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Weight Loss Is Not the Answer: A Well-being Solution to the “Obesity Problem”

Christine Logel^{1*}, Danu Anthony Stinson² and Paula M. Brochu³

¹Renison University College, University of Waterloo

²University of Victoria

³Nova Southeastern University

Abstract

Americans have been gaining weight in recent decades, prompting widespread concern about the health implications of this change. Governments, health practitioners, and the general public all want to know: What is the best way to reduce the health risks associated with higher body weight? The dominant *weight-loss solution* to this “obesity problem” encourages individuals to lose weight through behavior change. This solution rests on the assumptions that higher body weight causes health problems, that permanent weight loss is attainable, and that weight loss improves health. But comprehensive reviews of the scientific evidence find mixed, weak, and sometimes contradictory evidence for these premises. We suggest that a different solution to the “obesity problem” is needed – a solution that acknowledges both the multifaceted nature of health and the complex interaction between person and situation that characterizes the connection between weight and health. Thus, we use the lens of social psychological science to propose an alternative, *well-being solution* to the “obesity problem”. This solution has the potential to improve health by encouraging eating and exercising for optimal health rather than weight loss, by developing interventions to reduce weight stigma and discrimination, and by helping higher body-weight people cope with the stress of stigma and discrimination.

...obesity is one of today's most blatantly visible – yet most neglected – public health problems... If immediate action is not taken, millions will suffer from an array of serious health disorders.

– World Health Organization (2015^a)

Body weight is indeed “blatantly visible”, as noted by the World Health Organization (WHO, 2015a) above. With a single glance, people can size up one another and categorize each other as thinner or fatter. More than ever, people are categorizing each other as fatter. In the United States, the focus of the present review, the majority of adults now weigh more than health authorities agree is optimal for health (Centers for Disease Control and Prevention [CDC], 2014b, September 9; WHO, 2015b). Indeed, the prevalence of weights that are considered “obese” according to medical classification systems – and thus are considered to pose a significant health risk – has increased from 13% to 32% over the past 50 years (e.g., Wang & Beydoun, 2007).

However, the extent to which higher body weight is actually a “neglected public health problem” that has not yet been targeted with “immediate action” in the United States is debatable. The American government has taken action. They have created a dedicated division of the CDC with an annual budget of \$49.5 million (The State of Obesity, 2015) and made higher body weight among children the priority issue of the First Lady's office (see www.letsmove.gov). Individuals are also taking action. The most common New Years' resolution is to lose

weight (Norcross, Mrykolo, & Blagys, 2002), and Americans spend \$50 billion annually on weight-loss products (Weiss, Galuska, Khan, & Serdula, 2006). Despite these and other actions, as the WHO notes above, most people still weigh more than what is considered optimal for health by health authorities.

So it may not be lack of action that makes higher body weight a neglected public health problem, but a lack of *effective* action. Yet the dominant response to the ineffectiveness of past efforts has been to take the same actions, but just try harder: Governments increase funding for weight-loss initiatives (The State of Obesity, 2015); encourage employers to monitor their employees' weight and implement weight-loss programs in the workplace (CDC, 2014a, November 2012); and introduce taxes on foods thought to contribute to higher body weight (Mandaro, 2014). Individuals, for their part, attempt one diet after another (Montani, Schutz, & Dulloo, 2015). Yet body weights remain high.

Rather than continuing to pour money and energy into actions that have not been effective, we suggest that researchers, health practitioners, and lay people pause to ask themselves a tough question: What is the best way to reduce the health risks that are associated with higher body weight? We call this the “obesity problem”, and in this paper, we use the lens of social psychological science to evaluate the currently dominant solution, and then to propose an alternative. With its focus on the complex interactions between the person and the social situation, and its emphasis on experimental methods to determine causality, social psychological science is uniquely suited to tackle the “obesity problem”.

Throughout this paper, we use the colloquial term *body weight* to refer to a person's relative fatness or leanness. *Higher body-weight people* are those who would be deemed “overweight” or “obese” according to the common medical classification system for weight, or by themselves or important others. We use quotation marks around these weight terms because they reflect arbitrary classifications and many higher body-weight people find them stigmatizing. Beyond the scope of this article are issues pertaining to the one in 200 people who are classified as “extremely obese” (Sturm & Hattori, 2013), to children's weight, or to clinically significant eating disorders.

Evaluating the Weight-loss Solution

Obesity is a national epidemic, causing higher medical costs and a lower quality of life.

– CDC (2010)

This quote from a CDC pamphlet exemplifies a common belief: That a high volume of adipose tissue causes costly and debilitating health problems. This belief about the “obesity problem” leads logically to what we term the *weight-loss solution*: If higher body weight causes serious health problems, the appropriate solution is to encourage weight loss. Implicit to this solution is the assumption that permanent weight loss is attainable with individual efforts, and that it will improve health. Does the evidence support these premises?

Evidence that higher body weight causes health problems

Evidence is strong that higher body weight *predicts* health problems over time. Studies in high-caliber epidemiological and biomedical journals identify higher body weight as a risk factor for type 2 diabetes, cardiovascular disease, osteoarthritis, and several types of cancer (e.g., Calle, Thun, Petrelli, Rodriguez, & Heath, 1999; Mokdad, Marks, Stroup, & Gerberding, 2004). Large-scale longitudinal studies demonstrate moderate correlations between higher body

weight and both disease and all-cause risk of mortality (e.g., Flegal, Graubard, Williamson, & Gail, 2005; Hedley et al., 2004). If body fat actually causes these outcomes, then the United States is experiencing a true public health crisis.

However, articles in many of the same high-caliber epidemiological and biomedical journals call for caution in concluding that this link is causal. Virtually all research linking higher body weight to longer-term negative health consequences is, necessarily, correlational, and many studies fail to adequately control for third variables known to predict, and sometimes cause, both higher body weight and poor health. One such third variable is socioeconomic status (SES; e.g., Kassirer & Angell, 1998). People who are of lower SES are higher in body weight and also experience worse health outcomes than their higher SES counterparts. Another is physical activity (e.g., LaMonte & Blair, 2006). Studies that distinguish between physical activity and body weight reveal that fitness, not fatness, is the strongest predictor of health (e.g., Farrell, Braun, Barlow, Cheng, & Blair, 2002; Grundy et al., 1999; Lee, Blair, & Jackson, 1999; Wie et al., 1999). Additional and potentially important third variables include powerful *social determinants of health* (Wilkinson & Marmot, 2003) such as social rejection, poor social support, and stress, each of which can lead to weight gain and poor health (e.g., Björntorp, 2001; Cohen, 2004; Cohen, Tyrrell, & Smith, 1991; Dallman, 2010; Logel et al., 2014; Stinson et al., 2008). These confounding variables may explain the so-called *obesity paradox*, the finding in many large-scale, multi-country epidemiological studies that body fat predicts lower mortality risk (Flegal, Kit, Orpana, & Graubard, 2013; Grabowski & Ellis, 2001; Orpana et al., 2010; Stessman, Jacobs, Ein-Mor, & Bursztyn, 2009; Tamakoshi et al., 2010), and better outcomes following pneumonia infection (Corrales-Medina, Valayam, Serpa, Rueda, & Musher, 2011), kidney disease (Kopple, 2005), and cardiovascular disease (Lavie, Milani, & Ventura, 2009).

When taken together, evidence suggests that it is premature to conclude that higher body weight *causes* health problems. What are the implications of this uncertain causality for the weight-loss solution to the “obesity problem”? If a given public health action has potential to benefit health, is easy to implement, and carries few costs, then it make sense to implement it while scientists continue to seek causal evidence. This appears to be the perspective adopted by public health and governmental organizations like the WHO and CDC, whose scientists have surely been aware of the problem of inferring causal associations from correlational evidence, and who support ongoing research in this area. Some of this research has investigated the degree to which weight loss is easy to attain and has costs. Does this research support continued implementation of the weight-loss solution?

Evidence that weight loss is attainable

So here I stand, 40 pounds heavier than I was in 2006....I'm mad at myself. I'm embarrassed. I can't believe that after all these years, all the things I know how to do, I'm still talking about my weight...How did I let this happen again?
— Oprah Winfrey (2009)

Oprah Winfrey conquered childhood poverty and prejudice to become one of Time Magazine's “100 Most Influential People in the World” and win the Presidential Medal of Freedom (Turner, 2011). But as she poignantly describes, she has been unable to consistently maintain a body weight in the range considered optimal by health authorities. Her failure is not for want of trying. Ms Winfrey has famously lost and then regained weight numerous times during her long tenure in the public eye.

How can a highly successful philanthropist and business woman have so much difficulty maintaining a lower body weight? The formula for weight loss seems simple – consume less

energy than you burn, creating an energy deficit, and forcing your body to use stored fat for fuel. Ms Winfrey’s website includes tips to create such an energy deficit by consuming 1300–1500 kilocalories per day (Oz, 2012), an amount consistent with public health recommendations for weight loss (American Heart Association, 2014) and much less than the 2500 kilocalories necessary to be “well-nourished” according to the Food and Agricultural Organization of the United Nations (FAO, 2000). Ms Winfrey’s guidelines are less extreme than popular commercial diet plans like Nutrisystem (1250 to 1500 kilocalories) and Jenny Craig (1200 kilocalories).

Public health communications typically recommend attaining this reduced energy intake by eating smaller portions that include more fruits and vegetables and exercising to burn additional fat stores (e.g., American Heart Association, 2014; CDC, 2014). However, this behavioral formula for weight loss can only work if body weight is a predominantly controllable characteristic (Friedman, 2003, 2004; O’Rahilly & Farooqi, 2008). It is not. Large-scale studies of families, including twins who have been reared apart, reveal that fully 70% of individual variance in body weight can be explained by genetics (Stunkard, Harris, Pedersen, & McClearn, 1990; see also Sørensen, Price, Stunkard, & Schulsinger, 1989; Stunkard et al., 1986), a degree of heritability commensurate with traits like height (e.g., O’Rahilly & Farooqi, 2008). This means that most of the population’s variance in body weight is determined by individual differences in genetic heritage, not individual differences in behavior. Furthermore, although environmental factors like greater availability of calorie-dense foods (e.g., Kessler, 2010), increasing portion sizes (Wansink & Chandon, 2014), and less active work lives (Prentice & Jebb 1995; but see Westerterp & Speakman, 2008) may explain recent weight gains across the entire American population, the same large-scale studies of families we just reviewed reveal that some people are genetically more susceptible to such environmental factors, and this susceptibility is generally uncontrollable by the individual. Thus, many experts conclude that weight is a largely genetic trait that is highly responsive to the environment (e.g., Friedman, 2003, 2004).

Once genes and the environment interact to settle a person at a given body weight, automatic, homeostatic biological processes work to maintain it as a minimum body weight – or more specifically, a minimum fat volume – that only varies within a relatively narrow range (e.g., Keesey & Powley, 2008). Thus, decreases in energy intake, such as those proscribed by weight loss plans, prompt a cascade of biological changes that resist weight loss. These include shifts in appetite-regulatory hormones that increase subjective appetite (Sumithran et al., 2011) and changes in metabolism that reduce energy expenditure (Brownell, 1991; Leibel, Rosenbaum, & Hirsch, 1995), which can persist up to a year after weight loss occurs.

Moreover, the level of energy intake recommended by many popular diets (i.e., 1200 to 1500 kilocalories per day) is comparable to that of the most undernourished global regions, where severe hunger interferes with individuals’ ability to thrive and make meaningful contributions to society (FAO, 2000). It is no wonder, then, that dieting for weight loss is psychologically and physiologically stressful (Tomiya et al., 2010). This stress further undermines weight loss by prompting increased caloric consumption (see Torres & Nowson, 2007) and physiological changes that facilitate weight gain (see Björntorp, 2001; Dallman, 2010).

Pitted against these genetic, environmental, biological, and psychosocial factors, how well do people fare in their efforts to lose weight? Independent comprehensive reviews of behavioral weight-loss interventions all reach the same conclusions: In the short term, some weight loss is possible on *any* diet program, but nearly every dieter regains the weight they lost within three to five years, and as many as two-thirds of dieters regain *more* weight than they initially lost (Katz, 2005; Mann et al., 2007; see also Aphramor, 2010; Bacon, 2008; Bacon & Aphramor, 2014; Garner & Wooley, 1991; Kassirer & Angell, 1998). Permanent weight loss, at least via individual behavioral efforts, is exceptionally rare.

But can those rare individuals who do maintain significant weight losses over time serve as exemplars for the potential success of the weight-loss solution? Perhaps. But such individuals might also be counted as statistical outliers. Moreover, in a sample drawn from the National Weight Control Registry, participants reported that they maintained their 30-pound weight losses for five years or more by continuing, against biological, environmental, and psychosocial pressures, to follow a starvation-level diet – 1685 kilocalories daily for men; 1300 kilocalories daily for women (Shick et al., 1998). And even then, on average the women’s weights were barely into “healthy weight” classification, and the men were still classified as “overweight”.

Proponents of the weight-loss solution to the “obesity problem” might argue that the weight-loss solution should not be abandoned, but merely adjusted – that new methods of weight loss should be sought for the sake of people’s health. But does weight loss improve health?

Evidence that weight loss improves health

Researchers have documented some modest, short-term health benefits of weight loss. A review of 21 randomized-controlled trials of weight-loss interventions concluded that participants in the weight-loss conditions enjoyed small decreases in coronary morbidity and mortality risk, as well as slight improvements in blood pressure, use of diabetes medication, fasting blood glucose, levels of cholesterol and triglycerides, and incidence of diabetes and stroke compared to the control participants (Tomiyaama, Ahlstrom, & Mann, 2013). However, none of these effects were correlated with the amount of weight that participants lost, meaning that participants in the intervention conditions enjoyed these health benefits regardless of their level of weight loss, which varied widely across participants. Given that most interventions increased exercise, social support, healthcare access, and consumption of fruits and vegetables in addition to manipulating calorie intake, the authors of the review could find little convincing evidence that weight loss itself played any causal role in the (mostly small) positive health outcomes observed in the treatment conditions. Indeed, health interventions that include all of these beneficial factors but do not limit caloric intake demonstrate equally positive health outcomes in the absence of weight loss (Bacon & Aphramor, 2011).

Not only does evidence that weight loss directly improves health appear to be weak, but evidence that weight-loss efforts can be harmful appears to be stronger, and includes correlational but also experimental evidence. Dieting requires sustained acts of willpower which can eventually break down, resulting in overeating and a lack of self-regulatory capacity needed for other tasks (Kahan, Polivy, & Herman, 2003; Vohs & Heatherton, 2000). The stress of dieting increases the stress hormone cortisol, potentially compromising dieters’ immune functioning (Tomiyaama et al., 2010). Dieting also predicts elevated rates of depression and negative self-image (Markowitz, Friedman, & Arent, 2008), and in adolescents, predicts future weight gain and binge eating (Field et al., 2003). And it appears that the more often people attempt weight loss, the more their health is at risk – frequency of dieting predicts decreased markers of immune functioning among higher-weight, currently-healthy women (Shade et al., 2004).

The costs of the weight-loss solution are not borne by higher body-weight people exclusively. The portrayal of higher weight as unhealthy and weight loss as both desired and attainable has likely contributed to the fear of fat that extends across the weight spectrum. In one study, nearly 60% of participants classified as “non-overweight” agreed that they would give up at least one year of their lives rather than be “obese”, and 15% agreed that they would give up ten years or more (Schwartz, Vartanian, Nosek, & Brownell, 2006). Weight dissatisfaction is so pervasive among women that it is referred to as a “normative discontent” (Rodin, Silberstein, & Striegel-Moore, 1983). Among young people, body dissatisfaction prospectively predicts a host of

unhealthy behaviors for both higher- and lower-weight people, including extreme dieting, binge eating, smoking, lower fruit and vegetable intake, and lower rates of exercise (Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006). The difference between a person's actual and ideal weight is a stronger predictor of physically and mentally unhealthy days than is actual body weight (Muennig, Jia, Lee, & Lubetkin, 2008), and the negative health consequences of weight loss followed by weight regain (i.e., weight cycling) are most severe for lower body-weight people (Montani et al., 2015). Moreover, negative body image predicts weight gain over time independent of body weight (van den Berg & Neumark-Sztainer, 2007).

The research evidence regarding body weight and health is perhaps best summed up by the editors of the *New England Journal of Medicine*: “Unfortunately, the data linking overweight and death, as well as the data showing the beneficial effects of weight loss, are limited, fragmentary, and often ambiguous” (1998, p. 52). Our own reading of the empirical literature supports that conclusion and adds that evidence suggests that long-term weight loss is extremely rare, and that efforts to attain long-term weight loss can be harmful to health and well-being.

And when viewed through a social psychological lens, this research points to another question that must be asked of the weight-loss solution: Could it be helping to maintain stigma and discrimination against higher body-weight individuals?

Weight stigma and discrimination

In 2008, Representative W. T. Mayhall Jr proposed legislation requiring restaurants to weigh prospective diners and refuse service if their weight met Mississippi's criteria for “obesity” (Junkfood Science, 2008). This bill did not pass, but its very proposal offers a stark reminder of the pervasive – and socially acceptable – weight stigma that dominates American culture (Puhl & Brownell, 2001; Puhl & Heuer, 2009).

Higher body-weight people are commonly stereotyped as unhealthy, unhappy, lazy, unattractive, and slow, and they are perceived to have poor eating habits, to lack physical fitness, and to lack self-control or willpower (e.g., Brochu & Esses, 2011). At three years of age, children describe their “chubby” peers as mean, stupid, lazy, and ugly (Cramer & Steinwert, 1998), and 5th and 6th grade students like “obese” children less than any other stigmatized group (Latner & Stunkard, 2003). As potential marriage partners, higher body-weight people are deemed less desirable than embezzlers, cocaine users, and shoplifters (Venes, Krupka, & Gerard, 1982). Physicians report that “obese” patients are awkward, unattractive, ugly, and noncompliant (Foster et al., 2003) and display less warmth in their interaction with higher body-weight patients (Gudzune, Beach, Roter, & Cooper, 2013). Sadly, higher body-weight people cannot always rely on their family members or close friends for support in the face of such negativity, because such close relationships are often a major source of weight stigmatization in people's lives (Puhl & Brownell, 2006).

In an age where blatant bias or discrimination is becoming less and less acceptable, weight bias remains one of the last socially acceptable forms of discrimination (Puhl & Brownell, 2001). Higher body-weight people face discrimination in employment, health care, education, media, and interpersonal relationships (Puhl & Heuer, 2009). Higher body-weight job candidates are evaluated less favorably than lower body-weight job candidates who are *unqualified* for the position (Sartore & Cunningham, 2007), and such discrimination continues throughout hiring, promotion, earning, disciplinary decisions, and firing (Roehling, 1999; Roehling, Pichler, & Bruce, 2013). Higher body-weight people are also underrepresented in college and are less likely to receive post-interview offers of admission to psychology graduate programs, despite high standardized test scores, strong recommendation letters, and aspirations to attend college (Burmeister, Kieflner,

Carels, & Musher-Eizenman, 2013). It is no surprise, then, that they earn approximately 90 cents for every dollar earned by their lower body-weight counterparts (Baum & Ford, 2004).

Thus, the negative stereotyping, prejudice, and discrimination experienced by higher body-weight people in America permeate their daily lives. And evidence suggests that the weight-loss solution to the “obesity problem” serves to perpetuate this discrimination. Of course, weight stigma and discrimination existed long before the recent upsurge in “anti-obesity” actions carried out as part of the weight-loss solution. Yet stigmatizing comments and discriminating behavior are commonly framed as concern about the target’s health, a tactic termed *concern trolling* (e.g., warn a friend they’re fat day; Connelly, 2015). Size-acceptance activists devote considerable attention to helping higher body-weight people protect themselves from this subtle, yet damaging, form of aggression (e.g., Harding & Kirby, 2009). Representative Mayhall’s proposed bill banning higher body-weight people from restaurants, putatively to help them avoid temptation to overeat, is one example of this type of discrimination. Thus, the weight-loss solution to the “obesity problem” works together with existing weight biases to foster the belief that higher body weight is a personal moral failure.

This likely-unintended cost of the weight-loss solution undermines its goal of helping higher body-weight people prevent health problems. Cultural weight bias exposes higher body-weight people to both acute and chronic stressors, taxing their ability to cope and negatively impacting the cardiovascular system, the neuroendocrine system, and the body’s restorative processes (Major, Mendes, & Dovidio, 2013). For example, the frequency of weight stigma that people experience and their awareness of weight stigma in their daily lives each predict biological markers of stress (cortisol) and cellular aging (F₂-isoprostane), suggesting that weight stigma “may contribute to the development of chronic disease” (Tomiya et al., 2014, p. 862). Because financial security, access to healthcare, education, and social support all cause better health (Wilkinson & Marmot, 2003), discrimination against higher body-weight people in these domains likely undermines health. Indeed, higher body-weight people who experience weight stigma are more likely to avoid preventive healthcare screenings and cancel medical appointments (Amy, Aalborg, Lyons, & Keranen, 2006).

Weight stigma also triggers social identity threat, a concern that one is being judged in light of negative group stereotypes (Hunger, Major, Blodorn, & Miller, 2015; Steele, Spencer, & Aronson, 2002). In such situations, higher body-weight people show reduced executive control, increased blood pressure, cortisol reactivity, and subjective stress (Major, Eliezer, & Rieck, 2012; Schvey, Puhl, & Brownell, 2011), resulting in increased calorie consumption and feelings of loss of self-control (Brochu & Dovidio, 2013; Major, Hunger, Bunyan, & Miller, 2014; Schvey et al., 2011). Indeed, perceived weight stigma explains why higher body-weight people report worse health outcomes than lower body-weight people (Hunger & Major, 2015; Jackson, Beeken, & Wardle, 2015), and perceived weight discrimination predicts weight gain over time in nationally representative samples (Jackson, Beeken, & Wardle, 2014; Sutin & Terracciano, 2013).

If weight loss was attainable and improved health, then weight loss would be the solution to this problem of stigma and discrimination. But as the evidence reviewed in the previous section demonstrates, weight loss efforts tend to be ineffective and harmful. Clearly, a different answer to the “obesity problem” is needed – a solution that draws on social psychological science.

Proposing a Well-being Solution

Fat people already are ashamed... No further manpower needed on the shame front... My question is, what if they try and try and try [to lose weight] and still fail? What if they are still fat? What if they are fat forever? What do you do with them then? Do you really want millions of teenage girls to feel like they're trapped in unsightly lard prisons

that are ruining their lives, and on top of that it's because of their own moral failure, and on top of that they are ruining America with the terribly expensive diabetes that they don't even have yet?

– Lindy West (2011)

In the above quote, Lindy West, an award-winning journalist and self-identified fat person, gives voice to the urgent need for a solution to the “obesity problem” that acknowledges the toll of weight stigma and the elusiveness of permanent weight loss. Scientists, health practitioners, and activists from diverse backgrounds share Ms West’s concerns and have rallied to propose alternative, *weight-inclusive* models of health (see Tylka et al., 2014). Perhaps the best-known and most influential of these alternatives is the Health at Every Size™ approach (HAES™; www.haescommunity.org; Bacon, 2008), which emerged from the feminist and size-acceptance movements in the 1970s and has grown in scope and influence in the intervening decades (see Bruno, 2013). HAES™ promotes a model of health care that honors the principles of accepting and respecting all bodies, engaging in compassionate self-care by listening to the body’s hunger and satiation cues and engaging in joyful activity, and critically challenging scientific and cultural assumptions about weight and health.

We draw upon this weight-inclusive health movement as well as social psychological theory and research to propose a *well-being solution* to the “obesity problem”. This solution uses an evidence-based approach to improve overall health and to reduce the negative health outcomes associated with higher body weight. Importantly, a well-being solution defines health as “... a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 2003, para. 1). Hence, actions that might positively affect physical health but might negatively affect mental or social health are not supported. Moreover, a well-being solution evolves as new evidence supports or fails to support its key elements. Currently, some proposed elements are supported directly by weight and health research, and others are suggested based on research in other literatures.

Promote healthful – and weight-neutral – approaches to eating and exercise

Proponents of the weight-loss solution may fear that any focus away from weight loss might encourage malnutrition, extreme weight gain, and inactivity. But a well-being solution includes attention to nutrition, weight stability, and physical activity and does so in a publically appealing way – people perceive health-focused public health campaigns to be more motivating, less stigmatizing, and more promoting of self-efficacy for health behavior change than weight-loss focused campaigns (Puhl, Luedicke, & Peterson, 2013; Puhl, Peterson, & Luedicke, 2013). Indeed, a recent review of six randomized and controlled HAES™ interventions concluded that weight-inclusive approaches to health can decrease blood pressure and cholesterol, reduce instances of binge eating, increase physical activity, and improve psychological well-being across a range of dimensions, all without dieting or weight loss (Bacon & Aphramor, 2011). But what does a weight-inclusive approach to eating and exercise look like?

Encourage eating for health, not weight loss. Evidence suggests that longevity and vitality can be supported by eating fewer processed foods and more plants, according to a comprehensive review (Katz & Meller, 2014). None of the popular, specific recommendations for proportioning macronutrients (e.g., low carb, low fat, “Paleolithic”) have been consistently found superior to the others, nor has an ideal intake amount been identified, perhaps because ideal food intake should vary according to the needs of the individual in each situation.

One evidence-based strategy for healthful nutrition intake is intuitive eating, which emphasizes attention to internal cues of hunger and fullness and an attitude of body acceptance (in contrast

with dieting, which directs attention away from hunger and satiety cues onto external rules; e.g., Orbach, 2006). A review of 20 interventions found that intuitive eating decreased reports of disordered eating behaviors like binge eating and dietary restraint, increased physical activity, body satisfaction, self-esteem, and quality of life and reduced depression and anxiety (Schaefer & Magnuson, 2014). Furthermore, intuitive eating can lead to better nutrition, such as reduced fat intake and increased consumption of fruits and vegetables. Many of these improvements in health lasted longer than the temporary weight loss resulting from traditional diets.

Encourage exercising for health, not weight loss. The evidence is strong that regular physical activity is effective in preventing chronic diseases and premature death (Warburton, Nicol, & Bredin, 2006). Exercise also appears to have psychological benefits, predicting decreased symptoms of anxiety and depression (Jayakody, Gunadasa, & Hosker, 2014; Penedo & Dahn, 2005; Scully, Kremer, Meade, Graham, & Dudgeon, 1998) and improved body image (Hausenblas & Fallon, 2006). However, much of this research concerning psychological health is correlational. The experimental studies, although promising, have not yet clarified the precise mechanisms through which exercise benefits psychological well-being (some theorized causal paths include increasing endorphins and providing a “time out” from stressors; Scully et al., 1998); nor have they established what type, duration, and frequency of activity is optimal for psychological health. However, it seems plausible that exercising for immediate and long-term improvements in well-being may be more rewarding than exercising – while hungry – in the hopes of achieving a potential, future weight loss. This shift in purpose could potentially result in higher levels of exercise participation and improved population health. Indeed, there is some experimental evidence that people who exercise for health, but not weight loss, are more likely to maintain their new exercise regime than people who exercise for weight loss (Bacon, Stern, Van Loan, & Keim, 2005). Furthermore, research suggests that framing physical activity as fun and enjoyable (e.g., “a scenic walk”) reduces the compensatory hedonic eating that typically follows physical activity when it is framed as “exercise” (Werle, Wansink, & Payne, 2014).

Reduce weight stigma and discrimination

If weight stigma impairs health, then one action in the well-being solution to the “obesity problem” must be to reduce the stigma. Doing so is no easy task. The social acceptability, pervasiveness, and cognitive and affective underpinnings of anti-fat prejudice – such as beliefs about weight’s controllability, and disgust towards fat – make it particularly intractable (e.g., Daniélsdóttir, O’Brien, & Ciao, 2010). Still, social psychological science suggests some promising strategies.

Develop and implement social psychological interventions. A meta-analysis concludes that social psychological interventions that address controllability beliefs, foster empathy, or use social consensus and informational social influence can produce a small, positive effect on negative beliefs and attitudes towards higher body-weight people (Lee, Ata, & Brannick, 2014). Such prejudice-reduction efforts may be especially worthwhile when aimed at healthcare professionals, because their biases can constrain higher body-weight people’s access to healthcare (Puhl & Heuer, 2010). Especially promising are psychoeducational interventions that emphasize the uncontrollable aspects of body weight, which have been shown to reduce implicit and explicit anti-fat prejudice among healthcare students (O’Brien, Puhl, Latner, Mir, & Hunter, 2010).

Promote non-stigmatizing media portrayals of higher body-weight people. Higher body-weight people are rarely seen in the media, and when they are seen, they are stigmatized (Greenberg, Eastin, Hofschire, Lachlan, & Brownell, 2003; Hilbert & Ried, 2009). One content analysis of online

news stories about “obesity” observed that 72% of news images depict higher body-weight people in stigmatizing ways, by focusing on their stomachs, portraying them eating or drinking, or cutting their heads from the frame (Heuer, McClure, & Puhl, 2011). Reducing stigmatizing portrayals and introducing positive portrayals could help to reduce weight bias. Non-stigmatizing media portrayals of higher body-weight people improve weight attitudes and reduce support for discriminatory weight-based medical policy (Brochu, Pearl, Puhl, & Brownell, 2014; Pearl, Puhl, & Brownell, 2012).

Include weight as a protected category in federal legislation. Inclusion of weight as a protected category has potential not only to reduce systematic weight-based discrimination and establish nondiscriminatory social norms but also to reduce weight-based health disparities and improve the effectiveness of public health efforts. Civil rights legislation in the 1950s and 1960s is at least partially credited with increasing awareness of racism, reducing tolerance for overt discrimination, improving racial attitudes, and spawning interest in intergroup relations research (Bobo, 2001; Dovidio, Newheiser, & Leyens, 2011). Furthermore, in the 12 months after the legalization of same-sex marriage in Massachusetts, sexual minority men had fewer medical care visits, mental healthcare visits, and mental healthcare costs compared to the 12 months before the law change (Hatzenbuehler et al., 2012). However, there is currently no federal legislation that protects people from discrimination based on their body weight (Pomeranz & Puhl, 2013). Among states, only Michigan prohibits weight discrimination, and among cities, only six (Washington, DC; San Francisco, CA; Santa Cruz, CA; Binghamton, NY; Urbana, IL; and Madison, WI) include weight and/or physical characteristics as protected categories in their human rights law or municipal code (National Association to Advance Fat Acceptance, n.d.). It is encouraging, however, that public opinion polls demonstrate overwhelming support for legislation that prohibits weight discrimination, particularly in employment decisions (Puhl & Heuer, 2010; Puhl, Heuer, & Sarda, 2011; Suh, Puhl, Liu, & Fleming Milici, 2014).

Promote strategies for coping with weight stigma

Stigma is highly stressful (Miller & Major, 2000), and stress damages health. Social psychological science has identified numerous strategies that can reduce the pernicious effects of the stress of stigma. Not only could these strategies support higher body-weight people’s health, they could also benefit lower body-weight people, whose well-being is compromised by fear of fat and body dissatisfaction.

Theory-driven psychological interventions. Positive psychology interventions are treatment methods or intentional activities that cultivate positive feelings, behaviors, or cognitions. A review suggests they can enhance well-being and reduce depression symptoms (Sin & Lyubomirsky, 2009). Mindfulness interventions, which can be effectively carried out in therapy, groups, or individually with workbooks and computer programs (Cavanagh, Strauss, Forder, & Jones, 2014), teach people to intentionally focus their attention, in an accepting and non-judgmental way, on the emotions, thoughts, and sensations of the present moment. Mindfulness increases subjective well-being, reduces psychological symptoms and emotional reactivity, and improves behavioral regulation (Keng, Smoski, & Robins, 2011). A review of 14 interventions showed that mindfulness decreases binge eating and emotional eating among populations engaging in these behaviors (Katterman, Kleinman, Hood, Nackers, & Corsica, 2014).

A related intervention fosters self-compassion, which entails treating the self with kindness during emotional setbacks, recognizing the shared humanity of one’s flaws and negative experiences, and adopting a mindful, non-judgmental perspective towards the self (Neff, 2011).

Self-compassion reduces guilt after overeating among chronic dieters (Adams & Leary, 2007) and buffers young women against body shaming from family (Daye, Webb, & Jafari, 2014), benefits that may explain why self-compassion is already a mainstay of the size-acceptance community (e.g., Baker, 2015). Thus, self-compassion may be a potential antidote to the negative self-evaluations that higher body-weight individuals often experience as a result of weight stigma (i.e., Crocker, Cornwell, & Major, 1993; Puhl, Moss-Racusin, & Schwartz, 2007).

Finally, self-affirmation is a guided-writing task in which individuals contemplate a cherished personal value, such as relationships, creativity, or education (e.g., Sherman & Cohen, 2006). Such contemplation affirms people's sense of personal worth and self-integrity and allows them to more effortlessly cope with both mundane stressors and experiences of discrimination. These benefits can persist for months and even years after the initial intervention, because immediate changes in self-integrity positively influence behavior and experiences over time, which further reinforce self-worth. Thus, self-affirmation may be an effective tool to buffer higher body-weight people against the stress of weight stigma.

Changing attributions. Higher body-weight people may be able to improve their well-being by (accurately) attributing their weight status to factors that are primarily out of their control, such as genes. Similarly, higher body-weight people may benefit from learning to attribute their negative experiences to the offending party's discrimination and prejudice, rather than their own personal and moral shortcomings. Higher body-weight people typically attribute negative experience to their weight, and most importantly, they do not blame an offending party for his or her transgression (Crocker et al., 1993). As a consequence of this attribution style, higher body-weight people experience heightened negative mood, depression, and anxiety. In contrast, members of stigmatized groups who attribute their negative experiences to discrimination and prejudice are buffered from many of the negative psychological consequences of discrimination (Crocker & Major, 1989). Thus, higher body-weight people who learn to embrace the size-acceptance mantra “my body is fine, it's the world that is messed up” may also come to benefit from these self-protective aspects of stigma.

Identifying with the “stigmatized majority”. Because most higher body-weight people do not want to identify with “fat people” and have internalized the premises of the weight-loss solution, higher body-weight people do not currently enjoy the stigma-buffering effects of group membership (Crocker & Major, 1989; Wang, Brownell, & Wadden, 2004). Thus, another strategy for coping with weight stigma is to build social networks with other in-group members and allies from the outgroup. The online size-acceptance community is doing just that in blogs (see The Militant Baker, militantbaker.com; Dances with Fat, danceswithfat.wordpress.com; and The Body is Not an Apology, thebodyisnotanapology.com). Research is needed to examine the degree to which participation in the size-acceptance community supports higher body-weight people's well-being by encouraging them to reject the premise that thinness is a prerequisite for beauty or self-acceptance and reduce the importance of body shape and size for self-worth. The size-acceptance community also may help people to reaffirm their worth, for example, by reappropriating the term “fat” (e.g., Galinsky et al., 2013; Wann, 1998) and celebrating the positive aspects of higher body weight, like softness and strength. By encouraging social activism and confronting prejudice in daily life, these communities may increase feelings of empowerment and self-confidence.

One aspect of group identification that is particularly applicable to higher body-weight people is that of satisfaction – one's positive attitudes about the group and one's membership in it (Leach et al., 2008). This type of weight satisfaction confers numerous benefits, including positive health behaviors (e.g., less likely to diet and more physically active) and physical health

outcomes (e.g., lower rates of hypertension, diabetes, and hypercholesterolemia), regardless of body weight (Blake et al., 2013). Preliminary research suggests that, as a component of group identity, weight satisfaction buffers the negative consequences of discrimination and increases perceptions of injustice (Brochu & Jones, 2014).

Conclusion

People are tired of diets, tired of feeling like failures, and tired of being scared of food. They are excited to find a paradigm that respects the diversity of human bodies and starts from the very basic premise that they can trust themselves, a paradigm that respects pleasure rather than denial.

– Linda Bacon (n. d.)

Nutrition professor and HAES™ pioneer Linda Bacon, quoted above, describes an approach towards weight and health that has, thus far, been uncommon in North America. As population weights have risen, and the association between higher body weight and health problems has been identified, researchers, health practitioners, and individuals have been striving to solve this “obesity problem”. The approach so far has been to pursue weight loss. But this approach has generally failed to produce lasting weight loss or health improvements and appears to contribute to weight gain, weight cycling, weight bias, and body image dissatisfaction and preoccupation – ultimately undermining health and well-being. These costs are especially lamentable given that research has not convincingly shown that higher body weight is the key cause of its associated health problems.

We conclude that it is time to abandon the weight-loss solution. It is time for researchers, health practitioners, and individuals to stop trying to find the “right” diet, and instead focus on supporting health, broadly defined, by encouraging eating and exercising for well-being rather than weight loss, by reducing weight bias and stigma, and by protecting higher body-weight people from the damaging effects of discrimination.

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Short Biographies

Christine Logel’s research seeks to understand and address social-psychological barriers to health, well-being, and educational success. She has authored or coauthored papers in *Psychological Science*, *Educational Psychologist*, *Journal of Educational Psychology*, *Journal of Personality and Social Psychology*, *Journal of Experimental Psychology*, and others. She is currently an assistant professor in the Department of Social Development Studies at Renison University College, affiliated with the University of Waterloo in Ontario, Canada. She holds a BA in Psychology and PhD in Social Psychology from the University of Waterloo and previously held postdoctoral fellowships at the University of Colorado Boulder, Stanford University, and the University of Waterloo. Her research is funded by SSHRC, HEQCO, and the University of Waterloo’s Centre for Teaching Excellence.

Danu Anthony Stinson’s research seeks to identify the consequences of different regulatory strategies for people’s psychological, social, and physical well-being. Her recent publications examine the role of self-esteem and social relationships in health and well-being. Dr Stinson’s

SSHRC-funded work is published in *Journal of Personality and Social Psychology*, *Psychological Science*, *Social Psychology and Personality Science*, *Personal Relationships*, and *Self and Identity*. Dr Stinson is an associate professor in the Psychology Department at the University of Victoria. She did her undergraduate degree at the University of British Columbia and her PhD in Social Psychology at the University of Waterloo, both in Canada, and a postdoctoral fellowship at State University of New York, Buffalo.

Paula M. Brochu's research examines the processes underlying the expression of prejudice, as well as the consequences of stigma on human functioning. With obesity levels high and weight bias rampant, she finds weight bias to be an informative domain to test, extend, and formulate psychological theories of prejudice and stigma. Her research has been published in *Social Psychological and Personality Science*, *Health Psychology*, *Personality and Social Psychology Bulletin*, *Journal of Applied Social Psychology*, and *Group Processes and Intergroup Relations*, among others. Dr Brochu earned a BA in Psychology at the University of Saskatchewan and a PhD in Social Psychology at the University of Western Ontario, both in Canada. She completed a postdoctoral fellowship at Yale University, before accepting a position as an assistant professor at Southeastern Nova University in Florida.

Note

* Correspondence: Department of Social Development Studies, Renison University College, University of Waterloo, Waterloo, Ontario, Canada N2L 3G4. Email: clogel@uwaterloo.ca

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