



# Childhood obesity and the pandemic

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# Presentation Outline

- Childhood obesity in SF prior to the pandemic
- Growth of obesity during the pandemic
- Recommendations for moving forward

# Impact of childhood obesity on health

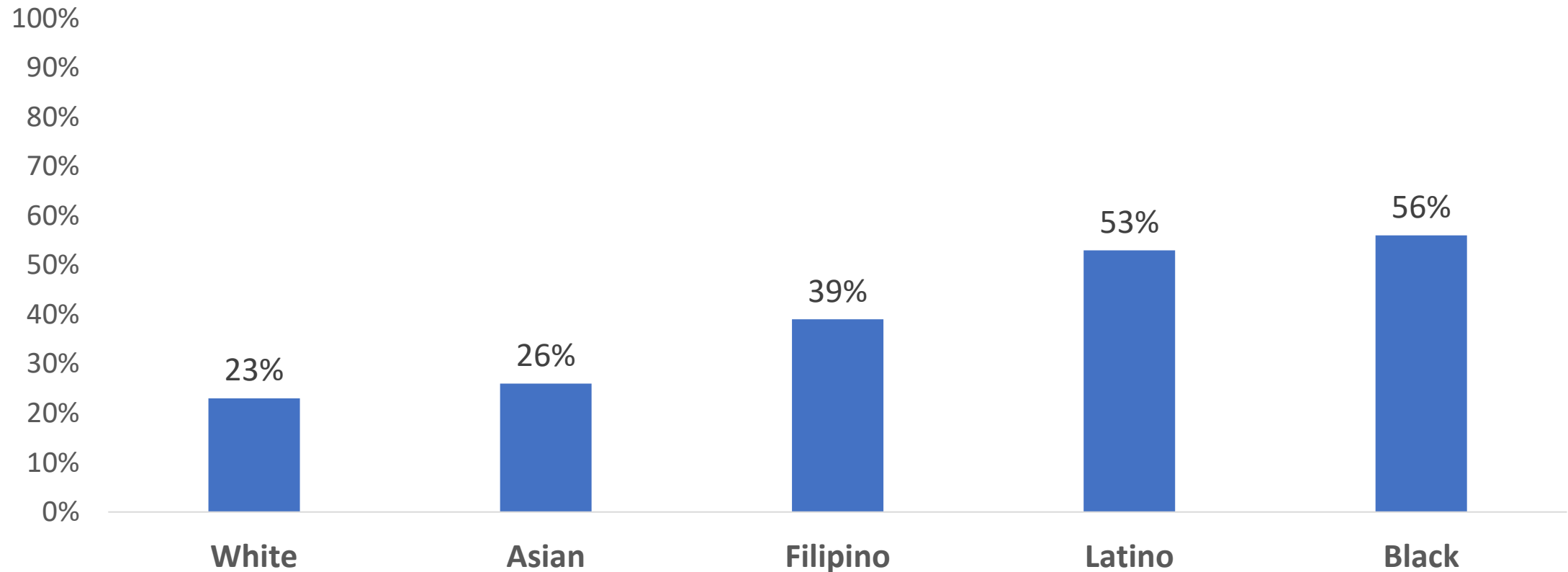
- Strongly linked to adult obesity
- Pre-diabetes and Diabetes
- Fatty liver disease
- Hypertension
- Obstructive Sleep Apnea
- Mental health concerns (cause and consequence)

# Obesity is a disease of social inequity

- **Income:** Children in lower and middle-income families have double the risk of obesity compared to children in upper-income families
- **Education:** Children whose parents have not graduated from college have double the risk of obesity compared to those with a college degree

# Overweight/obesity among 7<sup>th</sup> graders in San Francisco public schools pre-pandemic

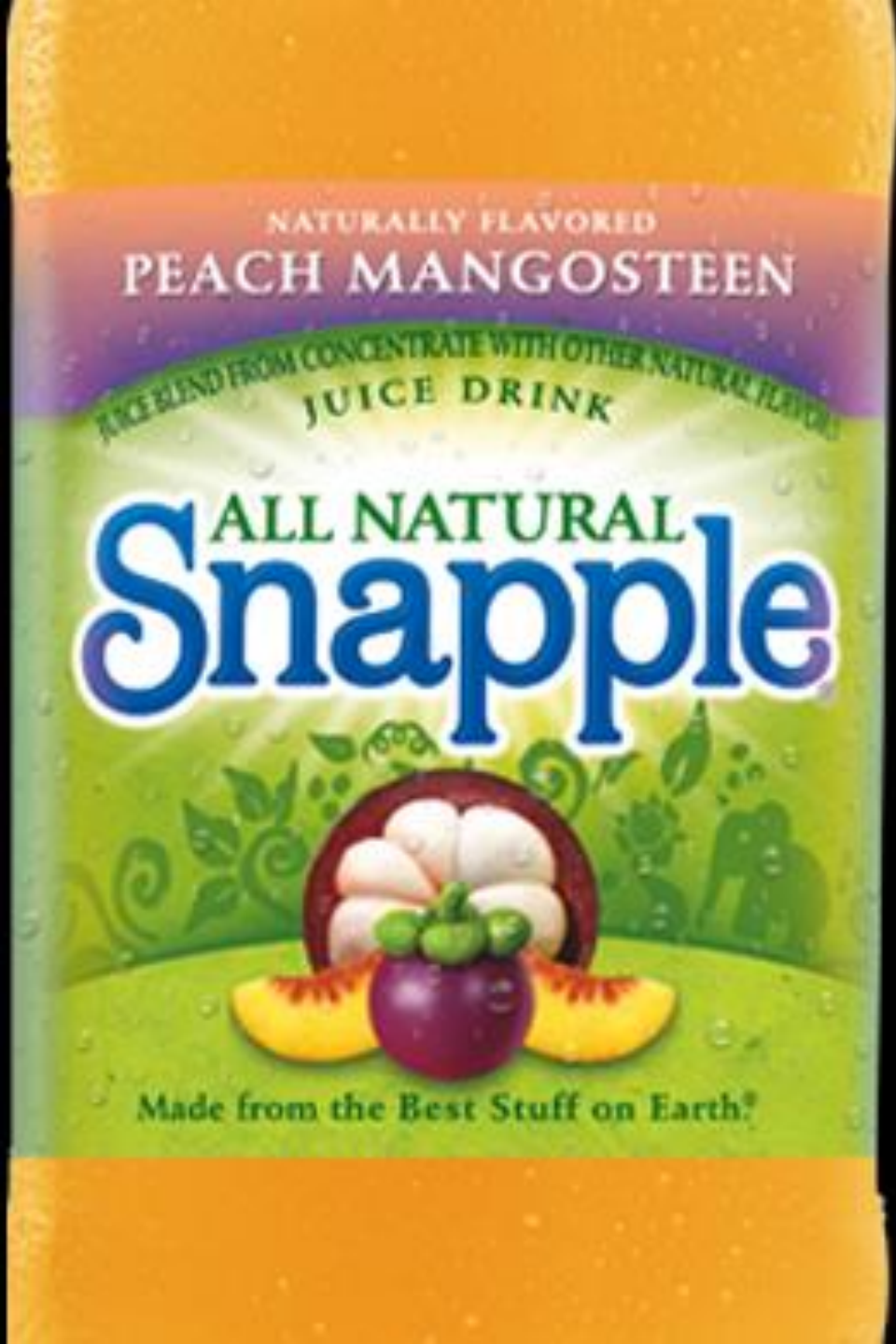
Percent of 7th graders with overweight or obesity



Data from the California Fitness Gram 2019, kidsdata.org

# Factors that contribute to obesity inequities

- Structural factors
  - Access to green space and physical activity
  - Access to healthy food
  - Access to employment, housing, and educational opportunities
- Targeted marketing of high calorie low nutrient foods and beverages to communities of color



# Power of deceptive marketing

*“This is better because it’s natural. It says that it’s all juice”*

*“I think that it’s healthy because it has fruit and vitamins. One bases oneself in that it looks like it’s all natural. Supposedly it has natural fruit or something natural.”*

**Beck AL, Takayama JI, Halpern-Felsher B, Badiner N, Barker JC.** Understanding how Latino parents choose beverages to serve to infants and toddlers. *Matern Child Health J.* 2014 Aug; 18(6):1308-15.

# How the pandemic contributed to childhood obesity

- **School closures**
  - Children typically increase BMI percentile over the summer
  - More pronounced for low-income children and those with overweight/obesity
- Reduced access to physical activity and recreation
- Rising food insecurity



# A case from my clinic at San Francisco General

- 8-year-old girl
- Lives in a studio without a full kitchen
- Strong family history of obesity and diabetes (high risk)
- Eats mostly processed food

Pre-pandemic	During the pandemic
<ul style="list-style-type: none"><li>• Attended afterschool program with outside play time</li><li>• Went to playground for an additional 1-2 hours after her aftercare program</li><li>• Swam 2-3x per week</li><li>• BMI was slightly overweight and stable</li></ul>	<ul style="list-style-type: none"><li>• No physical activity, rarely left apartment</li><li>• <b>Gained 27 pounds in 6 months</b> – now with BMI in severely obese range</li><li>• <b>Developed elevated blood pressure</b></li></ul>

Impact of shelter-in-place on health behaviors, food access, and weight status among low-income children ages 4-12 in SF

Variable	Pre-pandemic	During pandemic
<b>Health Behaviors</b>		
Non-academic screen time $\geq$ 4 hours daily	6%	52%
Mean daily physical activity	1.8 hours	1 hour
Bedtime after 10 pm	3%	65%
<b>Food access</b>		
Household food insecurity	48%	71%
Use of foodbanks	35%	54%
Receive free or reduced-price meals from school	78%	60%
<b>Weight status</b>		
Obesity	58%	85%

**Average yearly weight gain of 19.2 pounds!**

NB: healthy weight gain in this age range is 4-7 pounds per year

Beck AL, Huang JC, Lenzion L, Fernandez A, Martinez S. Impact of the COVID-19 pandemic on parents' perception of health behaviors in children with overweight and obesity. *Acad Pediatr*. 2021 May 20.

Beck AL, Huang JC, Lenzion L, Fernandez A, Martinez S. Weight Gain during the COVID-19 Pandemic in a High-Risk Cohort of Children in San Francisco, CA. *Child Obes*. Published online October 7, 2021

# Lessons learned

- Lack of access to schools and to physical activity + increased food insecurity  
+ other factors (stress)

**>>>>>> staggering increase in childhood obesity among low-income communities of color in SF**

# Playgrounds are essential!

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# SF Recreation & Parks Enrollment

## Opportunities for improvement

- San Francisco Recreation & Parks offers high quality sports and physical activity programs for children
- A scholarship program exists but the application process is very complicated
  - We pay a case manager to assist our patients with the process
- Enrollment requires:
  - A laptop
  - A tech savvy parent
  - Availability at 10:00 am on Saturday mornings

# Recommendations

- Improve access to **physical activity** for low-income children
  - Set aside spots in Recreation & Parks programs for low-income children
  - Increase access to physical activity
    - Schools
    - After-school
    - Summer programming
- Support **family nutrition education** in multiple settings (health care, child-care, schools, after school and summer programming)
  - Programs should be culturally tailored

# Recommendations

- Intensify efforts to address **food insecurity**
  - *Vouchers for Veggies Eat SF*
  - Support Cal Fresh enrollment
  
- Increase resources for evidence based **intensive childhood obesity treatment**
  - Multi-disciplinary approach

# Partnerships that work

UCSF is eager to partner on best practices to reduce childhood obesity



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Latinx Center  
of Excellence



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University of California  
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Questions?

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