



# A Call to Reconceptualize Obesity Treatment in Service of Health Equity: Review of Evidence and Future Directions

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## Abstract

**Purpose of Review** Rates of obesity and associated comorbidities are higher among Black and Latino adults compared to white adults. We sought to provide an overview of both structural and individual factors contributing to obesity inequities and synthesize available evidence regarding treatment outcomes in Black and Latino adults, with an eye towards informing future directions.

**Recent Findings** Obesity disparities are influenced by myriad systemic issues, yet the vast majority of interventions target individual-level factors only, and most behavioral treatments fail to target drivers beyond eating and physical activity. Extant treatments are not equally accessible, affordable, or effective among Black and Latino adults compared with white counterparts.

**Summary** Asset-based, culturally relevant interventions that target the root causes of obesity and address intersectional stress—designed in partnership with intended beneficiaries—are urgently needed. Treatment trials must improve enrollment of Black and Latino adults and report treatment outcomes by race and ethnicity.

**Keywords** Obesity · Health equity · Obesity treatment · Race · Ethnicity · Black · Latino

## Introduction

Significant racial and ethnic disparities exist in obesity and associated comorbidities. Of the approximately 40% of adults with obesity in the USA, rates are higher among Black and

Latino adults compared to whites, with overall rates continuing to increase in recent years [1, 2]. There also appears to be differences in obesity risk by race/ethnicity and sexual orientation. For example, Latino lesbian women have higher odds of obesity and diabetes whereas Black bisexual women have higher odds of obesity compared to their white counterparts [3]. These data underscore the importance of considering intersectionality—or the ways in which different aspects of a person’s identity such as race, class, gender, and weight can create overlapping forms of discrimination or disadvantage [4].

Obesity is linked to numerous other chronic diseases, infertility, and poor mental health secondary to weight stigma [5, 6]. In addition, individuals with obesity diagnosed with COVID-19 are also more likely to experience greater COVID-19 severity than those without obesity [7]. Stark disparities exist in risk for obesity-related comorbidities as well—for instance, data indicate rates of both cardiovascular disease and metabolic syndrome are higher in Black adults compared to white adults [8, 9], with some research noting higher rates among Black women than white women [9].

Modest weight losses of 5 to 10% are reliably associated with improvements in obesity-related comorbidities [5, 10]. However, extant obesity treatments have largely failed to meet

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Author note: We capitalize Black to increase awareness about the marginalization of Black identity. Given that capitalizing the word “white” may support white supremacy, we also use lower case while referring to “white” (see <https://www.cjr.org/analysis/capital-b-black-styleguide.php> for more information).

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the needs of Black and Latino adults [11, 12]. Indeed, novel and effective interventions to promote equitable treatment access and benefit are urgently needed for Black and Latino adults. In this review, we seek to inform future work in this area by first providing an overview of structural as well as individual-level factors contributing to obesity in these populations. Next, we will synthesize the current literature regarding treatment effects of behavioral, pharmacological, and surgical approaches to obesity treatment in Black and Latino adults. Finally, we highlight significant areas of future study and call on researchers to utilize an asset-based framework and design programming that addresses root causes of obesity in addition to individual factors to more effectively mitigate obesity-related health disparities experienced by Black and Latino adults.

## Factors Influencing Obesity

Individual-level factors are often the focus when drivers of obesity disparities are considered. However, race and ethnicity are social constructs grounded in systemic racism and it is impossible to discuss obesity-related health inequities without considering structural and environmental factors. Indeed, structural factors affect all downstream variables—including individual level—that influence obesity risk and intervention for Black and Latino individuals.

### Structural-Level Factors

#### Food Environment, Neighborhoods, and Targeted Advertising

Environmental factors such as housing, transportation, and neighborhood design (e.g., supermarkets, parks, and recreational facilities) all contribute to racial/ethnic disparities in obesity prevalence. Indeed, the distribution of food resources, particularly in racial/ethnic minority neighborhoods, are prone to be more “obesogenic,” with fewer supermarkets and more fast-food and liquor store options [13]. Healthier options are limited and typically of lower quality, more expensive, or not culturally well-known [13, 14]. Importantly, similar findings on the accessibility, availability, and overall cost of healthier food options have been reported for rural environments [15, 16]. Furthermore, food insecurity is positively associated with obesity risk, with stronger associations for Black and Latino adults [17, 18]. In addition, many Black and Latino adults live in low-income neighborhoods that lack the necessary resources, such as sidewalks, recreation facilities, and parks, that are conducive to participating in routine physical activity [19]. Moreover, when resources are available, Latino women in particular express safety concerns about their neighborhoods [20].

Targeted advertisements also contribute to obesity disparities. Like the tobacco industry, the food industry promotes behaviors that contribute to poor health outcomes among Black and Latino adults [21]. Historically, food companies intentionally focus advertisements for low nutrient foods, such as fast-foods and sugar-sweetened beverages towards Black and Latino communities [21], which encourages increased consumption of energy dense, low nutrient foods that contribute to obesity. For example, incorporating known Black and brown actors, athletes, or musicians into fast-food/beverage commercials or rebranding high-sugar beverages and salty snacks to attract Latino individuals (e.g., Mandarin Tangerine Kool-Aid and Lays Limón chips) [22•]. Additionally, personalized digital advertising based on information (e.g., shopping history and location) gathered from the consumers browser further exposes Black and Latino consumers to unhealthy food and drink advertisements [22•].

### Obesity Training and Cultural Competency in Medical Education Programs

Given the American Medical Association (AMA) classified obesity as a chronic disease almost a decade ago, it is alarming that many medical schools provide minimal obesity management education to students [23•]. A recent study found a mere 10% of medical education faculty report their students are prepared to treat patients with obesity upon graduating [23•]. The inadequate education and training within medical school results in physicians that are unable to effectively treat patients with obesity. For example, many providers report feeling inept to treat patients with obesity [24] and are not comfortable having conversations about obesity-related behavioral factors with their patients from marginalized groups [25]. However, evidence suggests patients, specifically marginalized populations, are interested in talking about their weight with their provider [26].

Although evidence is somewhat limited in this area, extant data suggest that trainings in motivational interviewing or the 5 A’s (Ask, Advise, Assess, Assist, Arrange), coupled with an experiential learning component, might be effective in improving physician communication skills related to obesity [27]. Parallel to obesity training, the Association of American Medical Colleges developed the Tool for Assessing Cultural Competence Training (TACCT)—a tool created to self-evaluate cultural competency training curriculum in medical school [28••]. While evidence suggests cultural competency training is beneficial for improving overall patient-provider communication and care, there is not a universal consensus on the correct approach (e.g., implementation and evaluation), which leads to inconsistencies and differences in outcomes [28••]. Lack of obesity training compounded with differences in cultural competency training provides missed opportunities for the provider to build rapport and sensitively discuss obesity management options with their patients.

## Stigma and Bias in Obesity Care

Weight stigma (weightism), both implicit and explicit, is prevalent among healthcare professionals [29] and adversely impacts the health of persons with obesity. The prevalence of weight stigma ranges from 19.2 to 41.8% depending on obesity class [6•]. Weight stigma is correlated with several factors such as greater suicidal ideation, higher weight loss goals, increased body dissatisfaction, decreased physical activity, and maladaptive eating [6•]. Weight stigma also impacts obesity treatment outcomes. For example, one study found 20% of participants who discussed their weight and did not feel judged by their primary care provider achieved > 10% weight loss relative to only 14% of participants who did feel judged [30]. This same study reported feeling judged was linked to weight loss attempts but not weight loss. Other research has noted racial differences in the coping behaviors associated with weight stigma, with Latino women and Black men reporting higher rates of maladaptive eating to cope relative to Black women and white men [6•].

In addition to weight stigma, racial bias is also prevalent within the medical community at all levels and across specialties [31]. Regardless of whether racial biases present as unintentional (implicit) or intentional (explicit), such biases result in negative consequences: poor provider-patient communication, assumptions of inferiority among Black and Latino patients compared to white patients, and accusations of non-compliance towards Black and Latino patients [32, 33]. Evidence suggests that healthcare professionals' implicit bias towards Black and Latino patients is equivalent to that reported by the public as a whole [31]. While medical training encourages a patient-centered approach, bias has been shown to negatively impact the benefits of using this technique within the Black community [34]. Biases, beliefs, and attitudes about a group of people ultimately lead to discrimination and unfair treatment, which causes and perpetuates health inequities among Black and Latino patients. In fact, a recent study showed 54.6% Black and 21.9% of Latino adults experienced racial discrimination in a healthcare setting [35••]. The prevalence of stigma, bias, and discrimination among the healthcare team underscores the importance of comprehensive reform of medical training to help mitigate bias in healthcare settings.

## Health Insurance

Health insurance companies rarely cover the cost of evidenced-based obesity treatment without comorbidities [36, 37]. Body mass index (BMI) is also the primary indicator of health used in current obesity treatment guidelines [10] which inform insurance policies, yet data indicate that BMI is a poor indicator of overall metabolic health [38]. In addition, marginalized racial/ethnic groups are more likely to be uninsured than whites [39••], and Latinos are more likely to be uninsured compared

to the general population, which increases the likelihood of not receiving preventative care [40, 41].

Of note, even with health insurance coverage, evidence-based care is not consistently accessible or affordable [42]. Over the years, coverage for obesity treatment has increased considerably; however, there are several restrictions, such as lifetime maximums, select plan privileges (e.g., pharmacotherapy on select plans only), and extremely high co-pays [42], making effective obesity treatment out of reach for many Black and Latino patients. Moreover, coverage guidelines vary from state to state, which could be due to the differences in their handbooks' language (e.g., obesity is listed as a disease in some states and not in others) [42]. Further, the cost of medications to treat obesity can vary based on disease type. For example, in the USA, the cost of semaglutide [43], an injectable glucagon-like peptide-1, is almost \$500 higher per month for treating obesity compared to treating diabetes (\$1300) [44], which is unaffordable for the average person.

## Policies

Many government entities have developed initiatives (e.g., Women, Infants and Children; WIC, Supplemental Nutrition Assistance Program) to help reduce excess weight gain by providing nutritious foods and dietary guidance. For instance, WIC participants have better diet quality and consume more nutrient-dense foods both during and after leaving the program [45, 46]. Additionally, some states developed tax systems that discourage the purchase of unhealthy beverages and fast food. Although research is mixed, this tax approach has successfully reduced the consumption of unhealthy beverages and fast-food purchases in some states [47]. Other research has noted the potential benefit of providing health warnings on sugar-sweetened beverages. While more research is needed, several field-based studies have found a positive association between health warnings and decreased sugary beverage purchases [48]. Importantly, taxation and health warning labels do not account for convenience, preferences, or cultural norms, which could all influence the decision to purchase fast-food and sugary beverages that contribute to weight gain and obesity.

## Systemic Racism

All of the aforementioned structural factors are rooted in systemic racism. Racism is a system designed to disadvantage people based on their race. In the USA, racism is intricately woven into all facets of life including school, work, healthcare, neighborhoods, food availability, and access. This is made evident by redlining, historical disinvestment, racially targeted food marketing, food deserts/swamps, and fat phobia—which dates to the transatlantic slave trade and

the desire to denigrate and demoralize Black bodies, while affirming whiteness [49••]. As a whole, Black and brown people living in the USA do not have the privilege of living the American Dream because they are tasked with navigating a white system of oppression that was built on the backs of their ancestors—yet designed to disadvantage them.

## Individual-Level Factors

### SES and Obesity

Socioeconomic status (SES) is a combined measure of one's education, income, and occupation [50••]—all of which are influenced by systemic racism [49••]. While Black and Latino adults make up 31.9% of the total population, they account for over 50% of those residing in poverty [51]. Additionally, Black and Latino adults are less likely to receive a bachelor's degree compared to non-Latino white adults and their median household income is over \$20,000 less [52]. While the relationship between SES and obesity outcomes is complex, low SES contributes to health disparities through shortage of resources, food insecurity, decreased physical activity, lack of access, affordability, and increased consumption of high-calorie, highly processed, nutrient deficient meals [50••]. Moreover, there is mounting evidence regarding the behavioral, metabolic, and hormonal effects of lower subjective social status (SSS) [53–56], which might influence obesity inequities among marginalized populations such as Black and Latino adults.

### Psychosocial Factors

A growing body of literature suggests psychosocial factors such as stress, racial discrimination, weight discrimination, depression, anxiety, and maladaptive eating behaviors are similarly pertinent to obesity prevention and treatment as biological and environmental factors [50••]. The association between stress and obesity is multifactorial in that stress causes changes to the body behaviorally, physiologically, and psychologically [57•]. Black and Latino adults are exposed to both everyday stressors and race-related stress or racial discrimination [58••]. Racial discrimination has been linked to obesity and obesity treatment response [59, 60•, 61]. Similarly, weight discrimination is one of the most reported forms of discrimination [6•] and disparities exist, with the highest rate among women. In addition to healthcare settings, weight discrimination is prevalent among family members, schools, and within the workplace [6•]. Some Latino adults must also navigate dietary acculturation and acculturative stress [62, 63] associated with relocating to a new country and being submerged in a different belief system. Research suggests acculturation is associated with behavior changes and obesity in Latino adults [64].

Another psychosocial factor that influences obesity risk is maladaptive eating behaviors such as binge eating.

Historically, Black and Latina women were erroneously thought to be immune to disordered eating; however, the prevalence of binge eating among Black women with obesity is elevated with rates as high as 36% [65••]. In addition, binge eating and binge eating disorder (BED) are common among Latino adolescents and adults, and BED is associated with higher BMI and higher frequency of binge eating episodes in Black adults compared to white adults [66, 67]. Binge eating is often used to cope with depression and negative feelings related to experiences like trauma, abuse, discrimination, or body dissatisfaction [65••]. Of note, Black and Latina women rarely receive treatment for binge eating [65••, 68], which puts them at greater risk for continued weight gain.

Finally, body image is an inimitable stressor for Black women residing in the USA. In general, the Black community is more accepting of larger bodies compared to other races; however, living in a society that praises a westernized thin body ideal is experienced as stressful and paradoxical at times [69, 70]. Research among Latinos is mixed, but many Latina women prefer and are interested in a larger body type [71]. Of note, acculturative stress has a positive association with body dissatisfaction in Latina women [72•]. These body preferences, coupled with cultural norms, might contribute to obesity risk among some Black and Latina women. At the same time, recent evidence suggests that some Black women experience body dissatisfaction, and that body appreciation partially mediated the association between BMI and eating behaviors and attitudes [73•]. Indeed, promoting body positivity among Black and Latino adults at all sizes is important, while also encouraging behaviors that support overall health.

Black and Latino adults sit at the intersection of many of these factors, thus exacerbating obesity risk in these populations. Scholars have long called for researchers to examine health outcomes using an intersectional lens [74, 75] to capture the nuances of living as a minority with intersecting identities that are continually influenced by both individual and structural factors. For example, Black and Latina women in particular sit at the intersection of both marginalized race and gender identities—which means we must acknowledge “gendered racism” [76]. Further, for Black and Latina women living in larger bodies, we must also recognize ways in which “weightism” converges with gendered racism to fully understand the mechanisms that contribute to obesity within these populations.

## Obesity Interventions

Despite myriad structural influences on obesity, most interventions focus solely on individual-level factors. Moreover, current evidence-based treatment options available for obesity are not equally accessible or effective for Black and Latino adults.



## Behavioral Lifestyle Interventions

Behavioral lifestyle intervention (BLI) is the first-line treatment approach for adult obesity. Guidelines recommend a high-intensity ( $\geq 14$  sessions in 6 months) comprehensive BLI [10, 77], which is typically characterized by a low-calorie heart-healthy diet, increased physical activity, and behavioral therapy [78•]. Such programs promote weight losses of 5 to 11% and associated improvements in cardiometabolic risk factors and quality of life are sustained for 2 to 8 years [77, 78•]. However, many studies investigating the efficacy of BLIs have failed to enroll adequate numbers of Black or Latino adults or account for race in statistical analyses [11, 66]. Moreover, there is a paucity of research on BLIs designed specifically for these historically excluded populations.

In a recent review, Goode et al. found only 10 of 23 randomized controlled trials (RCTs) examined outcomes by race and/or considered race in statistical analyses, even though 69% of the trials met or exceeded US population estimates for Black adults [11]. A review of NIH-funded multicenter BLIs reporting subgroup analyses showed less weight loss but similar or less weight regain in Black adults compared to white adults at 6-month follow-up [79]. Numerous studies have documented Black women experience the least weight loss treatment benefit compared to other race/gender groups [39••, 80].

Recent efforts to enhance BLIs for Black women with culturally relevant or community-based components have not demonstrated greater weight loss relative to standard BLIs [81••, 82]. However, culturally relevant, cognitive behavioral interventions for obesity have shown promising effects. For instance, a cognitive behavioral intervention based on a decision-making model of women's food choice resulted in less eating pathology and greater weight loss in Black women in a church setting compared to Black and white women in a university setting [83]. Additionally, a standard behavioral treatment approach that integrated both environmental and acceptance-based enhancements eliminated disparities in treatment response observed in standard behavioral treatment, producing average weight losses of 9.4% at 12 months in Black adults [84].

While overall inclusion of Black adults in BLIs has improved in the last two decades [11], this has not been the case for Latinos. BLI research still lacks representation of Latino adults [85] and often combines multi-ethnic subsamples in statistical analyses of outcomes [86], which prevents examination of potential differences in weight outcomes with Latino adults. A culturally tailored lifestyle modification intervention that included demonstrations of modified traditional dishes showed positive outcomes for Mexican American women when combined with Orlistat [87]. Research has also shown familial and social relationships are important to leverage in intervention activities to promote weight loss among Latino and Black adults [12, 87–89].

## Pharmacotherapy

Another evidence-based approach to obesity treatment is medication. Currently, six anti-obesity medications are approved by the US Food and Drug Administration, including orlistat, phentermine plus topiramate, naltrexone plus bupropion, liraglutide, semaglutide, and tirzepatide [90, 91]. Anti-obesity medications result in at least 5% weight loss at 52 weeks compared to placebo, and phentermine plus topiramate and liraglutide are the most effective in lowering weight [92]. Phentermine plus topiramate is also highly effective compared to lifestyle modification alone [93•]. Further, semaglutide plus lifestyle intervention has been shown to be highly effective resulting in weight loss of 14.9% [94].

In a review of anti-obesity medications in marginalized racial/ethnic groups and whites, Osei-Assibey identified 18 RCTs with predominately multi-ethnic samples and found no differences in weight loss response to orlistat between marginalized groups and Whites [95••]. A recent RCT of liraglutide showed no differences in efficacy between Latinos and non-Latinos as both subgroups had  $\geq 5\%$  weight loss with pharmacotherapy [96]. Recent trials on combined anti-obesity medication and BLI have not recruited adequate samples of Black and Latino adults to examine potential differences in treatment effects or did not consider exploring such differences by race/ethnicity. Research suggests that combining orlistat and culturally tailored BLI results in increased weight loss in Mexican–American women relative to a wait-list control group [87].

Of note, extant data indicate that access and usage of anti-obesity medications varies by race and ethnicity. In a study based on a population-level national database from 2010 to 2019, Black adults and Medicaid recipients were more likely to be prescribed anti-obesity medication than whites and other insurance recipients (Medicare, commercial, self-pay), respectively [97]. However, a study found less acceptance of anti-obesity medication as a viable treatment option in Black, Latino, and economically disadvantaged adults due to concerns about safety, which mostly focused on cardiovascular effects, and efficacy of medications for obesity [98]. Adults who used anti-obesity medication reported side effects based on personal experiences while those who had not used such medications reported perspectives based on information from media sources or influential others. Among many medication users, anti-obesity medication did not produce weight loss and if weight loss occurred, weight loss benefits were considered to be short-term.

## Bariatric Surgery

Bariatric surgery is the most effective treatment for obesity, resulting in significant weight loss, improvements in obesity-related

comorbidities [9, 99], and medication discontinuation [100]. For example, a multicenter longitudinal study found Roux-en-Y gastric bypass (RYGB) produced a weight loss of 28.4% and lower rates of dyslipidemia, diabetes, and hypertension at 7-year follow-up [99]. Recent research has also shown a lower risk of hospitalization, need for supplemental oxygen, and severe COVID-19 infection among patients who underwent bariatric surgery [101].

Despite the benefits of bariatric surgery across racial and ethnic groups [102], it is less accessible, and therefore, underutilized by marginalized groups. Socioeconomic factors, such as income and insurance (private vs. public), can influence access to bariatric surgery as adults with private insurance are more likely to undergo bariatric surgery [103], which likely contributes to racial and ethnic disparities in utilization. Referrals for bariatric surgery are lower for Latino adults than white and Black adults [104••]. Data indicate that whites have the highest rates of undergoing bariatric surgery [103] and Latino adults have lower rates than whites [105••, 106]. Black men undergo bariatric surgery at lower rates than white men [107]. Longitudinal research has uncovered racial and ethnic differences in long-term weight outcomes (> 12 months) following surgery [108••, 109]. In a multicenter study of patients who underwent RYGB, white adults had greater loss than Black adults at 5-year follow-up [108••]. Further, weight regain is more common among Black adults than their white and Latino counterparts [110••]. However, in studies at a single center, there are inconsistent findings regarding where disparities exist [111, 112] and some data indicate no differences in treatment benefit by race/ethnicity [113]. Altogether, it appears that weight loss differs by race/ethnicity over time, with greater disparities over time, particularly for Black adults.

Data indicate marginalized racial/ethnic groups experience poor surgical outcomes and complications at higher rates. Registry data show higher rates of serious complications, mortality, reintervention, and readmission at 30 days in Black adults compared to whites [114••, 115]. Further, research points to higher odds of multiple grades of complications for Black adults and higher odds of Grade 3 complications for Latino adults relative to whites [116••]. However, other studies found no differences between Latinos and whites in mortality, morbidity (shock, intensive care unit stay), hospital length, or costs [105••]. It is possible that these disparities are related to socioeconomic factors, such as income and access to healthcare [114••], as well as bias in the healthcare system by providers. Research to identify drivers of poor surgical outcomes among marginalized racial/ethnic groups is sorely needed to develop strategies to address them.

## A Call to Action: Key Issues to Address in Future Obesity Interventions

As healthcare providers and researchers, maximizing the health and well-being of patients and participants is of high-priority. Yet, as a field, we have fallen short of this goal

when it comes to Black and Latino adults, who are at disparate risk for obesity and resulting comorbidities [1, 2, 8, 9]. It is time to reconceptualize obesity treatment in service of health equity—we urge researchers and healthcare providers to consider the following recommendations in their work.

1. *Improve recruitment and retention of Black and Latino adults across the spectrum of obesity interventions.* Little is known about the efficacy of current obesity interventions in Black and Latino adults partly due to the inadequate samples of these populations in RCTs. Black men and Latino adults, in particular, are underrepresented in BLIs [39••, 85]. Furthermore, in studies with sufficient enrollment of Black and Latino adults, outcome analyses should consider treatment response by both gender and race and ethnicity.
2. *Design culturally relevant interventions that account for social determinants of health and structural factors and are developed in partnership with intended beneficiaries.* Few culturally relevant, BLIs for Black and Latino adults have been studied. While findings have been mixed [81••, 82], there is some evidence to support the potential benefits of culturally tailored interventions for obesity, but it is likely that culturally tailoring is necessary but not sufficient. Of note, the majority of obesity interventions have focused on individual-level factors, despite research demonstrating the need to consider structural-level factors to address health disparities [117, 118••]. Utilizing a social determinant of health framework, which consists of key factors influencing an individual's health including healthcare and education access and quality; economic stability; social and community contexts; and neighborhood and the built environment, will inevitably be a more holistic and ultimately successful way of improving health and reducing obesity-related disparities [119••]. Indeed, the U.S. Department of Health and Human Services has identified such structural determinants of health as a key priority area for its Health People 2030 initiative [119••]. In this context, community-engaged and community-based participatory research approaches are promising for improving lifestyle behaviors among Black and Latino adults [117, 120], but are underutilized in obesity interventions. For example, community-based participatory research strategies take a bottom-up vs. top-down approach and engage those from relevant communities in all steps of creating effective, often multi-level interventions [121, 122].

As a field, we need to move beyond individual-level treatment to include assessment and addressing of the myriad structural and systemic factors influencing risk, interventions, and outcomes. Although these factors may seem beyond the scope of any one researcher or clinician, assessing and being aware of them when considering risk, maintaining factors, and designing interventions is critical. Collaborative work across disciplines and key

stakeholders (e.g., patients, participants, researchers, clinicians, and policy makers) would greatly enhance this process. By working with members of Black and Latino communities, healthcare providers and researchers can develop a greater appreciation for the communities' and individuals' strengths and resilience. Along these lines, developing more assets-based and strengths-based models and approaches versus a deficits-based perspective [123] is sorely needed in addressing weight interventions and health disparities. Part of this entails identifying individuals' protective factors and maximizing these assets (e.g., social, familial, and faith-based connectivity) to encourage and sustain health-promoting behaviors. Again, however, even with resilience and resources, individuals are unlikely to maximize their health potential without systems, policy, and community-level changes.

3. *Increase emphasis on psychosocial factors and exposure to intersectional stress experienced by Black and Latino adults, particularly women.* There is limited coverage, if any, on psychosocial factors in BLIs. For instance, disordered eating, body image, weight and racial discrimination, and intersectional stress experiences are rarely addressed, despite their prevalence and significance among marginalized racial/ethnic populations [67, 70, 72•, 124]. When addressing individuals of higher weight in clinical practice, few providers assess for psychological contributors outside of depression. Yet, for some, including Black and Latino adults, the energy balance model is insufficient to address the underlying anxiety and stress that may contribute to obesity via physiological pathways (e.g., cortisol) and behavioral pathways (e.g., overeating or binge eating as a means of coping) [125••]. These psychological concerns are critical to determine prior to providing guidance on behavioral or biological interventions. In addition, assessing full-threshold eating disorders—which are often not diagnosed in higher weight persons due a failure to recognize that eating disorders (including restrictive-based types) are evident across the weight spectrum [126]—is needed prior to a prescriptive plan. Without this assessment approach, providers may inadvertently be feeding dysregulated eating and maladaptive behaviors that paradoxically lead to excess weight gain.
4. *Increase emphasis on health indicators other than BMI.* There is an overemphasis on using BMI to guide obesity treatment recommendations and determine the effectiveness of many obesity interventions with limited consideration of other health indicators such as metabolic health. This is concerning as research has shown misclassification of adults as cardiometabolically unhealthy or cardiometabolically healthy occurs when BMI categories are used as the main health indicator [32]. Research has also shown that at the same BMI, non-Latino Black adults on average have lower fat mass compared to Latinos and whites [127].

5. *Use alternative words to describe obesity.* Research suggests that use of the term obesity may have harmful effects on adults of higher weight. A study of adults with BED and obesity in an RCT showed that obesity was one of several weight-related terms (e.g., heaviness, large size, excess fat, and fatness) viewed negatively [128]. Alternative terms focused on weight, such as weight, BMI, and unhealthy body weight or BMI, were viewed more favorably. Of note, weight was the most preferred term. The terms weight and BMI were also preferred in a community sample of adults [129]. Healthcare providers and researchers should consider using terms that refer to weight when discussing obesity with patients and participants, and defer to patients' and participants' preferred language.

## Conclusion

This review synthesized the literature on individual and structural factors influencing obesity and current intervention approaches for obesity. Obesity is a complex disease driven by numerous factors—many of which can be attributed to systemic racism. We found that obesity interventions have continued to inadequately represent Black and Latino populations and fail to address their needs with little consideration of structural drivers of obesity. Asset-based, culturally relevant, obesity interventions designed in partnership with intended beneficiaries are urgently needed. Moreover, it is critical that such intervention efforts also address structural factors that significantly impact treatment outcomes. Effectively understanding and treating obesity in Black and Latino populations requires an intersectional lens and a multidisciplinary team of healthcare providers, behavioral investigators and interventionists, community members, and other stakeholders.

## Compliance with Ethical Standards

**Conflict of Interest** Sylvia Herbozo, Kristal Lyn Brown, Natasha L. Burke, and Jessica Gokee LaRose declare that they have no conflict of interest.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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- Of major importance

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