Overweight and Obesity in Michigan: Surveillance Update 2013

Michigan Department of Community Health

MDCH

Rick Snyder, Governor
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MiNPAO

Michigan's Nutrition, Physical Activity and Obesity Program

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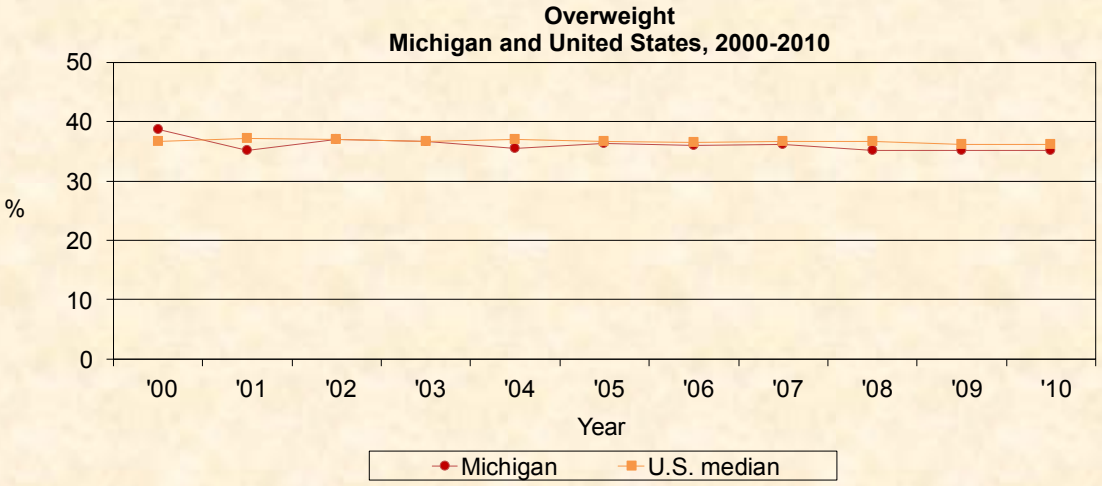
OVERWEIGHT AND OBESITY FACTS ABOUT MICHIGAN ADULTS (2000-2010)

What are overweight and obesity?

- Obesity is defined as a Body Mass Index (BMI) of 30 or higher; while a BMI between 25 and 29.9 is considered overweight.[1]
- Obesity is a result of an energy imbalance which involves consumption of too many calories and not getting adequate physical activity.[2]
- Obesity has been associated with various chronic diseases, including type 2 diabetes, hypertension, dyslipidemia, stroke, coronary heart disease, arthritis and cancer.[3]

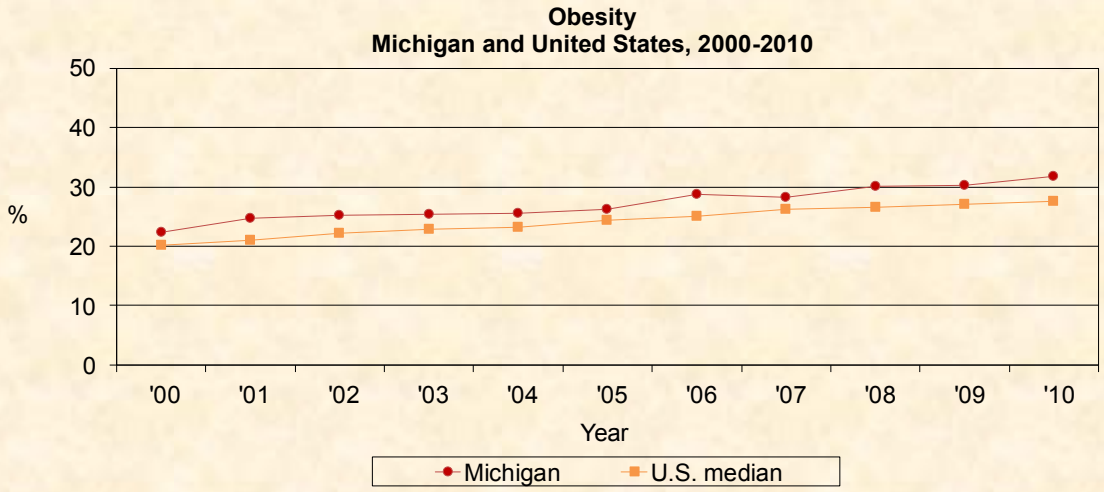
Is obesity an epidemic?

- In 2010, Michigan had the 6th highest prevalence of obesity in the United States.[4]
- An estimated 31.7% of Michigan adults were obese, while approximately 35.1% of adults were overweight.
- Social determinants are now being recognized as factors which contribute to poor health. Reducing obesity in part by addressing social determinants of health is one of the main objectives of Healthy People 2020.[5,6]



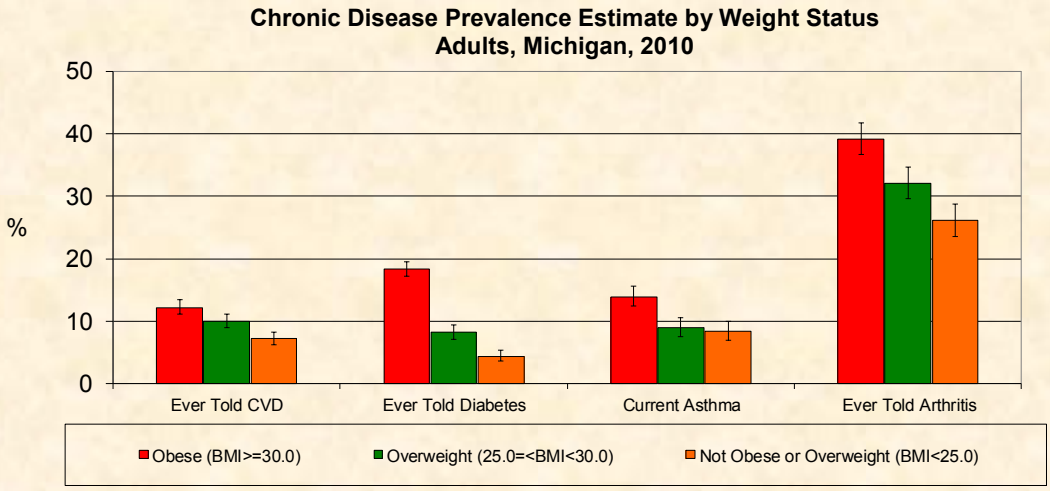
In 2010, 35.1% of Michigan's adult population was overweight. This prevalence estimate has remained constant since 2000 and consistent with the United States median prevalence.

Source: CDC BRFSS [www.cdc.gov/brfss/] and MiBRFSS [www.michigan.gov/brfs]



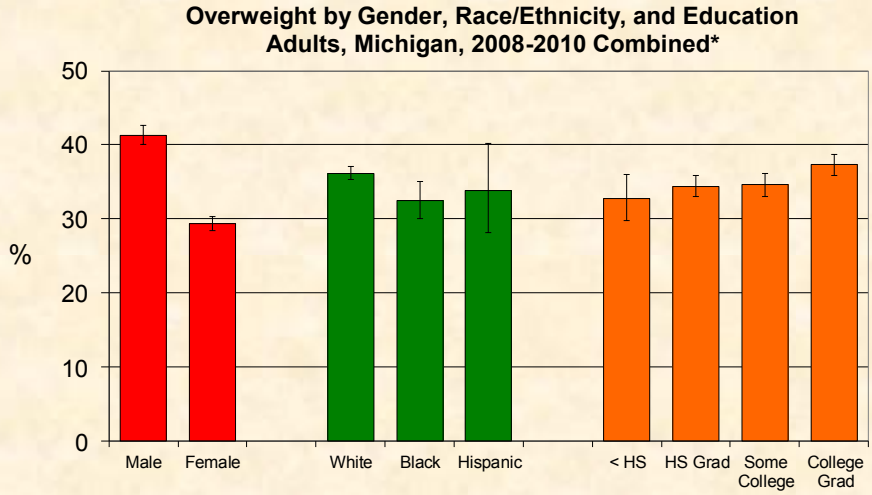
In 2010, 31.7% of adult Michiganders were considered obese. The rate of increase has been consistent for both Michigan and the US since 2000.

Source: CDC BRFSS [www.cdc.gov/brfss/] and MiBRFSS [www.michigan.gov/brfs]



Source: MiBRFSS [www.michigan.gov/brfs]

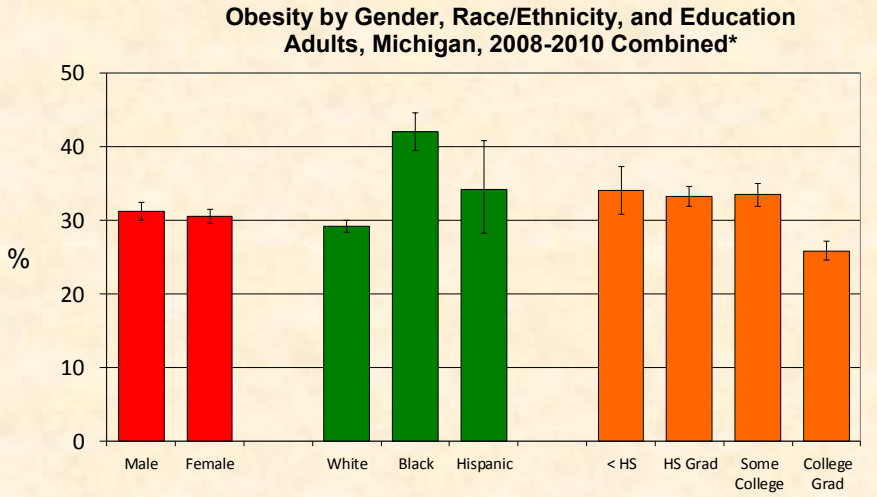
- In 2010, Michigan adults who were considered obese reported the highest prevalence of chronic health conditions such as cardiovascular disease (CVD), diabetes, asthma, and arthritis.
- Significant differences between obese and healthy weight adults were noted for all chronic health conditions (i.e., CVD, diabetes, asthma, and arthritis).



*Data collected in 2008, 2009, and 2010 were combined to increase sample size; thereby, improving the statistical estimates and confidence intervals.

Source: MiBRFSS [www.michigan.gov/brfs]

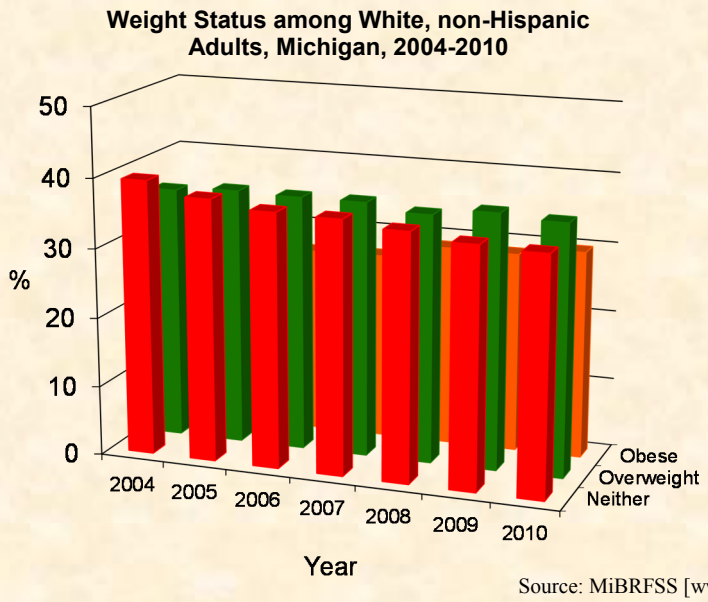
- Adult males (41.3%) had a higher prevalence of overweight than females (29.4%) based on 2008-10 data.
- Black adults had a significantly lower prevalence of overweight (32.5%) than White adults (36.2%).
- The confidence intervals were wide for Hispanic adults making a determination not possible.

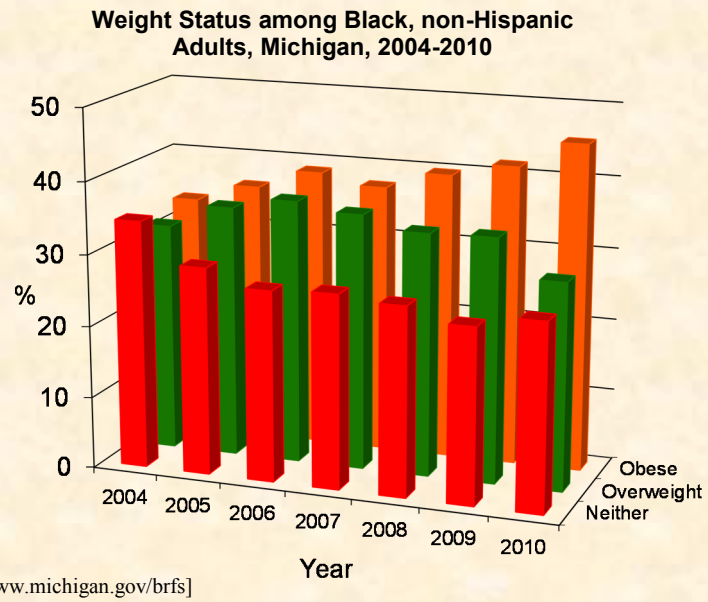


*Data collected in 2008, 2009, and 2010 were combined to increase sample size; thereby, improving the statistical estimates and confidence intervals.

Source: MiBRFSS [www.michigan.gov/brfs]

- For 2008-10 combined, the prevalence of obesity was similar for adult males (31.2%) and females (30.5%).
- Black adults reported a significantly higher prevalence of obesity than White adults (42.0% vs. 29.1%).
- The prevalence of obesity was significantly lower among college graduates (25.8%) than among adults with less than a college education (33.2% - 34.0%).





Source: MiBRFSS [www.michigan.gov/brfs]

- Social, economic, and environmental factors strongly influence lifestyle choices contributing to weight. These factors combined often result in disparities in the Michigan population.
- Black adults have reported a higher level of obesity than White adults for the past several years. The gap is increasing: the disparity was nearly 10% greater in 2010 than the disparity in 2004.
- The percentage of Black adults who were obese increased relative to those who were overweight, while the percentage of White adults who were obese compared to overweight remained constant.

Note: The prevalence estimates were weighted for sex, age, and race to represent the Michigan population.

References:

1. Centers for Disease Control and Prevention. Available online at: http://www.cdc.gov/obesity/defining.html. Accessed on August 15, 2012.
2. Centers for Disease Control and Prevention. Available online at: http://www.cdc.gov/obesity/adult/causes/index.html. Accessed on August 15, 2012.
3. NIH, NHLBI Obesity Education Initiative. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Available online at: http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf. Accessed August 15, 2012.
4. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division.
5. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Nutrition and Weight Status. Available online at: http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=29. Accessed on September 19, 2012.
6. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Social Determinants. Available online at: http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39. Accessed on September 19, 2012.

Suggested citation: Byrd HCM , Fussman C, Lyon-Callo S, Imes G. Overweight and Obesity Facts about Michigan Adults (2000-2010). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division. August 2013.

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OVERWEIGHT AND OBESITY AMONG MICHIGAN ADULTS-2011 (CDC BRFSS METHODOLOGY CHANGES)

- In 2011, the Centers for Disease Control and Prevention made changes to the Behavioral Risk Factor Surveillance System (BRFSS) methodology.[1] Data was collected from both landline and cell phone respondents in order to more accurately represent the current state adult population (18+ years), and a new raking weighting methodology (i.e. iterative proportional fitting) was introduced to improve the accuracy of BRFSS prevalence estimates.[2]
- Due to these BRFSS methodology changes, the BRFSS overweight and obesity prevalence estimates for 2011 and beyond cannot be compared to BRFSS prevalence estimates from 2010 and prior. This results in a break in the trends of overweight and obesity between 2010 and 2011.
- This fact sheet was created to establish new baseline prevalence estimates for overweight and obesity based on data from the 2011 Michigan BRFSS.[2]

- Nearly two-thirds of Michigan adults were either overweight or obese (65.4%) in 2011. An estimated three in ten adults were classified as obese (31.3%), and at least one in three adults were classified as overweight (34.2%).
- In 2011, the prevalence of obesity among adult Michigan males (31.9%) was comparable to the prevalence among adult females (30.7%); however, the prevalence of males who were classified as overweight (38.0%) was significantly higher than the prevalence of females who were classified as overweight (30.3%).
- In 2011, the prevalence of non-Hispanic White Michigan adults classified as overweight (35.0%) was significantly higher than the prevalence of non-Hispanic Black adults classified as overweight (31.0%).
- In contrast, a markedly higher percentage of non-Hispanic Michigan Black adults (41.0%) were classified as obese than the percentage of non-Hispanic White adults who were classified as obese (29.7%).
- In 2011, 36.7% of Hispanic Michigan adults were classified as obese, and approximately one in three Hispanic adults were classified as overweight (31.3%). However, the number of Hispanic respondents was too small to determine whether these prevalences differed statistically from those of non-Hispanic White adults.
- Approximately one in four Michigan adults with at least a college degree (26.6%) were classified as obese in 2011, while about one in three adults with less than a college degree (32.1%-33.8%) were classified as obese. There was no evidence of a statistical difference in the percentage of adults considered overweight regardless of education level (30.4%-36.2%).

References:

1. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System—Improving Survey Methodology. 2011.
2. Fussman C, LyonCallo S. The Impact of BRFSS Methodology Changes on Michigan BRFSS Health Estimates. *Michigan BRFSS Surveillance Brief.* Vol. 6, No. 4. Lansing, MI: Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division, Surveillance and Program Evaluation Section, Chronic Disease Epidemiology Unit, September 2012.

Suggested citation: Byrd HCM, Fussman C, Imes G. Overweight and obesity among Michigan adults —2011 (CDC BRFSS methodology changes). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division. August 2013.

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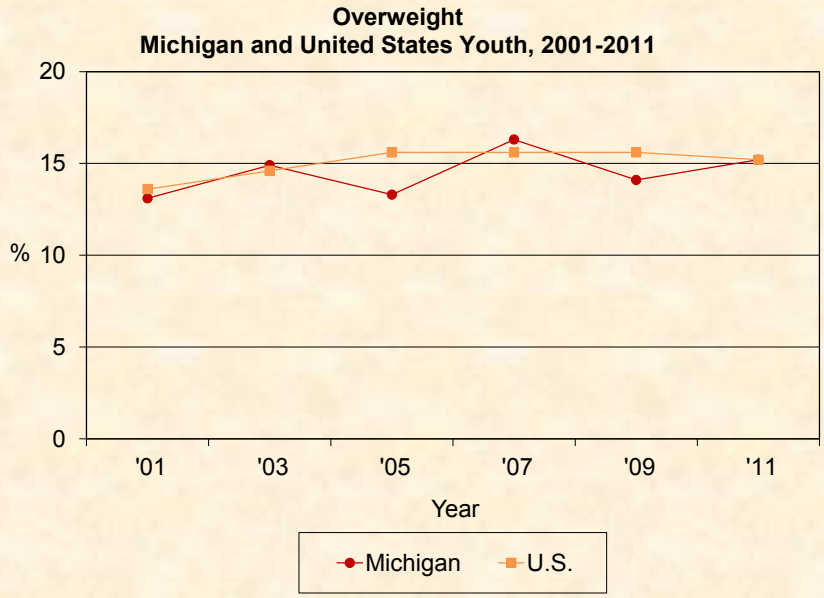
OVERWEIGHT AND OBESITY AMONG MICHIGAN YOUTH (9th-12th GRADE)

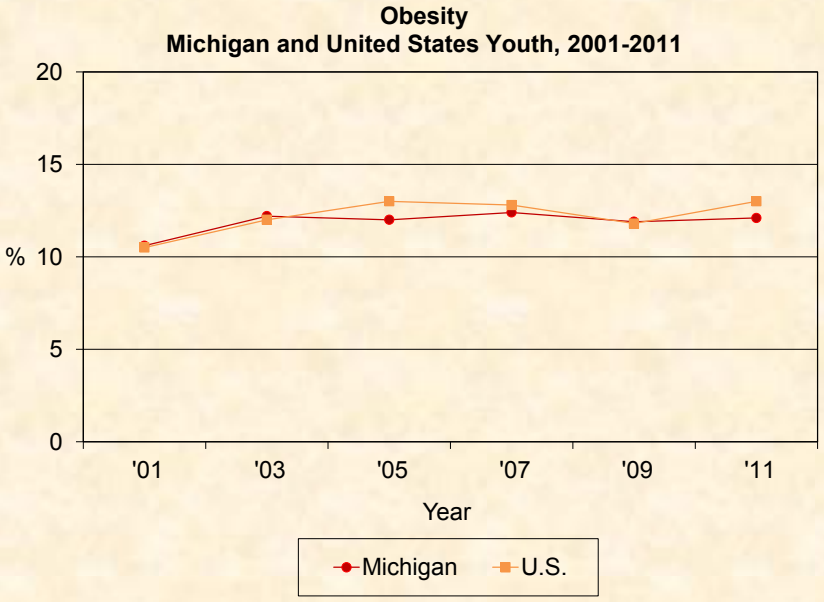
What are overweight and obesity in youth?

- Obesity in youth is defined as a Body Mass Index (BMI) specifically for age and sex at or above the 95th percentile, while a BMI for age and sex equal and greater than the 85th but less than 95th percentile is considered overweight, based on the CDC sex-specific BMI-for-age growth charts.[1]
- Obesity is a result of energy imbalance which involves consumption of too many calories and not getting adequate physical activity.[2]
- Obese youth are at risk for a number of chronic conditions such as type 2 diabetes, hypertension, asthma and sleep issues.[3,4]
- The main source of information related to youth is based on the Michigan Youth Risk Behavior Survey (MiYRBS) of 9th-12th graders' health and behaviors.[5]



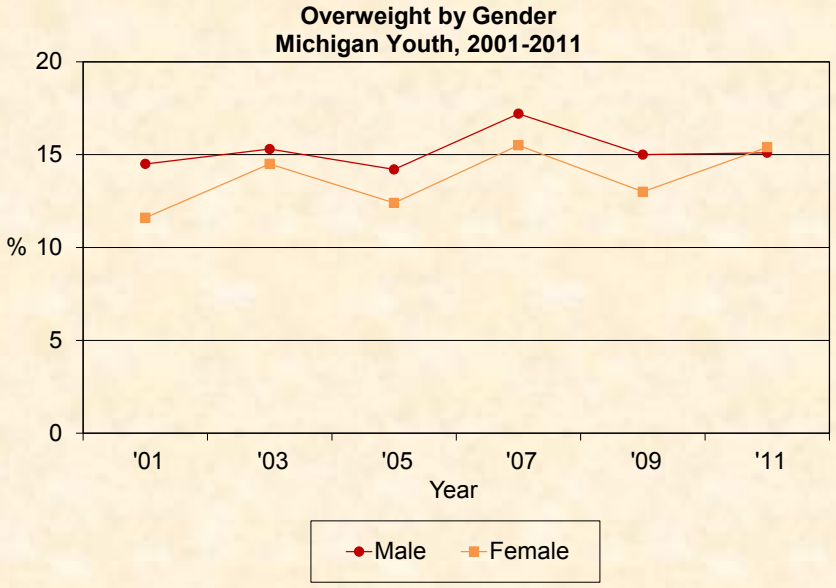
Source: CDC YRBSS [www.cdc.gov/yrbs] MiYRBSS [www.michigan.gov/yrbs]

In 2011, the percentage of 9th-12th graders who were overweight in Michigan and the US was similar (15.2%).



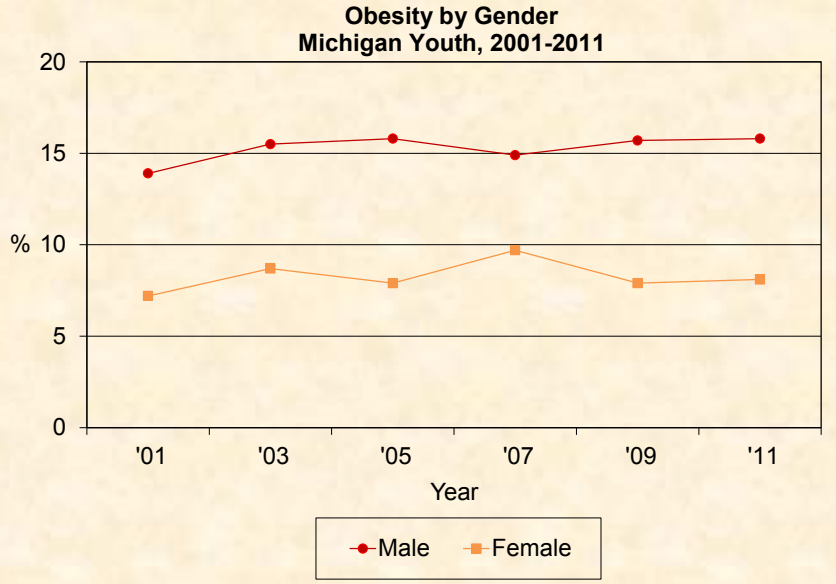
Source: CDC YRBSS [www.cdc.gov/yrbs] MiYRBSS [www.michigan.gov/yrbs]

The obesity prevalence among Michigan high school students was 12.1%, which was comparable to the obesity prevalence among high school students living in the US (13.0%).



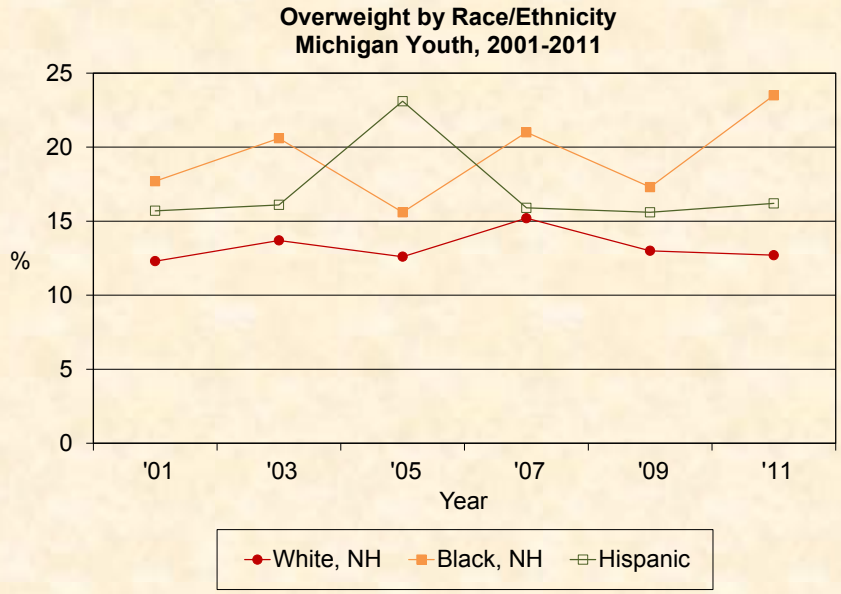
Source:MiYRBSS [www.michigan.gov/yrbs]

- In 2011, the overweight prevalence among Michigan high school females and males was approximately 15%.
- When male and female overweight prevalences for each year from 2001 to 2011 were compared, no statistical differences were found.



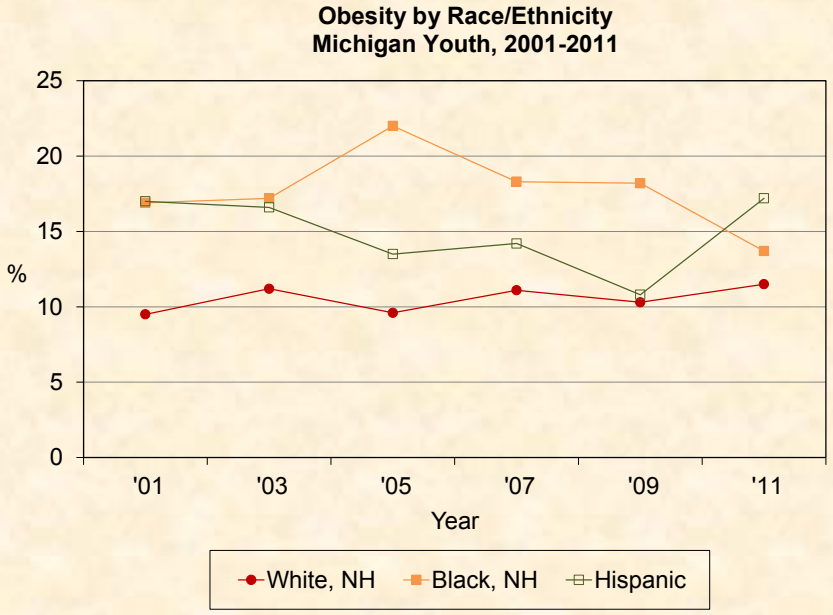
Source:MiYRBSS [www.michigan.gov/yrbs]

- In contrast to overweight prevalence, the obesity prevalence among male high school students(15.8%) was nearly twice that of females (8.1%) in 2011.
- When male and female obesity prevalences for each year from 2001 to 2011 were compared, prevalence of obesity was consistently higher for males when compared to females.



Source:MiYRBSS [www.michigan.gov/yrbs]

- In 2011, nearly one in four non-Hispanic Black 9th-12th graders (23.5%) was overweight compared to one in eight non-Hispanic White youth (12.7%). However, it was inconclusive between non-Hispanic White and Hispanic youth.
- Over the past 11 years, non-Hispanic Black youth tended to have a higher overweight prevalence than non-Hispanic White youth. However, there was no evidence of overweight prevalence difference between Hispanic and non-Hispanic White youth except in 2005 (23.1% vs. 12.6%, respectively).



Source:MiYRBSS [www.michigan.gov/yrbs]

- In 2011, the obesity prevalence among non-Hispanic White 9th-12th graders (11.5%) was comparable to the obesity prevalence among non-Hispanic Black students (13.7%).
- Due to the small sample of Hispanic students, there was no evidence of a statistical difference between the prevalence of Hispanic high school students (17.2%) and non-Hispanic White students.
- From 2001 to 2009, the prevalence of obesity among non-Hispanic Black youth was significantly higher than the prevalence among non-Hispanic White youth. However, it was inconclusive between non-Hispanic White and Hispanic youth .

- In 2011, nearly three in ten 9th-12th graders were either overweight or obese (27.3%).
- In 2011, the percentage of overweight or obese male high schoolers (31.1%) was significantly higher than the percentage of overweight or obese female high schoolers (23.5%).
- In 2011, the percentage of non-Hispanic White high schoolers who were either overweight or obese was 24.3%. The percentage of non-Hispanic Black youth who were either overweight or obese (37.2%) was 53% higher than that of their non-Hispanic White classmates. One in three Hispanic high schoolers was either overweight or obese (33.3%) compared to about one in four non-Hispanic White high schoolers.

Note: The number of youth surveyed for other race/ethnicities were too small to determine reliable prevalence estimates.

References:

1. Centers for Disease Control and Prevention (CDC). http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html. Accessed January 11, 2013.
2. Centers for Disease Control and Prevention. Available online at: http://www.cdc.gov/obesity/adult/causes/index.html. Accessed on January 11, 2013.
3. Freedman DS, Zuguo M, Srinivasan SR, Berenson GS, Dietz WH. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: the Bogalusa Heart Study. Journal of Pediatrics 2007;150(1):12–17.
4. Must A, Parisi SM. Sedentary behavior and sleep: paradoxical effects in association with childhood obesity. Int J Obesity. 2009; 33: S82-S86.
5. Centers for Disease Control and Prevention (CDC). *1991-2011 High School Youth Risk Behavior Survey Data.* Accessed on January 11, 2013.

Suggested citation: Byrd HCM, Wahl R, Lyon-Callo S, Imes G. Overweight and Obesity among Michigan Youth (9th-12th Grade). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division. August 2013.

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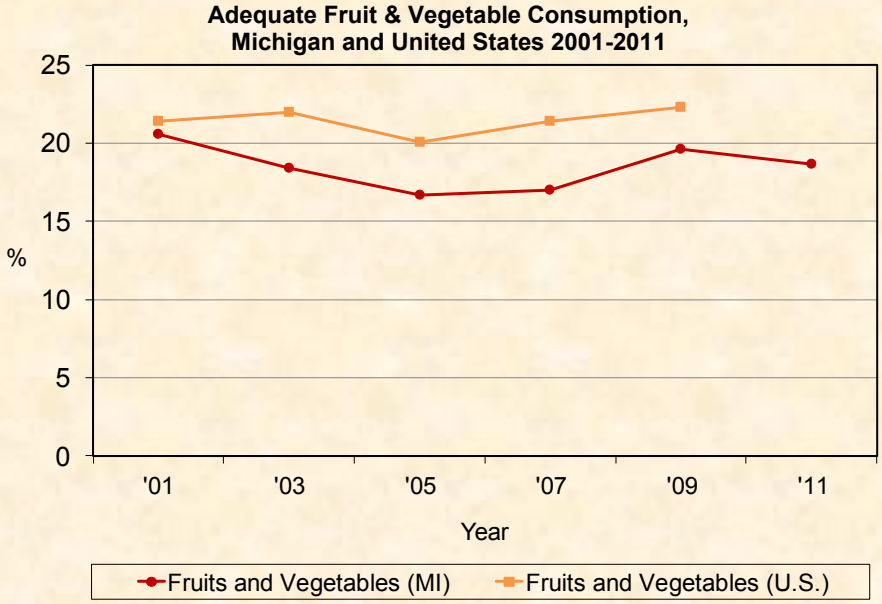
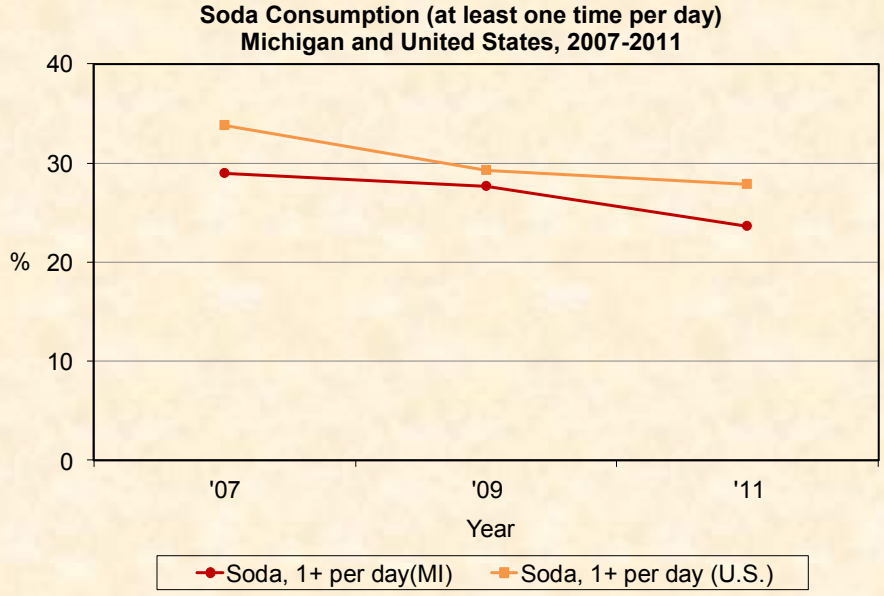
FRUIT AND VEGETABLE AND SODA CONSUMPTION AMONG MICHIGAN YOUTH (9th-12th GRADE)

- In 2011, the percentage of 9th-12th graders who were overweight or obese was 27.3%.[1]
- Obese youth are at an elevated risk of chronic conditions such as type 2 diabetes, hypertension, asthma, and sleep issues.[2,3]
- Eating more fruits and vegetables can replace high calorie foods and help achieve and maintain a healthy weight and may reduce the risk of many chronic diseases.[4,5]
- Research showed that sodas were the single leading food source of added sugars intake among children, adolescents and adults.[6]
- Strong evidence showed that children and adolescents who consume more sugar-sweetened beverages had a higher body weight, compared to those who drank less sugar-sweetened beverages.[4]
- For example, drinking one 12 oz. can of soda per day could potentially contribute to a weight gain of approximately 15 lbs. over the course of a year.[7]



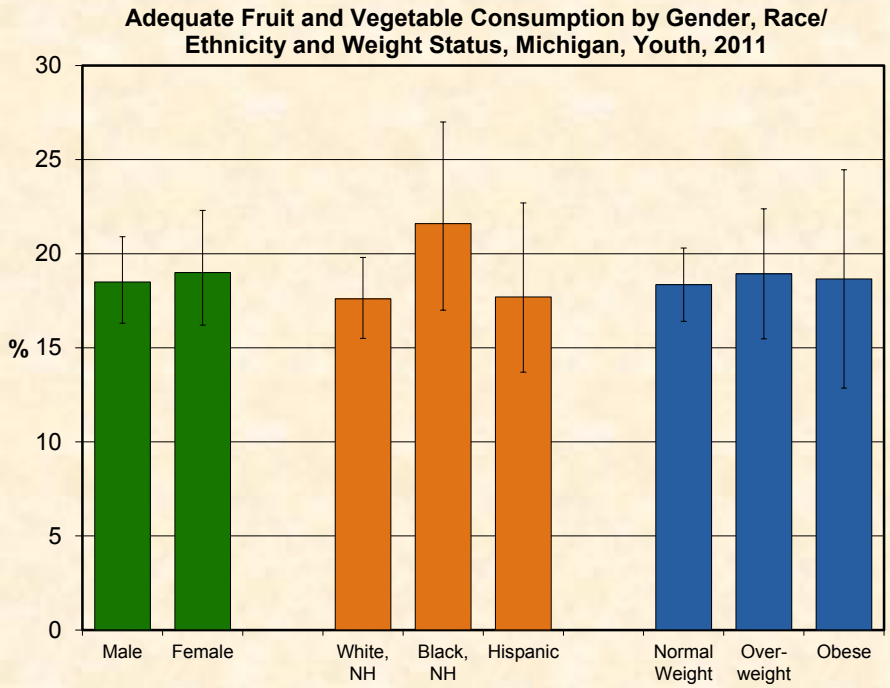
Source: CDC YRBSS [www.cdc.gov/yrbss] and MiYRBSS [www.michigan.gov/yrbs]

- In 2011, nearly one in five (18.7%) Michigan 9th-12th graders consumed an adequate amount of fruits and vegetables daily.
- While Michigan and US showed similar trends over time, the percentage of adequate fruit and vegetable consumption was significantly lower for Michigan youth when compared to US youth for 2003-2009.
- Data was unavailable for US fruit and vegetable consumption for 2011.



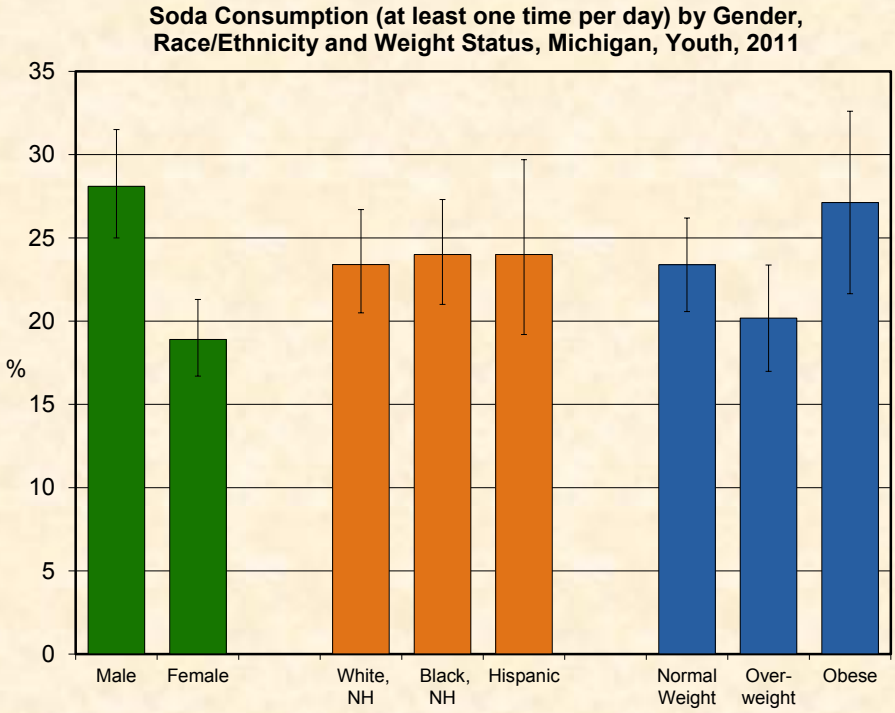
Source: CDC YRBSS [www.cdc.gov/yrbss] and MiYRBSS [www.michigan.gov/yrbs]

- In 2011, 27.8% of US 9th-12th graders consumed at least one or more servings of non-diet soda per day (e.g., 12 oz. can), which was statistically comparable to Michigan (23.6%). Overall, non-diet soda consumption for both Michigan and US youth decreased from 2007 to 2011. However, consumption of sugar-added beverages, such as sports drinks and fruit juice were not considered.
- Soda consumption was more prevalent than adequate fruit and vegetable consumption for both Michigan and US youth.



Source: MiYRBSS [www.michigan.gov/yrbs]

- In 2011, adequate fruit and vegetable consumption was similar, regardless of gender, race/ethnicity or weight status.
- The sample size for underweight Michigan youth was too small to be reliable to display the data.



Source: MiYRBSS [www.michigan.gov/yrbs]

- In 2011, the percentage of high school males who consumed one or more sodas per day was markedly higher (27%) than females who consumed one or more sodas per day.
- Prevalence among high school youth who consumed one or more sodas per day was similar regardless of race/ethnicity or weight status.

The main source of information related to youth is based on the Michigan Youth Risk Behavior Survey (MiYRBS) of 9th-12th graders' health and behaviors.

Note:
In the survey, at least one per day was defined as a12 oz. serving of soda at least one time per day.
In the survey, adequate fruit and vegetable consumption was defined as students who ate fruits and vegetables five or more times a day in the past seven days—one time being equivalent to one serving.
The sample size for underweight, Michigan 9th-12th grade youth was too small to determine reliable prevalence estimates.

References:

1. Byrd HCM, Wahl R, Lyon-Callo S, Imes G. Overweight and Obesity among Michigan Youth (9th-12th Grade). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Life course Epidemiology and Genomics Division. July, 2013.
2. Freedman DS, Zuguo M, Srinivasan SR, Berenson GS, Dietz WH. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: the Bogalusa Heart Study. Journal of Pediatrics 2007;150(1):12–17.
3. Must A, Parisi SM. Sedentary behavior and sleep: paradoxical effects in association with childhood obesity. Int J Obesity. 2009; 33: S82-S86.
4. U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2012. 7th ed. Washington, DC: U.S. Government Printing Office, 20120. Available from: http://www.cnpp.usda.gov/DietaryGuidelines.htm. Accessed, February 6,2013.
5. Van Duyn MA, Pivonka E. Overview of the health benefits of fruit and vegetable consumption for the dietetics professional: selected literature. J Am Diet Assoc. 2000; 100:1511-1521.
6. Ervin RB, Kit BK, Carroll MD, Ogden CL. Consumption of added sugar among U.S. children and adolescents, 2005–2008. NCHS data brief no 87. Hyattsville, MD: National Center for Health Statistics. 2012
7. Weight gain was estimated using a pound of body fat equating to approximately 3500 calories and calorie content in typical 12-oz cola about 140 calories.

Suggested citation: Byrd HCM, Gordon D, Imes G. Fruit and Vegetable and Soda Consumption among Michigan Youth (9th-12th Grade). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division. August 2013.

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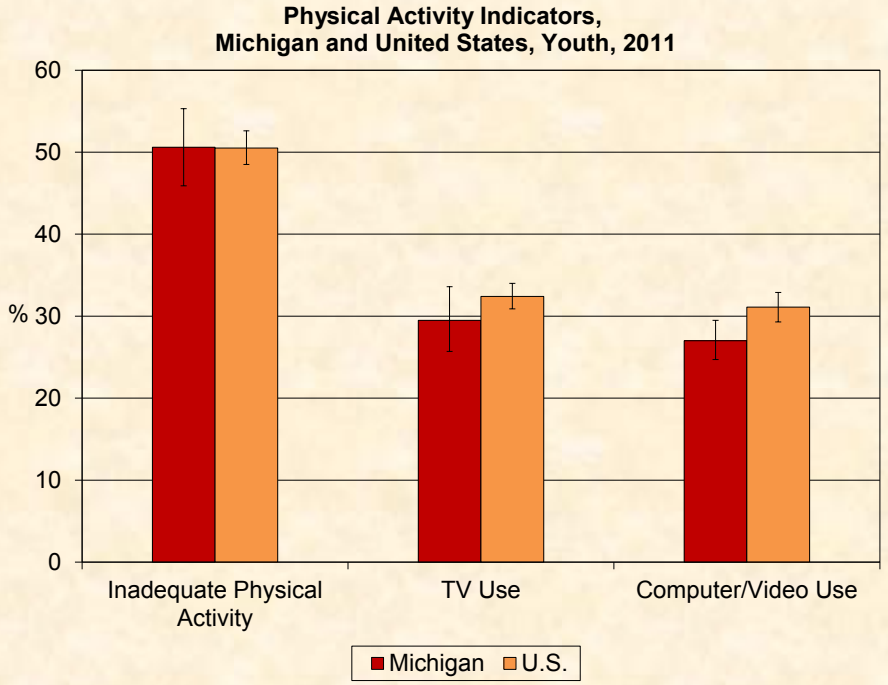
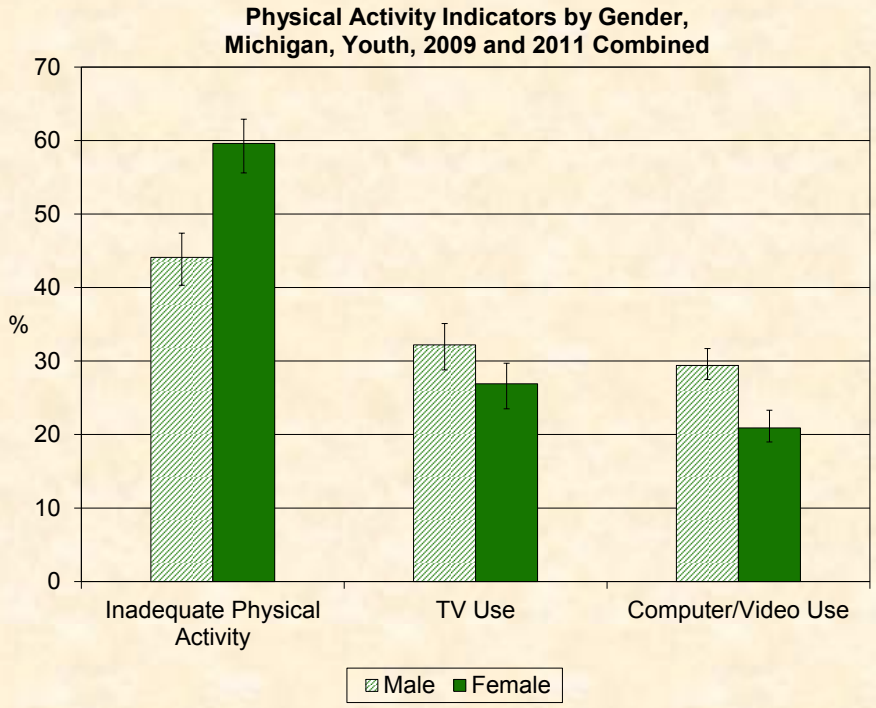
PHYSICAL ACTIVITY AMONG MICHIGAN YOUTH (9th-12th GRADE)

- In 2011, the percentage of 9th-12th graders who were overweight or obese was 27.3%.[1]
- Adequate physical activity assists in maintaining a healthy weight and overall good health.
- Too much television may be linked to obesity.[2,3] The 2008 Physical Activity Guidelines for Americans recommend no more than two hours of screen time per day.[4]
- Physical activity indicators were assessed using Michigan Youth Risk Behavior Survey (MiYRBS) data. For 2009 and 2011, data were combined to better determine statistical differences in physical activity indicators among certain Michigan subgroups, such as non-Hispanic White and Hispanic high school youth.



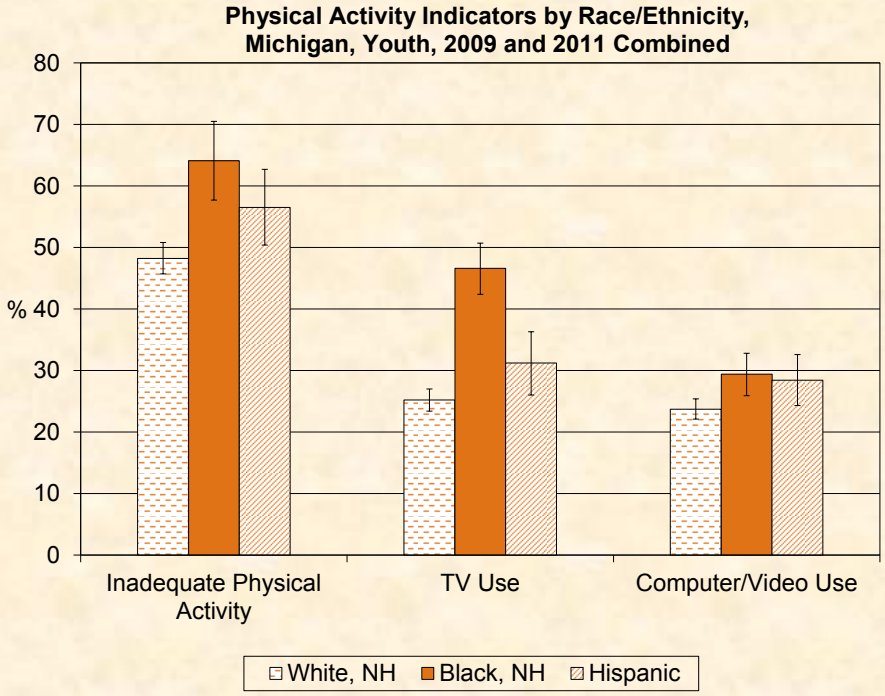
Source: CDC YRBSS [www.cdc.gov/yrbss] and MiYRBSS [www.michigan.gov/yrbs]

- In 2011, one half of Michigan high school students reported inadequate physical activity. This was comparable to the United States.
- In Michigan and the United States population, nearly three in ten high school youth watched television for three or more hours on an average school day.
- In 2011, a slightly lower percentage of Michigan high school youth reported three or more hours of computer/video use on an average school day compared to the percentage of U.S. high school youth.



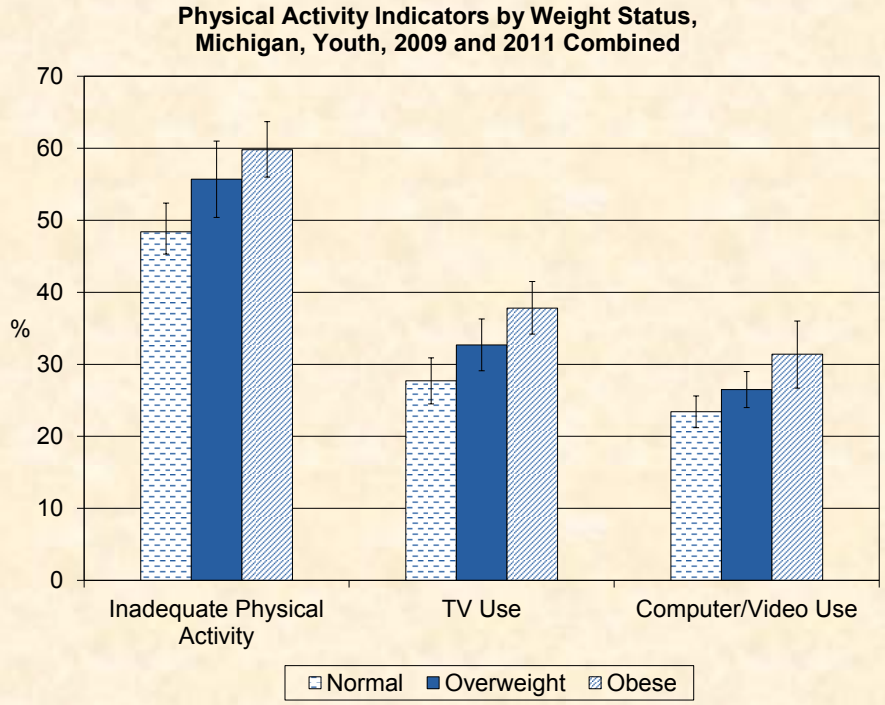
Source: MiYRBSS [www.michigan.gov/yrbs]

- For 2009 and 2011, nearly 60% of 9th-12th grade females in Michigan reported inadequate physical activity compared to about 44% of high school males.
- High school males watched more television than recommended compared to high school females.
- The proportion of 9th-12th grade males who reported three or more hours of computer/video use on an average school day was 40% higher than the proportion of females.



Source: MiYRBSS [www.michigan.gov/yrbs]

- Both non-Hispanic Black and Hispanic high school youth in Michigan tended to be less physically active than non-Hispanic White youth.
- Nearly one half of non-Hispanic Black high school students viewed more than two hours of television on an average school day compared to about one fourth of non-Hispanic White and three in ten Hispanic students.
- About 25% of Non-Hispanic White students reported computer/video use for at least three hours on an average school day compared to nearly 30% of non-Hispanic Black and Hispanic students.



Source: MiYRBSS [www.michigan.gov/yrbs]

- Nearly 60% of Michigan high school youth who were classified as overweight or obese tended to be less physically active than high school youth of normal weight status (about 50%).
- Television use above the 2008 recommendation increased with increasing weight status.
- Similarly, high school students of higher weight status reported higher computer/video use for three hours or more on an average school day compared to those of lower weight status.

The main source of information related to youth is from the Michigan Youth Risk Behavior Survey (MiYRBS) of 9th-12th graders' health and behaviors.

Note:
The YRBS defined inadequate physical activity as being physically active at least 60 minutes per day on less than five days in past seven days. Television use was watching television three or more hours per day on an average school day. Computer/video use was defined as playing video or computer games or using a computer for something that was not related to school work three or more hours per day on an average school day.

The YRBS media use questions did not account for high school youth utilizing devices such as smart telephones or tablets or multi-tasking.

The sample size for underweight youth was too small to reliably provide any statistical significance.

References:

1. Byrd HCM, Wahl R, Lyon-Callo S, Imes G. Overweight and Obesity among Michigan Youth (9th-12th Grade). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Life course Epidemiology and Genomics Division. August 2013.
2. American Academy of Pediatrics. Council on Communications and Media. Policy Statement—Children, Adolescents, Obesity, and the Media. Pediatrics 2011; 128: 201-208.
3. American Academy of Pediatrics. Council on Communications and Media. Policy Statement—Children, Adolescents, Obesity, and the Media. Erratum. Pediatrics 2011; 128: 594.
4. U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. Available from: http://www.health.gov/paguidelines/guidelines/default.aspx. Accessed, March 30, 2013.

Suggested citation: Byrd HCM, Imes G. Physical Activity among Michigan Youth (9th-12th Grade). Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division. September 2013.

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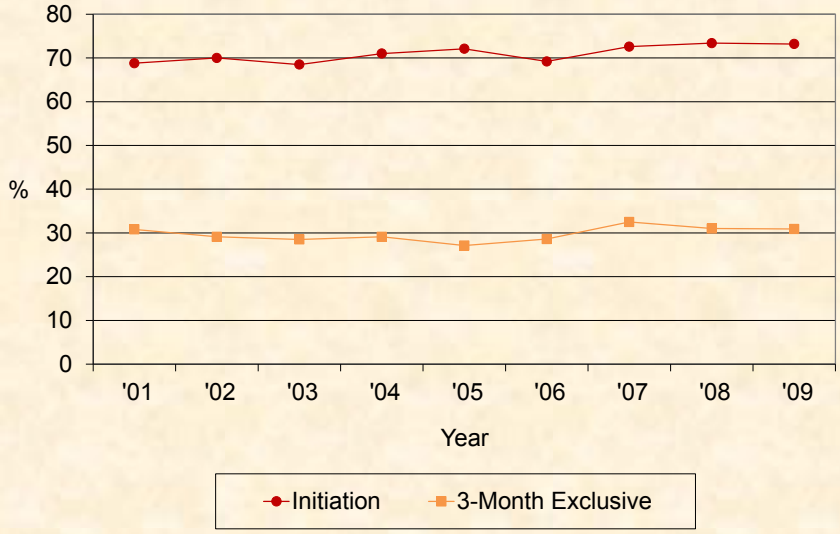
BREASTFEEDING AND OBESITY

- Breastfeeding might assist in both postpartum weight loss and be protective against childhood obesity.[1-5] Exclusive breastfeeding is defined as an infant's consumption of human milk with no supplementation of any type except for vitamins, minerals, and medications.[1]
- Healthy People 2020 provides science-based national objectives for improving the health of infants, youth, and adults in the United States. Two of the objectives involve increasing the proportion of infants who are ever breastfed and who are breastfed exclusively for at least three months.[6]
- Michigan Pregnancy Risk Assessment Monitoring System (MI PRAMS), a public health surveillance system, surveys mothers who recently delivered a live birth in order to measure risk factors for infant mortality and other negative outcomes.
- MI PRAMS data was combined for 2006 to 2009 to determine differences between subgroups for race/ethnicity, education, and pre-pregnancy weight status, e.g., distinguishing differences between non-Hispanic White and Asian/Pacific Island mothers.

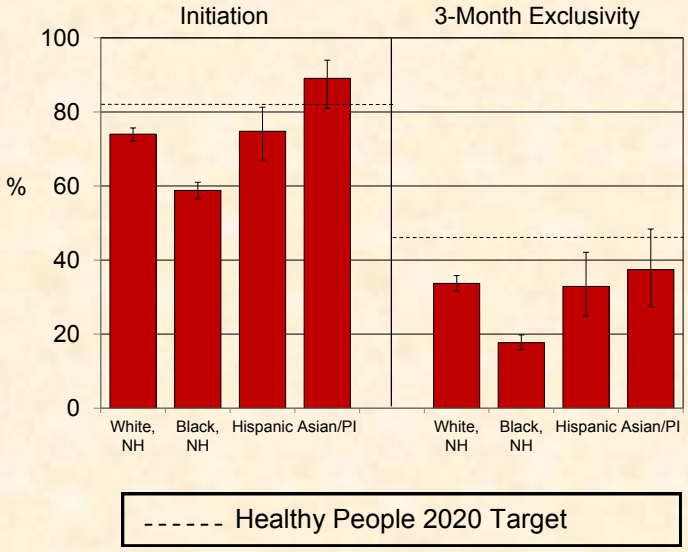
Breastfeeding Initiation and Three-month Exclusivity, Michigan, 2001-2009



Source: MI PRAMS [www.michigan.gov/prams]

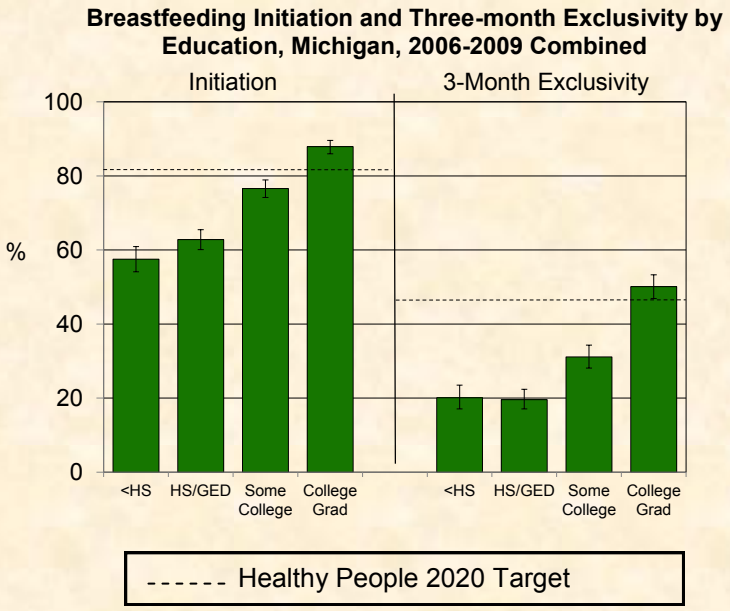
The prevalence of breastfeeding initiation among mothers with recent live births has increased slightly over the past several years; however, the percentage of mothers who continued to breastfeed exclusively for three months has remained constant.

Breastfeeding Initiation and Three-month Exclusivity by Race/ Ethnicity, Michigan, 2006-2009 Combined



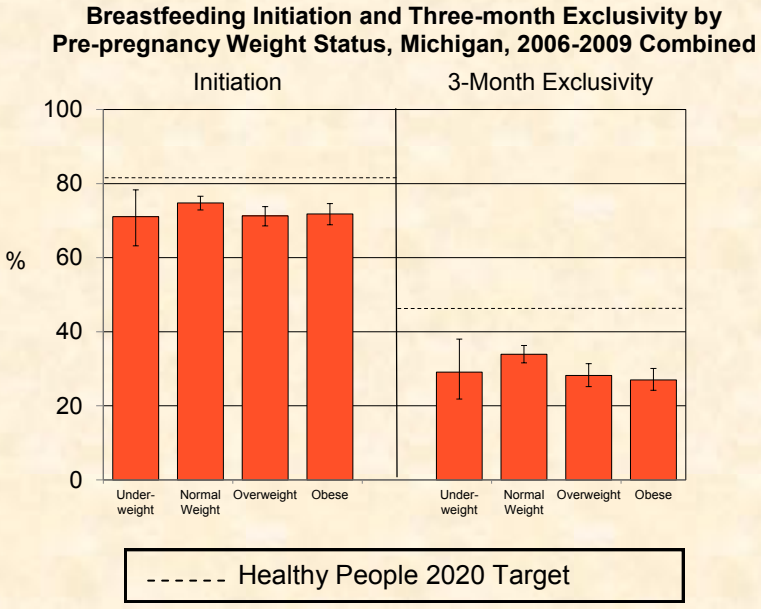
Source: MI PRAMS [www.michigan.gov/prams]

- For 2006-09 combined, nearly nine in ten Asian/ Pacific Island mothers initiated breastfeeding, exceeding Healthy People 2020s' target (81.9%). However, only 58.8% of non-Hispanic Black mothers initiated breastfeeding.
- The prevalence of breastfeeding initiation was around 75% for both Hispanic and non-Hispanic White mothers.
- Prevalence of exclusively breastfeeding for three months was less than the Healthy People 2020 target of 46.2% for non-Hispanic White, non-Hispanic Black, and Hispanic mothers, but inconclusive for Asian/Pacific Island mothers due to small number of mothers surveyed.
- Prevalence estimates are not shown for other racial/ethnic groups due to the small number of mothers surveyed.



Source: MI PRAMS [www.michigan.gov/prams]

- The percentage of mothers who initiated breastfeeding increased with education level.
- The prevalence of breastfeeding initiation was higher (87.9%) among college graduates than among mothers with less than a college degree (57.5%-76.6%).
- Only mothers with at least a college degree (50.1%) met the Healthy People 2020 target for three-month breastfeeding exclusivity.
- One in five mothers with a high school degree or less and three out of ten mothers with some college education breastfed exclusively for three months.



Source: MI PRAMS [www.michigan.gov/prams]

- The percentage of mothers who were normal weight and initiated breastfeeding (74.1%) was significantly higher than mothers who were obese and initiated breastfeeding (67.8%)
- There was no distinction between mothers who were either overweight and breastfed (72.8%) or underweight (63.6%) compared to mothers who were normal weight.
- Less than 40% of the mothers continued to breastfeed exclusively for three months, regardless of pre-pregnancy weight status.

Note: At this point, the survey does not oversample for mothers who are Hispanic, Asian/Pacific Islander, American Indian/Alaska Native or Arab descent. The data was combined over four years (2006-2009) to determine reliable prevalence estimates for subgroups with small numbers (e.g., Asian/Pacific Island mothers) and, therefore, making it possible to detect differences between subgroups.

References:

1. American Academy of Pediatrics. Policy Statement. Breastfeeding and the Use of Human Milk. Pediatrics. 2012; 129:e827-e841.
2. Martin RM, Patel R, Kramer MS et al. Effects of Promoting Longer-term and Exclusive Breastfeeding on Adiposity and Insulin-like Growth Factor-I at Age 11.5 Years. JAMA 2013; 309: 1005-1013.
3. Spatz D, Lessen R. Risks of Not Breastfeeding. International Lactation Consultant Organization. 2011.
4. Wojcicki JM, Heyman MB. Let's move—Childhood obesity prevention from pregnancy and infancy onward. The New England Journal of Medicine .2010; 326:1457-1459.
5. Labbok MH. Effects of breastfeeding on the mother. Pediatric Clinics of North America. 2001; 48:143-158.
6. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Maternal, Infant and Child Health

http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=26 Accessed December 15, 2012

Suggested citation: Byrd HCM, Larder C, Eggleston E., Lyon-Callo S, Imes G. Breastfeeding and Obesity. Nutrition, Physical Activity and Obesity Program Surveillance Brief. Michigan Department of Community Health, Lifecourse Epidemiology and Genomics Division. August 2013.

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