

# Childhood Obesity

## Prevalence of Childhood Obesity in Kalamazoo County, 2015-2016

WIC Enrolled Ages 2-5 <sup>1</sup>	7th Grade <sup>2</sup>	9th Grade <sup>2</sup>	11th Grade <sup>2</sup>
<b>13.4%</b>	<b>12.1%</b>	<b>12.0%</b>	<b>13.9%</b>

### Importance

Childhood obesity affects both physical and mental health. Children with obesity are at high risk for having other chronic health conditions, such as asthma, sleep apnea, bone and joint problems, type 2 diabetes, and risk factors for heart disease. These children are also bullied and teased more than their normal weight peers, and are more likely to suffer from social isolation, depression, and lower self-esteem.

Overweight or obese children are five times more likely than normal-weight children to be overweight or obese as adults, and 90% of obese adolescents remain obese as adults. Obesity in adulthood is linked to serious conditions such as heart disease, type 2 diabetes, metabolic syndrome, and several types of cancer.

### Obesity for WIC Enrolled Children Aged 2-5, 2016

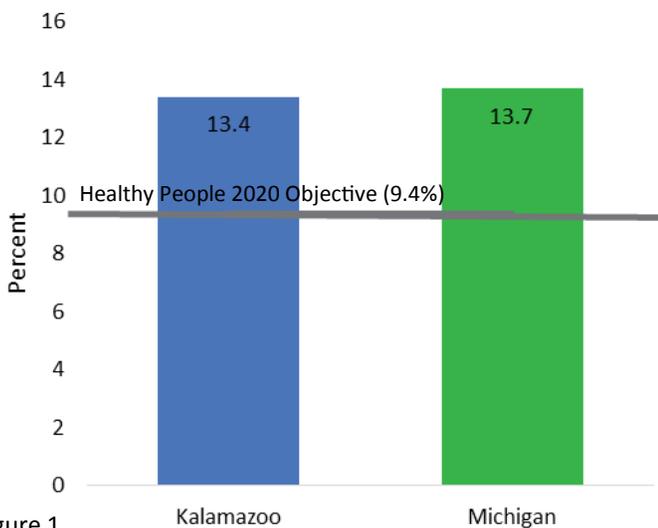


Figure 1.

### Children Under Age 5

The Women, Infants, and Children (WIC) program collects and reports data about the weight status of children under the age of 5 enrolled in the program. In WIC-enrolled children aged 2-5 years, Kalamazoo County has a prevalence of obesity of 13.4%. Michigan has a prevalence of 13.7% in the same population. Healthy People 2020 has a target of 9.4% obesity in this population.

<sup>1</sup> Pediatric Nutrition Surveillance

<sup>2</sup> Michigan Profile for Healthy Youth



KALAMAZOO COUNTY GOVERNMENT

In the Pursuit of Extraordinary Governance

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## Community Input

Community members were asked to name the top health issue facing school-aged children in our community during the summer of 2017. Over one thousand people responded. Nutrition (#1), obesity (#4), and physical inactivity were all identified as significant health issues. Health assessments completed by local hospitals have also identified obesity as a top issue.

### Obesity by MiPHY Self-Report, 2015-2016

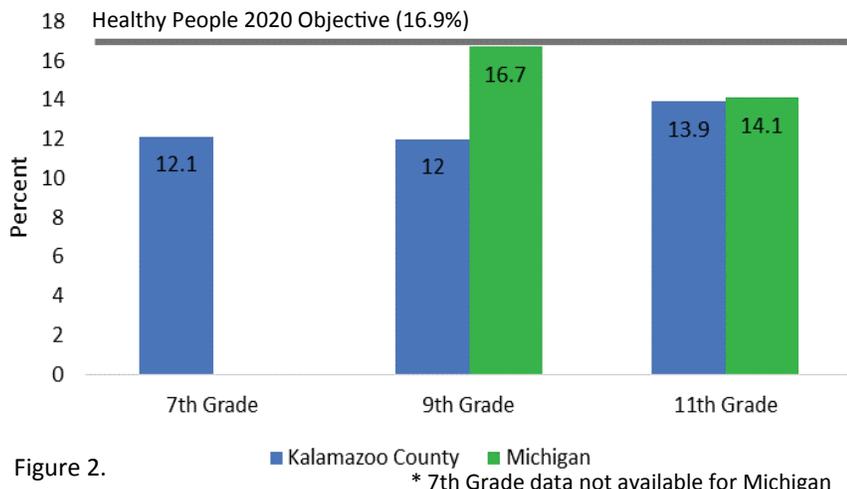


Figure 2.

### Obesity by MiPHY Self-Report by Sex, 2015-2016

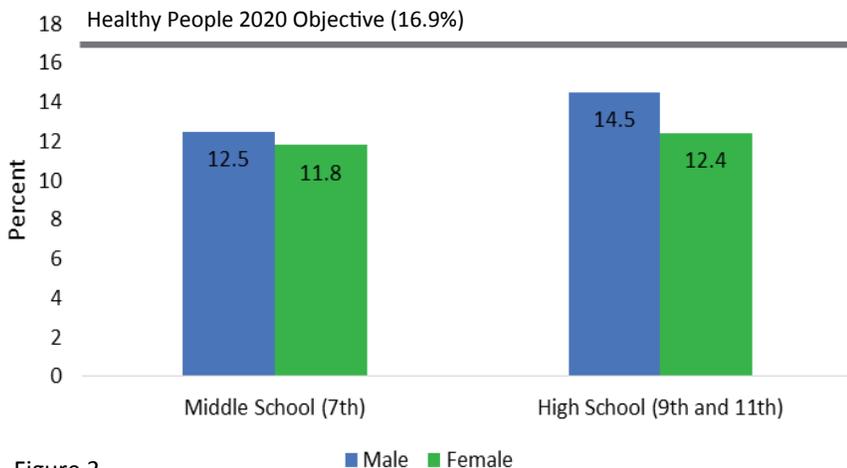


Figure 3.

### Obesity by MiPHY Self-Report by Race/Ethnicity, 2015-2016

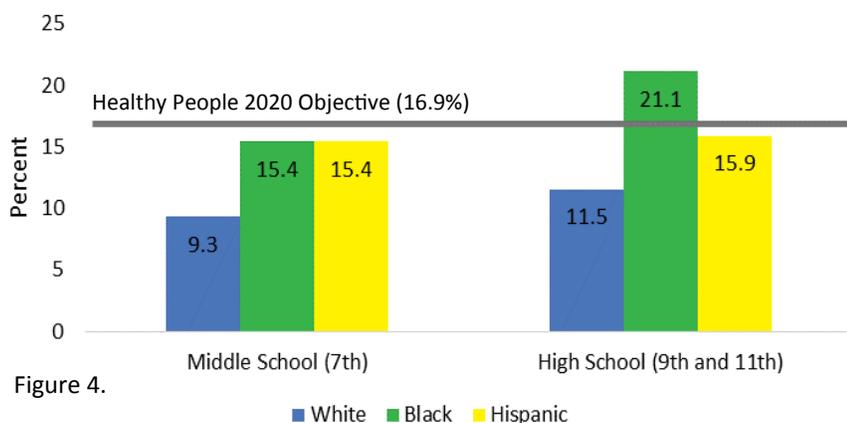


Figure 4.

## Adolescents—Obesity

Middle and high school students are surveyed using the Michigan Profile for Healthy Youth (MiPHY). These results show an obesity prevalence of 12.1% in 7th graders, 12.0% in 9th graders, and 13.9% in 11th graders (Fig 2). For 9th graders, Kalamazoo has a lower prevalence than Michigan. For 11th graders, the prevalence is similar to the State data. Healthy People 2020 has a goal of an obesity prevalence of 16.9% in this population.

The percentage of obesity is similar between males and females (12.5% and 11.8%) in middle school (Fig 3). In high school, males have a slightly higher prevalence of obesity (14.5% and 12.4%).

In both middle school and high school, white adolescents have lower rates of obesity than black or Hispanic adolescents (Fig 4). In middle school, black and Hispanic adolescents have similar rates (15.4%), but in high school, black adolescents have higher rates (21.1% vs 15.9%).

MiPHY Nutrition, 2015-2016

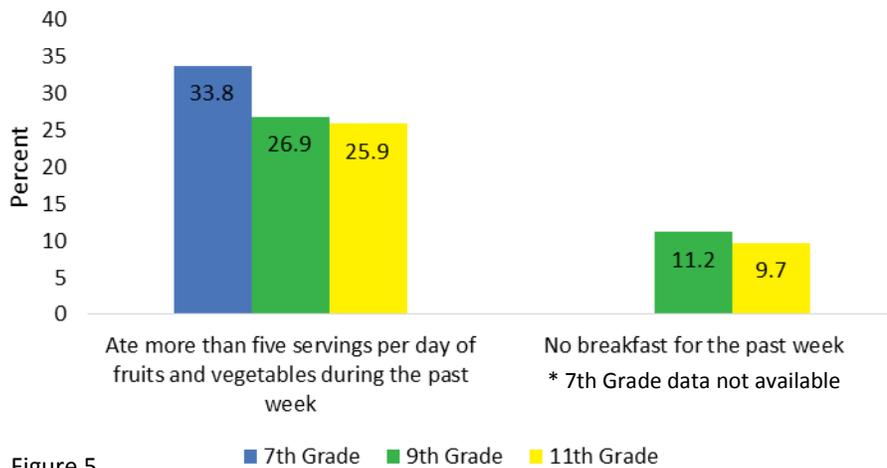


Figure 5.

MiPHY Nutrition by Sex, 2015-2016

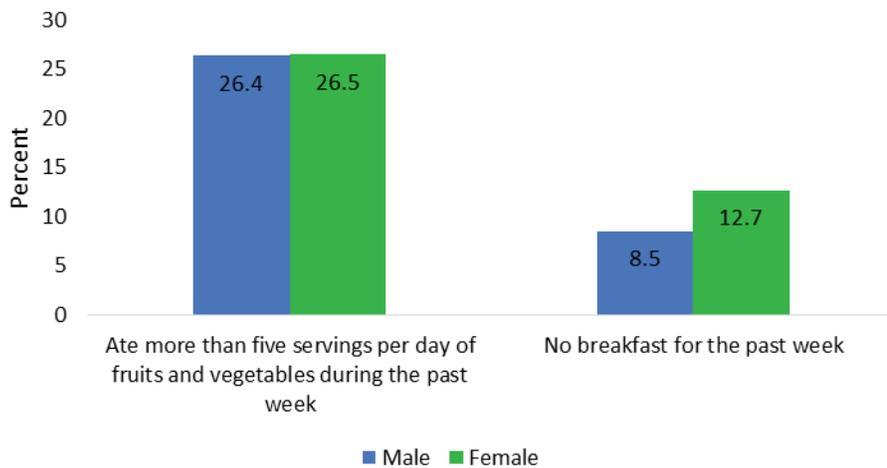


Figure 6.

MiPHY Nutrition by Race/Ethnicity, 2015-2016

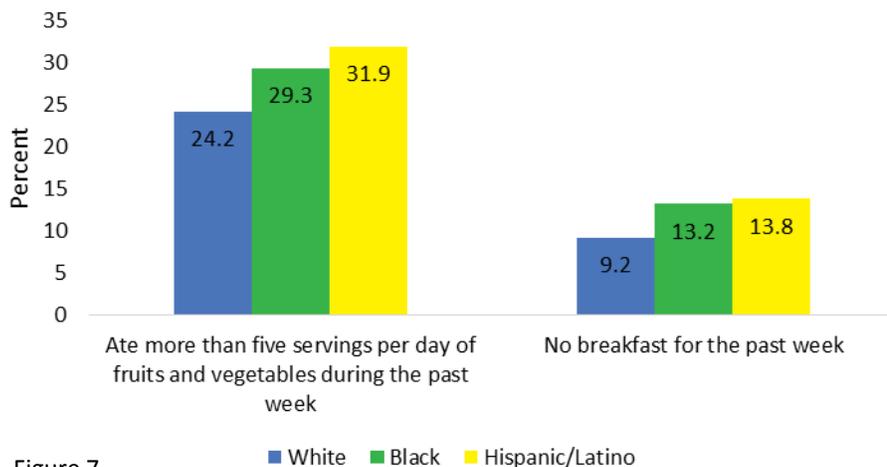


Figure 7.

### Adolescents—Nutrition

The MiPHY survey asks a variety of questions regarding nutrition and eating habits. The percentage of students reporting that they ate more than five servings per day of fruits and vegetables during the past week is highest in 7th grade (33.8%), decreasing to 25.9% in 11th grade (Fig 5). Males and females report similar rates of consuming adequate fruits and vegetables (26.4% and 26.5%) (Fig 6). By race and ethnicity, Hispanic adolescents report the highest rates of adequate fruit and vegetable consumption (31.9%), followed by black adolescents (29.3%) and then white adolescents (24.2%) (Fig 7).

Eleven percent of 9th graders report that they did not eat breakfast at all during the week prior to the survey, compared to 9.7% of 11th graders (Fig 5). Females reported not eating breakfast more than males (12.7% and 8.5%) (Fig 6). By race and ethnicity, black and Hispanic adolescents reported similar rates of not eating breakfast (13.2% and 13.8%), compared to white adolescents, 9.2% of whom who reported not eating breakfast (Fig 7).

MiPHY Physical Activity, 2015-2016

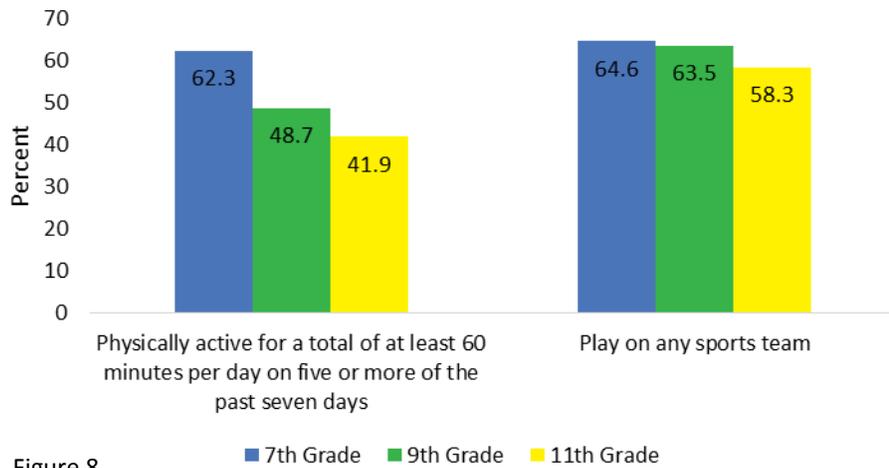


Figure 8.

MiPHY Physical Activity by Sex, 2015-2016

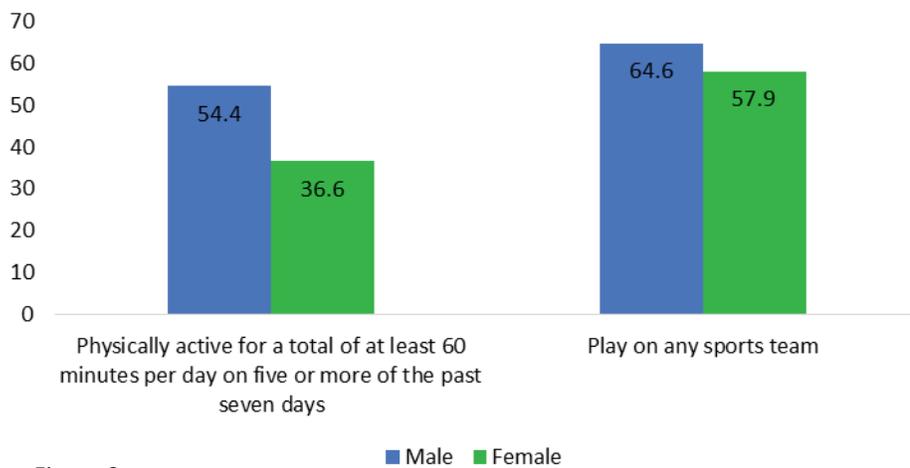


Figure 9.

MiPHY Physical Activity by Race/Ethnicity, 2015-2016

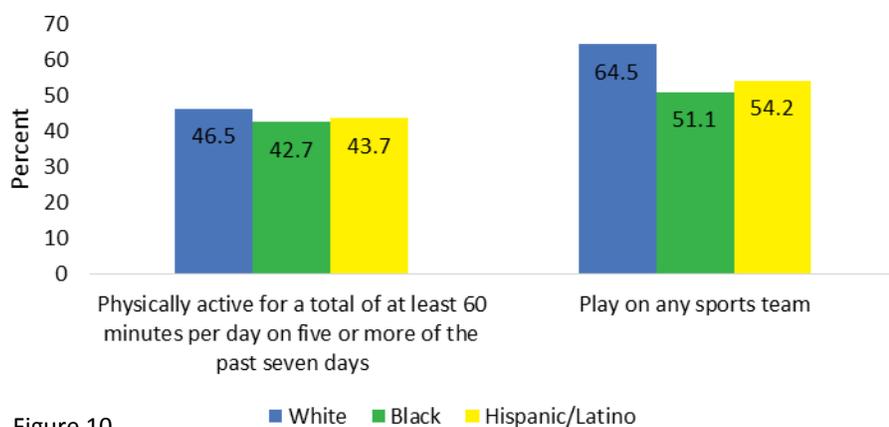


Figure 10.

### Adolescents—Physical Activity

Adolescents report being physically active for at least 60 minutes per day on at least five out of the past seven days in decreasing numbers with increasing age, from 62.3% in 7th grade to 48.7% in 9th grade and 41.9% by 11th grade (Fig 8). More males report adequate physical activity than females (54.4% and 36.6%) (Fig 9). For race and ethnicity, white, black, and Hispanic adolescents report similar rates of physical activity (Fig 10).

In contrast, the prevalence of playing on any sports team is similar between 7th and 9th grades (64.6% and 63.5%), and slightly decreases in 11th grade (58.3%) (Fig 8). Males are more likely than females to play on a team (64.6% and 57.9%), though the difference is smaller than is seen with physical activity (Fig 9). White adolescents report the highest rate of playing on sports teams (64.5%), compared to black adolescents (51.1%) and Hispanic adolescents (54.2%) (Fig 10).

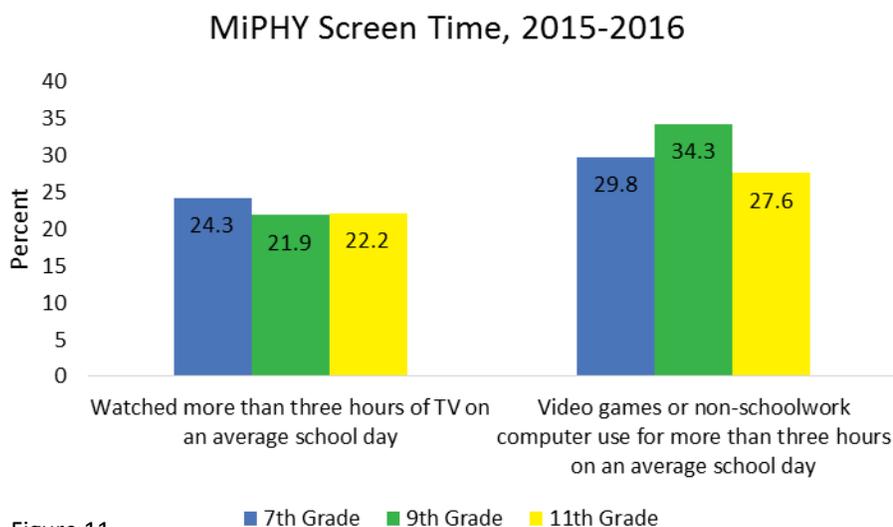


Figure 11.

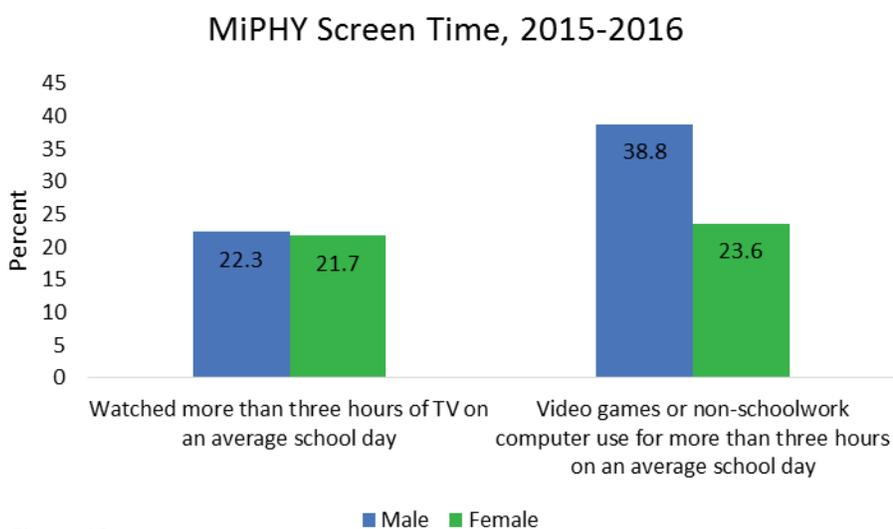


Figure 12.

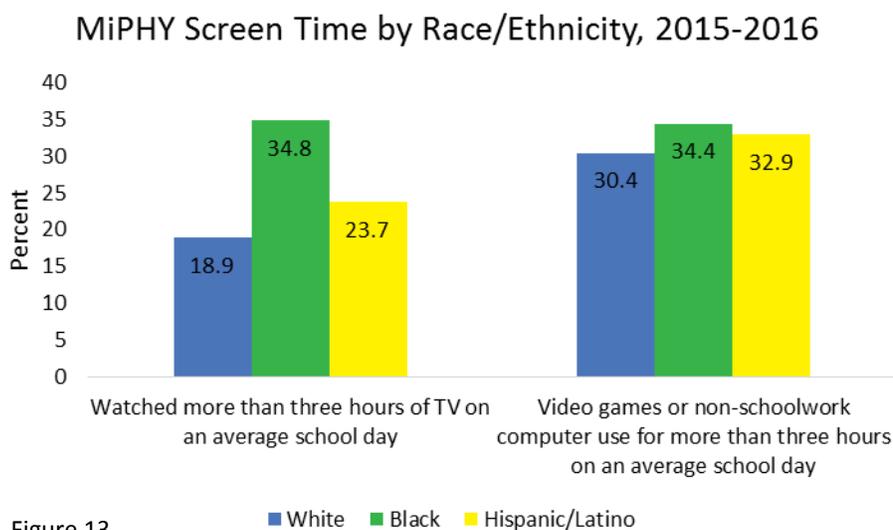


Figure 13.

### Adolescents—Screen Time

When asked about television viewing, the percent of students who reported watching more than three hours of TV on an average school day was similar by grade level, ranging from 21.9% to 24.3% (Fig 11). Males and females reported similar rates as well, 22.3% and 21.7% (Fig 12). There were differences by race and ethnicity—34.8% of black adolescents reported more than three hours of TV per day, compared to 23.7% of Hispanic adolescents and 18.9% of white adolescents (Fig 13).

The number of adolescents who reported video or computer games, or other non-schoolwork related computer time, was highest among those in 9th grade at 34.3%, compared to 29.8% of 7th graders and 27.6% of 11th graders (Fig 11). More males reported more than three hours of video or computer time than females (38.8% and 23.6%) (Fig 12). The prevalence was similar across age groups, from 30.4% to 34.4% (Fig 13).

Sources:  
 Gordon-Larsen, P, et al. [Longitudinal trends in obesity in the US from adolescence to the third decade of life](#). 2010.  
 Michigan Department of Education, [Michigan School Health Survey System](#)  
 Michigan Department of Health and Human Services, [Pediatric Nutrition Surveillance](#)  
 Obesity Society, [Childhood Overweight](#)