# **Brief Epidemiologic Reports**

# Ethnic and Sex Variations in Overweight Selfperception: Relationship to Sedentariness

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#### **Abstract**

YANCEY, ANTRONETTE K., PAUL A. SIMON, WILLIAM J. MCCARTHY, AMY S. LIGHTSTONE, AND JONATHAN E. FIELDING. Ethnic and sex variations in overweight self-perception: relationship to sedentariness. Obesity. 2006;14:980-988.

Objective: With increasing frequency, health promotion messages advocating physical activity are claiming weight loss as a benefit. However, messages promoting physical activity as a weight loss strategy may have limited effectiveness and cross-cultural relevance. We recently found self-perceived overweight to be a more robust correlate of sedentary behavior than BMI in Los Angeles County adults. In this study, we examined ethnic and sex differences in overweight self-perception and their association with sedentariness in this sample.

Research Methods and Procedures: We conducted bivariate and multivariate analyses of cross-sectional survey data from a representative sample of Los Angeles County adults. **Results:** Women were more likely to perceive themselves to be overweight than men overall (73.2% of overweight/nonobese and 24.1% of average weight women vs. 44.5% of overweight/non-obese and 5.6% of average weight men) and within each ethnic group. African-Americans were least likely (41.3% of overweight/non-obese African-Americans self-identified as overweight) and whites were most likely to consider themselves overweight (60.6% of overweight/ non-obese whites self-identified as overweight). Overweight (vs. average weight) self-perception was correlated

with sedentariness among average weight adults (45.3% vs. 33.0%, p < 0.001), overweight adults (43.4% vs. 33.6%, p < 0.001), men (average and overweight: 38.4% vs. 27.8%, p < 0.001), overweight whites (41.9% vs. 29.7%, p = 0.0012), and African-Americans and Latinos (41.6%) vs. 33.9%, p = 0.005).

Discussion: These data suggest that our society's emphasis on weight loss rather than lifestyle change may inadvertently discourage physical activity adoption/maintenance among non-obese individuals. However, further research is needed, particularly from prospective cohort and intervention studies, to elucidate the relationship between overweight self-perception and healthy lifestyle change.

Key words: overweight, African-Americans, Latinos, weight self-perception, physical activity

# Introduction

Obesity is a major contributor to ethnic disparities in health status (1). One important strategy in addressing obesity-related health disparities is persuasive communications—social marketing of fitness-promoting lifestyles (2). However, insufficient data are available, particularly from ethnically and socioeconomically diverse populations, to inform the development of public health messages to effectively combat sedentariness (3,4).

In parallel with the growing media attention to the obesity epidemic, physical activity promotion messages are increasing in frequency and increasingly linked to weight loss in both the commercial and public health sectors. Responses to these messages may influence or be influenced by selfperceptions of weight and fitness status (5). However, these messages may have limited effectiveness and cultural relevance for some groups.

Studies suggest that the prevalence of overweight is higher and weight dissatisfaction is lower in those cultures that less typically equate thinness with attractiveness (6,7), and, therefore, weight loss may be less of a motivating factor for increasing activity levels. Several studies in adults have found physical activity level to be unrelated to over-

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weight self-perception, level of satisfaction with current weight, or weight loss attempts (8,9), and overweight selfperception may even be a barrier to physical activity participation (10). Feeling "too fat" to exercise, or misperceiving that vigorous exercise is necessary for weight control, may actually deter physical activity adoption and maintenance (5,10).

Among Los Angeles County adults (11), we recently found that those who perceived themselves to be overweight were more likely to be sedentary than those who perceived themselves to be average weight, regardless of BMI. This study further examines this finding in this large, populationbased sample, permitting comparisons within and between ethnic and sex groups. These constructs and their interactions have rarely been assessed in ethnically diverse probability samples. Specifically, these analyses test the hypotheses that overweight self-perception varies significantly by ethnicity and sex and is associated with sedentariness in most groups.

## **Research Methods and Procedures**

This study used data from the 2002 to 2003 Los Angeles County Health Survey, a random-digit-dial telephone survey of the non-institutionalized adult population in Los Angeles County (12). The survey was conducted from October 2002 through February 2003 and was approved by the Institutional Review Board of the Los Angeles County Department of Health Services.

One adult (≥18 years old) from each randomly selected household was eligible for inclusion in the survey. In households with multiple adults, one adult was randomly selected for participation. Interviews were offered in English, Spanish, Cantonese, Mandarin, Korean, and Vietnamese. Interviews were conducted by trained staff using a standardized questionnaire and computer-assisted telephone interviewing. Of 14,154 eligible adults who were contacted, 8167 completed interviews, providing a 58% cooperation rate based on Council of American Survey Research Organizations standards. Data were weighted to reflect the age, sex, and racial/ethnic distribution of the county population on the basis of 2002 projections from 2000 U.S. Census data.

BMI was calculated from self-reported weight and height, and subjects were classified as underweight (BMI <  $18.5 \text{ kg/m}^2$ ); normal ( $18.5 \le BMI \le 24.9 \text{ kg/m}^2$ ); overweight  $(25 \le BMI \le 29.9 \text{ kg/m}^2)$ ; or obese  $(BMI \ge 30.0)$ kg/m<sup>2</sup>). Severe obesity was defined as BMI  $\geq$  40 kg/m<sup>2</sup>.

Measurement of self-perceived weight status was based on responses to the question "Do you consider yourself to be overweight, underweight, or about average for your height?" Because the latter question was not asked of adults ≥65 years of age, the analysis was restricted to adults 18 to 64 years of age.

Respondents were categorized as "sedentary" based on responses to standardized items from an adaptation of the

short version of the International Physical Activity Questionnaire available in August 2002 (http://www.ipaq.ki.SE/ dloads/IPAQ\_SHORT\_LAST\_7\_TELEPHONE-revised\_8-23-02.pdf) (13). Respondents were asked whether, in a typical week, during leisure or work time, they engaged in "vigorous activities for >10 minutes at a time, such as running, aerobics, heavy yard work or anything else that causes large increases in breathing and heart rate," and, if so, on how many days and how many minutes total they spent each day doing such activities. Respondents were also asked whether on an average day, they engaged in "moderate activities for at least 10 minutes at a time, such as walking, yard work, or other physical activity that causes light sweating and slight increases in breathing and heart rate," and if so, on how many days and how many minutes total they spent each day doing such activities. Respondents were classified as "sedentary" if they reported either no activity (no continuous physical activity for >10 minutes weekly at any level) or minimal activity (some sporadic moderate and/or vigorous activity but considerably less than the amount recommended in national guidelines, e.g., 10 minutes of yard work once per week) (13,14).

Design-weighted prevalence estimates of overweight and obesity are reported below. Bivariate analyses were used to assess differences in the relationship between BMI and self-perceived weight status by sex and race/ethnicity. Bivariate analyses were also conducted to examine the prevalence of sedentariness by BMI and self-perceived weight status. Differences in prevalence estimates were assessed for statistical significance (p < 0.05) with the  $\chi^2$  test. Logistic regression analysis was done to examine potential interaction by race/ethnicity for the relationship between self-perceived weight status and sedentariness among normal weight women. All analyses were conducted with SAS statistical software (15).

#### Results

The prevalence of overweight and obesity among adult Angelenos by race/ethnicity and sex was fairly typical of national samples (Table 1). Overall, the combined prevalence of overweight and obesity was highest in African-Americans and Latinos, intermediate in whites, and lowest in Asians-Pacific Islanders. This pattern was observed in both men and women. African-American men and women were more likely to be severely obese than other racial/ ethnic groups. Significant sex differences in weight status were also observed, with 42.9% of men and 26.8% of women in Los Angeles County being overweight (p < 0.001) and 20.7% and 19.0%, respectively, being obese (p = 0.089). The higher prevalence of overweight in men than women was observed across all racial/ethnic groups. However, the prevalence of obesity was significantly higher among men than women only in the white and Asian/Pacific Islander subpopulations. Overall, women were more likely

**Table 1.** Prevalence of overweight and obesity and percent perceived overweight by weight status among non-elderly adults by gender and race/ethnicity, Los Angeles County, 2002–03

		Male	le	Female	ale		Male			Female	
		Prevalence		Prevalence			Perceived			Perceived	
	N	(%)	95%CI	(%)	95%CI	N	overweight (%)	95%CI	N	overweight (%)	95%CI
White											
Average weight	1275	41.2	38.0-44.5	64.9	62.1–67.7	432	5.7	3.3-8.0	843	20.5	17.4–23.6
Overweight	962	40.3	37.2–43.5	20.7	18.3-23.1	505	51.5	46.5–56.4	291	80.3	75.0-99.2
Obese	406	18.5	16.0-21.0	14.4	12.4–16.5	210	91.3	86.9-95.7	196	95.9	92.6-99.2
Latino											
Average weight	893	27.6	24.7–30.5	40.9	38.1–43.7	288	8.0	4.6 - 11.3	605	30.0	25.8-34.1
Overweight	991	48.1	44.8–51.3	34.0	31.3–36.6	507	40.8	36.2-45.4	484	73.5	69.3-77.8
Obese	009	24.3	21.5–27.1	25.1	22.7–27.6	253	82.3	77.1–87.5	347	92.0	88.9-95.0
African-American											
Average weight	228	29.3	22.9–35.6	37.0	31.7–42.2		*	*	154	18.3	11.5–25.2
Overweight	225	38.6	32.0-45.2	31.8	26.6-37.0	102	30.6	20.2-41.1	123	53.1	43.1–63.1
Obese	205	32.2	26.0-38.4	31.2	26.1–36.3	98	75	65.2-84.9	119	94.1	89.1–99.1
Asian/Pacific Islander											
Average weight	447	55.4	49.7–61.2	6.97	72.2–81.6		* *	*	266	24.3	18.5–30.2
Overweight	188	36.9	31.3–42.5	18.5	14.3–22.8	122	50.4	40.7 - 60.1	99	79.3	68.8–89.7
Obese	43	7.7	4.8-10.5	4.5*	2.0-7.0	29	89.3	76.5-100.0		*	* *
All											
Average weight	2915	36.3	34.4–38.3	54.2	52.3–56.0 1002	1002	5.6	4.0-7.1	1913	24.1	21.8-26.3
Overweight	2256	42.9	40.9-45.0	26.8	25.2–28.5	1282	44.5	41.4–47.6	974	73.2	70.0-76.3
Obese	1287	20.7	19.1–22.4	19.0	17.6-20.4	599	84.3	81.0-87.6	889	93.7	91.6–95.7

Average weight is defined as BMI <25; overweight is defined as 25 ≤BMI <30; obese is defined as BMI ≥30 (Los Angeles County Health Survey 2002-03). CI, confidence interval.

\*\* Numbers were too small to justify point estimates (for purposes of confidentiality).

<sup>\*</sup> Estimate is based on a cell size <20, corresponding to a relative standard error  $\ge$ 23% of the point estimate, which may be statistically unstable.

to be severely obese than men (2.1% vs. 1.4%, respectively, p = 0.030), and African-Americans more than other racial/ ethnic groups (5.3% in women and 4.2% in men vs.  $\leq$ 2.5% in the other ethnic groups, respectively).

The interaction between BMI and self-perceived weight was examined in two steps. First, discordance between BMI and self-perceived weight was examined by sex and racial/ ethnicity (Table 1). Men were less likely than women to perceive themselves as overweight, regardless of BMI (p <0.001). Asian/Pacific Islanders were excluded from further analysis because of their small sample size and marked heterogeneity with respect to national origin, immigrant status, acculturation, and obesity prevalence within sub-Overall, overweight African-Americans populations. (41.3%) were less likely to perceive themselves to be overweight than overweight Latinos (53.5%; p = 0.001) who, in turn, were less likely to perceive themselves to be overweight than overweight whites (60.6%; p = 0.004). This pattern was observed for both men and women.

The second and final step in the analysis involved examining rates of sedentary behavior among those whose actual and self-perceived weight statuses did and did not agree (Table 2). Obese individuals were excluded from further analysis because very few considered themselves to be of average weight. Among non-obese individuals, those who perceived themselves to be overweight, regardless of BMI, were more likely to be sedentary than those who perceived themselves as average weight (p < 0.0001). This correlation between overweight self-perception with sedentariness was most pronounced among average weight and overweight men (54.9% vs. 26.3%, p < 0.001, and 36.7% vs. 29.6%, p = 0.006, respectively), particularly among white men (38.4% vs. 27.3%, p = 0.014, and 44.2% vs. 20.0%, p = 0.0140.004, respectively). The association was also pronounced among average weight individuals overall (45.3% vs. 33.0%, p < 0.001). In subgroup analyses by race/ethnicity, Latinos and African-Americans (collapsed into one group because of small numbers) who perceived themselves as overweight were more likely to be sedentary, regardless of BMI (41.6% vs. 33.9%, p = 0.005 among overweight individuals; 43.4% vs. 34.2%, p = 0.018 among normal weight individuals). This finding was also observed among overweight whites (41.9% vs. 29.7%, p = 0.002), but the trend was non-significant for average weight whites (33.7% vs. 27.8%, p = 0.148). In subgroup analyses by sex, selfperceived overweight was not significantly associated with sedentariness among overweight women (50.3% vs. 48.0%, p = 0.57); there was a trend toward sedentariness among average weight women who perceived themselves as overweight (43.6% vs. 38.7%, p = 0.094). Subgroup analyses by race/ethnicity and sex among women were hampered by small numbers in certain cells. However, we noted that the only group in which the proportion of sedentary individuals was not higher among those who considered themselves

overweight (vs. average weight) was average weight white women, the only ethnic-sex group in which average weight individuals comprised the majority. Indeed, the interaction between self-perceived weight status and race/ethnicity, when comparing the prevalence of sedentariness between white and Latina/African-American women of average weight, approached significance (p=0.095), i.e., there was a trend toward sedentariness among average weight African-American women and Latinas who considered themselves overweight compared with their white counterparts.

### **Discussion**

Our finding of an association between sedentariness and perceived overweight status is consistent with research associating successful exercise adoption with positive physical self-perception among obese individuals (4). The finding has not been sufficiently examined, however, among leaner adults, among whom physical activity may prevent the development of obesity. The observation of Burns et al. (16) that perceived overweight was more important than measured overweight for predicting 5-year declines in general health and vitality in a large, representative sample of Dutch men is also consistent with our findings. Perceived overweight predicted similar declines among Dutch women, but so did measured overweight. The findings of Burns et al. (16) are consistent with the sex differences we observed.

In this ethnically diverse Los Angeles County sample, ethnic differences were observed in overweight self-perception among overweight and normal weight individuals, consistent with published literature (9,17). African-Americans and Latinos were significantly less likely than whites to perceive themselves as overweight. Among men and people of color (Latinos and African-Americans), overweight selfperception is associated with sedentary behavior. The crosssectional nature of the data cannot illuminate the directionality of this association, i.e., whether perceiving ones' self as overweight diminishes motivation to be active, inactivity increases more negative self-perceptions such as overweight, or some interaction. However, the greater strength of the association for normal weight individuals and men is suggestive of the former—greater complacency and acceptance of overweight status among those subgroups in which overweight is prevalent. Such complacency/acceptance may erode self-efficacy and positive self-perception as active or fit, and thereby, lessen motivation to be active. In fact, a population-based Canadian study found that weight status moderated the influence of social ecological factors (e.g., social support, self-efficacy, recreation facility access) on physical activity, with self-efficacy a stronger correlate for non-obese than for obese individuals (18). A parallel may be drawn to the association between weight dissatisfaction and fast food consumption in a predominantly overweight, African-American sample—rather than motivating healthier

Table 2. Percent of non-elderly adults (18 to 64 years) who were classified as sedentary, by BMI and self-perceived weight status

				Total				Whites			I	Latinos/African-Americans	can-s
BMI	Self-perceived weight	Z	%	95%CI	p-value	S	%	95%CI	p-value	Z	%	95%CI	p-value
Males													
Overweight	Overweight	584	36.7	32.2-41.1		262	38.4	31.5-45.2		241	30.4		
	Average weight	681	29.6	25.6-33.5	0.006	238	27.3	20.8-33.8	0.014	358	29.5		0.781
Recommended BMI	Overweight	99	54.9	40.6–69.2		26	44.2	23.2–65.2		23	49.9	27.4–72.4	
	Average weight	784	26.3	22.9–29.8	< 0.001	344	20.0	15.1–24.8	0.004	278	28.3	22.6–33.9	0.018
Females													
Overweight	Overweight	717	50.3	46.2-54.4		239	46.7	39.6–53.9		421	50.8	45.6–56.0	
	Average weight	240	48.0	41.1–55.0	0.571	20	43.1	27.2–58.9	0.679		47.1	39.0–55.1	0.446
Recommended BMI	Overweight	436	43.6	38.3-48.9		163	31.5	23.8–39.1		205	42.3	34.8–49.9	
	Average weight	1280	38.7	35.6-41.7	0.095	969	34.0	30.0–38.3	0.601		39.4	34.5-44.2	0.513
All*													
Overweight	Overweight	1301	43.4	40.4-46.5		501	41.9	36.9–46.9		662	41.6	37.4–45.7	
	Average weight	921	33.6	30.1–37.1	< 0.001	288	29.7	23.6–35.8	0.002	533	33.9	29.5–38.3	0.005
Recommended BMI	Overweight	492	45.3	40.3-50.3		189	33.7	26.3-41.0		228	43.4	36.2-50.7	
	Average weight	2064	33.0	30.7–35.3	< 0.001	949	27.8	24.6–31.1	0.148	775	34.2	30.5–37.9	0.018

CI, confidence interval.

\* Total/all includes Asian/Pacific Islanders (Los Angeles County Health Survey, 2002-03).

eating, this negative self-perception seems to engender surrender to the convenience and palatability of less nutritious food selection (19).

The alternative interpretation is that physical inactivity increases negative self-perceptions, including perceived overweight status. If this interpretation is correct, the relationship between sedentariness and overweight would seem more likely to be greater among women, who are more stigmatized for being overweight than men, and among overweight individuals, who are generally stigmatized in American mainstream culture's overarching valuation of thinness. Rather, the observed relationship is greater among normal weight individuals and men.

The directional distinction approaching significance between normal weight white women and normal weight African-American women and Latinas in this regard may be explained by the markedly lower group prevalence of overweight and obesity among white women and the greater stigma associated with overweight in this ethnic group (20). Because the ideal for their ethnic-sex peer group is relatively unattainable and non-normative, they would be unlikely to have an image of themselves as fit; because they are not actually overweight, however, the goal weight might seem to be within reach, preserving self-efficacy (vs. the opposite effect on self-efficacy that promoting weight control through depiction of slim models exercising likely has on the overweight—the unrealistic goal distances "exerciser" from the overweight individual's identity) (4). The deviance of even normal weight white women from the microsocial values of their group, continually reinforced by the commercial media, may engender unfavorable social comparisons and desire for social conformity (6). When combined with their greater access to child care, facilities for active recreation, and walkable neighborhoods (21-24), the discrepancy between actual and ideal may not deter action in the way that it seems to operate for other ethnicsex groups. This argument is consistent with that of Blanchard et al. (18) in the earlier cited Canadian study, in which they found that self-efficacy was a weaker mediator of physical activity among the obese than the non-obese and that self-efficacy interacted with social support in the correlation between social support and physical activity in normal weight and overweight individuals but not in the obese.

Data from another study (25) in Los Angeles County lends credence to the argument that social comparisons influence physical self-perception. Among a socioeconomically and ethnically diverse sample of county employees, sedentary individuals' ratings of their health and fitness statuses in the control group were similar to those of their more active peers and unrelated to their level of physical activity or physical activity stage of change. However, in the intervention group, immediately after engaging in 10 minutes of moderate-intensity exercise during a meeting, sedentary individuals' ratings of their health and fitness statuses were lower and more closely related to their physical activity levels. In other words, sedentary individuals seemed to rate their health and fitness statuses similarly to non-sedentary individuals until they were actually engaged in a brief bout of non-strenuous exercise. Qualitative data collected during study implementation suggested that exercising at this modest level and for this short period caused greater exertion than they believed it would or should, dispelling their prior illusion of fitness. We may speculate that the postmodern environment generally demands so little obligatory physical activity that illusions of fitness and good health among the unfit are commonplace.

Overweight and normal weight individuals are especially important population segments for obesity control policy and programmatic interventions (26). Without intervention, secular and age-related trends of weight gain predict that many will become obese or overweight (27). Modest amounts of physical activity (standing, light household tasks vs. lying down or sitting), even less than those meeting the Centers for Disease Control and Prevention and American College of Sports Medicine daily recommendation (14), have been shown to prevent the development of obesity and type 2 diabetes among women (28) and to lower health care costs, even among the obese (29). Particularly for men, people of color, and normal weight individuals, these data call into question the use of lay-targeted social marketing messages promoting overweight self-labeling among the non-obese, because a negative relationship between obesity self-perception and physical activity exists in these groups. The overwhelming majority of obese individuals, who might benefit from this knowledge (assuming an association with help-seeking behavior), already self-identify as overweight. Increasing overweight self-labeling may actually contribute to negative self-perception and erode physical activity motivation as it seeps into the providerpatient and community dialogue.

Ethnic differences in weight self-perception may also help to explain the lack of association between ethnicity and sedentary behavior in multivariate analyses (11). The lesser likelihood of self-perceived overweight by people of color may be somewhat protective against sedentariness. Alternatively, because of the lesser stigma associated with overweight status, overweight self-perception among (BMI-categorized) overweight/obese women of color may not erode motivation to be active. Ethnic differences in weight status self-perception may reflect actual ethnic group differences in overweight and their accompanying cultural norms; sociocultural environmental influences may also reinforce this difference, e.g., media depictions. Tirodkar and Jain (30) recently found more than a 4-fold difference in overweight (observer-identified) between "black prime time" actors and general audience prime time actors, compared with a less than 2-fold black-white population disparity in BMI-defined

overweight. Ethnic differences in the valuation of thinness may influence the decisions of advertisers and casting agents, distorting television "reality." The distortion may be less harmful or even promote exercise self-efficacy if overweight characters are depicted as physically active (4). However, the distortion may also reinforce cultural (class, ethnicity) norms of excess weight, which may influence body habitus ideals and pursuits, particularly among younger people. Evidence suggests that Latinos are more similar to African-Americans than whites in their lesser cultural valuation of thinness, such that some of this discussion may apply to this group as well (7,31,32). This is highly speculative because there is such a paucity of media studies of ethnic groups other than African-Americans and whites in the public health literature. However, it is perhaps telling that the star of the only Latino-targeted situationcomedy currently showing on American English language commercial television is overweight (George Lopez).

The findings in this report are subject to a number of limitations. First, households without telephones were excluded from the sampling frame and, therefore, not represented in the findings. Second, the 58% cooperation rate is a potential source of bias because of non-response. However, this standard Council of American Research Organization CASRO cooperation rate is comparable to or better than the Council of American Research Organization cooperation rates for the Centers for Disease Control's Behavioral Risk Factor Surveillance System in 27 states, e.g., 51% from physical activity surveillance data recently published from 2001 Behavioral Risk Factor Surveillance System data (33). Third, data on physical activity were self-reported and, as such, are subject to reporting bias (less or more physical activity than captured by our items), imprecision, and misclassification. In the interest of preserving sample size for subgroup analyses, we elected to treat physical activity categorically (two rather than three categories) and compare sedentary to non-sedentary individuals. Similar to prior research, the greater differences were between the sedentary and non-sedentary rather than between the irregularly and regularly active (data not shown). Height and weight were also self-reported, with predictable small errors in overreporting of height by shorter individuals and under-reporting of weight by heavier individuals (34). Fourth, because of the marked skewing of socioeconomic status between African-Americans/Latinos and whites, ethnicity and socioeconomic status are confounded, with insufficient sample size for subgroup analyses by sex, ethnicity, and socioeconomic status. Thus, as is true for most population-based research studies, it may be difficult to distinguish the influences of ethnicity from those of socioeconomic status. Respondents who did not speak either English or one of the four other non-English languages provided (estimated at <1% of non-English speaking population in Los Angeles

County) were not represented. Last, as previously noted, data are cross-sectional in nature, thereby limiting confidence in inferring possible causal relationships.

In summary, these data suggest that our society's emphasis on weight control rather than lifestyle change may inadvertently discourage physical activity adoption/maintenance among non-obese individuals. Further research is needed, particularly from longitudinal observational and intervention studies, to elucidate the relationship between overweight self-perception and healthy lifestyle change and the apparent protective role of the cultural valuation of thinness and stigmatization of obesity in curtailing overweight prevalence. White American women bear the brunt of societal expectations of extraordinary and, for most, unattainable thinness, and are the only non-Asian American ethnic-sex group in which normal weight individuals are in the majority. It is not surprising that desire for weight loss may motivate, or at least not discourage, behavior change in this group in ways that it does not for most other ethnic-sex groups. This possible protective role of culturally prescribed thinness should be viewed, however, in the context of the likely contribution of these values to eating disorders, low self-esteem, and other mental health problems (6,35-37). The "bottom line" is that a better understanding of these issues may inform the construction of more culturally salient and, hence, influential messages for different populations (e.g., ethnic-sex, socioeconomic status, U.S. region, sexual orientation) at high risk for obesity. In particular, these messages are likely to vary by race/ethnicity and sex. On the other hand, all groups may benefit from messages that shift the focus away from a specific target weight and associated calorie restriction approaches to achieve that target weight (38,39) and instead promote increased physical activity and increased consumption of those high nutrient density and low caloric density foods that contribute naturally to enhanced satiety and weight control (40). In fact, Bacon et al. (39) found that a "health at every size" intervention produced sustainable weight-related lifestyle improvements and prevented weight gain in obese white women, whereas, in the comparison group, a conventional "deficit model" weight loss approach induced weight losses and improved outcomes in the short term but weight regain and disappearance of healthful behavioral changes at 1 year.

Interestingly, the few studies examining these issues from a public health policy standpoint have been conducted outside the United States, e.g., Biddle and Fox (4) in the United Kingdom and Timperio et al. (5) in Australia. A focus on these self-perception correlates of sedentariness is warranted in U.S. policy debates, given their likely sensitivity to intervention and linkage to other behavioral correlates of sedentariness (e.g., depressive symptoms, "screen time," and smoking) and given our growing recognition of the full spectrum of benefits of physical activity.

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