

# DELAWARE SURVEY OF CHILDREN'S HEALTH

## Childhood Overweight and Obesity in Delaware



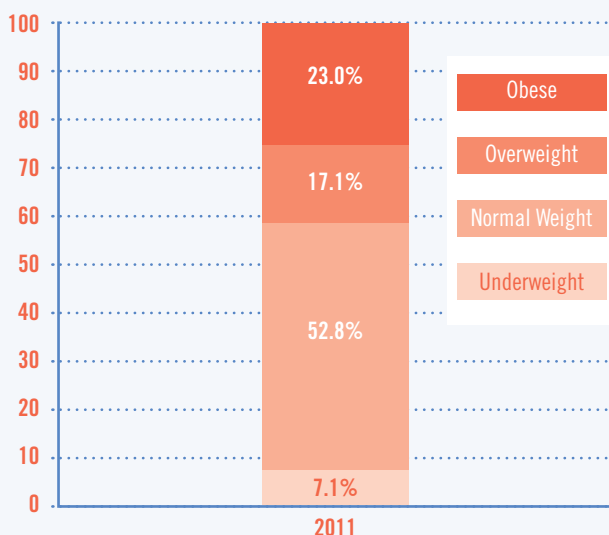
### Beneath a “Flat” Trend Line: Changes in the Demographics of the Epidemic

The Delaware Survey of Children's Health (DSCCH), sponsored by Nemours, is a surveillance instrument administered by telephone, with results from over 3,000 households with children ages birth through age 17.\* Administered in 2006, 2008 and 2011, the DSCCH provides data on various health trends including weight status, consumption of healthy foods, activity levels, use of screen media and parental understanding of a child's weight. Data briefs summarizing the survey findings will be issued by Nemours throughout 2013; this brief outlines the overall findings and indicates topics that will be explored in future briefs.

### Key Findings from the 2011 Delaware Survey of Children's Health

Forty percent of Delaware children, ages 2-17, were overweight or obese in 2011. Since the first sampling of the population in 2006, there have not been any statistically significant changes in percent of children who are overweight or obese children.

#### WEIGHT STATUS OF DELAWARE CHILDREN



Weight Status of Delaware Children Ages 2-17 (Based on BMI Percentile): 2011 DSCCH



Data Brief #1 2013

Beneath this “flat” trend line, however, were changes in the demographics of the epidemic:

- Overweight and obesity **decreased** among African-American males and white females;
- Overweight and obesity **increased** among white males.

There were no significant changes, according to the survey, in the prevalence of overweight and obesity among African-American females, although the prevalence remained high. The survey was not able to monitor changes over time among the Hispanic population† but data from 2011 show Hispanic children with the highest prevalence among the racial/ethnic groups in the state.

Survey results show encouraging trends in the lifestyles of Delaware children. Between 2008 and 2011, healthy eating and physical activity increased and consumption of sugar-sweetened beverages declined. Delaware children were, however, watching more television in 2011 than in prior years.

In 2011, according to the survey, close to 80% of Delaware parents of overweight children and more than half (55%) of parents of obese children said that their children were at a normal weight. This is similar to findings from the 2006 and 2008 surveys.

\* Height and weight were validated by data from health care providers. Almost 60% of parents who participated in the survey gave permission to contact the health care provider to obtain provider reported height and weight data. Data were collected from 70% of the providers which resulted in provider-reported height and weight data for 40% of the children and adolescents sampled.

† Due to the high margin of error for this group, the DSCCH cannot detect significant changes in prevalence.

## Changes in the Demographics of the Epidemic in Delaware

Childhood overweight and obesity declined among African-American males from 2008 to 2011; during the same time period, prevalence increased, to about the same extent, among white males. The precise extent of a particular decline, or increase, cannot be measured by the DSCH, given the sample size and the margin of error in each calculation.<sup>‡</sup> However, the data do show that there is a shift in how the epidemic is affecting racial/ethnic groups, and the different sexes, in Delaware. The following are the most pronounced changes:

### AFRICAN-AMERICAN MALES

Overweight and obesity **decreased**, from 48.0% in 2008 to 34.3% in 2011.<sup>§</sup>

### WHITE MALES

Overweight and obesity **increased**, from 34.0% in 2008 to 47.0% in 2011.<sup>||</sup>

### WHITE FEMALES

Overweight and obesity **decreased**, from 40.0% in 2008 to 30.6% in 2011.<sup>#</sup>



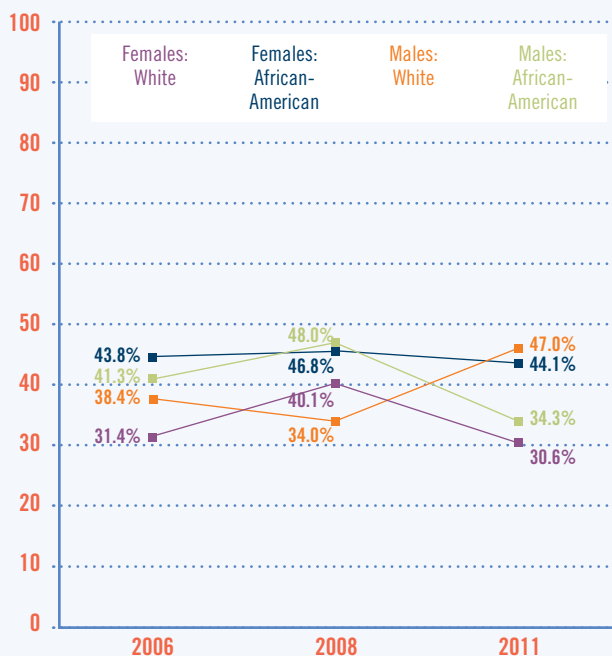
These changes are large in terms of percentage points, but there are also relatively large margins of error. The margins of error vary across demographic groups and survey years. They range from 5.0 percentage points for white males in 2008 to 9.3 percentage points for African-American males in 2011.

Because there are relatively high margins of error in the prevalence rates in this survey, the changes from one survey period to another may not be as large as, for instance, the nearly 14-point difference between the percentage of overweight and obese African-American males in 2008 and the percentage in 2011. Nonetheless, these demographic changes are significant statistically, and large enough to identify a shift in how the epidemic is affecting Delaware children.

Among African-American females, 44.1% were overweight or obese in 2011, with no statistically significant change from 2008 to 2011.

Whether the changes in overweight and obesity prevalence among African-American and white children and adolescents in Delaware might persist is unknown at this point. The shifts seen in 2011 were not anticipated from the 2008 survey, in which there were only minimal changes from 2006 in the demographics of the epidemic.

## OVERWEIGHT AND OBESITY BY RACE AND GENDER



Prevalence of Overweight and Obesity by Race and Gender: 2006-2011 DSCH

<sup>‡</sup> Trends and year-to-year comparisons were analyzed using logistic regression and controlling for gender, race/ethnicity, age and location.

<sup>§</sup> There is a margin of error of +/- 7.8 percentage points in 2008 and a margin of error of +/- 9.3 percentage points in 2011.

<sup>||</sup> There is a margin of error of +/- 5.0 percentage points in 2008 and a margin of error of +/- 6.3 percentage points in 2011.

<sup>#</sup> There is a margin of error of +/- 5.1 percentage points in 2008 and a margin of error of +/- 5.5 percentage points in 2011.



## Half of Hispanic Children are Overweight or Obese

The prevalence of overweight and obesity among Hispanic children in the 2011 survey was 50%, with prevalence for males at 55.9% and females at 43.2%. The prevalence for both males and females was notably high even given the disparities documented in national studies.<sup>3</sup> The administration of the DSCH (2006, 2008 and 2011) occurred during a period of rapid growth in the Hispanic population in Delaware. Census data indicate that between 2000 and 2010 the Hispanic population in Delaware almost doubled from 37,277 to 73,221.<sup>1</sup> This increase changed the proportion of this ethnic group in the Delaware population from 4.8% in 2000 to 8.2% in 2010.<sup>1</sup>

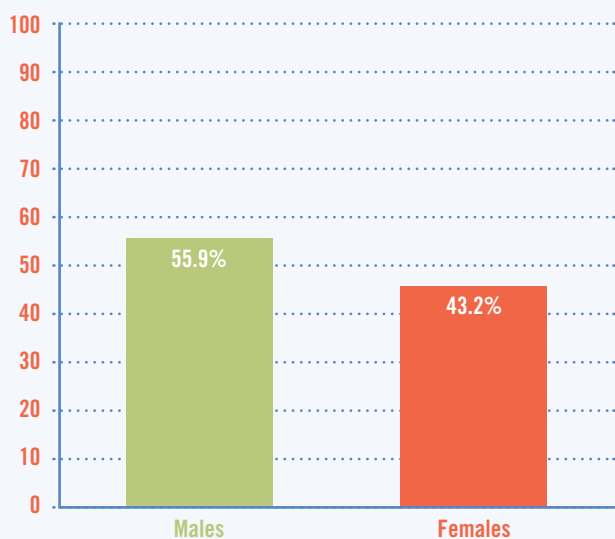
The majority of Hispanic children reside in New Castle County; Sussex County has the second largest Hispanic population in Delaware. However, Hispanics are a minority population within both counties: the majority of the child population, (55.6%) in New Castle County is white, non-Hispanic; 26.5% are African-American and 11.4% are Hispanic. In Sussex County, 64% of children are white, non-Hispanic; 16.8% are African-American and 15.5% are Hispanic.<sup>1</sup>

## Declines in the City of Wilmington; Insignificant Results in Other Localities

The declining prevalence of overweight and obesity among African-American males is driving a decline in the City of Wilmington, where a significant majority (68.3%) of the children is African-American. The prevalence of childhood overweight and obesity in Wilmington was 46.5% in 2008 and 40.3% in 2011.\*\* The recent improvements in obesity and overweight prevalence in this city represent a reversal from 2006-2008, when overweight and obesity among children in Wilmington increased from 37.8% to 46.5%.

In addition to the City of Wilmington, DSCH data were analyzed for each county in Delaware (New Castle, Kent and Sussex), but results were not statistically significant.

### OVERWEIGHT AND OBESITY AMONG HISPANIC CHILDREN 2011



Prevalence of Overweight and Obesity Among Hispanic Children by Gender.

\*\* This finding is marginally statistically significant.



## Food, Activity, Screen Time and Other Behaviors

Healthy lifestyle habits, such as eating fruits and vegetables, getting sufficient physical activity, and limiting recreational screen time can help to lower a child's risk of becoming overweight or obese.<sup>2,3</sup> DSCH data provide information on the extent to which these healthy behaviors, the focus of numerous health promotion activities in Delaware, are becoming the norm among local families. There are both encouraging trends and cause for concern in these findings, briefly discussed below. Future data briefs will examine these issues in more depth.

There are generally encouraging findings regarding children's eating habits and physical activity levels. More than half (51.3%) of all Delaware children consumed five or more servings of fruits and vegetables per day in 2011. More of the younger children ate the recommended five servings (61%) but over half (55%) of children ages 6-11 and 40% of adolescents ages 12-17 met this recommendation as well. In addition, consumption of sugar-sweetened beverages has declined since 2008 among all age groups of children: the 2011 survey shows 57.3% of Delaware's children had fewer than two servings of these drinks per week.

Physical activity levels were up in 2011: the percentage of children who met the physical activity recommendation of an hour per day increased significantly from 38.9% in 2008 to 44.8% in 2011. Sharp increases occurred among children living in Sussex County, where 43.7% of children met the recommendation in 2008 and 51.7% met the recommendation in 2011 and Kent County, which moved from 39.7% in 2008 to 46.6% in 2011. Despite these promising increases, more than half (55.2%) of Delaware's children did not get sufficient physical activity in 2011.

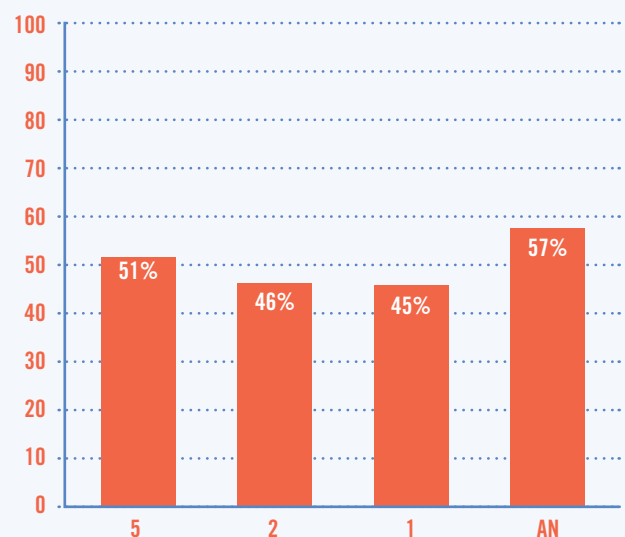


A cause for concern: television (TV) screen time continues to be a threat to children's health. Research first demonstrated an association between television viewing and childhood obesity over 25 years ago<sup>4</sup> and the evidence continues to grow.<sup>5,6</sup> Nemours recommends two hours or less of screen time per day for children, yet in 2011, over half (54%) of Delaware children exceeded this recommendation. TV viewing among Delaware children increased from an average of 1.72 hours in 2008 to an average of 2.31 hours in 2011. Adolescents were watching the most, with parents reporting an average of 2.56 hours per day for 12- to 17-year-olds, followed by an average of 2.10 hours for 2- to 5-year-olds and an average 2.05 hours for 6- to 11-year-olds.

Perhaps the most troubling data regarding television viewing pertain to infants. The American Academy of Pediatrics (AAP) recommends no television for children under two<sup>7,8</sup> and yet many Delaware infants were watching TV – sometimes for extended periods. One-year-olds in Delaware watched an average of 1.1 hours of TV daily in 2011. These hours add up: by the time the average Delaware child has turned two, the child has watched 657 hours of television. The DSCH findings are consistent with national trends: national data from 2009 indicate that 68% of children younger than two years of age use screen media on a typical day,<sup>9</sup> and one quarter of these children have a TV set in the bedroom. Additional data suggest most US-born infants younger than 2 years of age watch 1-2 hours of television daily.<sup>10,11</sup>

### HEALTH BEHAVIORS PRACTICED BY DELAWARE CHILDREN

Delaware children practicing targeted health behaviors: 5 fruit/vegetable servings per day, less than 2 hours of screen time per day, 1 or more hours of physical activity per day, and almost none sugar-sweetened beverages per week.

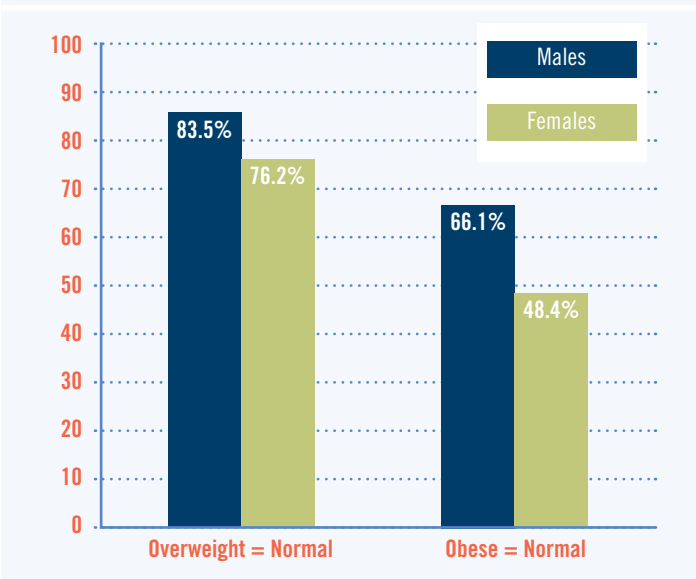


Health Behaviors Practiced by Delaware Children

## Parents of Overweight Children Say the Weight is Normal

A growing body of research documents that parents of overweight and obese children often report that their children are of normal weight.<sup>12,13</sup> In Delaware in 2011, close to 80% of parents of overweight children and more than half (55%) of parents with obese children reported that their children were of normal weight. This result is similar to findings from the 2006 and 2008 surveys and will be discussed in more depth in a future brief.

### PERCEPTIONS OF PARENTS



Percentage of Parents Who Perceive Their Overweight or Obese Children to Be Normal Weight by Gender of the Child

## Racial/Ethnic Disparities in Context

The national childhood obesity rate has leveled off<sup>3</sup> and several states and cities have reported declines in childhood obesity or in the combined prevalence of overweight and obesity. To date, California,<sup>15</sup> Mississippi,<sup>16</sup> New York City<sup>17</sup> and Philadelphia<sup>18</sup> have reported declines. To a large extent in the studies, overall declines in childhood overweight and obesity are driven by declines among white children and adolescents. In Philadelphia, however, the most significant reductions in obesity were among African-American and Hispanic children and adolescents.<sup>18</sup> In Delaware, African-American males as well as white females experienced the declines in overweight and obesity.

The reasons for the declines in overweight and obesity among African-American males in Delaware, and the absence of any similar declines among African-American females, are unclear at this point. According to national studies, the odds of being obese are significantly higher for African-American children and adolescents than for non-Hispanic whites.<sup>14</sup> The most recent analysis of the National Health and Nutrition Examination Survey (NHANES) indicates that childhood obesity prevalence continues to be higher among African-American and Hispanic children and adolescents than among white youth.<sup>14</sup> It will be important to monitor the trends among both males and females and examine what policies, practices or other factors are influencing these outcomes.

Similarly, it will be important to monitor and analyze the increase in prevalence of overweight and obesity among white males in Delaware. Other cities and states have not reported an increase among this group.<sup>14-18</sup> However, results from the NHANES do show an increase from 2000 to 2010 in obesity among males.<sup>14</sup> The reverse trend, a decline in overweight and obesity among white females, has been reported in other cities and states, as well as in Delaware.<sup>14</sup>

In 2011, Hispanics had the highest prevalence of overweight and obesity among racial/ethnic groups in Delaware. The high prevalence is similar to the childhood obesity prevalence for Hispanics nationally. National data indicate that Hispanic males have the highest prevalence of childhood obesity of the racial/ethnic groups charted by sex; Hispanic females have lower prevalence than African-American females, and lower prevalence than Hispanic males.<sup>14</sup>

## Conclusion

Although Delaware organizations are engaged in aggressive anti-obesity initiatives, this study cannot tell us why a given increase or decrease may be occurring. The usefulness of a surveillance tool such as the DSCH lies in its ability to draw attention to important patterns — such as the contrasting trends among African-American males and white males or the decline in children's consumption of sugar-sweetened beverages. Nemours' goal in administering the DSCH, and publicizing the findings, is to produce more data-driven decision making in the field of child health promotion. In the coming months, analyses from Nemours will explore key trends, such as the relationships among eating, physical activity and screen time habits and the weight status of children in Delaware; the parental perception of children's weight; and other issues.



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