



# CHILDHOOD OBESITY

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*Disease Information Packets – Slide Set*  
*Public Health Services, Community Health Statistics*  
*08/2022*



# What is Obesity



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- Overweight and obesity are defined as weight that is higher than what is considered healthy for a given height.
  - Obesity and overweight can develop over time due to an energy imbalance: when an individual has a higher caloric intake than output.
  - Obesity is a chronic condition that is linked to health problems such as type 2 diabetes and can be caused by various factors such as eating patterns or genetic history.

# What is Obesity



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- Body mass index (BMI) measures body fat in relation to an individual's height
  - Among children and teenagers:
    - BMI  $\geq$  85<sup>th</sup> percentile but  $<95^{\text{th}}$  percentile for all children and teenagers of the same age and sex are considered overweight
    - BMI  $\geq$  95<sup>th</sup> percentile for all children and teenagers of the same age and sex is considered obese



# Demographic Risk Factors



## ■ Age

- As individuals age, hormonal changes and less activity increases the risk for obesity.

## ■ Race/Ethnicity

- Prevalence is higher among American Indian/Alaska Native, non-Hispanic Black, and Hispanic children.
- Studies have shown that Black children with higher socioeconomic status (SES) do not have a lower obesity prevalence the way that White children with higher SES do.

## ■ Genetics or Family History

- Individuals with a family history of obesity may be predisposed to gain weight.
- Family members tend to share similar eating and physical activity habits.

# Demographic Risk Factors



## ■ Lower education

- In 2011 – 2014, obesity prevalence decreased as the head of household's education level increased.

## ■ Poverty or low income

- In 2011 – 2014, obesity prevalence was the highest among children (ages 2 to 19) in the lowest income group and lowest among children in the highest income group.
- Low-income and minority communities may lack affordable and healthy foods, leading them to settle for food that is nutritionally lacking and calorically dense.

# Social and Behavioral Risk Factors



## ■ Poor nutrition or dietary habits

- Eating foods with too much saturated fat or added sugar can increase the risk for obesity.
- Children's food habits are influenced by family, caregivers, friends, schools, marketing, and the media.

## ■ Screen time and sedentary lifestyle

- There is a positive association between screen time and adverse sleep; sleep deprivation is associated with weight gain among children between ages 3 and 7.
- Children with more screen media exposure consume fewer fruits and vegetables and have higher total energy intake.



Source: National Institutes of Health. National Heart, Lung, and Blood Institute. (2022). *Overweight and Obesity. Causes and Risk Factors*. <https://www.nhlbi.nih.gov/health/overweight-and-obesity/causes>.

Roblin L. Childhood obesity: food, nutrient, and eating-habit trends and influences. *Appl Physiol Nutr Metab*. 2007 Aug;32(4):635-45. doi: 10.1139/H07-046. PMID: 17622277.

Robinson TN, Banda JA, Hale L, Lu AS, Fleming-Milici F, Calvert SL, Wartella E. Screen Media Exposure and Obesity in Children and Adolescents. *Pediatrics*. 2017 Nov;140(Suppl 2):S97-S101. doi: 10.1542/peds.2016-1758K. PMID: 29093041; PMCID: PMC5769928.



# Intermediate Conditions



Obesity also increases the risk of other diseases and is accompanied by many complications. Some of these include:

- **Cardiovascular Disease (CVD)**

- The most significant risk factor for pediatric hypertension is high BMI; 25% of children with obesity can have hypertension.

- **Type 2 Diabetes**

- Childhood obesity quadruples the risk of developing glucose intolerance and Type 2 diabetes.
- Over 85% of children with Type 2 diabetes are either overweight or obese at the time of diagnosis.

# Intermediate Conditions



## ■ Cancer

- There is a strong association between higher BMI during childhood and increased risk for cancer as an adult.

## ■ Breathing problems

- Overweight or obese children have a higher prevalence of asthma and are at a greater risk for sleep apnea.

## ■ Additional consequences

- About 15 – 30% of adults with obesity also had childhood obesity.
- Children with obesity are more likely to experience low self-esteem and depression and have fewer social interactions.



# National Statistics and Disparities

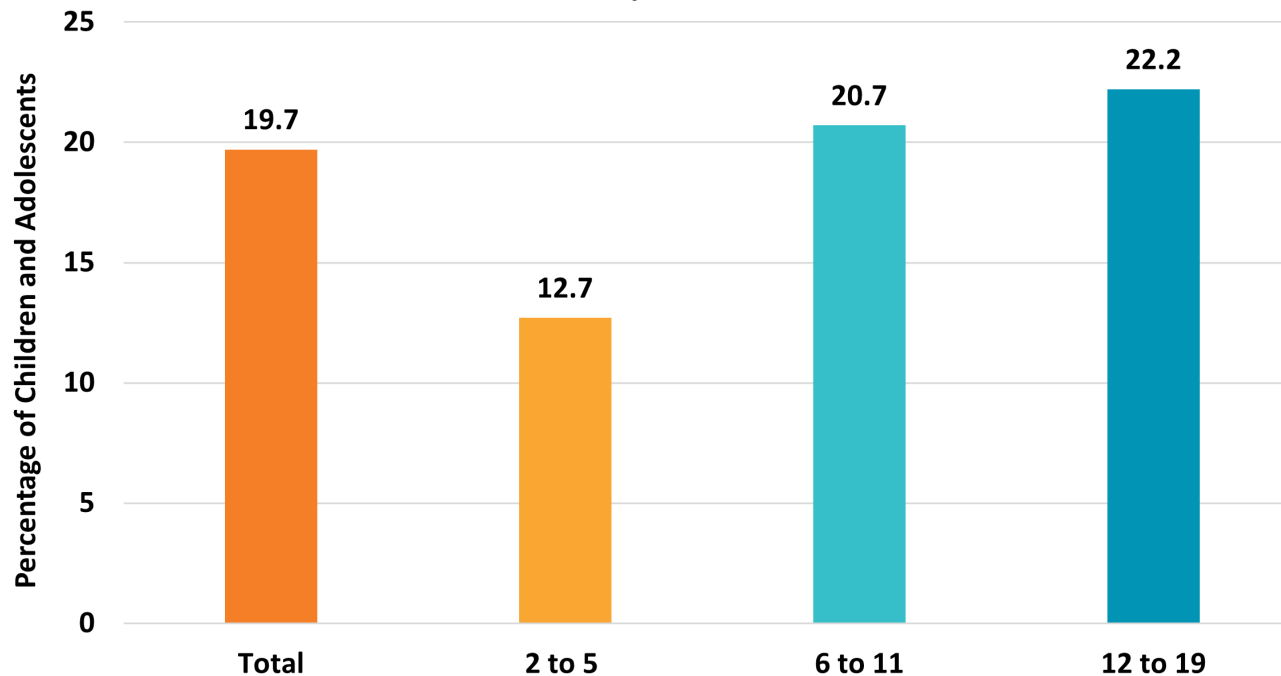


- In 2017 to March 2020, nearly 20% of children and adolescents (aged 2 – 19) in the United States had obesity.
- In 2019, 15.5% of high schoolers in the United States had obesity. 15.9% of California high schoolers had obesity.
- In 2019, 16.1% of high schoolers in the United States were overweight. 15.2% of California high schoolers were overweight.

# National Statistics and Disparities



**Prevalence of Obesity by Age, Ages 2 - 19,  
United States, 2017 - March 2020**



Source: Stierman B, Afful J, Carroll MD, Chen TC, Davy O, Fink S, et al. National Health and Nutrition Examination Survey 2017–March 2020 pre-pandemic data files—Development of files and prevalence estimates for selected health outcomes. National Health Statistics Reports; no 158. Hyattsville, MD: National Center for Health Statistics. 2021. DOI: <https://dx.doi.org/10.15620/cdc:106273.CS324470.nhsr158-508.pdf>

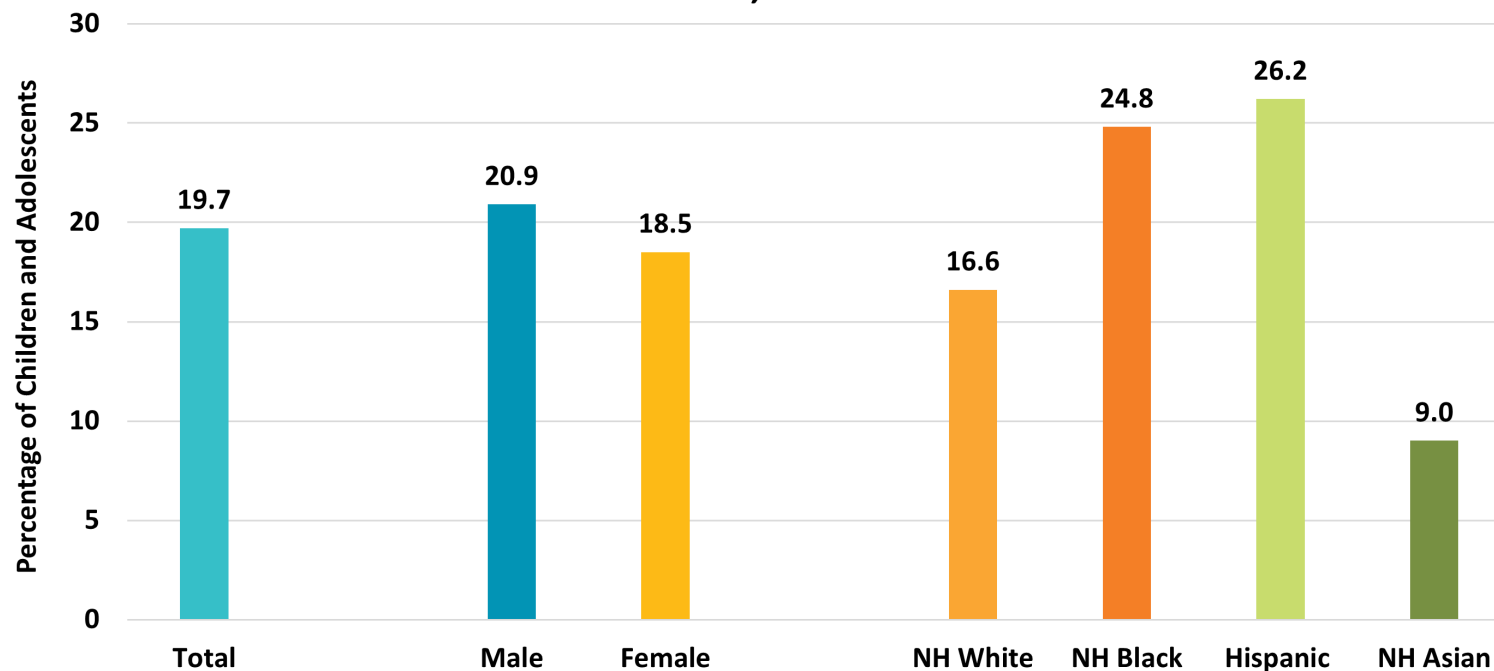
Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667. [https://www.sandiegocounty.gov/hhsa/programs/phs/community\\_health\\_statistics/](https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/) LiveWellSD.org. August 2022.

- From 2017 to March 2020, 19.7% of children and adolescents ages 2 to 19 had obesity.
- Individuals ages 12 – 19 had the highest prevalence of obesity (22.2%)

# National Statistics and Disparities



**Prevalence of Obesity Among Children and Adolescents Ages 2 - 19  
United States, 2017 - March 2020**



Source: Stierman B, Afful J, Carroll MD, Chen TC, Davy O, Fink S, et al. National Health and Nutrition Examination Survey 2017–March 2020 prepandemic data files—Development of files and prevalence estimates for selected health outcomes. National Health Statistics Reports; no 158. Hyattsville, MD: National Center for Health Statistics. 2021. DOI: <https://dx.doi.org/10.15620/cdc:106273>. CS324470 nhsr158-508.pdf

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LiveWellSD.org. August 2022.

- From 2017 to March 2020, males ages 2 – 19 had a higher obesity prevalence than females ages 2 – 19.
- From 2017 to March 2020, non-Hispanic (NH) Black and Hispanic children and adolescents had a higher rate of obesity than NH White children and adolescents.

# National Statistics and Disparities

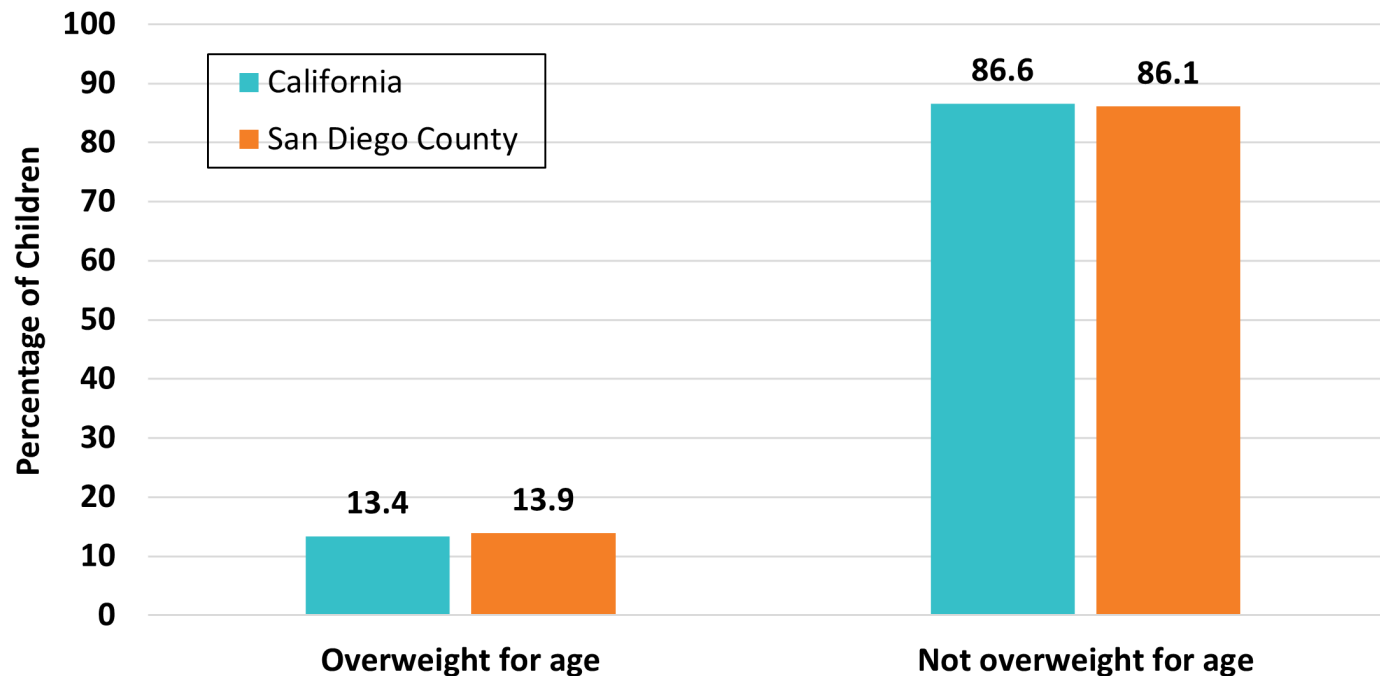


- From 2017 to March 2020, obesity prevalence was lower among non-Hispanic (NH) Black boys compared to NH Black girls.
- From 2017 to March 2020, obesity prevalence was highest among Hispanic boys and highest among non-Hispanic Black girls.
- Among non-Hispanic Asian children, boys had a higher prevalence of obesity.

# Local and State Statistics



## Weight Status Among Children Ages 0 - 11 California and San Diego County, 2019 - 2020



Source: UCLA Center for Health Policy Research, "2019, 2020 California Health Interview Survey," <http://www.chis.ucla.edu>.

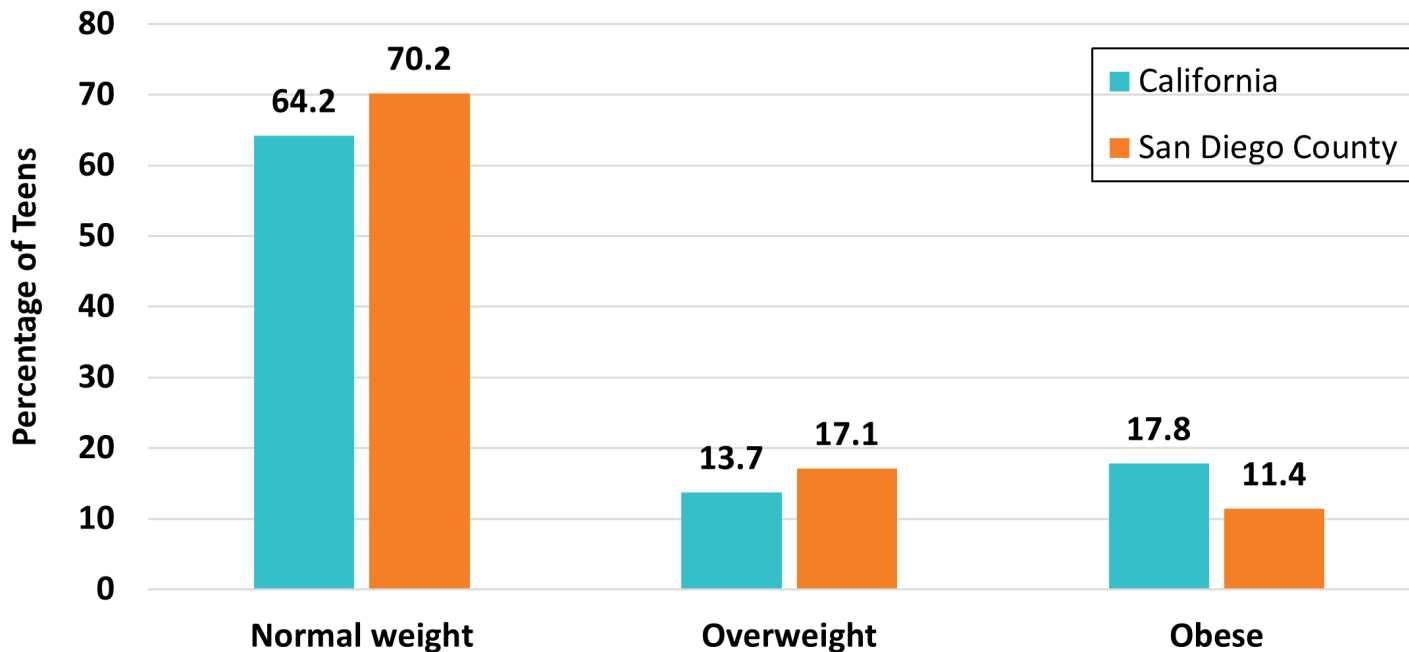
Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667. [https://www.sandiegocounty.gov/hhsa/programs/phs/community\\_health\\_statistics/](https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/)  
LiveWellSD.org. August 2022.

- In 2019 – 2020, nearly 14% of San Diego children were overweight for their age.
- In 2019 – 2020, the percentage of children overweight for their age in San Diego was similar to the state percentage.

# Local and State Statistics



**Weight Status Among Teens Ages 12 - 17  
California and San Diego County, 2019 - 2020**



Source: UCLA Center for Health Policy Research, "2019, 2020 California Health Interview Survey," <http://www.chis.ucla.edu>.

Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667. [https://www.sandiegocounty.gov/hhsa/programs/phs/community\\_health\\_statistics/](https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/)  
LiveWellSD.org. August 2022.

- In 2019 – 2020, 17.1% of San Diego teens were overweight and 11.4% were obese.
- In 2019 – 2020, 13.7% of California teens were overweight and 17.8% were obese.



# Prevention



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## ■ Parents and guardians can:

- Help children develop healthy eating habits by ensuring children eat plenty of vegetables, fruits, and whole-grain products, drink lots of water, and limit consumption of sugary drinks and saturated fats.
- Ensure children get at least 60 minutes of physical activity each day.
- Reduce sedentary time, including time watching television or playing video games.
- Ensure children get enough sleep. Children ages 6 – 12 are recommended to get 9 – 12 hours of sleep per night. Youth ages 13 – 18 are recommended to get 8 – 10 hours per night.



# Prevention



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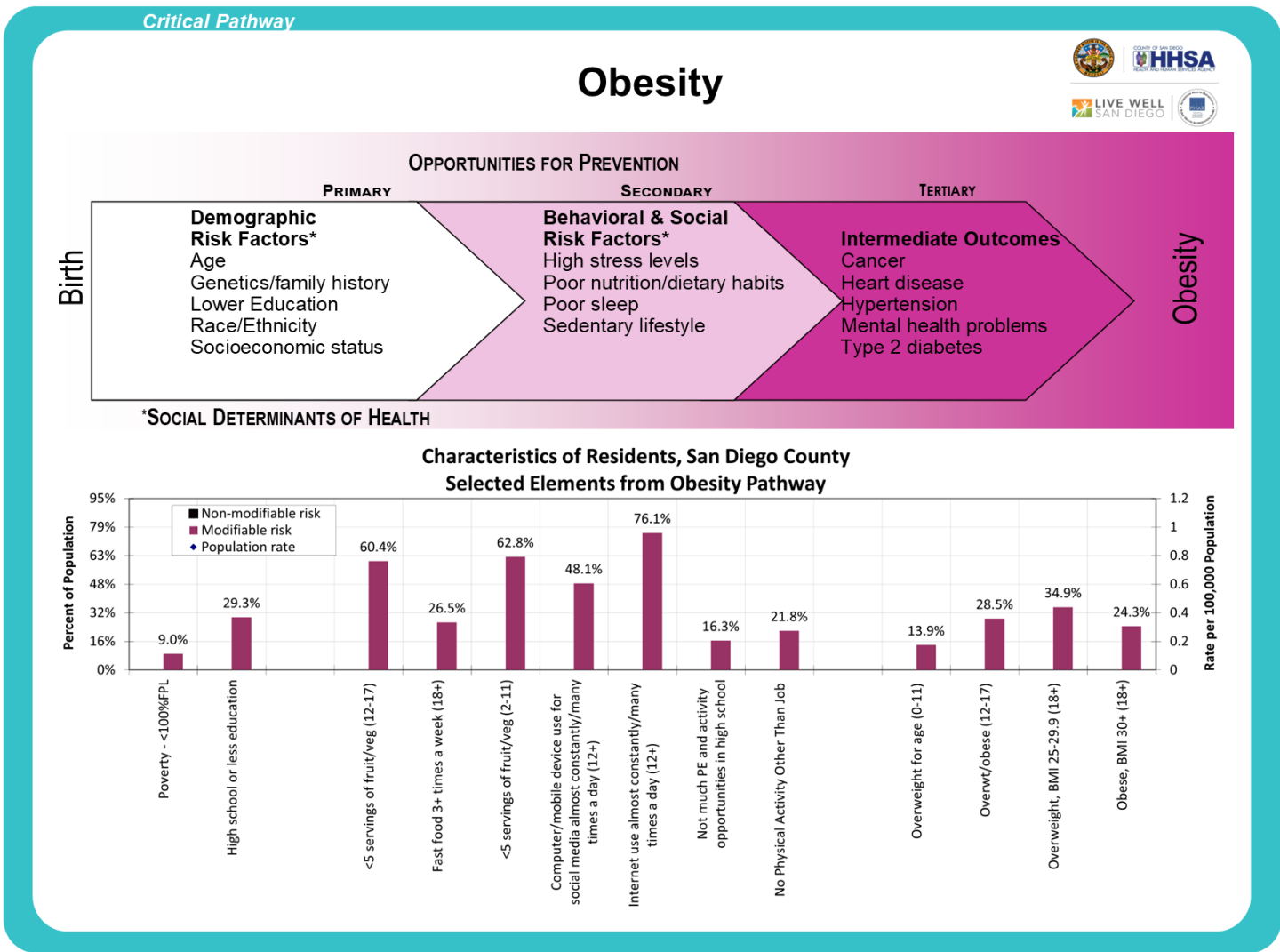
- **States and communities can:**
  - Promote and sponsor salad bars in schools and ensure that available food and beverage options meet dietary recommendations.
  - Establish supermarkets or farmers markets in underserved areas.
  - Increase places where people can be active, such as school facilities for public use or walking trails.
  - Increase the amount of time students are being active during physical education classes.



# Critical Pathway for Obesity



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# Contact Us



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For more information, including data, resources and reports from the  
County of San Diego's Community Health Statistics Unit:

[www.SDHealthStatistics.com](http://www.SDHealthStatistics.com)

(619)692-6667