The Impact of Weight Stigma on Health

A Summary of Research Evidence

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How does weight stigma affect people’s health?

- Psychological distress
- Unhealthy eating behaviors
- Lower physical activity
- Physiological reactivity
- Metabolic risk factors
- Weight gain

Psychological distress

Weight Stigma

- Depression
- Anxiety
- Low self-esteem
- Poor body image
- Substance use
- Suicidality

## Weight gain and obesity

### Longitudinal Evidence

**Project EAT-IV**  
(*Eating & Activity in Teens and Young Adults*)  
N=1,830 adolescents followed for 15 years

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<th>Age Group</th>
<th>Description</th>
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| Adolescence | Weight-based teasing in adolescence  
(mean age: 15 years) |
| Adulthood | Odds of obesity 2x higher in both women and men  
(mean age: 31 years) |

*Adjusted for baseline body weight, race, SES, and age


**English Longitudinal Study of Ageing**

N=2,944 adults aged >50 followed for 6 years

- Perceived weight discrimination

  Significant increases in:  
  - body weight  
  - waist circumference  
  - odds of developing obesity

*Adjusted for baseline BMI, age, sex, and wealth

Jackson, Beeken, Wardle. *Obesity* 2014
Weight gain and obesity

Weight stigma is a psychosocial consequence of obesity, but also a psychosocial contributor to obesity.

Experiencing weight stigma predicts increased weight gain and obesity over time, regardless of baseline BMI, age, race/ethnicity, and socioeconomic factors.

Weight stigma leads to unhealthy eating behaviors

- Experiencing weight stigma
- Binge eating
- Emotional eating
- Increased food consumption
- Unhealthy weight control practices

Eating as a coping response to weight stigma

N=2,449 women in a self-help weight loss support program

“How do you cope with weight stigma experiences?”

79% reported eating:
“turning to food” as coping mechanism

Puhl & Brownell, Obesity 2006

N=2,378 adults in a national community sample

Increased weight stigma
Coped by engaging in:
Disordered eating behaviors
Increased eating and food intake


These coping responses can become long-term patterns in reaction to weight stigma

Lower physical activity

Negative feelings about engaging in physical activity

Lower intentions to be physically active

Avoidance of exercise

Bevan et al., *Int J Environ Res Public Health* 2021; Han et al., *BMC Obesity* 2018; Pearl et al., *Obesity* 2021
Physiological reactivity

- Elevated cortisol
- Elevated C-reactive protein
- Higher blood pressure
- Higher HbA1c levels
- Increased risk of high allostatic load

Increased risk of mortality independent of BMI

Media exposure to weight stigma increases physiological reactivity

Cortisol Reactivity

N = 128 women of different body sizes

Schvey et al., Psychsom Med 2014

Blood Pressure

For women with high blood pressure, watching the stigmatizing video led to increases in:

- Systolic blood pressure
- Diastolic blood pressure
- Ambulatory blood pressure
- Heart rate

N = 50 women with obesity, with either normal or high blood pressure

Panza et al., J Psychom Res 2023
Weight stigma may increase risk of:

- Metabolic syndrome
- Cardiovascular disease
- Myocardial infarction

Pearl et al., *Obesity* 2017; Udo & Grilo, *J Psychosom Res* 2017
Internalization of weight bias

Societal and/or interpersonal experiences of weight stigma

Negative external judgments become an internalized process of negative self-judgment

- Awareness of stereotypes
- Apply stereotypes to oneself
- Self-directed stigma and self-blame

Internalized weight bias and health

Findings persist after accounting for BMI and experienced stigma

- Psychological distress
- Disordered eating
- Barrier to weight loss
- Cardiometabolic risk

Interferes with weight management

- National, community sample of 549 adults who reported intentional weight loss of ≥10% in the past year
- 314 maintained weight loss, 235 re-gained weight:

What factors are related to weight loss maintenance (WLM)?

Demographics
- Age, Sex
- Race/ethnicity
- Education
- Income

Behaviors
- Eating breakfast
- Dietary monitoring
- Self-weighing
- Physical activity

Weight stigma
- Experienced stigma
- Internalized stigma

Some predictive value for WLM
Did not predict WLM outcomes
Unique predictive value for WLM

Lillis et al., J Health Psychol 2020; Olson et al., Obesity 2018; *Puhl et al., Ann Behav Med 2017
Internalized weight bias impairs efforts to sustain weight loss, independent of how much stigma people experience:

For every 1-unit increase in internalized weight bias:

- 28% lower odds of maintaining weight loss

Creates barriers for weight management

- U.S. adults engaged in weight management (N=18,769)
- Internalized weight bias was associated with:

  - Lower odds of achieving 5%-15% weight loss
  - Higher odds of 5%-10% weight gain
  - Poorer weight management behaviors, less food monitoring, lower eating self-efficacy

*Controlled for age, sex, race/ethnicity, education, marital status, BMI, overweight onset, program duration

Internalized weight bias and coping strategies

Internalizing weight bias is associated with:

- **more use of maladaptive coping strategies in response to stigma**
- **less use of adaptive coping strategies in response to stigma**

**Maladaptive Coping:**
- Avoiding exercise
- Disordered eating
- Self-blame
- Disengagement

**Adaptive Coping:**
- Self-acceptance
- Positive self-talk
- Emotional support
Pathway from weight stigma to weight gain

Weight stigma → Psychosocial distress → Internalized weight bias → Unhealthy coping strategies → Weight gain

- Disordered eating
- Unhealthy weight control practices
- Less physical activity
- Physiological stress

Puhl et al., *Am Psychol* 2020
Weight stigma is a public health issue

Endorsed by over 100 professional scientific and medical organizations:

“Weight stigma represents a major obstacle in efforts to effectively prevent and treat obesity and type 2 diabetes. Tackling stigma is not only a matter of human rights and social justice, but also a way to advance prevention and treatment of these diseases.”