

# Introduction: Prevalence and Causes of Weight Stigma

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**“A Pledge to End the Social Stigma of Obesity”**

**King's College London**

**February 9, 2024**

09 February 2024 11:00 to 15:00  
[King's Building, Strand Campus, London](#)



## Negative health consequences of stigma

### Mental health and behaviour change

Weight-based stigma can cause real and serious harm.

In both adults and children it is associated with:



- Depressive symptoms,
- Higher anxiety levels,
- Lower self-esteem,
- Social isolation,
- Stress

Leading to

- Emotional overeating (often on unhealthy 'comfort' foods)
- Lack of motivation contributing to lower levels of physical activity

**RESULT** = further weight gain, increasing the risk of both discrimination and poor health



# Animation

• Evoking Empathy



Explaining Biology

# April 2019 NYC International Conference



## March 2020 Report of Joint Consensus Statement & Pledge

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**RESULT** - further weight gain, increasing the risk of both discrimination and poor health.

Additional infographic text: **stigma**, **increased weight gain**, **COMPE**, **70-80% BOY**, **25-30% GIRL**, **10-15% ADULT**, **10-15% CHILDREN**.  
Please join us and sign the pledge. Together, we can end weight stigma.





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# Joint international consensus statement for ending stigma of obesity

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People with obesity commonly face a pervasive, resilient form of social stigma. They are often subject to discrimination in the workplace as well as in educational and healthcare settings. Research indicates that weight stigma can cause physical and psychological harm, and that affected individuals are less likely to receive adequate care. For these reasons, weight stigma deve

>100 Endorsing Organizations

[www.pledge2endobesitystigma.org](http://www.pledge2endobesitystigma.org)

## PLEDGE TO END OBESITY STIGMA

### **We pledge**

- To treat individuals with overweight and obesity with dignity and respect.
- To refrain from using stereotypical language, images, and narratives that unfairly and inaccurately depict individuals with overweight and obesity as lazy, gluttonous, and lacking willpower or self-discipline.
- To encourage and support educational initiatives aimed at eradicating weight bias through dissemination of current knowledge of obesity and body-weight regulation.
- To encourage and support initiatives aimed at preventing weight discrimination in the workplace, education, and healthcare settings.

[www.pledge2endobesitystigma.org](http://www.pledge2endobesitystigma.org)

# Endorsers/pledgers

- Professional Organizations
- Patients Advocacy Groups
- Academic Institutions/Hospitals
- Scientific / Medical Journals
- Parliamentary Groups
- Single Individuals

[www.pledge2endobesitystigma.org](http://www.pledge2endobesitystigma.org)

# Definitions

***Weight Bias:*** negative beliefs, assumptions and judgments toward individuals with overweight and obesity.

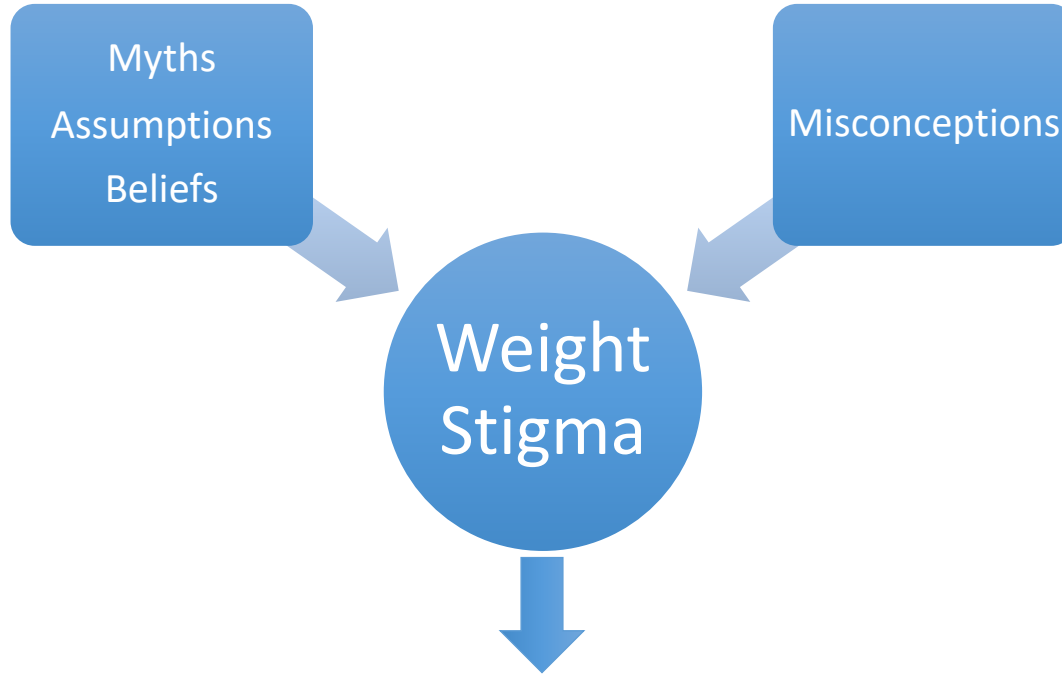
***Weight stigma:***

Social devaluation and denigration of people because of their body weight.

***Weight discrimination:***

Overt forms of weight-based prejudice and unfair treatment in the workplace, inequities in education, and prejudice in the health care setting





- **Human/Social Rights**
- **Health**
- **Access to Care**
- **Research**
- **Public Health**
- **Prevention**

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The New York Times

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PERSONAL HEALTH

# *Fat Bias Starts Early and Takes a Serious Toll*



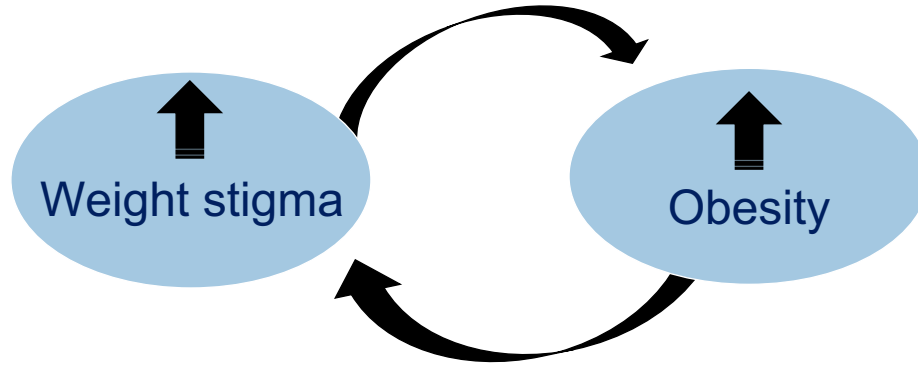
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Joint international consensus statement for  
ending stigma of obesity

## Physical and mental health consequences

*“Weight-based stigma and internalized weight bias can be particularly harmful to **mental health, increasing risks of depressive symptoms, anxiety, and promoting lower self-esteem, social isolation, stress, and substance use**”.*

Experiencing weight stigma is longitudinally associated with increases weight gain and obesity



*“Adults and children who experience weight-based stigma are more likely to avoid exercise and physical activity, and to engage in unhealthy behaviors that increase the risk of worsening obesity”*

Sutin & Terracciano, 2013; Sutin et al., 2014; Quick et al., 2013;  
Schafer & Ferraro, 2011; Hunger & Tomiyama, 2014



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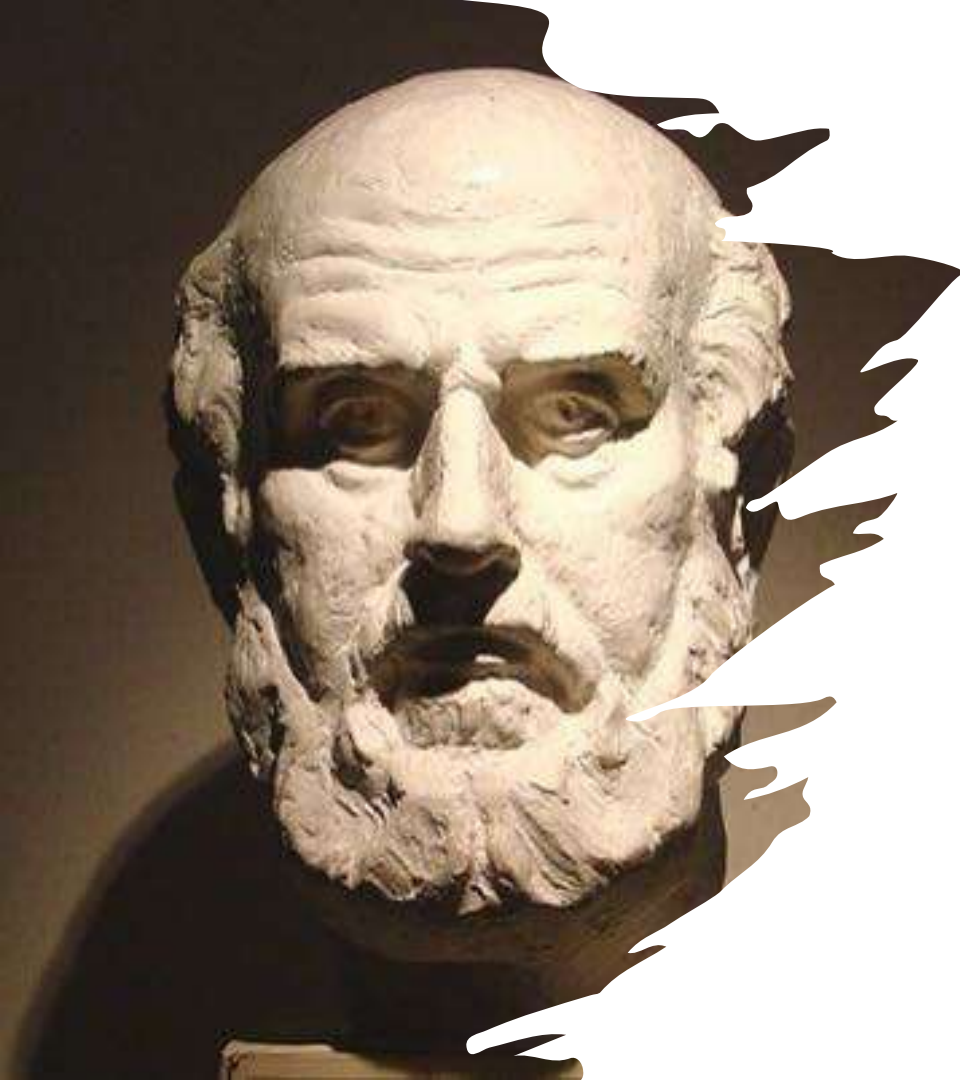
# Joint international consensus statement for ending stigma of obesity

## Access to care

*“Patients with obesity, are less likely to seek and receive appropriate treatment for obesity or other conditions.”*

*Despite the well-recognized risks of obesity and related illnesses, it is common for health insurance companies to have significant limitations or complete lack of coverage for evidence-based treatments of obesity—especially metabolic surgery. These policies can cause harm, are indefensible, and are ethically objectionable.*





“Cure Sometimes,  
Treat Often,  
Comfort Always”

*Hippocrates*

460 BCE–370 BCE

IFSO 2016  
Rio de Janeiro

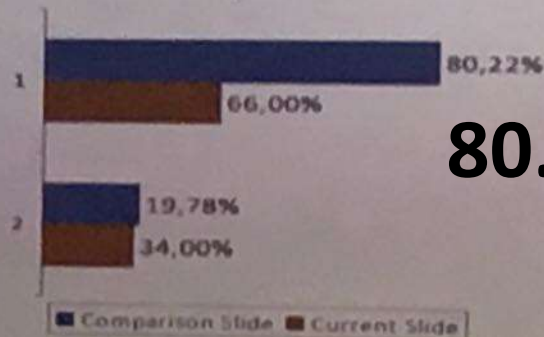
“What is the most likely explanation for weight regain after bariatric surgery?”

How should we define success?  
The patient is the primary responsible for obesity recidivism.

Vote!

1|A - True

2|B - False



80.22%

Johnson & Johnson

ETHICON



# Causes of Weight-Based Stigma

## **Causes and contributors of weight stigma/discrimination**

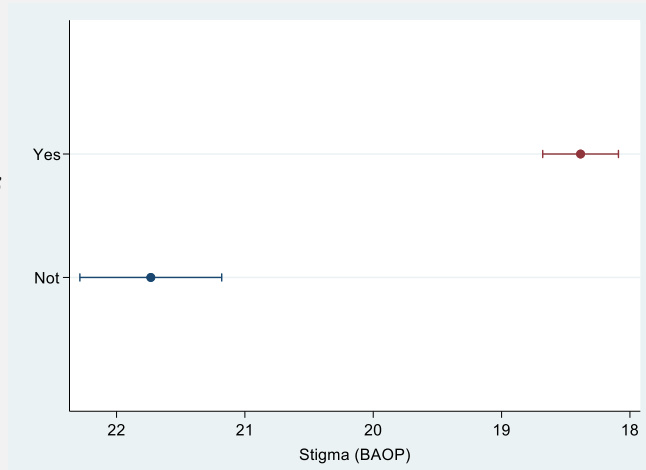
*“The idea that the causes of obesity depend on individuals’ faults, such as laziness and gluttony, provides the foundation for stigma against obesity”*

*Joint International Consensus Statement. Nature Medicine 2020*

# ASK Study: Stigmatizing Views & Treatment

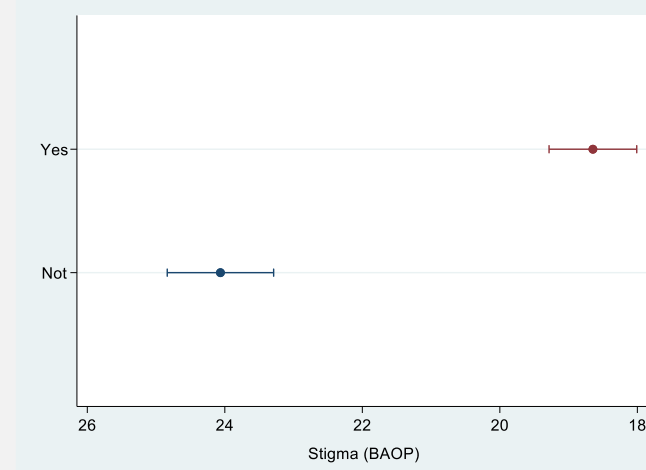
Association between stigmatizing views and opinion that **obesity** could be cured by commitment to follow a healthy lifestyle

### General Population



Increasing stigma →

### Healthcare Professionals



Increasing stigma →

O'Keefe et al  
*The Lancet Diabetes  
& Endocrin.* 2020

In Gen. Pop and HCPs those that consider obesity to be curable through a commitment to a healthy lifestyle have more stigmatizing views

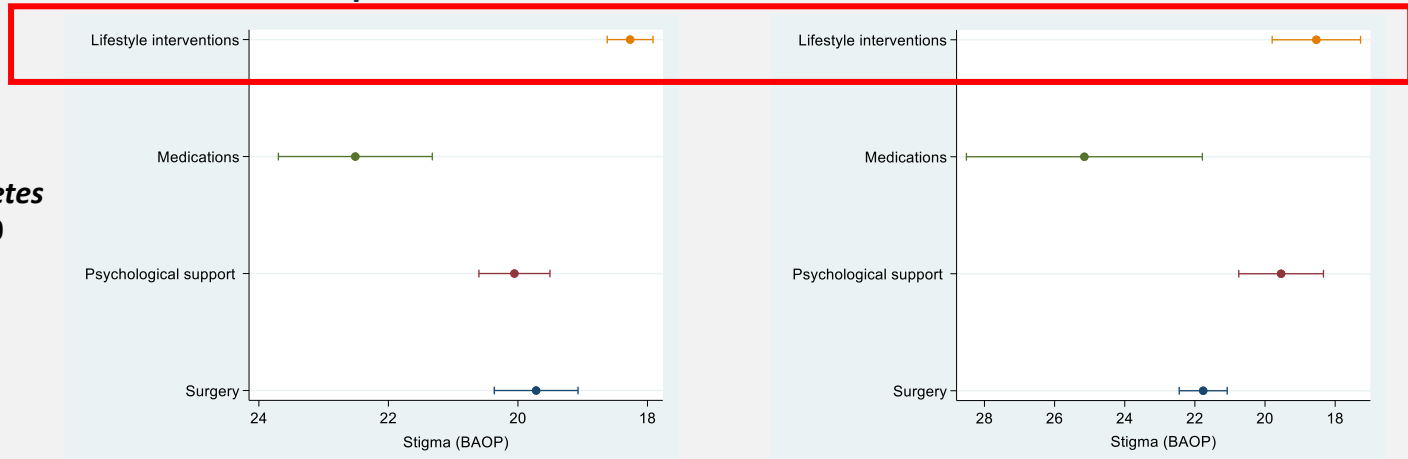
\*BAOP score used as proxy measure of stigma

# ASK Study: Stigmatizing Views & Treatment

Association between between stigmatizing views (as measured by BAOP) and opinion on most effective treatment for **severe obesity (BMI >35 kg/m<sup>2</sup>)**

## General Population

## Healthcare Professionals



O'Keefe et al  
*The Lancet Diabetes & Endocrin.* 2020

Increasing stigma →

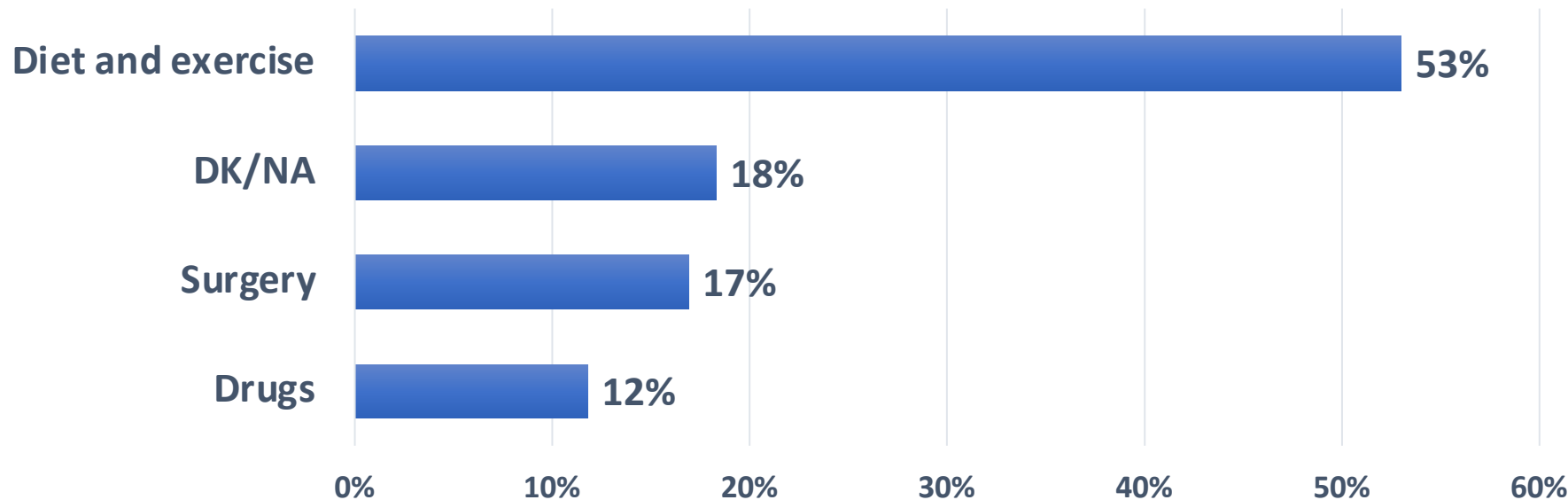
Increasing stigma →

In Gen Pop. and HCPs those that consider lifestyle intervention to be the most effective treatment for severe obesity have more stigmatizing views

\*BAOP score used as proxy measure of stigma

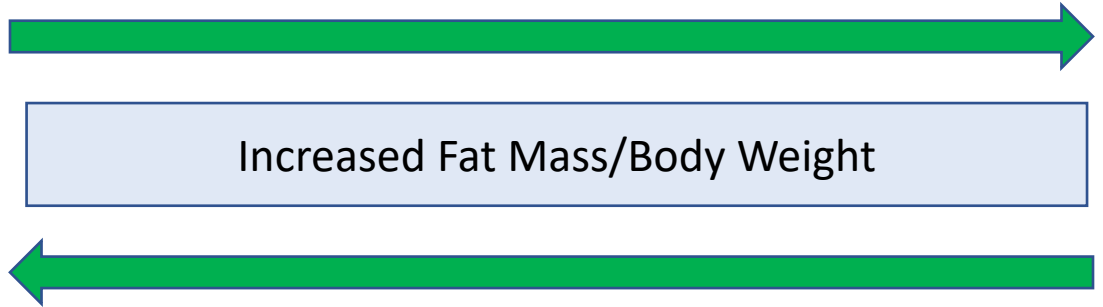
# *“What is THE most effective treatment today for Severe Obesity?”*

*“Aug 2023 Survey of 1017 U.S. Adults with self-reported obesity (Qualtrics)”*





Widespread  
Assumption that  
Volitional Control of  
Weight is Bidirectional,  
No Matter the Severity  
of Obesity



# Naïve Biology:

A set of concepts and cognitive processes that help us understand biological phenomena.

> Children are able to draw causal inferences that are specific to biological entities

## ENERGY HOMEOSTASIS



## Causes of obesity

Obesity is generally caused by consuming more calories, particularly those in fatty and sugary foods, than you burn off through physical activity. The excess energy is stored by the body as fat.

### ENERGY HOMEOSTASIS



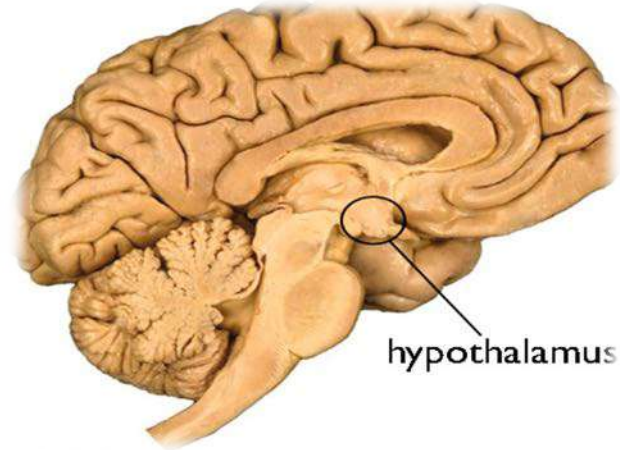
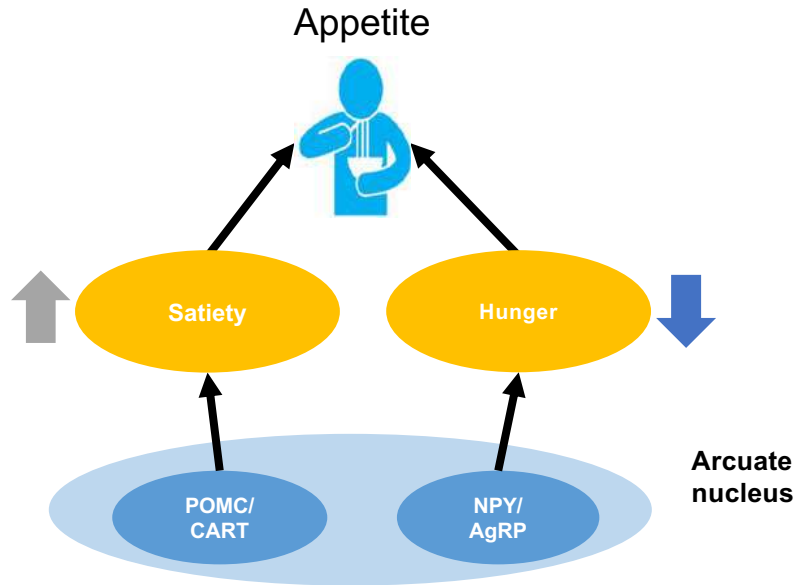
Body Weight = Energy In – Energy Out



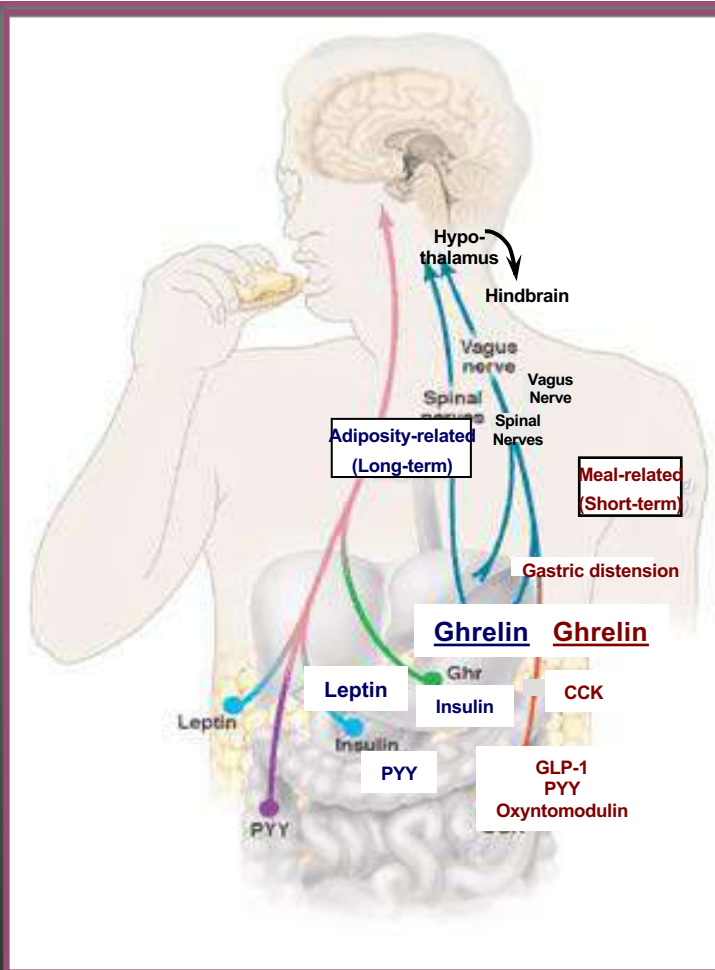
Is obesity really a volitional problem?

# Regulation of Appetite: Is it Volitional?

- Arcuate nucleus



AgRP, Agouti-related peptide; CART, cocaine- and amphetamine-regulated transcript; NPY, neuropeptide Y; POMC, pro-opiomelanocortin  
Secher *et al. J Clin Invest* 2014;124:4473–88; van Can *et al. Int J Obes (Lond)* 2014;38:784–93



Adapted from  
Marx J,  
*Science* 299:846, 2003

# Role of modern (sedentary) lifestyle



HADZA HUNTER-GATHERERS in Tanzania spend hundreds of calories a day on activity yet burn the same total number of calories as city dwellers in the U.S.

Hunter-Gatherers  
Hadza populations of Tanzania  
(walk an average of 11.2 km a day)



Western urban dwellers  
(New York City/Europe)

***Pontzer H, et al .PLoS One. 2012;7(7)***

# Role of modern (sedentary) lifestyle



Hunter-Gatherers

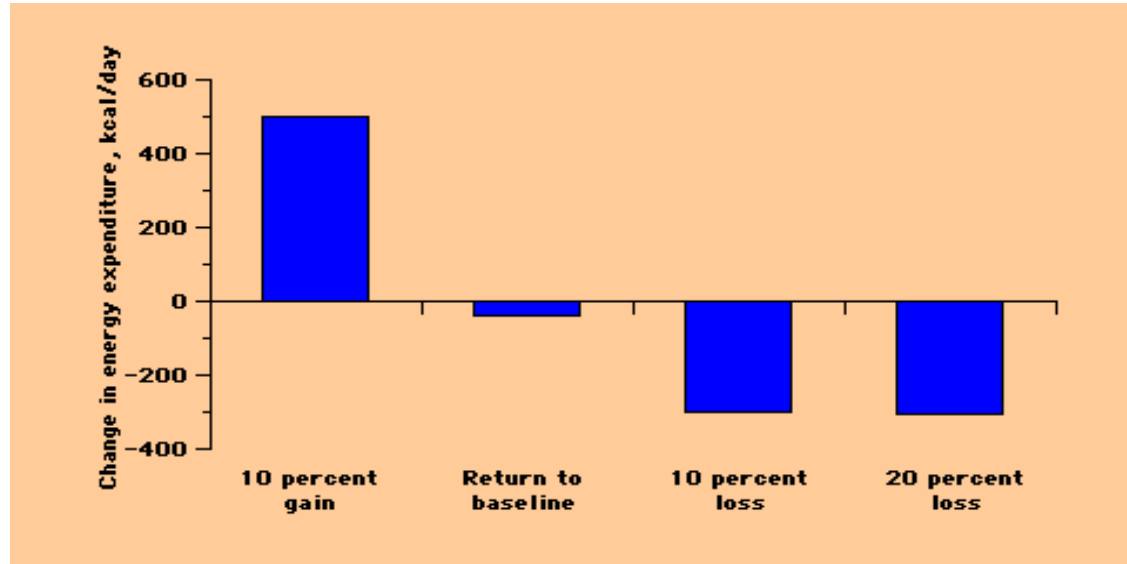
?



Western urban dwellers

**No Difference in Daily Total Energy Expenditure**

# Physiologic Response of Energy Expenditure to Changes in Body Weight



## **Changes in energy expenditure minimize changes in weight**

Observed minus predicted energy expenditure in subjects studied during food-induced weight gain and diet-induced weight loss. Changes in weight were associated with parallel changes in total energy expenditure, thereby making further alterations in weight more difficult. Data from Leibel, RL, Rosenbaum, M, Hirsch, J. N Engl J Med 1995; 332:621.

# Health Benefits of Physical Activity

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## **Panel 1: Health benefits of physical activity in adults<sup>3-5</sup>**

### **Strong evidence of reduced rates of:**

- All-cause mortality
- Coronary heart disease
- High blood pressure
- Stroke
- Metabolic syndrome
- Type 2 diabetes
- Breast cancer
- Colon cancer
- Depression
- Falling

### **Strong evidence of:**

- Increased cardiorespiratory and muscular fitness
- Healthier body mass and composition
- Improved bone health
- Increased functional health
- Improved cognitive function

But not so much weight loss

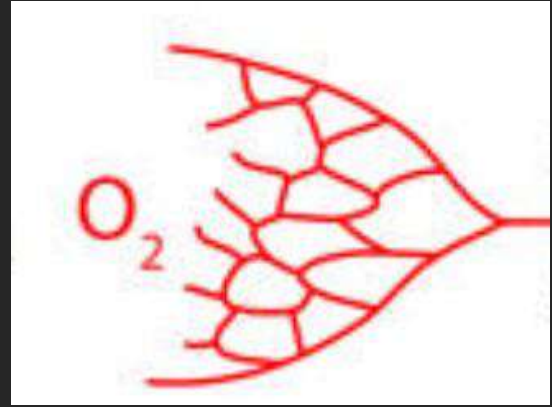
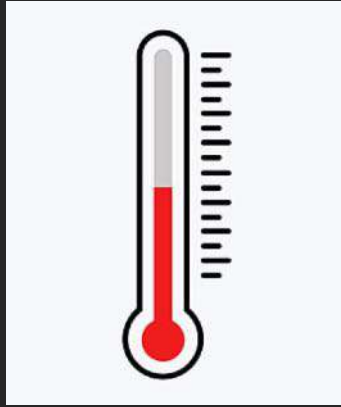
Lee et al, Lancet  
2012;380:219-29

# “Energy in” and “Energy Out” are Biologically Regulated

## ENERGY HOMEOSTASIS







- *Popular expressions such as ‘energy in versus energy out’ or ‘calories in versus calories out’ are misleading because they inaccurately imply that body weight and/or fat mass are solely influenced by the number of food calories ingested, and the amount of energy burned through exercise.*



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- ***This narrative is not supported by evidence and provides a foundation for popular, stigmatizing views that blame individuals’ lack of willpower for their obesity.***

- *“There is a widespread assumption, including among many medical professionals, that voluntary lifestyle changes (diet and exercise) can entirely reverse obesity over long periods of time, even when severe.*

- *This assumption runs contrary to indisputable scientific evidence demonstrating that voluntary efforts to reduce body weight activate potent compensatory biologic responses (for example, increased appetite, decreased metabolic rate) that typically promote long-term weight regain”.*

nature  
medicine

CONSENSUS STATEMENT

<https://doi.org/10.1038/s41591-020-0803-x>



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# Consensus Statement

## Executive Summary

Academic institutions, professional organizations, media, public health authorities, and government should encourage education about weight-based stigma and facilitate a new public narrative of obesity, coherent with modern scientific knowledge.

*F.Rubino et al; Nature Medicine 2020*



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