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The Surprising Relationship Between Weight and Mortality

A REVIEW OF KATHERINE FLEGAL'S RECENT PRESENTATION IN THE GENDER AND BODY SIZE FACULTY CURATOR SERIES

Everyone knows that there is an “obesity epidemic” raging across America, killing our children and straining our health care system. Or, at least, that is what the media, government, and medical profession have told us, and we take it as a matter of faith that what they have said about obesity is true. This fear of fat has led to billions of dollars invested in preventing or reducing obesity. Millions of men and women struggle to lose weight in order to improve their health. But is there really a link between weight and health?

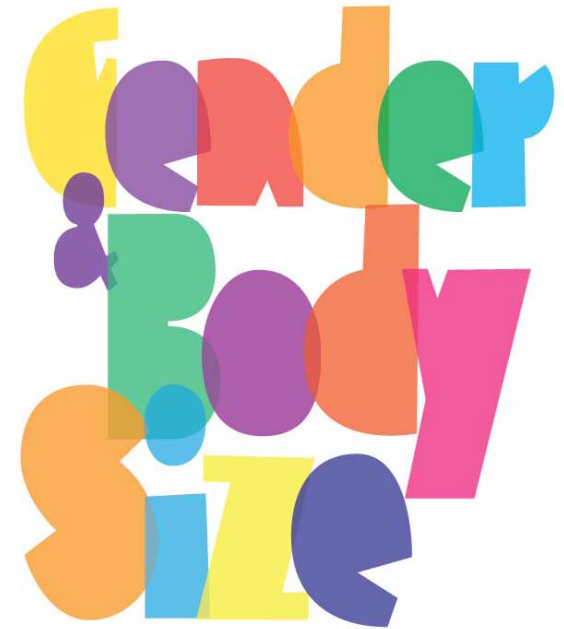
SURPRISING FINDINGS IN RESEARCH ON WEIGHT AND HEALTH

Dr. Katherine M. Flegal, an epidemiologist and senior research scientist at the National Center for Health Statistics at the Centers for Disease Control and Prevention (CDC), conducts research that sharply challenges the popular notions about the links between fat and health. She outlined her findings in her talk, “Weight and Mortality,” which was given as part of the Gender and the Body Size Faculty Curator Series organized by Professor Abigail Saguy and CSW.

Flegal noted that in 2004, a study by Ali Mokdad and colleagues found that being overweight (BMI 25–29) or obese (BMI 30+) was associated with a shocking 400,000 deaths per year. Mokdad and colleagues claimed that obesity would soon kill more people per year than smoking. The CDC publicized the study, and the media pumped out hundreds of news reports on the study for over a year. Tommy Thompson, the head of the U.S. Department of Health and Human Services, declared that “Americans need to understand that overweight and obesity are literally killing us.”

But something about these findings didn’t sound quite right to Flegal. Based on her years of research on obesity, the numbers seemed too impossibly high to be believed. Flegal and her colleagues took a look at the dataset that Mokdad had used and realized that there had been serious statistical errors in the article. Flegal re-analyzed the data using better statistical methods. She found that obesity (BMI 30+) was associated with 112,000 deaths per year, much lower than what Mokdad reported. Further, over the past several decades, the link between obesity and dying became weaker, and most of these deaths were associated with being in the very heaviest weight categories.

But she also found something that surprised many researchers: There were 86,000 fewer deaths per year in among “overweight” individuals (BMI 25–29) than among “normal” weight individuals! This means that people who are classified as “overweight” are actually more likely to live longer than thinner individuals. So, in total, if you combine the higher number of deaths associated with being obese (+112,000) and the lower number of deaths associated with



The CSW Winter 2010 Faculty Curator lecture series, “Gender and Body Size”—curated by Professor Abigail Saguy, Department of Sociology at UCLA—is responding to a gap in public and academic discourse, by hosting three speakers with expertise ranging from the epidemiology of body size to “fat activism”: Paul Campos, Katherine Flegal, and Marilyn Wann

Flegal went on to point out that correlation does not equal causation—just because there is an association between obesity and dying does not mean that obesity causes death. Poverty, physical inactivity, poor diet, lack of access to fresh food, and denial of health insurance are associated with both weighing more and dying earlier.

being overweight (-86,000), the number of deaths associated with overweight and obesity combined is only 26,000. Flegal published her study in the prestigious *Journal of the American Medical Association*.

Flegal went on to point out that correlation does not equal causation—just because there is an association between obesity and dying does not mean that obesity causes death. Poverty, physical inactivity, poor diet, lack of access to fresh food, and denial of health insurance are associated with both weighing more and dying earlier. Each of these factors could cause a person to be heavier and to die earlier. For example, we know from other research that fat men and women who exercise regularly have better health than slender men and women who do not exercise, suggesting that activity level is a far more important predictor of health than weight. Each time you take into account these other factors, the link between weight and mortality shrinks even more.

THE CONTROVERSY BREWS

The CDC admitted that the Mokdad study was flawed, endorsed Flegal’s study, and gave Flegal an award for her research. But the

controversy did not end there. The results of the study created a firestorm of criticism and outrage from the scientific and health community.

“It’s just rubbish,” states Walter Willet, professor of epidemiology and nutrition at the Harvard School of Public Health, in the *Washington Post*. The Harvard School of Public Health website featured an article titled, “Flawed Obesity Study Minimizes Health Risks of Excess Weight.” The article claims that there were “serious flaws” in Flegal’s study and that the findings grossly underestimate “the link between overweight and mortality risk.” As of March 1, 2010, the website does not mention that the CDC retracted their support of the Mokdad study and supported Flegal’s study.

In her talk, Flegal addressed each one of the counterpoints raised by critics, showing that the relationship between weight and mortality remains small even when taking the criticisms into account (see sidebar on page 15).

Clearly, the results of Flegal’s study created a great deal of concern from some public health authorities. There are people

Responses to Flegal's Critics

Isn't Flegal's study unusual? Is hers the only study showing that overweight people live longer?

No. Flegal gave citation after citation showing that that overweight men and women live longer than "normal" weight individuals. This is true in dozens of studies from many countries. However, many of these studies fail to mention in the text of the article that overweight people are healthier—you have to look in the tables to see the statistics showing this is true. There tends to be a bias in obesity research: When researchers find that obesity is linked with poorer health, they announce it prominently in the text. When they find no link or that heavier people are healthier than thinner folks, they often present the finding as part of a larger table and don't mention it in the text.

Maybe the problem is that you are using BMI, which is an imprecise measure of body fat. Wouldn't the results be different if you used a different measure of body fat?

No. You get the same results whether you use BMI or a variety of other measures of percentage of body fat.

Could it be that very sick people and older people lose a lot of weight, and that's why it appears that thinner individuals die earlier than overweight individuals?

No. In the case of wasting diseases, many people do lose weight. But Flegal did a variety of analyses where very sick individuals were either included or excluded from the sample. She still found the same pattern of results. Overall, there is a robust relationship between being overweight and living longer.

who have invested entire careers in the notion that even a little bit of extra weight is harmful. If obesity does not significantly increase the risk of mortality, what happens to funding that researchers are receiving to reduce the number of overweight and obese men and women? How will this affect current public health policies and interventions? Flegal argues that the widespread belief that fat is bad and the existing public health policies lead scientists to look for evidence that obesity is harmful while ignoring evidence that it is not.

WHAT DOES THIS MEAN FOR WOMEN'S STUDIES?

From the publishing of the books *Unbearable Weight* by Susan Bordo to *The Beauty Myth* by Naomi Wolf, feminists have long been critical of the pressure on average weight women to become very slender. But, until recently, many feminists had been silent about the pressures on overweight and obese men and women to lose weight.

Over the past several decades, more and more feminists have suggested that the preoccupation with body fat is just one more

way that people try to control men's and women's bodies. They argue that there is a long history of science being used to argue that stigmatized groups are in some way inferior to "normal" people, whether it is using "science" to "prove" that Black men and women are genetically inferior or that fat men and women are undesirable. It wasn't until decades after the Civil Rights Movement that we saw how science was influenced by the social beliefs of the previous era. Flegal suggests that there may be parallels in terms of how social beliefs affect the "science" of "healthy" weight.

Many feminists might argue that even if being fat does elevate somewhat one's risk of dying, it is still important to celebrate the diversity of body shapes and sizes that we see. Trying to eliminate an entire class of people—the nearly 70% of men and women who are classified as overweight or obese—is not a desirable or acceptable social goal. But knowing that the link between obesity and poor health is weaker than people commonly assume may make it easier for people to shed some of the prejudices they have towards fat men and women.

Diana Nguyen is an undergraduate pre-med student at UCLA. She is conducting research on prejudice and discrimination against fat men and women and is serving as an undergraduate teaching assistant for a seminar course on body dissatisfaction and dieting. She also assists with research examining the genetic factors that correlate with sexual orientation.

David Frederick is a PhD student in psychology. He conducts research on the evolutionary and social factors that shape the experiences of men and women. He has published research looking at non-Western cultures where fat men and women are believed to be healthy and very attractive. He studies how sexual objectification of men and women leads to body dissatisfaction and dieting and how body weight, ethnicity, and sexual orientation influence one's comfort with one's sex life. More about his research can be viewed at <http://dfred.bol.ucla.edu>