Cottage Center for Population Health

Santa Barbara County Public Health Department

Health Indicator Profile:
Adult Obesity

The causes of obesity are a complex combination of individual behaviors, genetics, and the environment. In addition to diet patterns and physical activity levels, other factors contribute to obesity, such as access to healthy foods, access to parks and recreational areas, nutritional education, and exposure to food marketing. Obesity is associated with poorer mental health outcomes and reduced quality of life. It contributes to the development of chronic diseases, such as diabetes, heart disease, stroke, and some types of cancer. Obesity has also been shown to increase all-cause mortality rates.[1] The prevalence for adult obesity in the U.S. was 41.9%[2] from 2017-2020, and according to recent surveillance data, there has been a significant increase (+3%) nationally since the start of the COVID-19 pandemic.[3]

Findings from the 2022 Santa Barbara County CHNA

Measure

Obesity was measured by asking respondents to report their weight and height. These measurements were then converted to kilograms (kg) and meters (m) to calculate the respondent's body mass index (BMI), which is kg/m. Obesity is defined as a BMI greater than or equal to 30kg/m^2. It's important to note that these data are self-reported, whereas the Healthy People 2030 Target was developed using BMI data collected in clinical settings (National Health and Nutrition Examination Survey).

It is important to note that although BMI is a reliable screening tool, it does not diagnosis body fatness or the health of individuals. There are several ways to measure body fatness which may be more accurate than BMI including skinfold thickness measurements, underwater weighing, bioelectrical impedance, dual-energy x-ray absorptiometry (DXA), and isotope dilution. Because of a number of factors associated with these measures of body fatness, including costs, expertise, and comparability across populations, BMI is often used as a proxy measure of body fatness as it is strongly correlated with metabolic and disease outcomes related to body fatness.

[1] Borrell, L. N., & Samuel, L. (2014). Body mass index categories and mortality risk in US adults: the effect of overweight and obesity on advancing death. American journal of public health, 104(3), 512-519.

[2] Centers for Disease Control and Prevention. (2022). Adult Obesity Facts | Overweight & Obesity | CDC. Retrieved from https://www.cdc.gov/obesity/data/adult.html Accessed 7/27/2023

[3] Restrepo B. J. (2022). Obesity Prevalence Among U.S. Adults During the COVID-19 Pandemic. American journal of preventive medicine, 63(1), 102–106. https://doi.org/10.1016/j.amepre.2022.01.012

Table 1. Percentage of Adults that are Obese by Demographics

	2016 Santa Barbara CHNA[1]	2019 Santa Barbara CHNA[1]	2022 Santa Barbara CHNA	2021 California BRFSS	2030 Healthy People Target
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	%
Overall	21.6 (19.1, 24.1)	25.5 (21.4, 29.7)	27.6 (23.5, 31.6)^	27.5 (26.1, 29.0)^	36.0
Male	20.8 (17.0, 24.6)	22.2 (16.5, 28.0)	29.4 (22.9, 35.9)^	26.5 (24.5, 28.4)^	
Female	22.5 (19.2, 25.8)	28.7 (22.7, 34.8)	26.0 (21.0, 31.1)^	28.6 (26.4, 30.8)^	
Hispanic	28.4 (23.5, 33.4)	36.1 (28.2, 44.0)	38.4 (29.4, 47.3)	35.7 (33.0, 38.4)^	
Non-Hispanic White	17.9 (14.9, 20.9)	17.6 (13.3, 22.0)	22.7 (18.3, 27.0)^	26.3 (24.1, 28.5)^	
Other	18.4 (10.9, 25.9)	22.8 (7.9, 37.7)	22.6 (11.9, 33.2)^	18.2 (15.4, 21.0)^	
Age 18-44	15.6 (12.2, 19.1)	23.7 (17.1, 30.2)	27.1 (20.4, 33.9)^	27.1 (24.9, 29.3)^	
Age 45-64	26.1 (21.9, 30.5)	30.7 (23.7, 37.7)	34.6 (26.9, 42.3)	30.6 (27.9, 33.2)^	
Age 65+	21.5 (17.9, 25.0)	21.5 (14.8, 28.2)	20.4 (14.8, 25.9)^	23.8 (20.9, 26.8)^	
< High School	22.2 (15.6, 28.7)	37.4 (24.1, 50.7)	42.1 (24.6, 59.6)	38.2 (34.0, 42.4)^	
High School Grad	24.6 (18.5, 30.7)	36.0 (25.4, 46.5)	37.5 (24.2, 50.7)	29.1 (25.8, 32.3)^	
Some College	21.0 (17.0, 24.9)	22.1 (15.2, 29.0)	28.3 (21.3, 35.3)^	29.6 (26.6, 32.6)^	
College Grad	13.0 (10.1, 15.9)	18.7 (12.7, 24.7)	20.1 (15.4, 24.9)^	19.5 (17.6, 21.4)^	
<$35,000	24.1 (19.6, 28.5)	32.9 (24.8, 40.9)	35.2 (25.2, 45.3)	33.2 (30.4, 36.0)	
$35,000-$74,999	22.3 (17.2, 27.4)	35.0 (24.7, 45.4)	24.5 (16.4, 32.6)^	29.2 (25.9, 32.5)^	
$75,000 or greater	15.9 (12.2, 19.6)	17.5 (12.0, 22.9)	25.9 (20.7, 31.1)^	24.2 (21.9, 26.5)^	

^ Significant difference between estimate and Healthy People 2030 target

[1] Point estimates were not evaluated for significance against Healthy People 2030 Target, as they were previously evaluated against Healthy People 2020 Target

Health Disparities

Santa Barbara County continues to meet the Healthy People targets for obesity with 27.6% of the adult population reporting obesity compared to the 2030 target of below 36.0%. Though there has been a 6.0% increase in reported obesity since 2016, this difference is not statistically significant. Those with less than a high school education reported obesity the most at 42.1%, and those reporting a college degree reported obesity the least at 20.1%. All demographic groups except for Hispanics, those age 45-64 years old, and those reporting less than some college education were significantly below the HP 2030 target (Figures 3-5). Obesity continues to rise in the lowest and highest income groups with 10% or greater increases since 2016. Those with household incomes between $35K and $75K saw a 10.5% decrease in reported obesity since 2019 (Figure 2).

Most impacted demographic subgroups include those with high school or less education, Hispanics, those with household incomes below $35,000, and those age 45-64 years old (see figures below).

Figure 1. 2022 Percent Reporting Obesity by Demographic Group

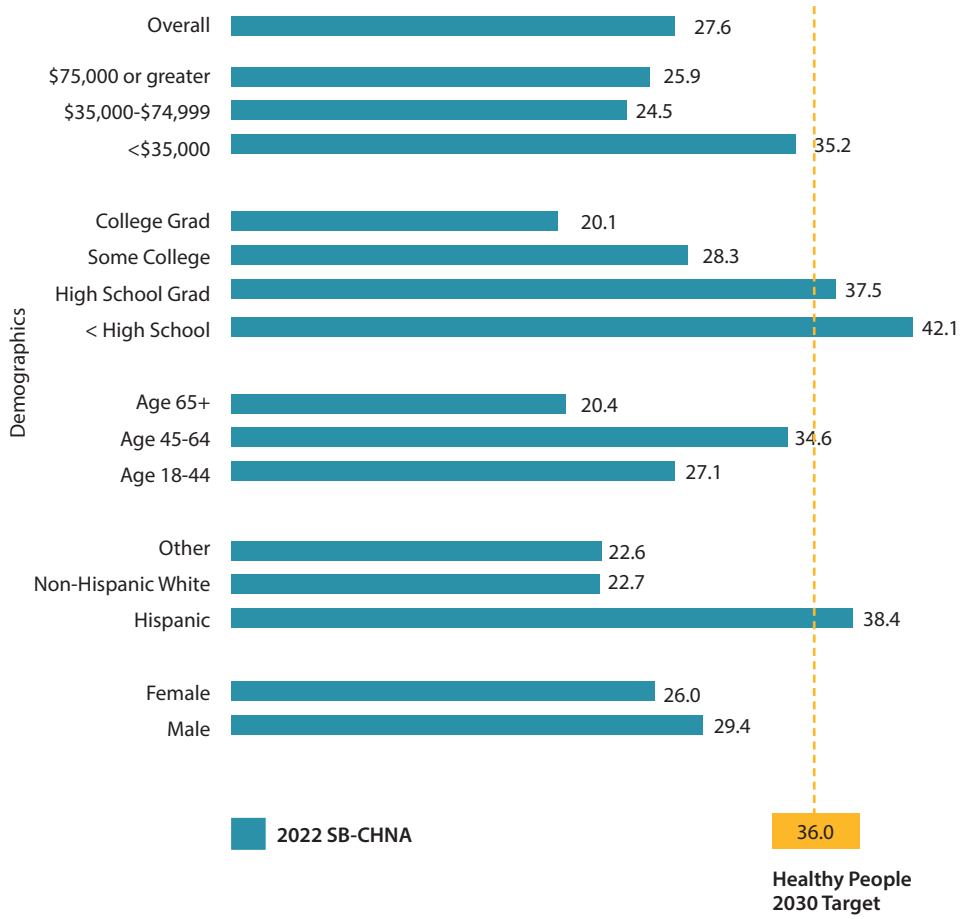


Figure 2. Percentage of Obese Adults by Education in 2016 and 2019, and 2022 with HP 2030 Target

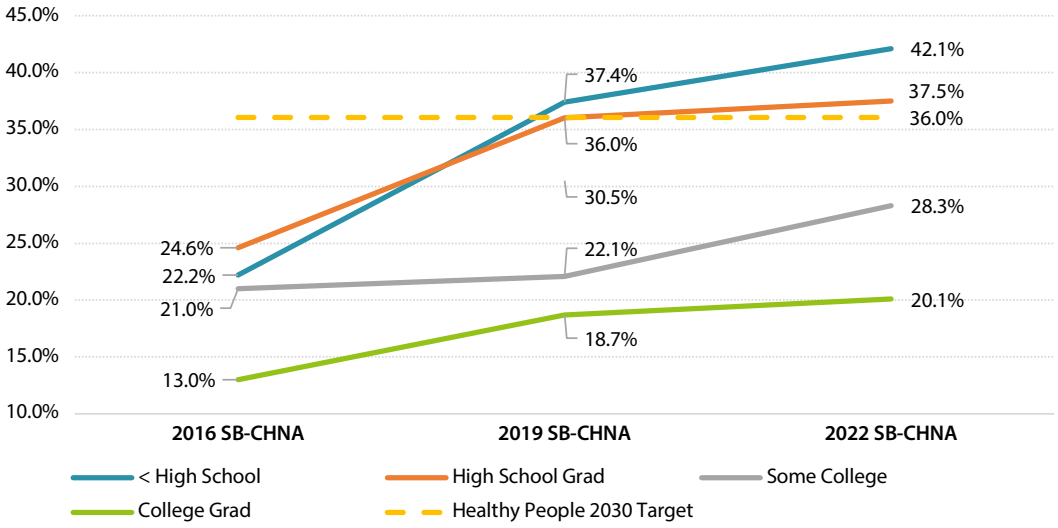


Figure 3. Percentage of Obese Adults by Age in 2016 and 2019, and 2022 with HP 2030 Target

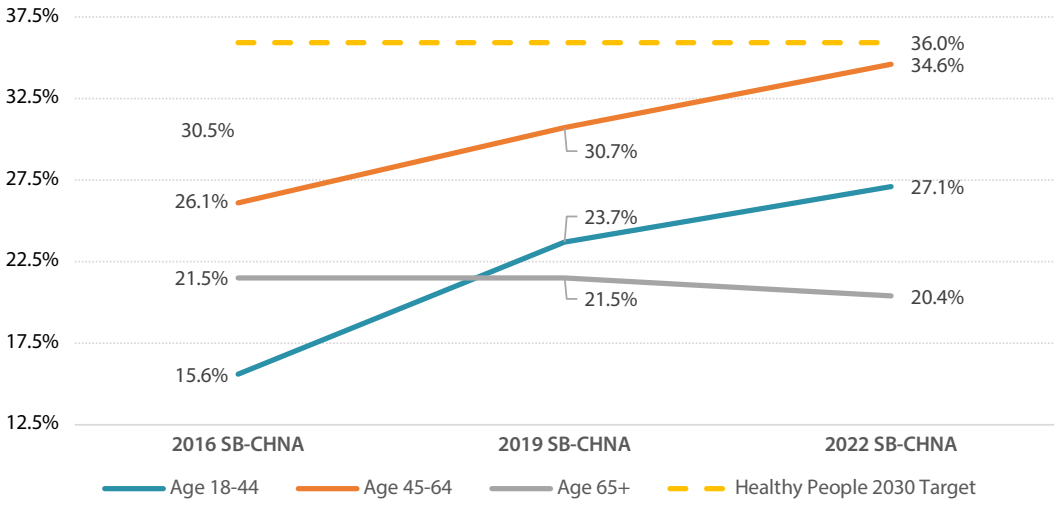


Figure 4. Percentage of Obese Adults by Income in 2016 and 2019, and 2022 with HP 2030 Target

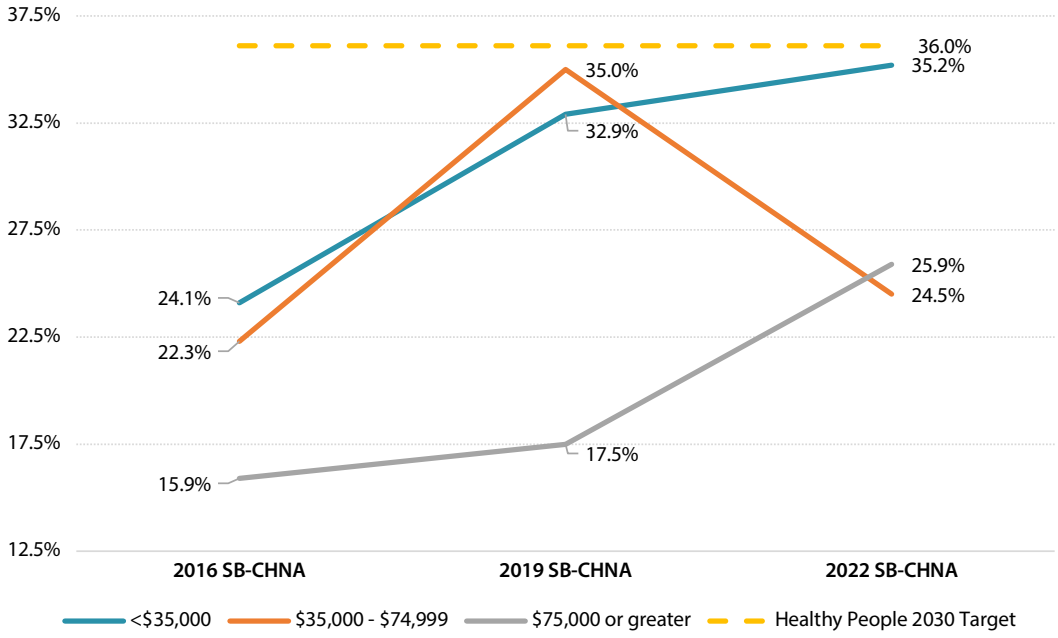
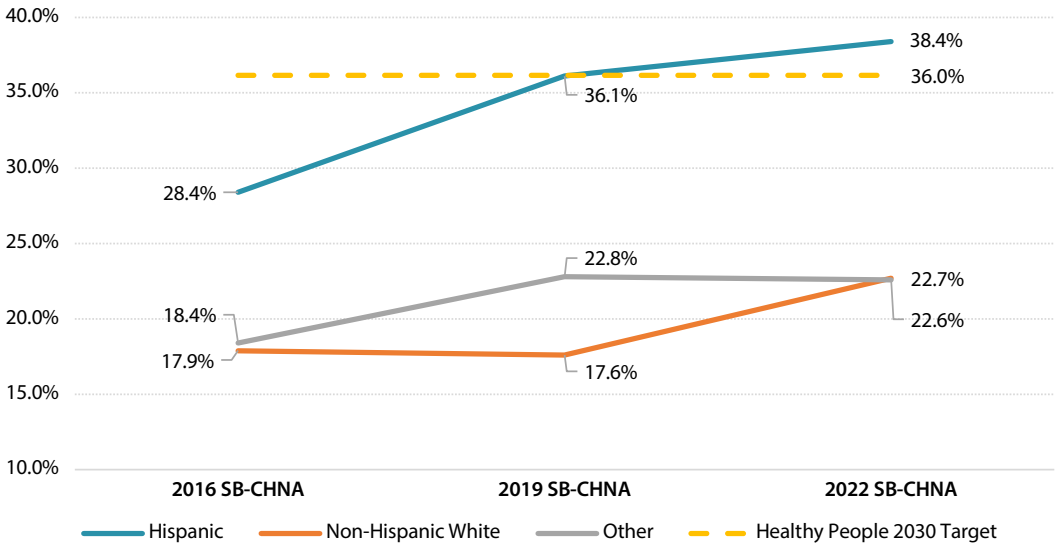


Figure 5. Percentage of Obese Adults by Ethnicity in 2016 and 2019, and 2022 with HP 2030 Target



Factors and Health Outcomes Associated with Obesity

Only diabetes was significantly correlated with increased obesity after adjusting for demographics (age, gender, race/ethnicity, and education level). The odds of reporting obesity were 4.4 (95% CI:1.8, 10.8) times greater for those reporting diabetes compared to those not reporting a history of diabetes. Those with diabetes report obesity at 57.6% compared to the county average of 27.8%.

Findings from the 2022 Santa Barbara County Listening Tour

Through the 2022 Listening Tour, participants shared how obesity impacts quality of life, health outcomes, and access to care. In addition, lack of access to basic resources, such as food and housing, may also contribute to obesity.[4]

Inequitable healthcare

Perceptions and biases can affect the quality of care for people with obesity, leading to a disparity in care provided to these patients. This may stem from assumptions about individuals because they are obese, and it can leave these individuals more susceptible to poorer outcomes, such as a higher chance of being ventilated when hospitalized for COVID-19.

> ***If a patient was obese, their chances of being ventilated was even higher.*** *So it pointed out to, yes, everyone has these predisposed conditions. I remember during the beginning of the pandemic days, clinical staff would say, "Oh, but they have diabetes. Oh, but they're obese." And it would just point to the fact that, well, you can't just point to this obvious disparity between people and say, that that's why, or that's causing [it]. – Hospital Services Worker*

Living Conditions

Living in low-income and low-resourced areas increases the difficulty to access nutrient dense foods and, thus, can lead to a higher susceptibility to obesity and diabetes. Additionally, given the high cost of living in Santa Barbara County, many individuals can barely obtain the minimum necessities of life.

> *So of the indigenous speakers in Mexico, they come primarily from, the ones that I'm seeing, are primarily from Oaxaca and Guerrero. And they live in very subsistence conditions, making just a few dollars a day in Mexico without the opportunity for education. And they have a vast experience of lived experience. But they don't have the ability when I hand them an information sheet to read it or even a consent form. And they often have really limited resources for even having family members to help them read. So that's, I would say the biggest obstacle and then next maybe closely tied one is language. They have a very high rate of diabetes. And this isn't uncommon in populations that are living very subsistence living conditions for most of their life. They come to this country where there's tons of calorie dense foods, and obesity is much more common. And diabetes is much more common. – Physician*

[4] Neff, L. M. (2020). Hidden hunger: food insecurity in the age of coronavirus. The American Journal of Clinical Nutrition, 112(5), 1160-1161.

Conclusion

Obesity can be addressed by enacting policies that support **equitable healthcare and creating programs that make healthier lifestyles more accessible.** There is a need to provide access to culturally and linguistically relevant interpreters to verbally translate important health forms and information. In addition, increasing access to affordable food, healthcare, shelter, and other basic needs can help support a healthy lifestyle and prevent obesity.