



Obesity Disparities in New York State

Over 40% of adults in the United States have obesity.¹ This is a serious condition that increases the risk of diseases such as heart disease, stroke, type 2 diabetes, some cancers, severe respiratory illnesses, and mental health disorders. It is also an expensive condition that results in approximately \$173 billion dollars in national health care expenses each year.²

The causes of obesity are complex and include eating patterns, physical activity levels, and sleep routines. Genetics, certain medical conditions, and medications can also contribute. At a community level, factors such as economic stability, access to quality education, the availability of nutritious foods, and opportunities for physical activity also influence the risk of obesity.³ Structural racism perpetuates racial disparities in obesity outcomes.⁴ Historical practices, norms, rules, and laws have created an environment where, compared to White communities, Black and Hispanic communities generally have worse access to healthy foods, physical recreation, education, and economic opportunities.⁵ Throughout the United States and New York State (NYS), obesity is more common among people who are Black or Hispanic, have less education, have lower income, and/or live in rural areas.^{6,7}

The purpose of this report is to increase awareness and understanding of obesity disparities in NYS. It presents data from the Behavioral Risk Factor Surveillance System (BRFSS), which is an annual telephone survey of adults developed by the Centers for Disease Control and Prevention and administered by the NYS Department of Health. New York adults surveyed through the BRFSS report their height and weight, which are used to calculate Body-Mass Index (BMI) and determine obesity (BMI greater than or equal to 30). Researchers combined and weighted six years of survey data (2016-2021) and then calculated the prevalence of obesity for 11 geographic regions in NYS. They created obesity categories by dividing the regional rates into six percentiles and then created maps to display the prevalence of obesity by region, race and ethnicity, education, and income. Prevalence rates are reported in the Appendix (see page 7).

Map 1 shows the estimated prevalence of obesity in adults for all 11 regions (see page 3). Regions with the lowest obesity prevalence (less than or equal to 29.66%) are Mid-Hudson, Long Island, and New York City. Regions with higher obesity prevalence (29.67% to 33.28%) are Southern Tier, Capital District, Western Region, and Mohawk Valley. Regions with the highest obesity prevalence (greater than or equal to 33.29%) are Tug Hill Seaway, North Country, Central NY, and Finger Lakes.

Maps 2a-2d show that obesity affects some racial/ethnic groups more than others (see page 4). Among people who are Black, almost all regions fall into the two highest obesity prevalence categories (10 out of 11 regions). Among people who are Hispanic or White, only 3 regions fall into the highest categories. Among people in other racial/ethnic groups, only 1 region is in the highest obesity prevalence category.

Maps 3a-3d show that level of educational attainment is associated with the prevalence of obesity (see page 5). Among people with a high school degree or less, most regions fall into the two highest obesity prevalence categories (7 out of 11 regions). Among people with more than a high school degree (but less than a college degree), only 4 regions fall into the highest categories. Among people with a college degree, no regions are in the highest obesity prevalence categories.

Maps 4a-4d show level of income also is associated with the prevalence of obesity (see page 6). Among people with lower household incomes (less than \$25,000 and less than \$50,000 per year), most regions fall into the highest obesity prevalence categories (7 out of 11 regions). Among people with a higher household income (\$50,000 or more), only 1 region falls into the highest obesity prevalence category.

The maps in this report demonstrate a clear relationship between obesity and household income, race, and education throughout the state. The maps highlight the need for 1) state and regional policies and programs that support healthy food and beverage choices and safe and accessible physical activity opportunities and 2) increased efforts to dismantle the structural factors contributing to health disparities and inequities. The [NYS Prevention Agenda 2019-2024](#) guides state and local efforts to improve the health of all New Yorkers and promote equity in all populations who experience disparities.

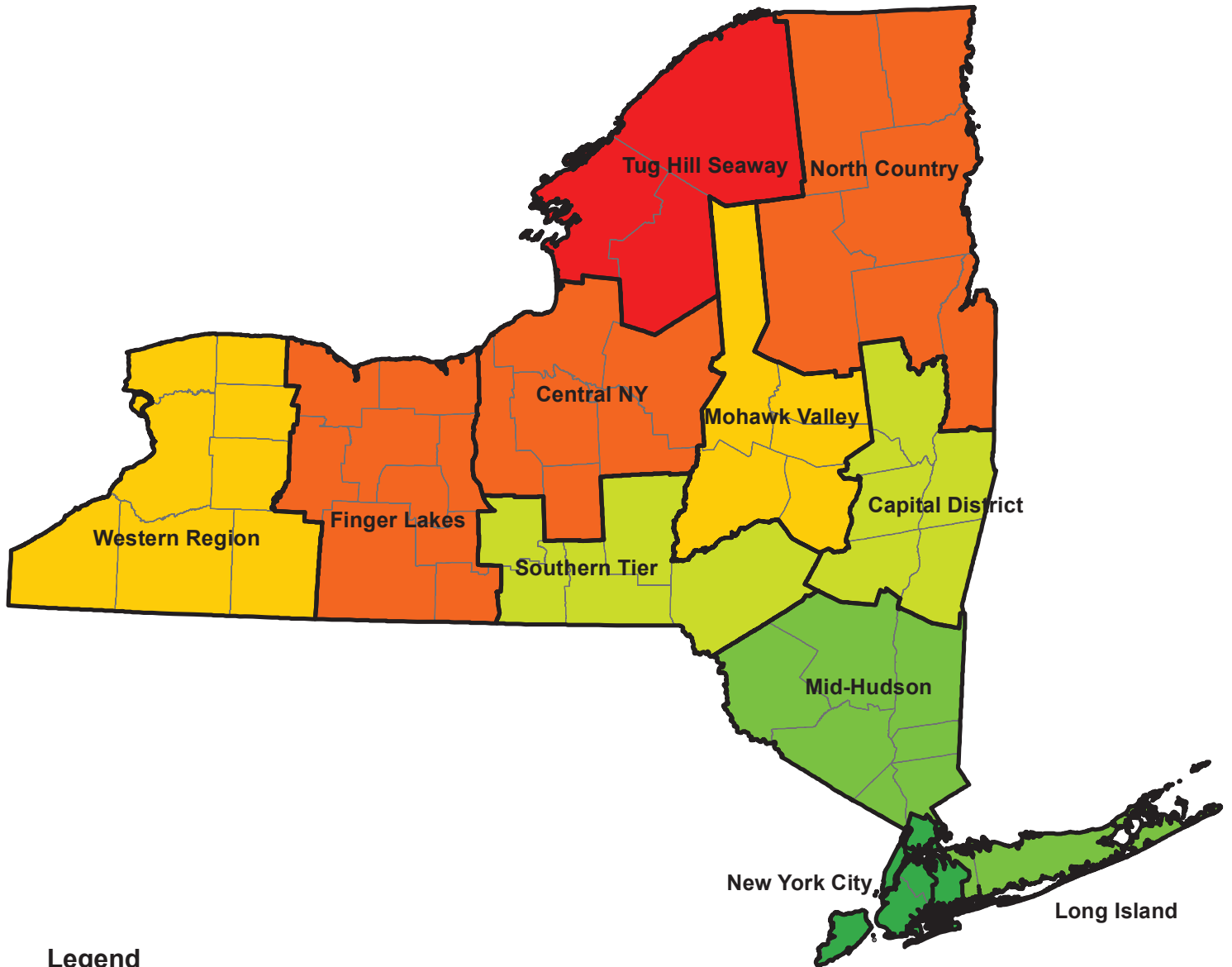
References

1. 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. <https://stacks.cdc.gov/view/cdc/106273>.
2. Ward ZJ, Bleich SN, Long MW, Gortmaker SL. (2021). Association of body mass index with health care expenditures in the United States by age and sex. PLoS ONE 16(3):e0247307. <https://doi.org/10.1371/journal.pone.0247307>.
3. Centers for Disease Control and Prevention. Causes of Obesity. <https://www.cdc.gov/obesity/basics/causes.html>
4. Mackey ER, Burton ER, Cadieux A, Getzoff E, Santos M, Ward W, Beck AR. (2022). Addressing structural racism is critical for ameliorating the childhood obesity epidemic in black youth. *Childhood Obesity*, 18(2). <https://doi.org/10.1089/chi.2021.0153>
5. Bleich, SN and Ard, JD. (2021) COVID-19, obesity, and structural racism: understanding the past and identifying solutions for the future. <https://doi.org/10.1016/j.cmet.2021.01.010>
6. *Adult Obesity Prevalence Maps*. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity, and Obesity. 27 September 2022.
7. *Overweight and Obesity, 2020*. New York State Behavioral Risk Factor Surveillance System (BRFSS).

For more information, contact the Bureau of Chronic Disease Evaluation and Research, Division of Chronic Disease Prevention, New York State Department of Health, 518-473-0673, BRFSS@health.ny.gov.

Prevalence of Obesity among NYS Adults, by Region, NYS BRFSS 2016-2021

Map 1. NYS Adults



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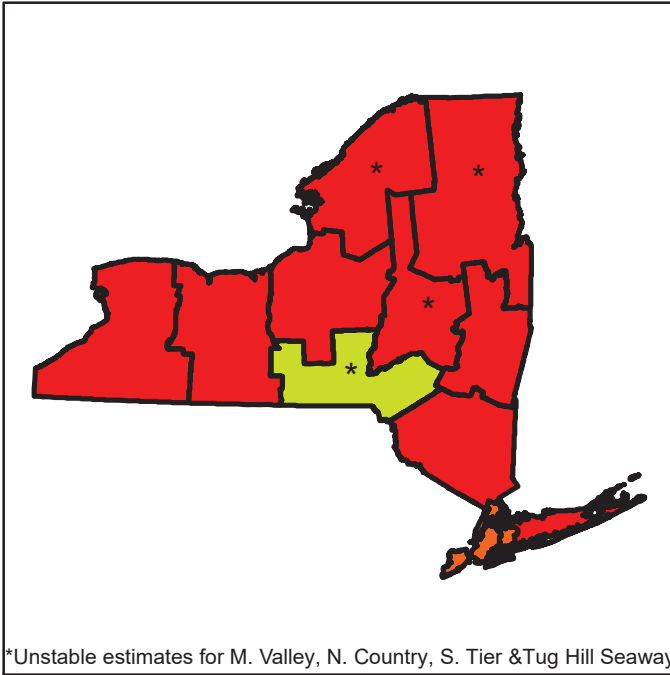
Percent with Obesity

 ≤ 25.30%	 31.90 - 33.28%
 25.31 - 29.66%	 33.29 - 34.39%
 29.67 - 31.89%	 ≥ 34.40%

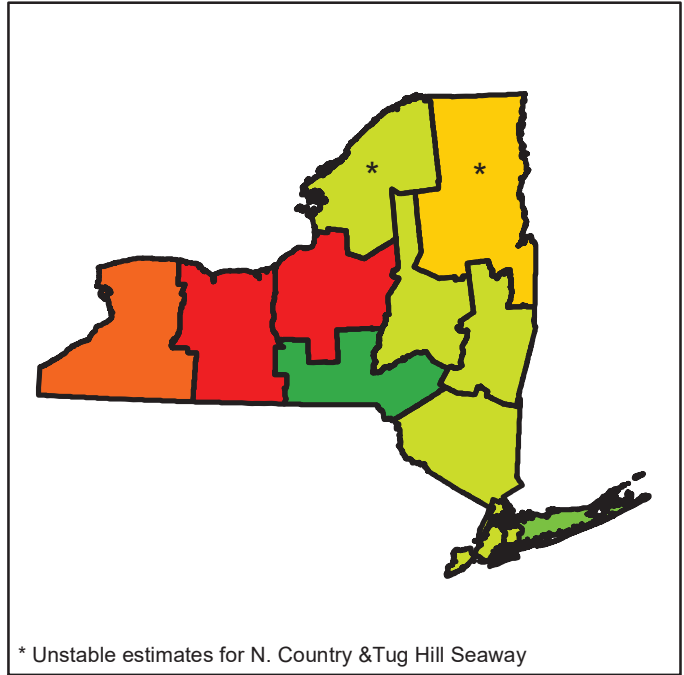
Cut points determined by dividing regional rates into 6 percentiles

**Prevalence of Obesity among NYS Adults, by Region and Race/Ethnicity,
NYS BRFSS 2016-2021**

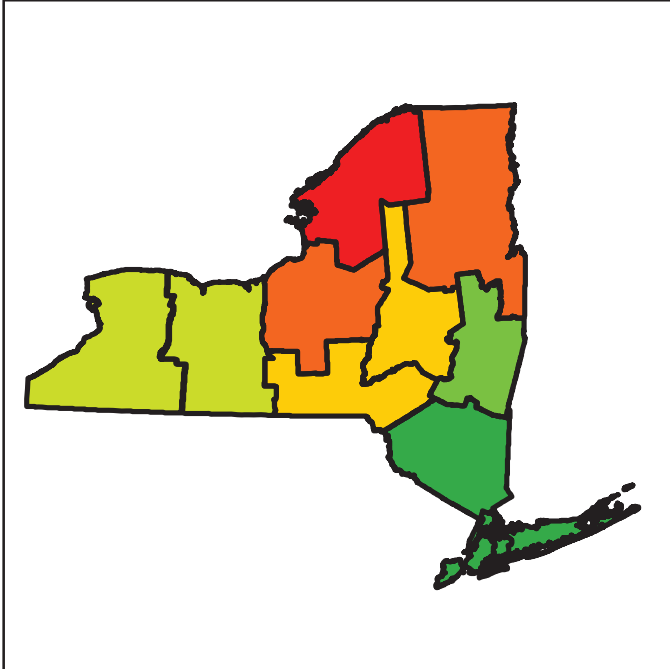
Map 2a. Black, Non-Hispanic



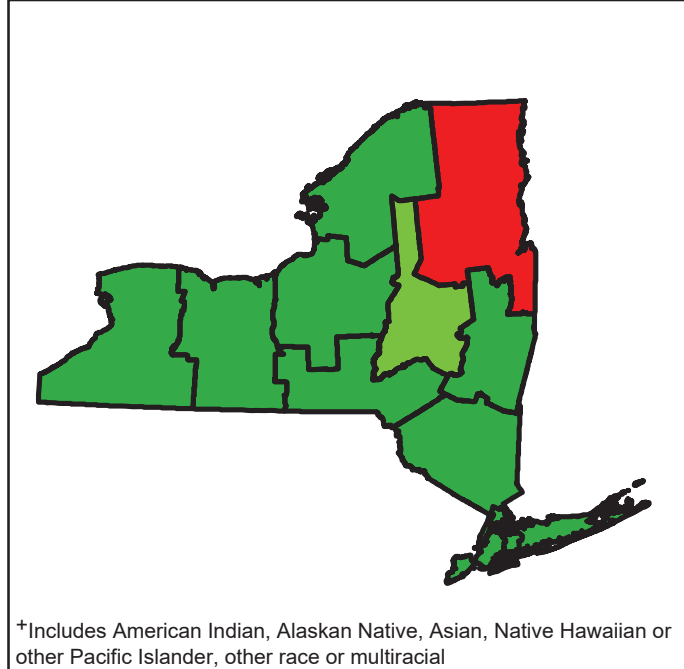
Map 2b. Hispanic



Map 2c. White, Non-Hispanic

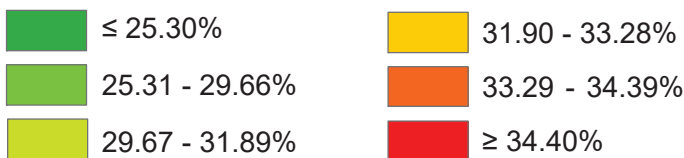


Map 2d. Other, Multi-Racial, Non-Hispanic⁺



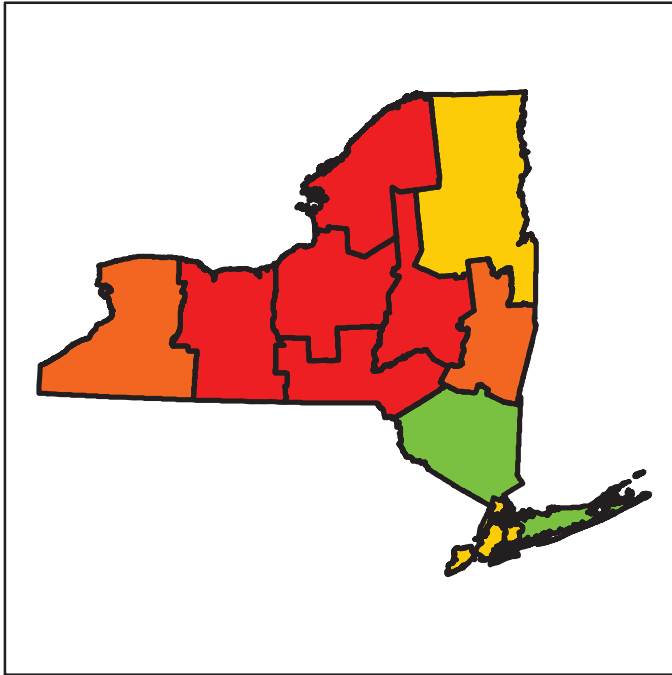
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Percent with Obesity

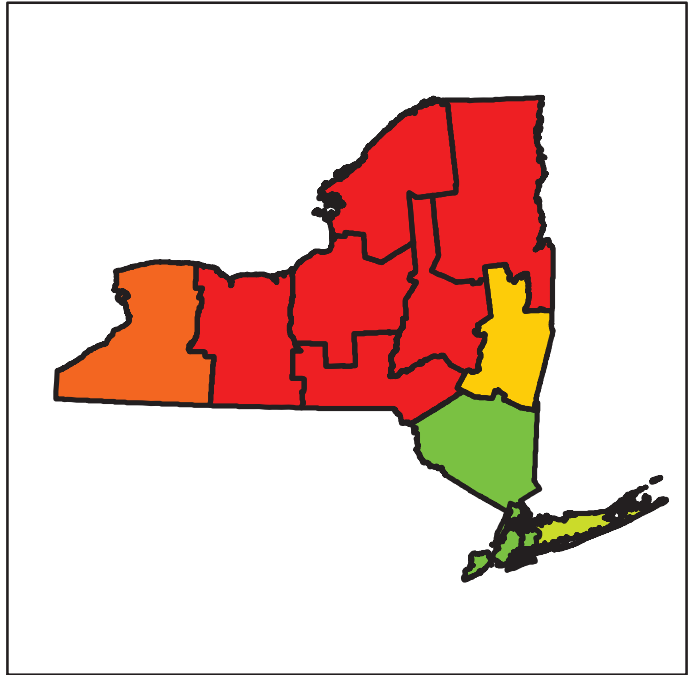


Prevalence of Obesity among NYS Adults, by Region and Education, NYS BRFSS 2016-2021

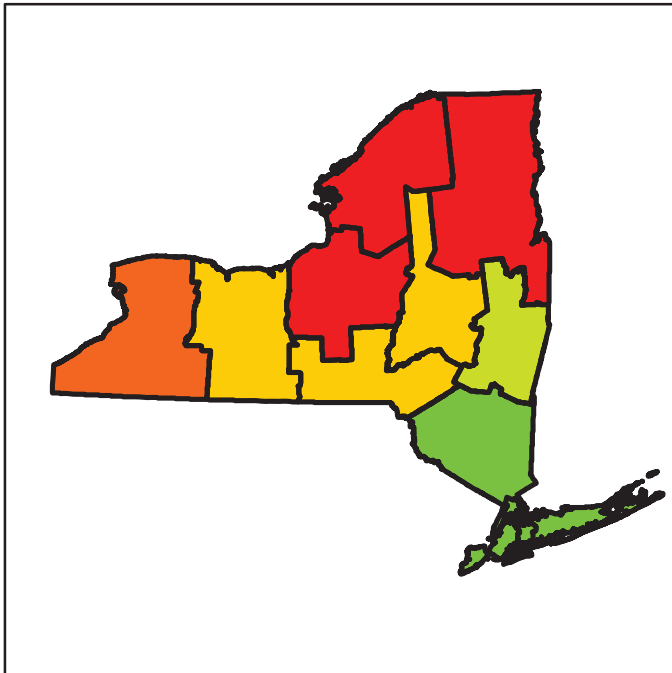
Map 3a. Less than High School



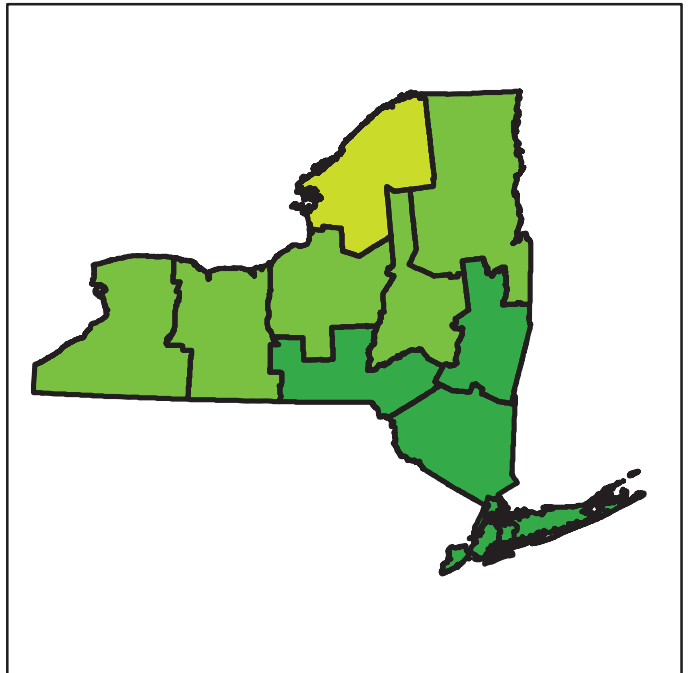
Map 3b. High School or GED



Map 3c. Some Post-High School

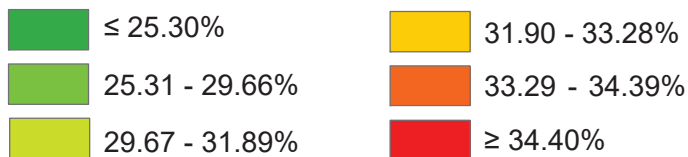


Map 3d. College Graduate



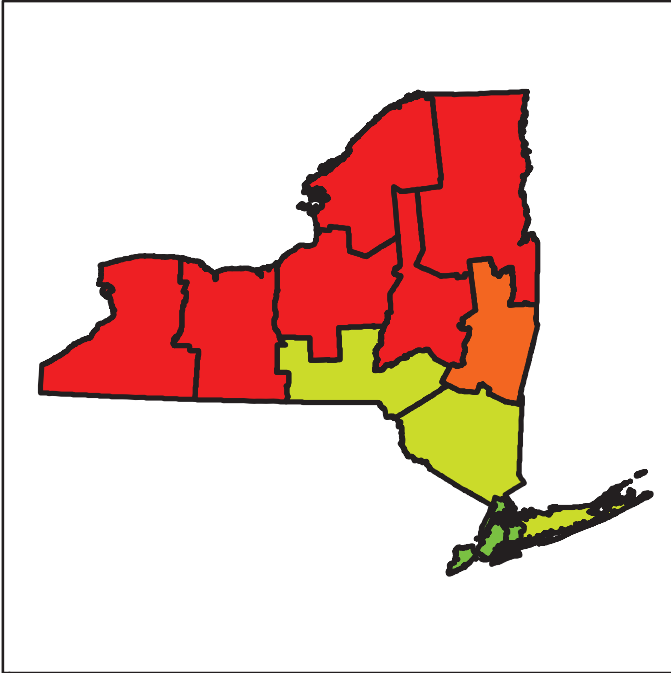
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Percent with Obesity

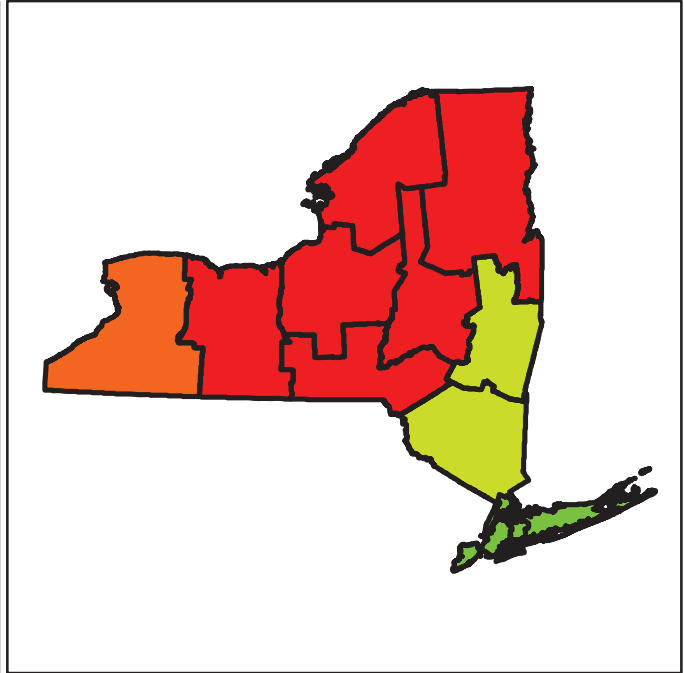


**Prevalence of Obesity among NYS Adults, by Region and Income,
NYS BRFSS 2016-2021**

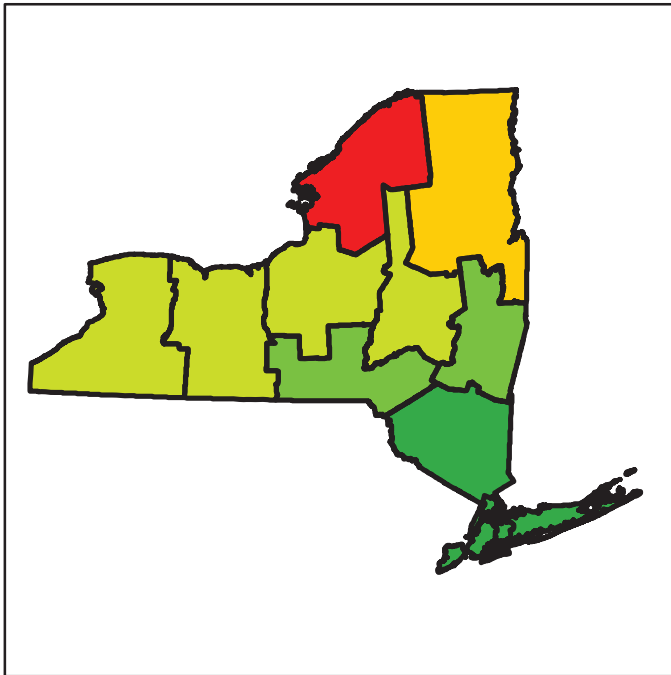
Map 4a. Less than \$25,000



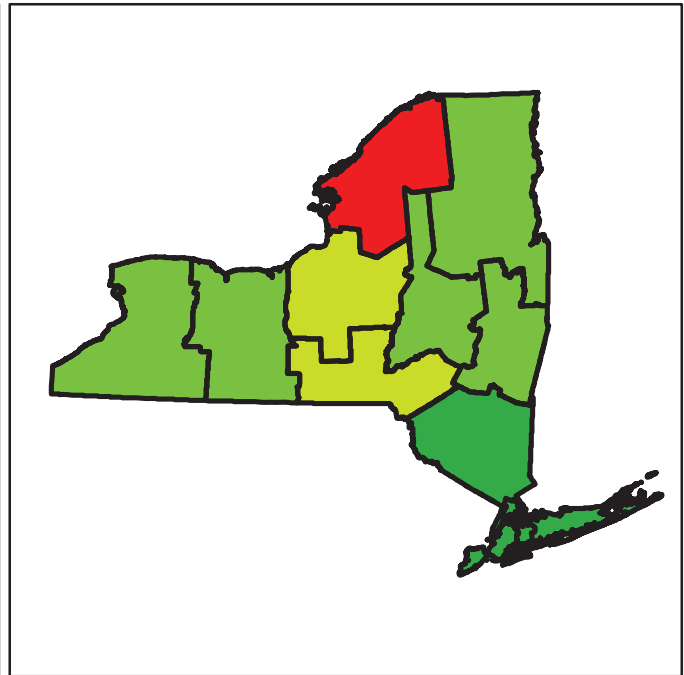
Map 4b. \$25,000-\$49,999



Map 4c. \$50,000 or more

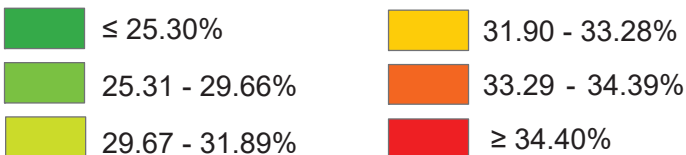


Map 4d. Missing income



Legend

Percent with Obesity



Appendix. Prevalence of Obesity among NYS Adults, NYS BRFSS 2016-2021

Region	Overall Obesity Rate (%)	Race/Ethnicity (%)				Education (%)				Income (%)				Counties Included in Regions
		White, Non-Hispanic (NH)	Black, NH	Hispanic	Other, Multi NH ⁺	Less than HS	HS or GED	Some post-HS	College Grad	Less than \$25,000	\$25-49,999	\$50,000 or more	Missing	
NY Statewide	27.2	26.6	34.9	30.9	15.0	32.7	30.9	28.9	20.9	31.8	30.0	25.1	24.3	--
Capital District	29.7	29.6	36.9	29.9	22.7	33.4	32.6	30.8	25.2	33.7	31.7	28.6	26.8	Albany, Columbia, Greene, Rensselaer, Saratoga, Schenectady
Central New York	33.6	33.7	40.6	36.1	18.5	39.8	36.4	35.3	26.4	36.4	37.0	31.5	31.5	Cayuga, Cortland, Oneida, Onondaga, Oswego, Madison
Finger Lakes	33.3	31.8	48.0	43.3	18.3	34.7	38.6	32.2	28.6	38.3	35.4	31.5	29.4	Chemung, Livingston, Monroe, Ontario, Schuyler, Steuben, Seneca, Wayne, Yates
Long Island	25.3	24.4	34.8	27.1	16.5	29.1	29.7	25.6	21.4	30.7	26.5	25.1	21.2	Nassau, Suffolk
Mid-Hudson	25.5	23.2	35.7	30.0	16.7	29.7	27.3	28.9	20.7	30.5	29.8	24.5	20.9	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester
Mohawk Valley	32.8	33.1	37.4*	30.4	25.4	37.4	35.0	33.1	26.2	35.8	34.4	31.8	28.6	Fulton, Herkimer, Montgomery, Otsego, Schoharie
New York City	24.4	19.0	33.3	31.4	13.6	32.7	27.4	26.1	17.5	29.6	26.5	20.7	23.4	Bronx, Kings, New York, Queens, Richmond
North Country	34.4	33.8	57.8*	32.0*	34.8	32.3	39.9	35.5	26.1	35.4	40.9	32.2	29.5	Clinton, Essex, Franklin, Hamilton, Washington, Warren
Southern Tier	31.0	32.5	31.8*	18.8	17.0	35.0	35.9	31.9	22.3	31.7	34.6	29.0	29.9	Broome, Chenango, Delaware, Tioga, Tompkins
Tug Hill Seaway	36.2	37.0	37.7*	30.3*	23.1	36.5	37.0	38.8	30.2	36.7	37.7	35.0	35.9	Jefferson, Lewis, St. Lawrence
Western Region	31.9	31.8	39.4	34.0	18.1	34.2	34.2	33.4	26.3	36.7	33.7	30.2	27.2	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming

*Estimates are unstable when the confidence interval is greater than or equal to 20 or the relative standard error is greater than 0.30.

⁺Includes American Indian, Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, other race or multiracial