan Carter Jones (Louisiana Department of Education), Catherine Champagne (Pennington Biomedical Research Center), Stewart T. Gordon (American Academy of Pediatrics, Louisiana Chapter), Holly Howat (Cecil J. Picard Center for Child Development and Lifelong Learning), Peter T. Katzmarzyk (Pennington Biomedical Research Center), Robert Newton (Pennington Biomedical Research Center), Ariane Rung (LSU School of Public Health), Melinda Sothorn (LSU Health Sciences Center), and Samaah M. Sullivan (Pennington Biomedical Research Center). The development of the 2010 Report Card also received assistance from Jennifer Winstead (Pennington Biomedical Research Foundation), Jessica Alleyne (Pennington Biomedical Research Foundation), and Angela W. deGravelles (deGravelles and Associates).

Louisiana's Report Card on Physical Activity & Health for Children and Youth is based on a similar initiative developed by Active Healthy Kids Canada (www.activehealthykids.ca).

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

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