Obesity is not a Behaviour

Ali Zentner, MD, FRCPC
Diplomate of ABOM

Disclosures

- Faculty: Ali Zentner

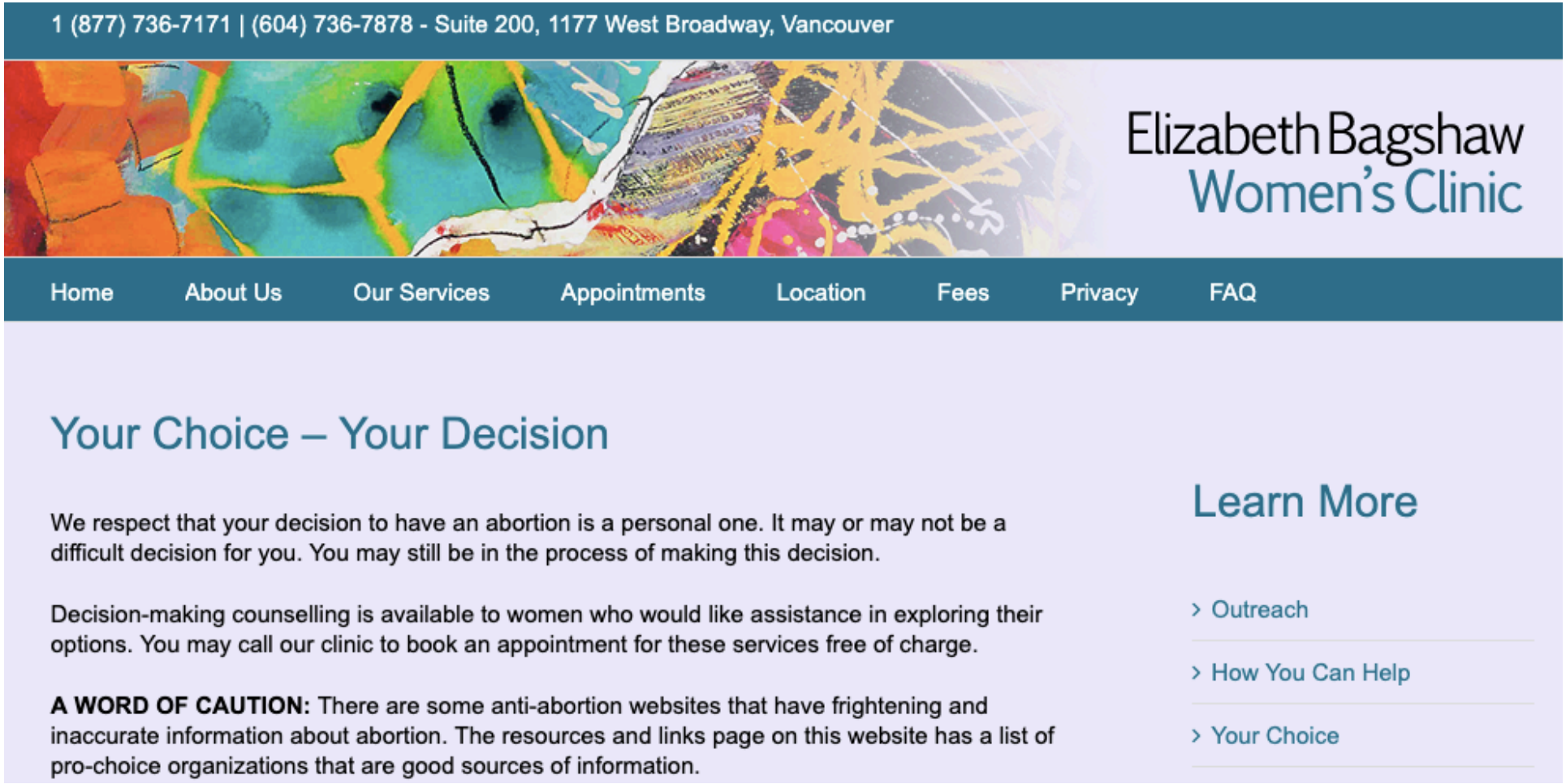
- Relationships with commercial interests:
  - Grants/Research Support: Astra Zeneca, Sanofi Aventis, Boeringher Engelheim, Eli Lilly
  - Speakers Bureau/Honoraria: Astra Zeneca, Sanofi Aventis, Boeringher Engelheim, Eli Lilly, Amgen, Novo Nordisk
  - Consulting Fees: Astra Zeneca, Sanofi Aventis, Boeringher Engelheim, Eli Lilly, Amgen, Novo Nordisk
  - Other: Investor Live Medical and Exercise Clinic

Meet Dr. Elizabeth Bagshaw

Did you ever know that you're my hero…

October 19, 1882 – January 5, 1982

How far we've come….



Why is it so hard to treat obesity?

All roads lead to…. BIAS

Bias Against the Disease….

- Obesity is a lifestyle choice
- Obesity is not a disease
- “You are fat because you want to/chose to be”
- There are no treatments
- Treatment does not work
- The results are minimal
- The results are temporary
- Noone gets to goal weight
- “what’s the point” medicine

Bias against the patient….

- Fat people are….

Nomenclature

- Bias:
  - Intrinsic
  - Extrinsic
- Stigma
- Discrimination

Let’s Talk Evidence

- Prevalence of Weight Bias
- Risk associated with it in clinical care

CLINICAL DATA

- What does the science show us on weight bias in medicine?
- What is the effect of weight bias on patients?
- What is the evidence towards addressing weight bias?

Here's the effect…

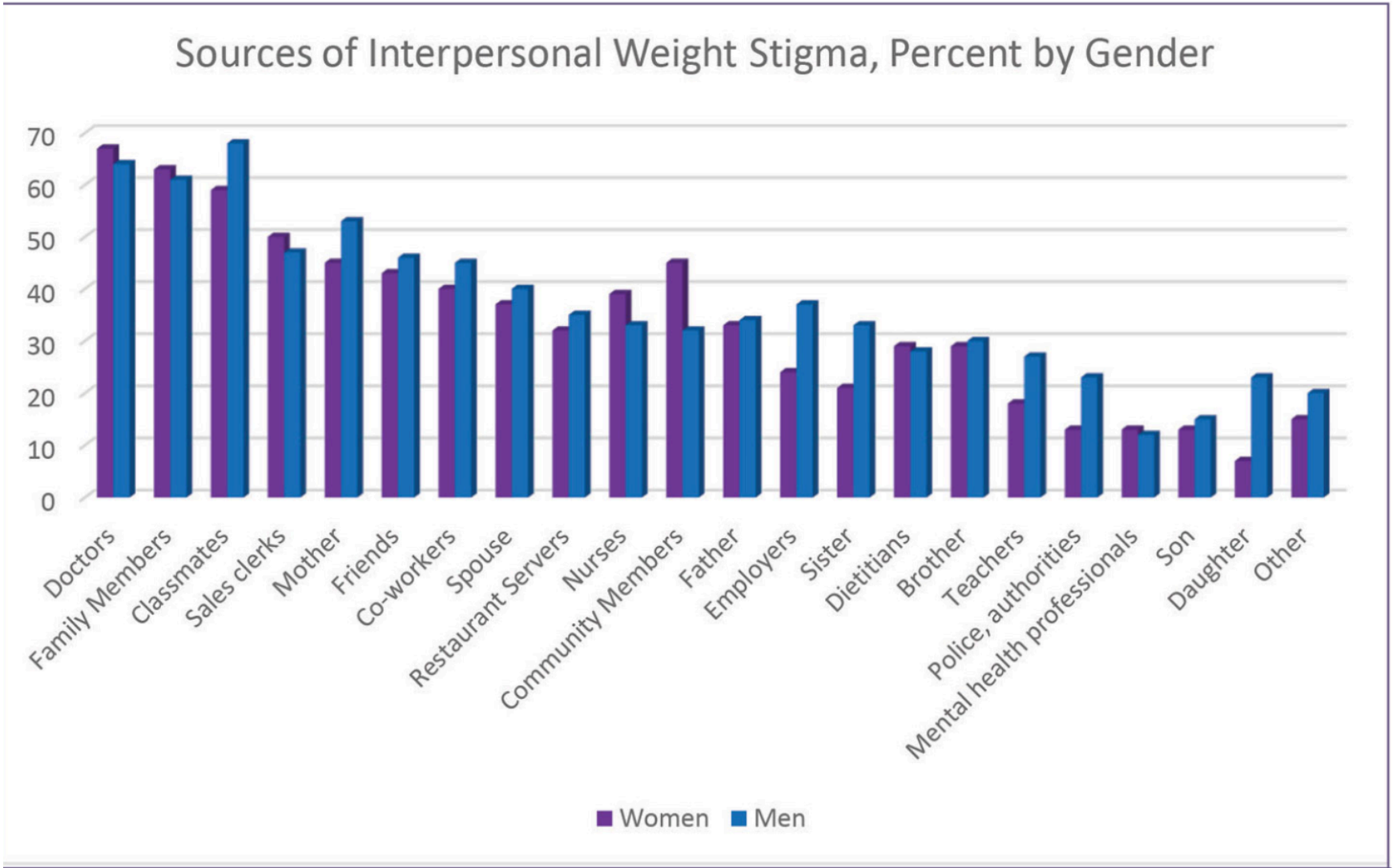


FIGURE 2. Sources of Interpersonal Weight Stigma. Physicians and family members were the most frequent sources of weight bias reported in a study examining experiences of weight stigmatization, sources of stigma, coping strategies, psychological functioning, and eating behaviors in a sample of 2,671 adults with overweight and obesity,

SOURCE: Puhl RM, Brownell KD. Confronting and coping with weight stigma: an investigation of overweight and obese adults. *Obesity*. 2006;14(10):1802–1815.

Project Implicit

- 4.4 million tests
- Implicit and explicit attitudes
- Internet population
- 13 years
- Sexual orientation, race, skin tone, age, disability, and body weight

www.implicit.harvard.edu/implicit

Table 1. Categories and associated subordinate stimuli for IAT tasks

Stimuli to be classified			
Target category labels			
Fat people	Fat	Obese	Large
Thin people	Slim	Thin	Skinny
Attribute category labels			
Bad	Terrible	Nasty	Horrible
Good	Wonderful	Joyful	Excellent
Lazy	Slow	Lazy	Sluggish
Motivated	Determined	Motivated	Eager
Smart	Intelligent	Smart	Bright
Stupid	Dumb	Stupid	Dense
Valuable	Deserving	Valuable	Important
Worthless	Insignificant	Worthless	Useless

Thin People Motivated		Fat People Lazy
	obese	√
	sluggish	√
√	slim	
√	eager	
	large	√
	lazy	√
	fat	√
√	motivated	
√	thin	
√	determined	
√	skinny	

Fat People Motivated		Thin People Lazy
√	obese	
	sluggish	√
	slim	√
√	eager	
√	large	
	lazy	√
√	fat	
√	motivated	
	thin	√
√	determined	
	skinny	√

Figure 1: Sample portions of two completed IAT tasks measuring implicit associations of fat and thin people with lazy and motivated descriptors. The page on the left (thin people with motivated and fat people with lazy) would be easier to complete quickly for people who have implicit anti-fat bias, because the pairings match negative automatic associations with overweight. In contrast, the page on the right (fat people with motivated and thin people with lazy) would be more difficult to complete quickly for people who have implicit anti-fat bias.

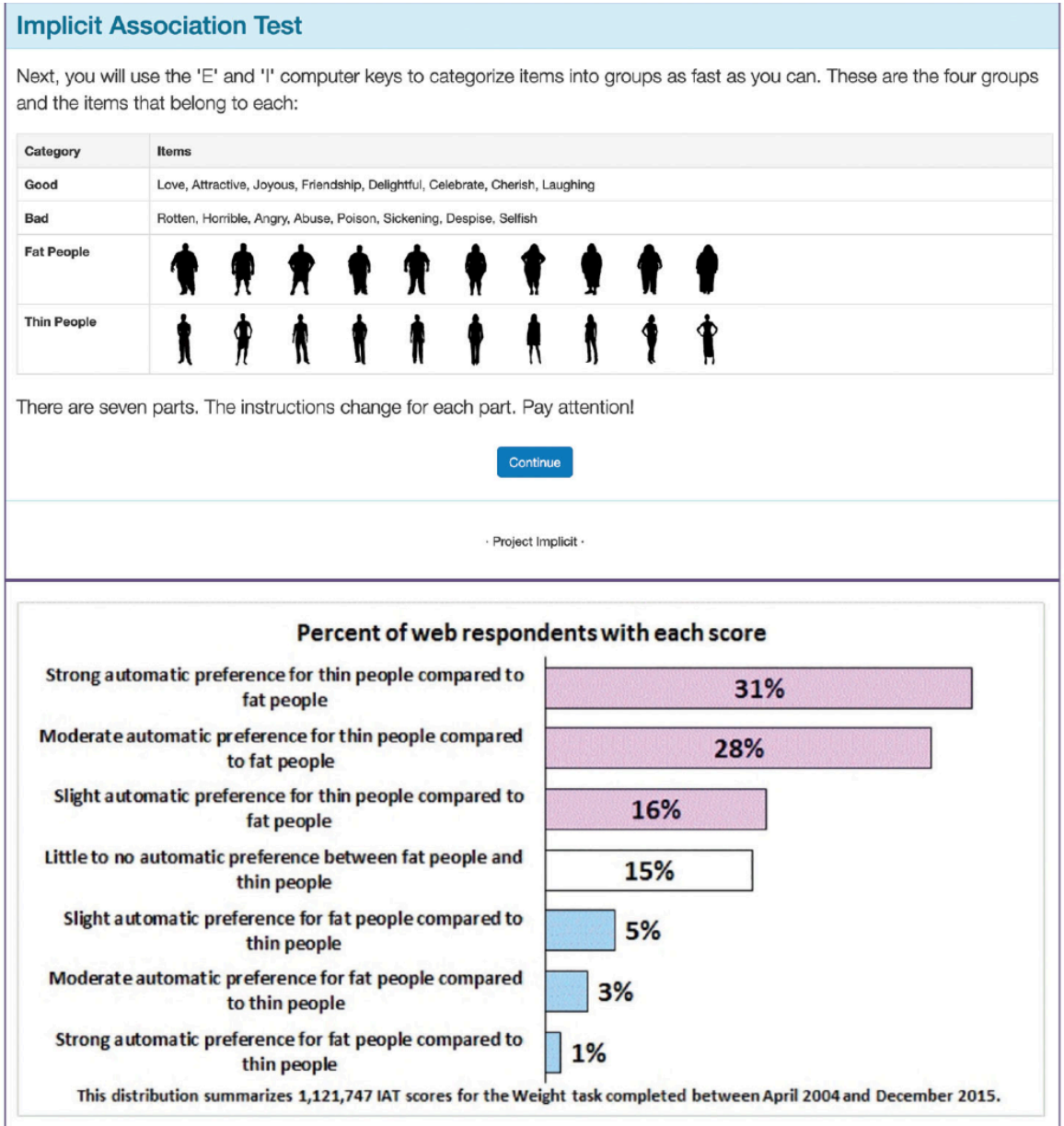


FIGURE 1. Project Implicit Weight ('Fat-Thin') Implicit Association Test. Data collected between April 2004 and December 2015 from Project Implicit's weight implicit association test (IAT) revealed the majority of respondents displayed an automatic preference for "thin" people relative to "fat" people.

SOURCE: Project Implicit. https://implicit.harvard.edu/implicit/

Published in final edited form as:
Obesity (Silver Spring). 2014 April ; 22(4): 1201–1208. doi:10.1002/oby.20687.

Implicit and Explicit Weight Bias in a National Sample of 4732 Medical Students: The Medical Student CHANGES Study

Sean M. Phelan, PhD, MPH,
Division of Health Care Policy and Research, Mayo Clinic, Rochester, MN, USA

John F. Dovidio, PhD,
Department of Psychology, Yale University, New Haven, CT, USA

Rebecca M. Puhl, PhD,
Rudd Center for Food Policy and Obesity, Yale University, New Haven, CT, USA

Diana J. Burgess, PhD,

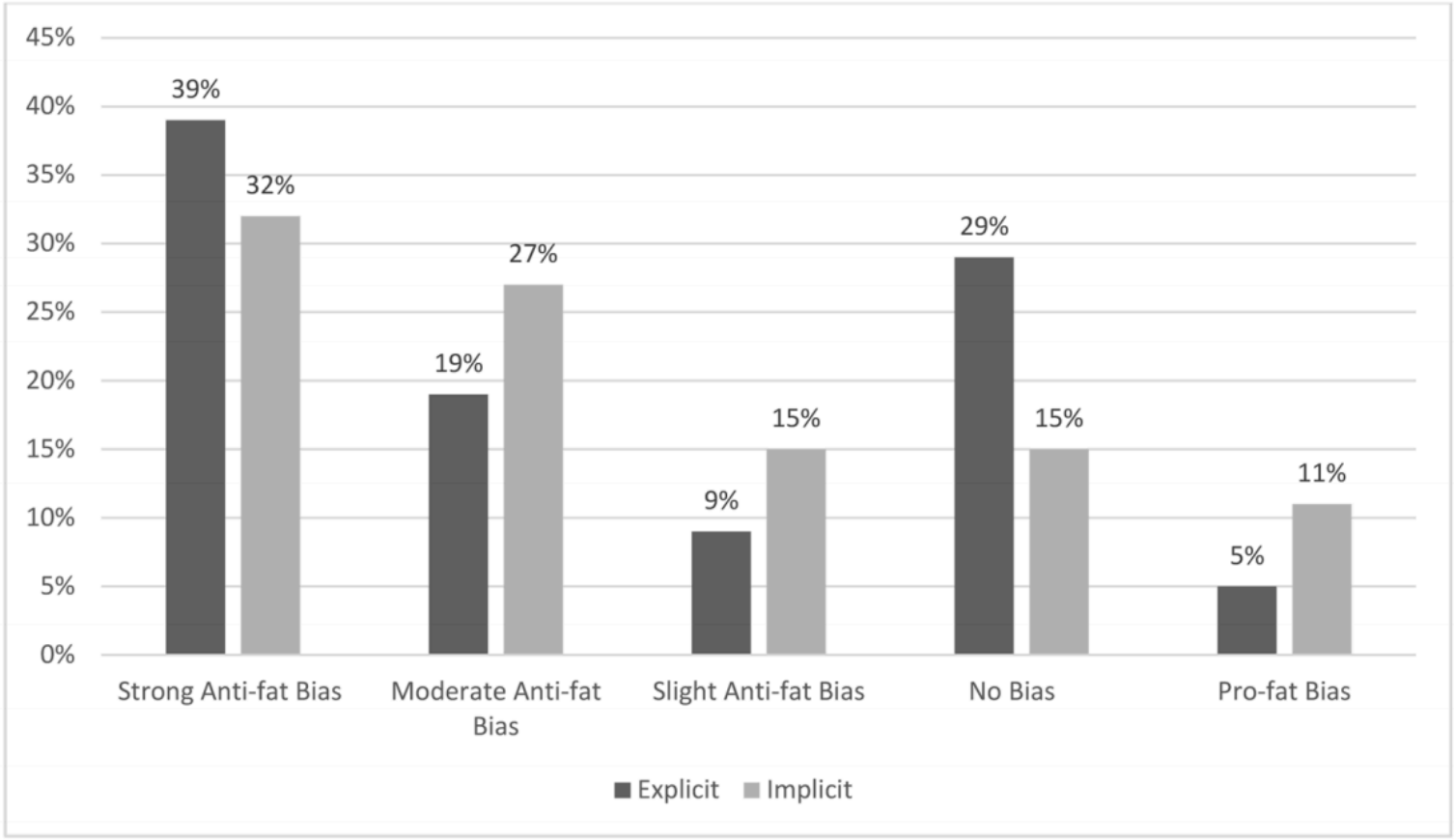


Figure 2. Distribution of explicit and implicit weight bias in a national sample of medical students

An IAT score ≥ .65 was considered strong; a score < .65 and ≥ .35, moderate; and a score <. 35 and ≥.15, slight anti-fat bias. A score > −.15 and <.15 was considered no bias, and a score ≤ −.15 was considered pro-fat bias. For explicit bias, a difference between feeling thermometer scores for Whites and obese people > 15 was considered strong; a difference between 6 and 15, moderate; and difference between 1 and 5, slight anti-fat bias. A difference of 0 was no bias, and a difference < 0 was pro-fat bias.

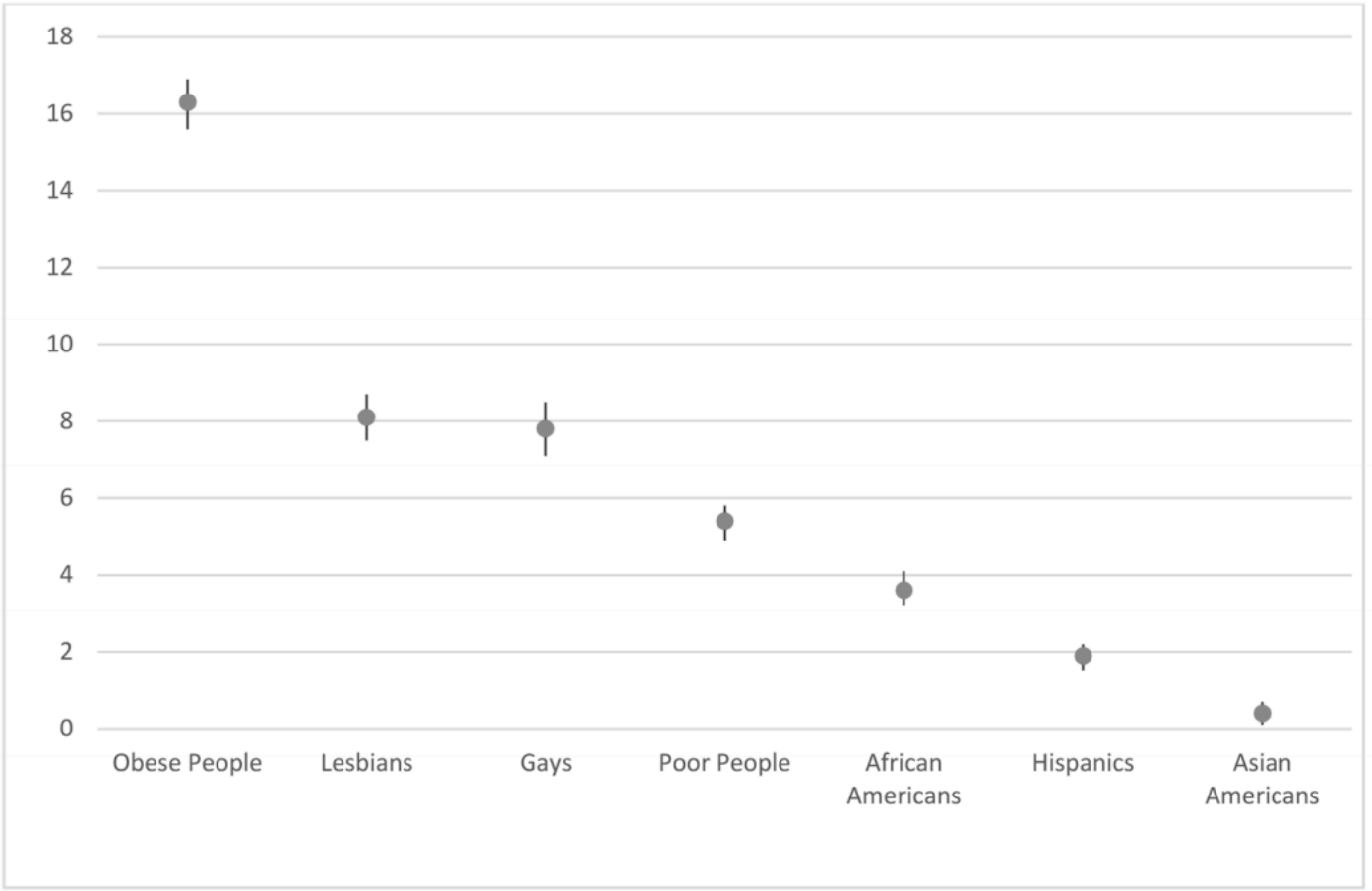


Figure 3. Explicit bias against people who are obese and other stigmatized/minority groups relative to Whites

The dots represent the sample mean of each participant's rating of whites minus their rating of obese people on feeling thermometers. Higher numbers indicate lower warmth toward the group relative to Whites. The bars represent the 95% confidence intervals

Primary Care Physicians' Attitudes about Obesity and Its Treatment

Gary D. Foster, Thomas A. Wadden,* Angela P. Makris,* Duncan Davidson,* Rebecca Swain Sanderson,* David B. Allison,† and Amy Kessler‡*

Abstract

FOSTER, GARY D., THOMAS A. WADDEN, ANGELA P. MAKRIS, DUNCAN DAVIDSON, REBECCA SWAIN SANDERSON, DAVID B. ALLISON, AND AMY KESSLER. Primary care physicians' attitudes about obesity and its treatment. *Obes Res.* 2003;11:1168-1177.

Objective: This study was designed to assess physicians' attitudes toward obese patients and the causes and treatment of obesity.

Research Methods and Procedures: A questionnaire assessed attitudes in 2 geographically representative national random samples of 5000 primary care physicians. In one sample ($N = 2500$), obesity was defined as a BMI of 30 to 40 kg/m^2, and in the other ($N = 2500$), obesity was defined as a BMI > 40.

Results: Six hundred twenty physicians responded. They issues if their time was reimbursed appropriately.

Discussion: Primary care physicians view obesity as largely a behavioral problem and share our broader society's negative stereotypes about the personal attributes of obese persons. Practitioners are realistic about treatment outcomes but view obesity treatment as less effective than treatment of most other chronic conditions.

Introduction

Two-thirds of Americans are either overweight or obese (1), prompting calls from the National Institutes of Health (2), the U.S. Surgeon General (3), and the World Health Organization (4) to treat obesity seriously. Despite these calls, patient surveys indicate that less than one-half of obese (BMI $>$ 30) individuals are advised by their physi-

Table 3. Physicians' attitudes towards obesity treatment

Items	Mean ± SD	1 (Strongly disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly agree)	1 and 2	4 and 5
I believe it's necessary to educate obese patients on the health risks of obesity	4.5 ± 0.6	0.3	0.6	3.9	37.1	57.9	1.0	95.0
Obesity is a chronic disease	4.5 ± 0.9	2.5	2.6	2.9	30.6	61.4	5.1	92.0
I make accommodations for obese patients[a]	4.4 ± 0.7	1.1	1.6	2.9	40.8	53.5	2.8	94.3
Obesity is associated with serious medical conditions	4.4 ± 0.8	0.8	2.3	5.5	38.1	53.3	3.1	91.4
Physicians should be role models by maintaining a normal weight	4.1 ± 0.8	0.6	1.6	12.8	52.5	32.4	2.3	84.9
A 10% reduction in body weight is sufficient to significantly improve obesity-related health complications	3.8 ± 0.9	0.5	10.5	13.8	55.4	19.6	11.0	75.0
I would spend more time working on weight management issues if my time was reimbursed appropriately	3.5 ± 1.1	4.5	15.7	25.8	32.0	21.9	20.3	53.9
I feel competent in prescribing weight loss programs for obese patients	3.4 ± 1.0	3.1	19.2	28.4	38.6	10.7	22.2	49.4
Most obese patients are well aware of the health risks of obesity	3.2 ± 1.0	4.7	26.9	19.8	43.0	5.5	31.7	48.5
Medications to treat obesity should be limited to short-term (<3 months) use	3.2 ± 1.2	8.3	24.0	24.3	28.4	15.0	32.3	43.4
Most obese patients could reach a normal weight (for height) if they were motivated to do so	3.1 ± 1.1	6.2	27.4	25.3	32.9	8.3	33.5	41.2
Most obese patients will not lose a significant amount of weight	3.1 ± 1.0	6.2	28.6	22.7	39.0	3.6	34.7	42.5
I have negative reactions towards the appearance of obese patients	3.0 ± 1.1	11.7	22.8	28.1	33.5	3.9	34.5	37.4
If a patient meets the appropriate criteria for obesity surgery, I would recommend an evaluation by a surgeon[b]	2.7 ± 1.1	13.2	31.9	31.2	19.2	4.6	45.1	23.8
Medications to treat obesity should be used chronically	2.6 ± 1.2	23.3	29.2	21.4	19.0	7.1	52.5	26.1
I am usually successful in helping obese patients lose weight	2.6 ± 0.9	8.9	42.1	34.7	12.6	1.6	51.1	14.3
For most obese patients, long-term maintenance of weight loss is impossible	2.5 ± 1.1	18.2	40.5	19.6	17.5	4.2	58.7	21.7
It is acceptable to use "scare tactics" to obtain compliance of the obese patient	2.3 ± 1.0	19.0	42.7	24.8	11.9	1.6	61.7	13.5
I feel uncomfortable when examining an obese patient	2.1 ± 1.0	29.4	45.1	16.4	8.0	1.1	74.5	9.1
It is difficult for me to feel empathy for an obese patient	2.0 ± 0.9	32.1	48.1	12.3	6.8	0.6	80.2	7.5

Personal Beliefs

Table 2. Physicians' beliefs about the personal characteristics of obese individuals

Adjectives	Mean ± SD	1	2	3	4	5	6	7	1 to 3	5 to 7
Awkward . . . Graceful	4.8 ± 1.0	0.5	0.9	3.1	33.9	37.3	20.3	4.1	4.4	61.7
Unattractive . . . Attractive	4.7 ± 1.0	0.5	1.0	6.3	38.9	31.6	16.9	4.8	7.8	53.2
Ugly . . . Handsome	4.6 ± 0.9	0.5	1.7	1.7	46.6	33.6	12.6	3.2	3.9	49.5
Noncompliant . . . Compliant	4.6 ± 1.1	0.5	2.5	8.1	38.0	28.4	18.5	3.9	11.2	50.8
Weak-Willed . . . Strong-Willed	4.5 ± 1.0	0.7	2.0	5.1	48.0	27.0	14.1	2.9	7.8	44.0
Lazy . . . Industrious	4.2 ± 1.0	1.0	3.6	7.7	58.0	21.2	6.3	2.2	12.3	29.7
Sloppy . . . Neat	4.2 ± 1.0	1.2	4.3	7.7	52.2	25.0	7.1	2.6	13.1	34.7
Unpleasant . . . Pleasant	3.4 ± 1.1	3.9	18.5	22.1	46.4	6.1	2.2	0.7	44.6	9.0
Dishonest . . . Honest	3.4 ± 1.0	6.0	16.2	13.9	60.5	2.0	0.9	0.5	36.1	3.4

All values, other than the mean, represent the percentage of respondents who endorsed each category (1 to 7). The higher the mean score, the more the first adjective of the pair was endorsed by physicians. Adjective pairs are listed in order of mean ratings; adjectives were not displayed in this order on the questionnaire nor were all negative attributes listed first.

Weight Bias among Health Professionals Specializing in Obesity

Marlene B. Schwartz, Heather O'Neal Chambliss,† Kelly D. Brownell,* Steven N. Blair,† and Charles Billington‡*

Abstract

SCHWARTZ, MARLENE B., HEATHER O'NEAL CHAMBLISS, KELLY D. BROWNELL, STEVEN N. BLAIR, AND CHARLES BILLINGTON. Weight bias among health professionals specializing in obesity. *Obes Res.* 2003;11:1033–1039.

Purpose: To determine the level of anti-fat bias in health professionals specializing in obesity and identify personal characteristics that correlate with both implicit and explicit bias.

Research Methods and Procedures: The Implicit Associa-

who are obese, and indicating an understanding of the experience of obesity.

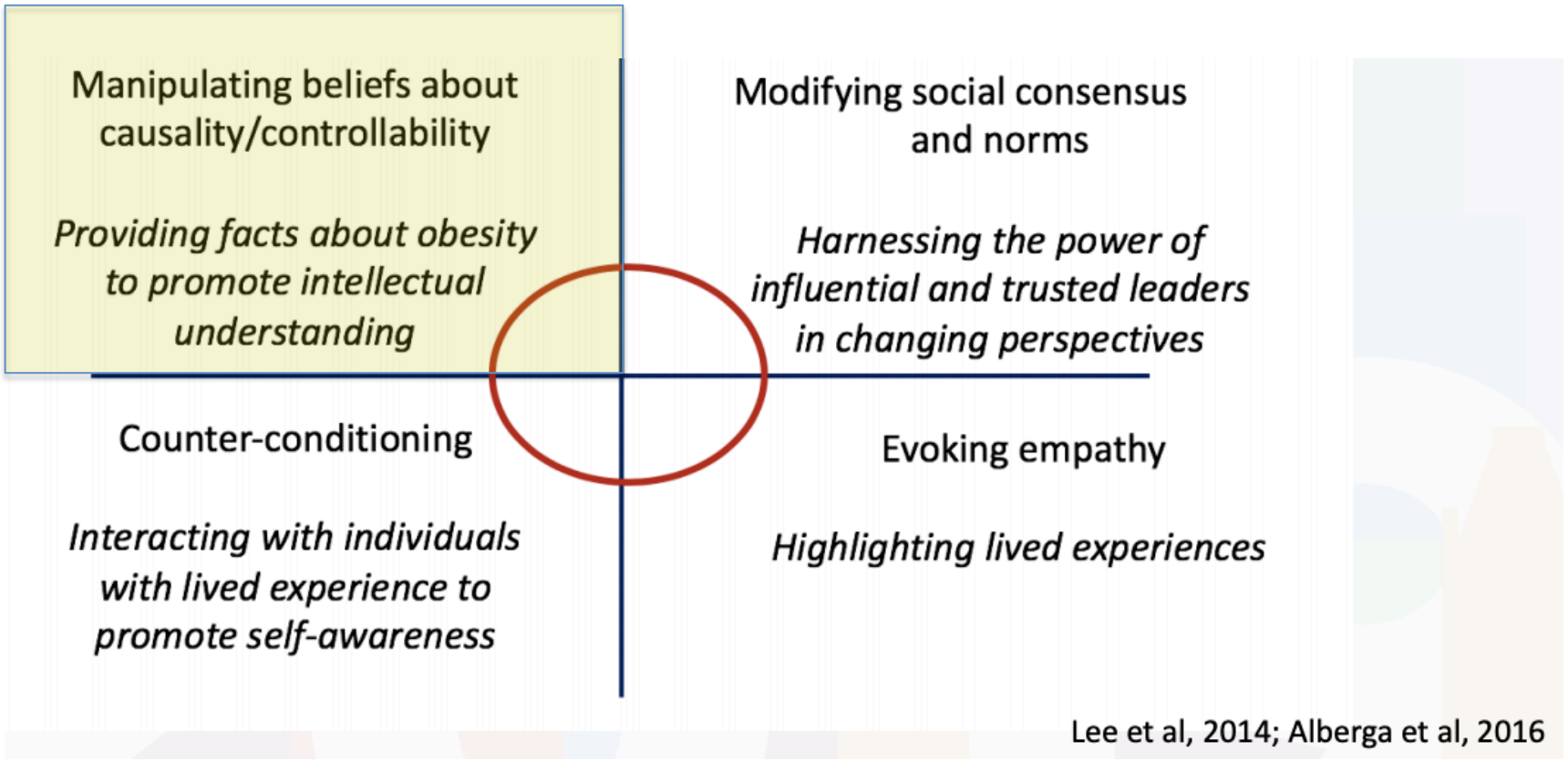
Discussion: Even professionals whose careers emphasize research or the clinical management of obesity show very strong weight bias, indicating pervasive and powerful stigma. Understanding the extent of anti-fat bias and the personal characteristics associated with it will aid in developing intervention strategies to ameliorate these damaging attitudes.

Key words: stigma, discrimination, implicit attitudes

Table 5. Relative efficacy of obesity treatment compared with that for ten chronic disorders

Obesity treatment effectiveness	Mean ± SD	1 (More effective)	2 (Equally effective)	3 (Less effective)
Hypertension	2.9 ± 0.4	2.3	6.7	91.0
Asthma	2.9 ± 0.3	1.1	8.3	90.5
Coronary artery disease	2.8 ± 0.5	2.3	14.9	82.8
Hyperlipidemia	2.8 ± 0.5	2.6	16.7	80.6
Diabetes	2.8 ± 0.5	1.6	19.6	78.7
Depression	2.7 ± 0.5	2.5	21.9	75.6
Osteoarthritis	2.6 ± 0.6	6.7	31.7	61.6
Cigarette smoking	2.2 ± 0.6	11.6	56.1	32.2
Alcoholism	2.1 ± 0.6	13.6	63.7	22.7
Drug addiction*	2.0 ± 0.7	19.4	57.4	23.0

Approach to Mitigating Weight Bias

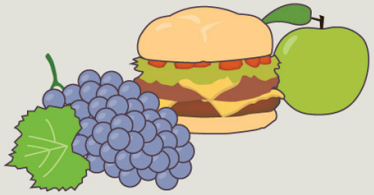


Lee et al, 2014; Alberga et al, 2016

Competing Narratives

- Moral Failure/ Attribution theory
- Toxic Environment
- Addiction
- Medical Condition- Blaming

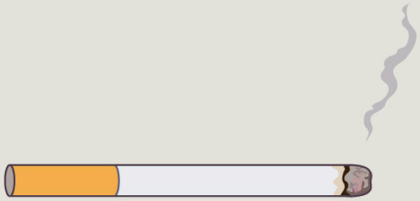
Contribution of genetic heritage and modern lifestyle to body weight



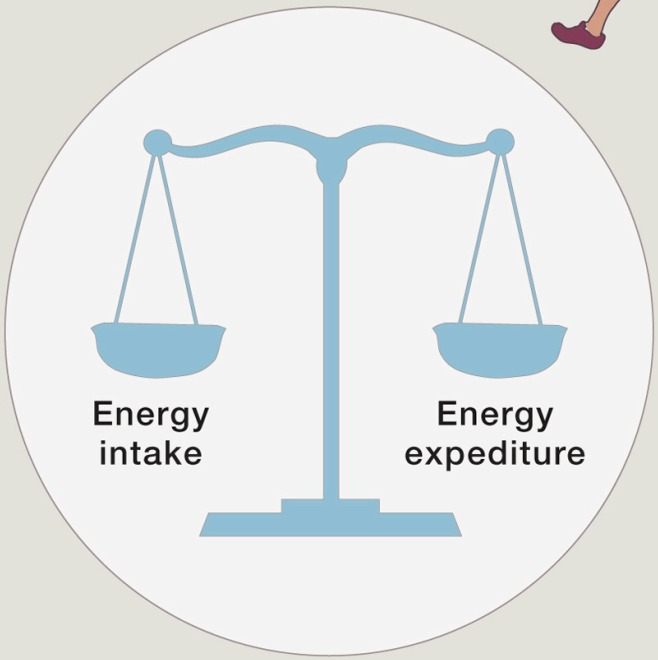
Diet

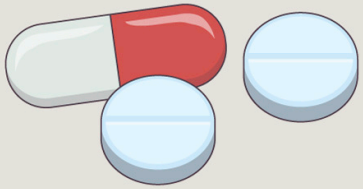
Lifestyle

Aging

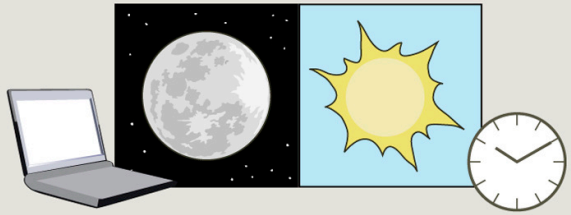


Smoking





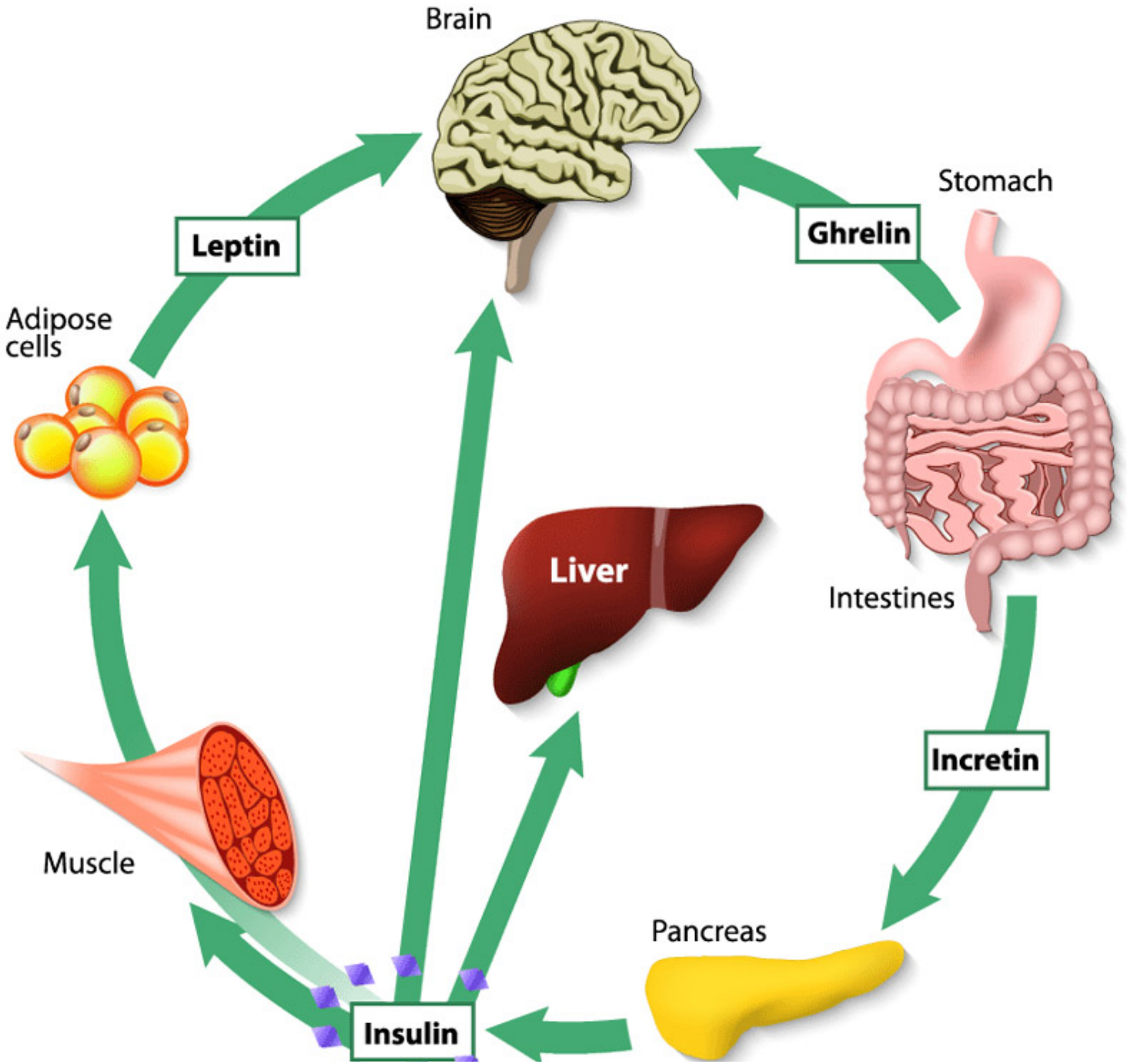
Drugs



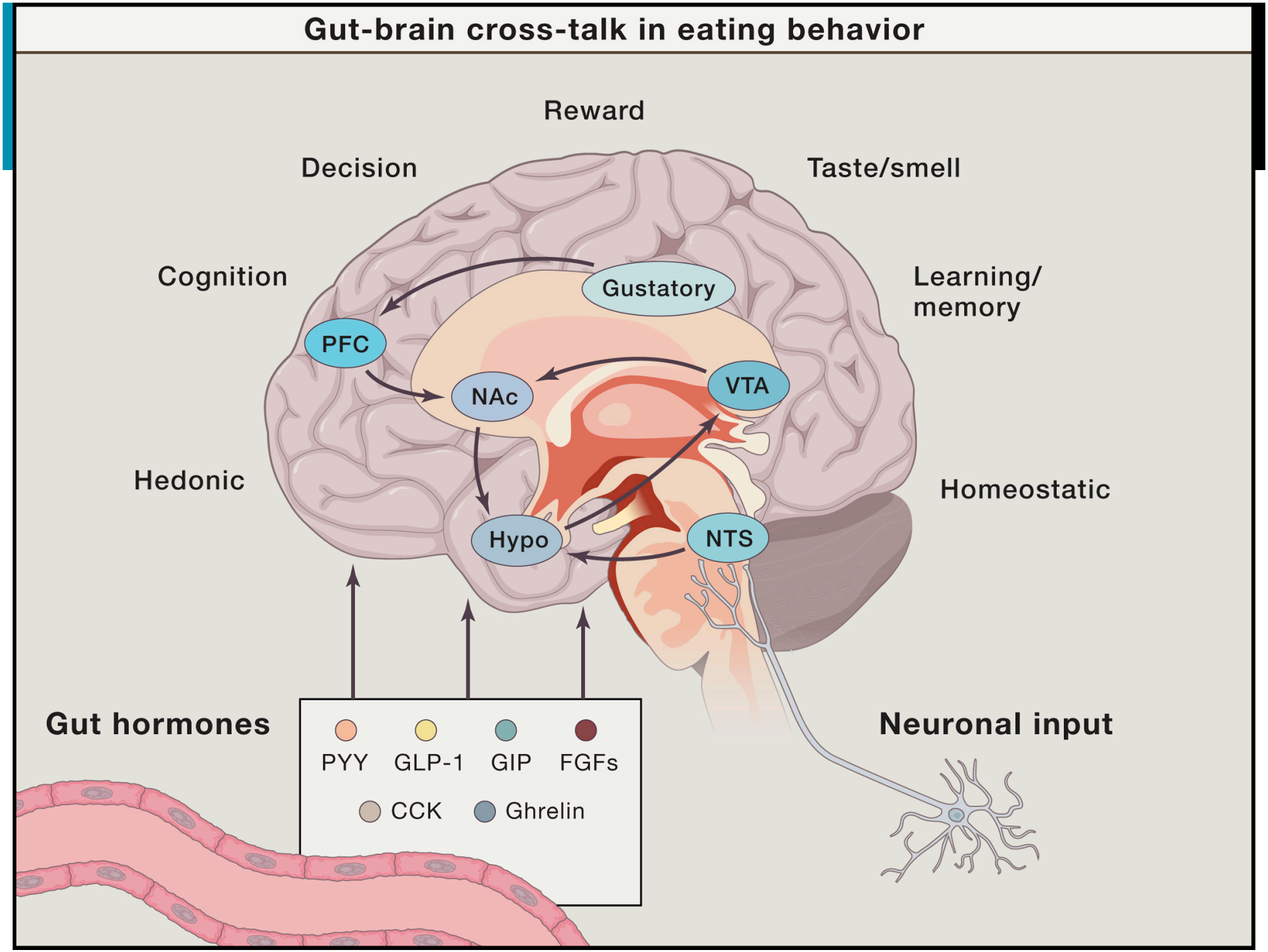
Circadian rhythm

Genetics

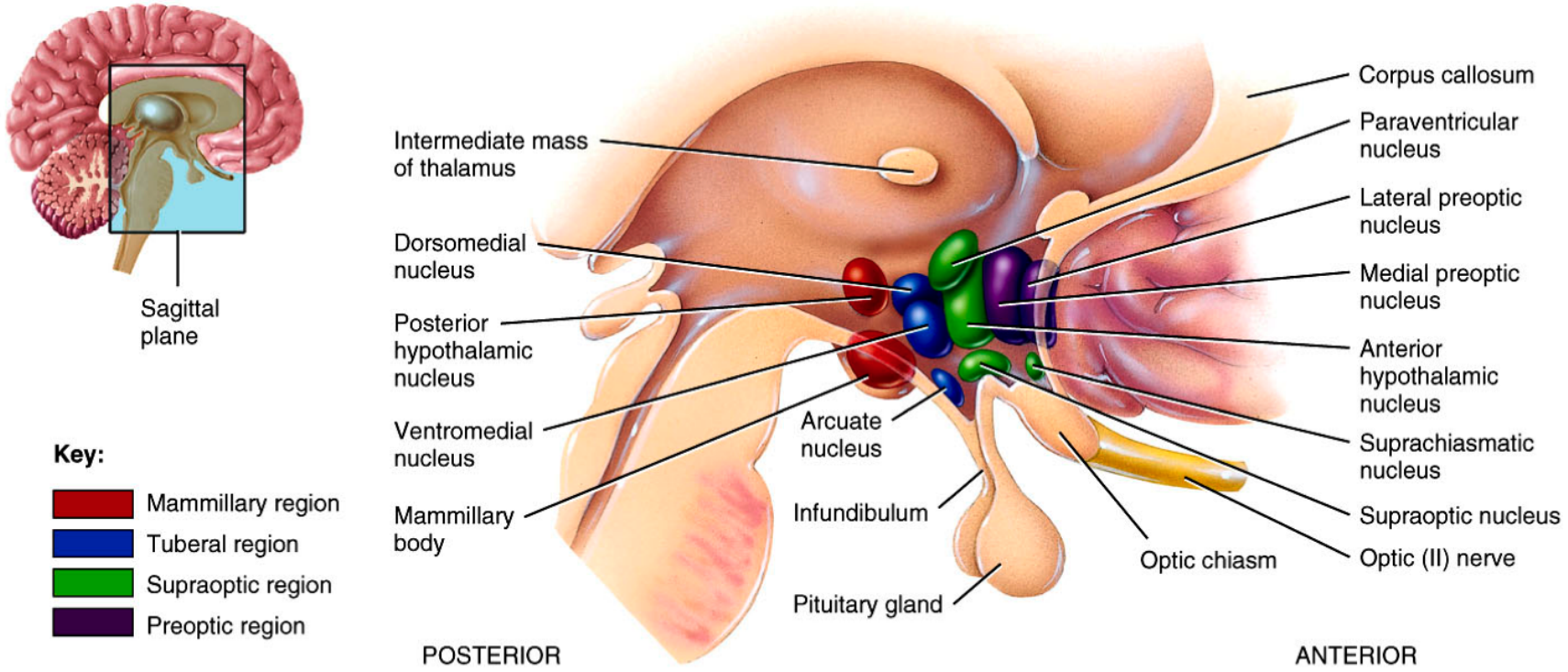
Epigenetics



Type to enter a caption.


Gut-brain cross-talk in eating behavior
Reward
Decision
Taste/smell
Cognition
Learning/
memory
Gustatory
PFC
NAc
VTA
Hedonic
Homeostatic
Hypo
NTS
Gut hormones
PYY
GLP-1
GIP
FGFs
CCK
Ghrelin
Neuronal input

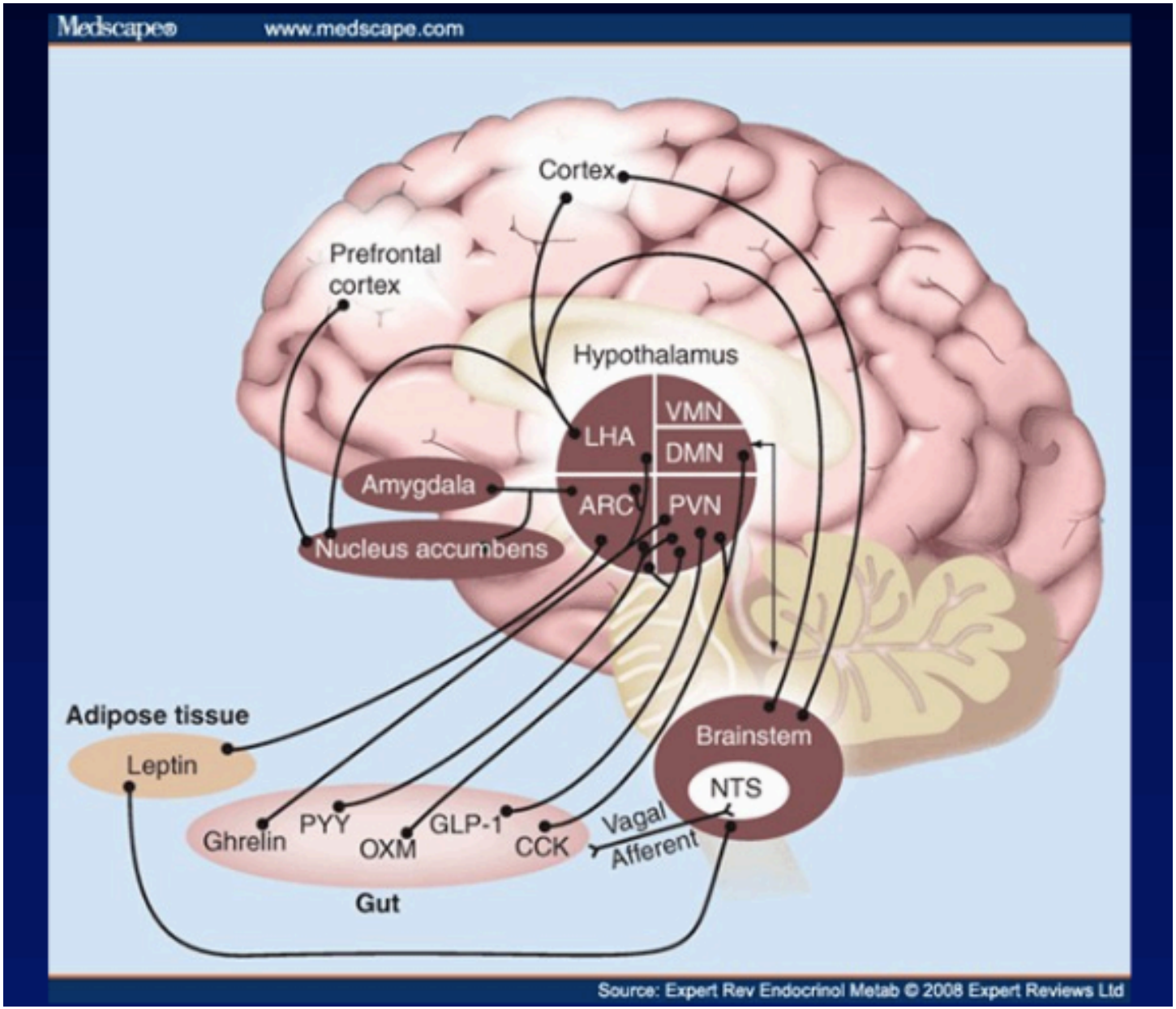
Nuclei of the Hypothalamus



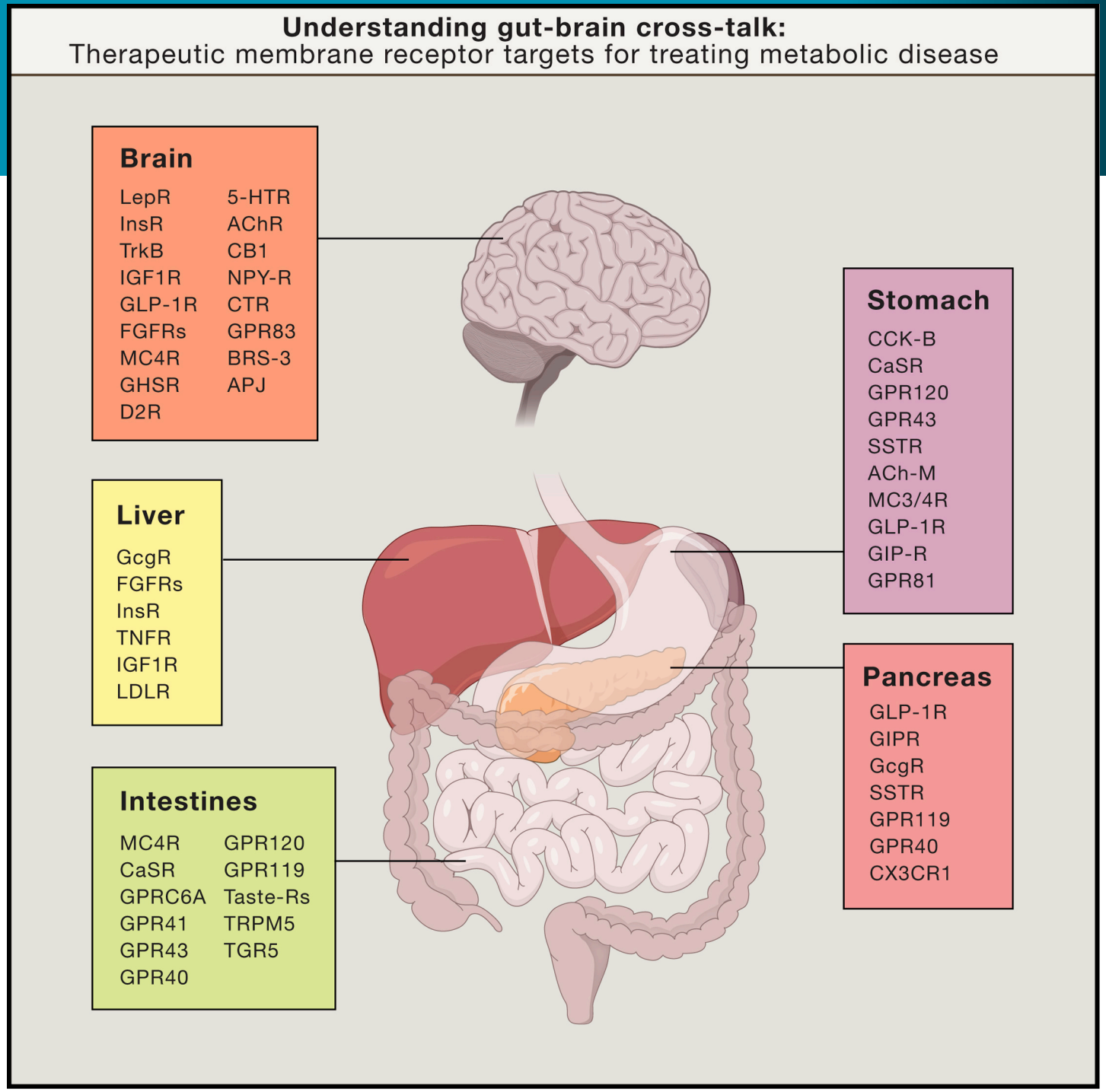
Sagittal section of brain showing hypothalamic nuclei

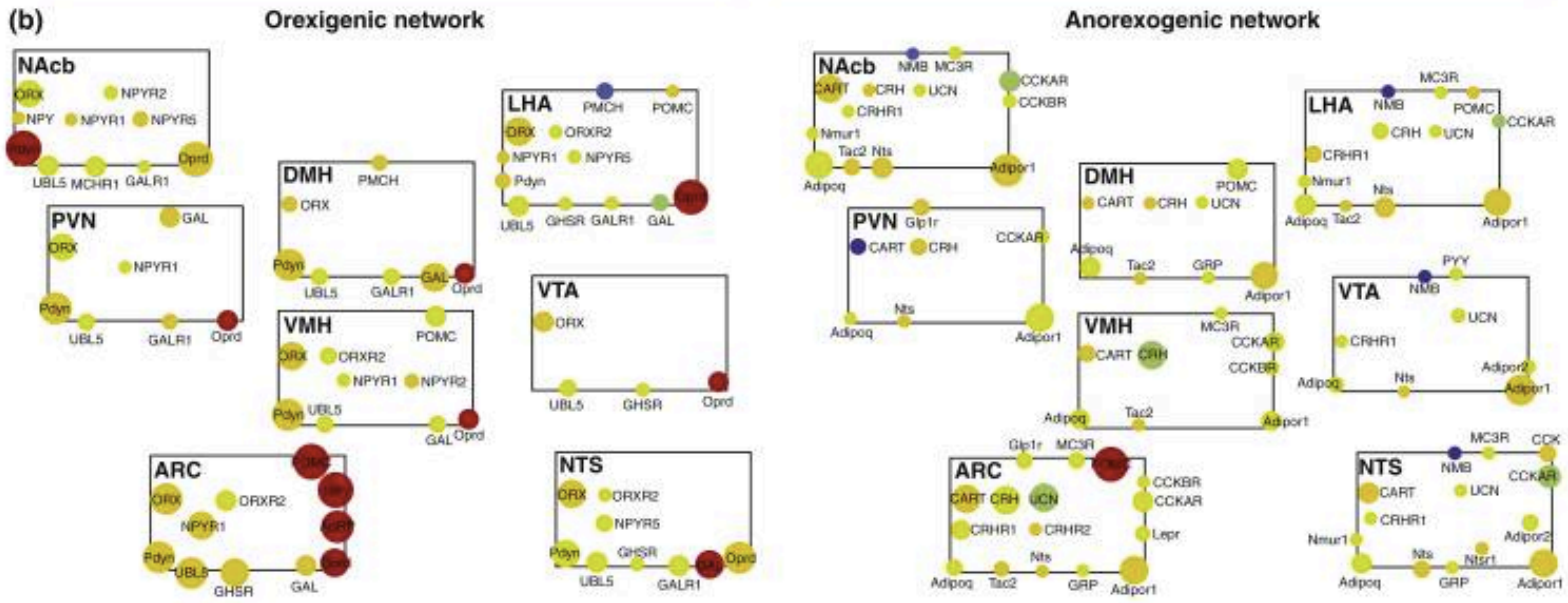
Figure 14.10 Tortora - PAP 12/e

THE HYPOTHALAMUS & ENERGY BALANCE



Understanding gut-brain cross-talk:
Therapeutic membrane receptor targets for treating metabolic disease





Orexigenic network

Genes encoding for **peptides**

- AgRP- Agouti-related peptide
- CART- Cocaine and Amphetamine regulated transcript
- Pdyn- Prodynorphin
- GAL- Galanin
- GHRH- Growth hormone releasing hormone
- PMCH- Pro-melanin concentrating hormone
- NPY- Neuropeptide Y
- ORX- Orexins/Hyopcretins
- POMC- Proopiomelanocortin
- UBL5- Ubiquitin-like 5

Receptors

- GALR1- Galanin receptor 1
- GHSR- Growth hormone secretagogue receptor
- NPY1R- NPY receptor Y1
- NPY2R- NPY receptor Y2
- NPY5R- NPY receptor Y5
- MCHR1- Melanin concentrating hormone receptor 2
- Oprd- Opioid receptor, delta 1
- ORXR2- Orexin / Hypocretin receptor 2

Central sites

- Arc- Arcuate nucleus
- VMH- Ventromedial hypothalamic nucleus
- DMH- Dorsomedial hypothalamic nucleus
- LHA- Lateral hypothalamic area
- PVN- Paraventricular hypothalamic nucleus
- NAcb- Nucleus accumbens
- VTA- Ventral tegmental area
- NTS- Nucleus of the solitary tract

Anorexigenic network

Genes encoding for **peptides**

- Adipoq- Adiponectin
- CART- Cocaine and Amphetamine regulated transcript
- CCK- Cholecystokinin
- CRH- Corticotropin releasing hormone
- GRP- Gastrin releasing peptide
- Nts- Neurotensin
- NMB- Neuromedin B
- POMC- Proopiomelanocortin
- PYY- Peptide YY
- Tac2- Tachykinin 2 (Neuropeptide K)
- UCN- Urocortin

Receptors

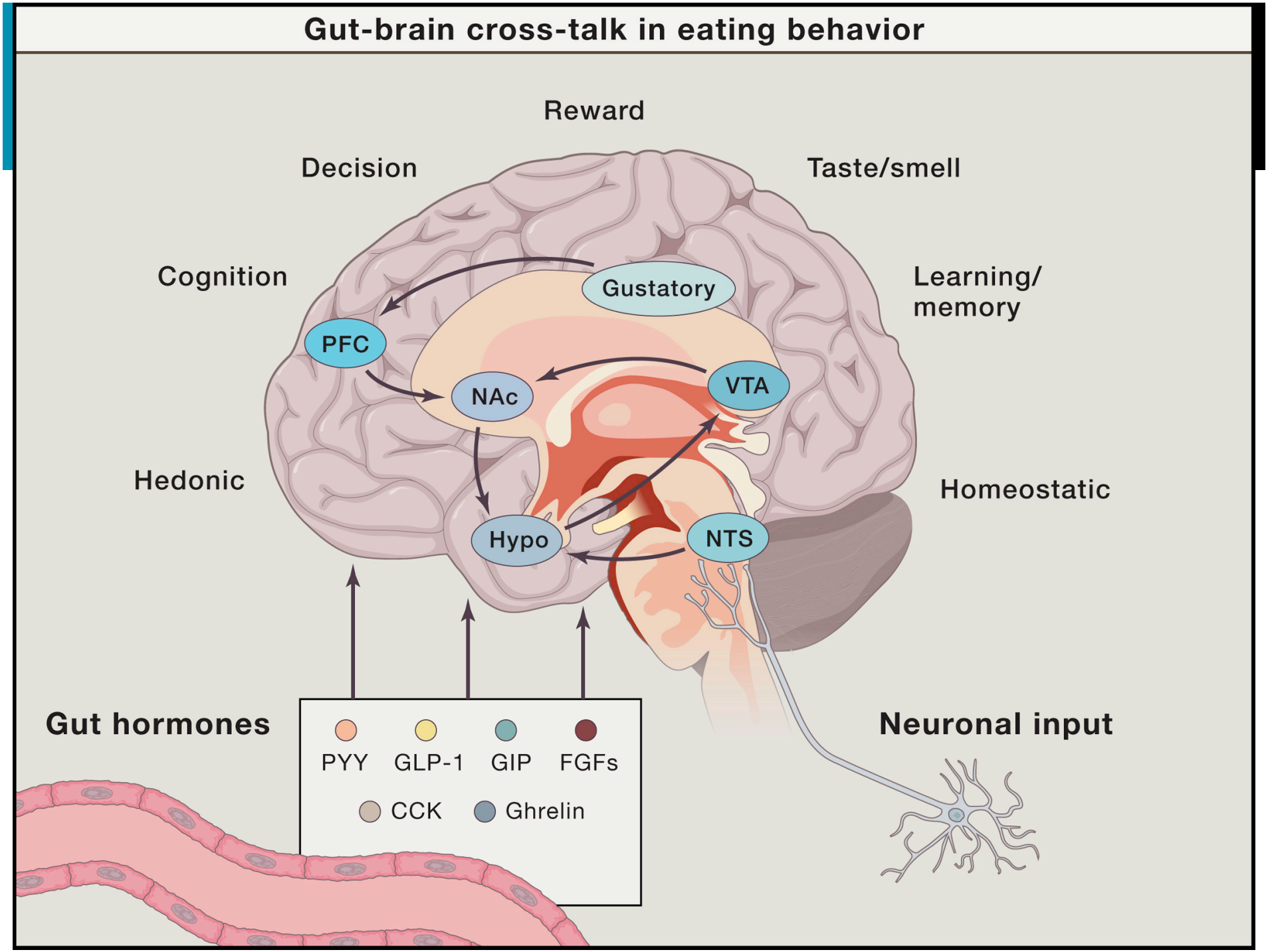
- Adipor1- Adiponectin receptor 1
- Adipor2- Adiponectin receptor 2
- CCKAR- Cholecystokinin A receptor
- CCKBR- Cholecystokinin B receptor
- CRHR1- Corticotropin releasing hormone receptor 1
- CRHR2- Corticotropin releasing hormone receptor 2
- Glp1r- Glucagon-like peptide 1 receptor
- Lepr- Leptin receptor
- MC3R- Melanocortin receptor 3
- Nmur1- Neuromedin U receptor 1
- Ntsr1- Neurotensin receptor 1

Central sites

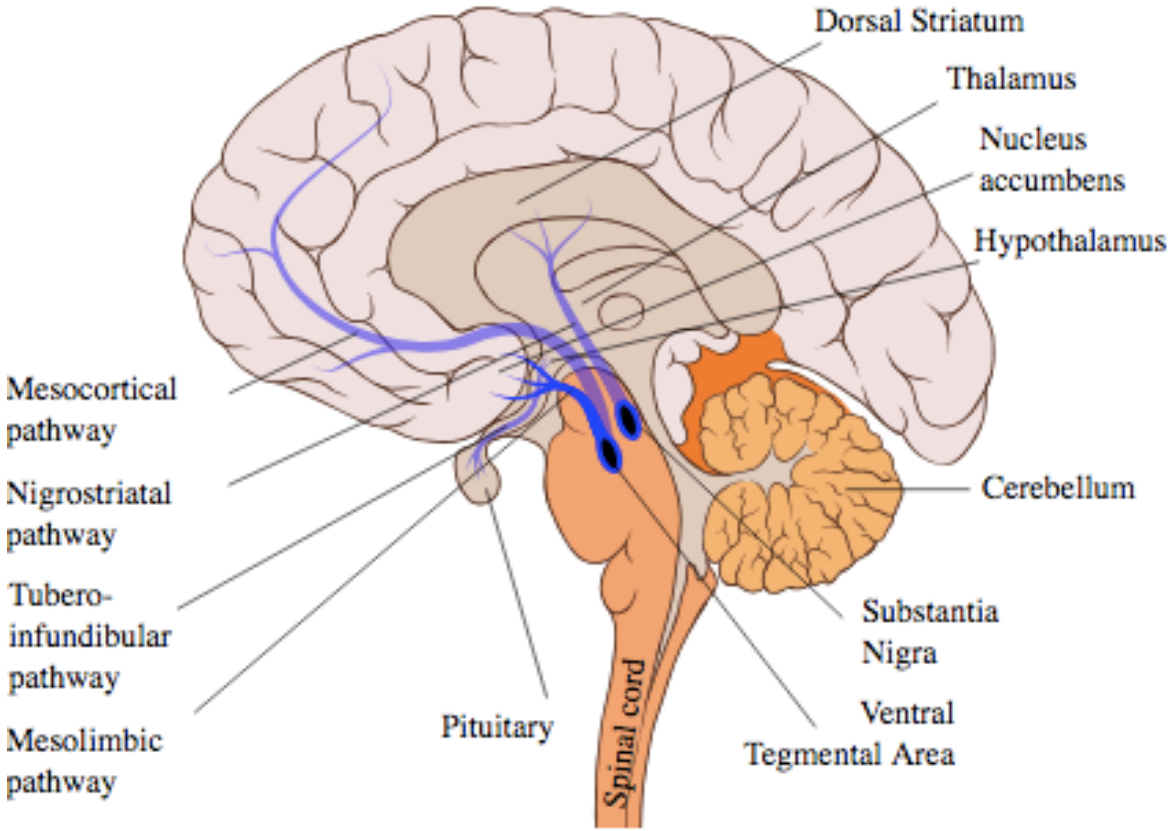
- Arc- Arcuate nucleus
- VMH- Ventromedial hypothalamic nucleus
- DMH- Dorsomedial hypothalamic nucleus
- LHA- Lateral hypothalamic area
- PVN- Paraventricular hypothalamic nucleus
- NAcb- Nucleus accumbens
- VTA- Ventral tegmental area
- NTS- Nucleus of the solitary tract

Expression level and density

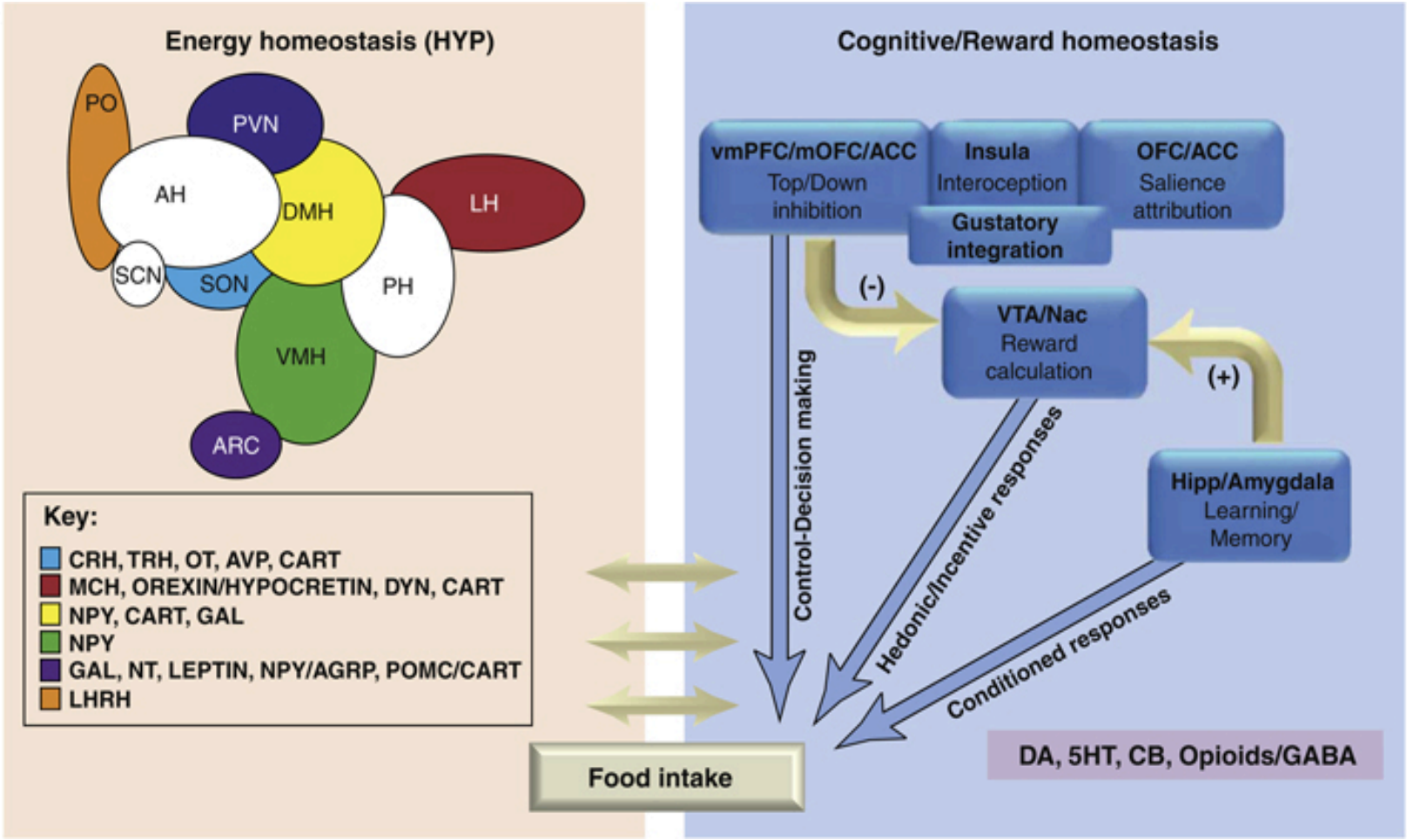
0/+ + +/++ ++ ++/+++ +++


Gut-brain cross-talk in eating behavior
Reward
Decision
Taste/smell
Cognition
Learning/
memory
Gustatory
PFC
NAc
VTA
Hedonic
Homeostatic
Hypo
NTS
Gut hormones
PYY
GLP-1
GIP
FGFs
CCK
Ghrelin
Neuronal input

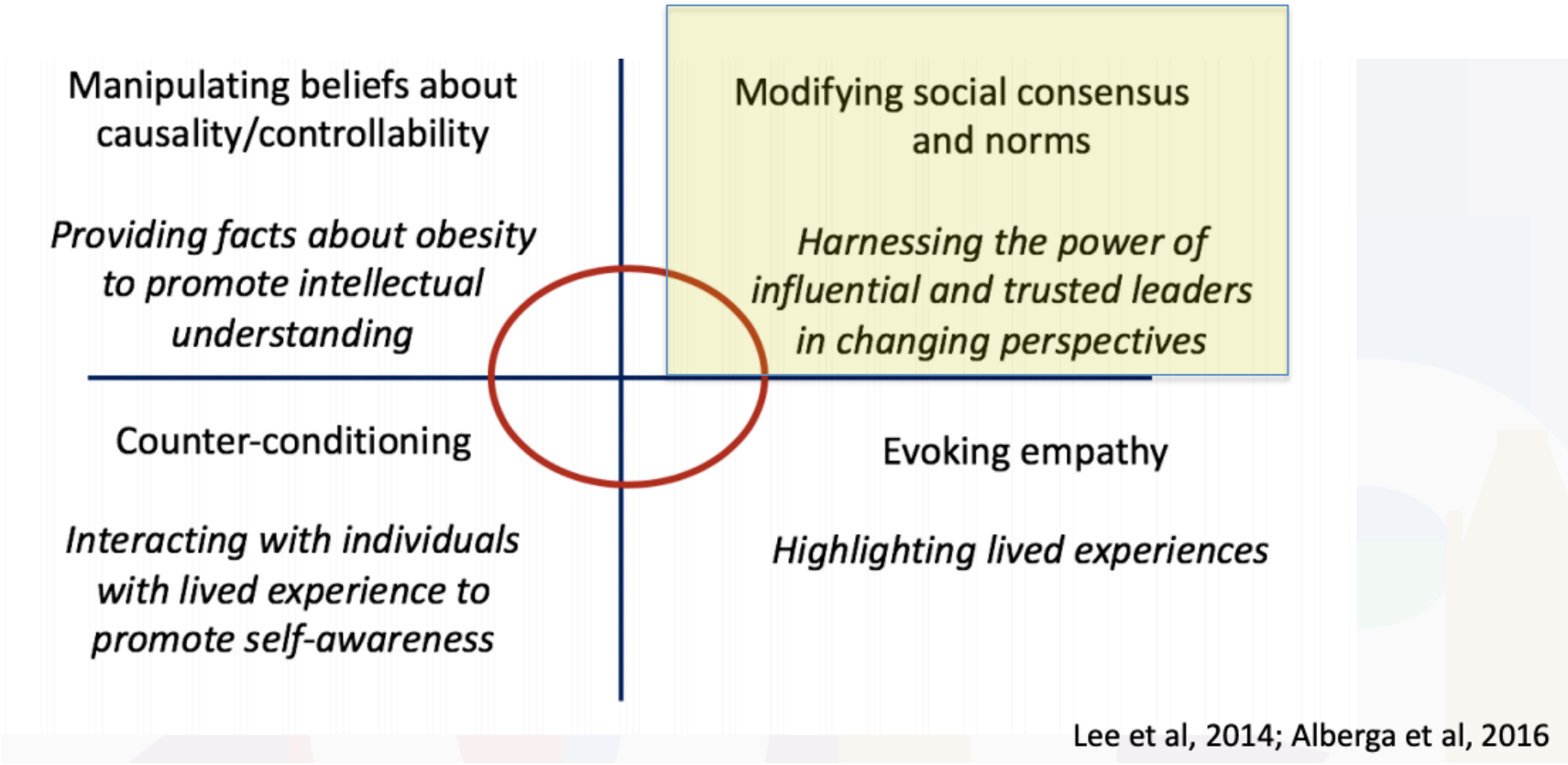
Mesolimbic Pathway



Reward and Homeostasis



Approach to Mitigating Weight Bias



Lee et al, 2014; Alberga et al, 2016

The Challenge here….

- Medicine Reflects Cultural Norms….
- We need to identify those cultural norms when it comes to obesity in order to address them properly

Sure Obesity is a disease….

- BUT?

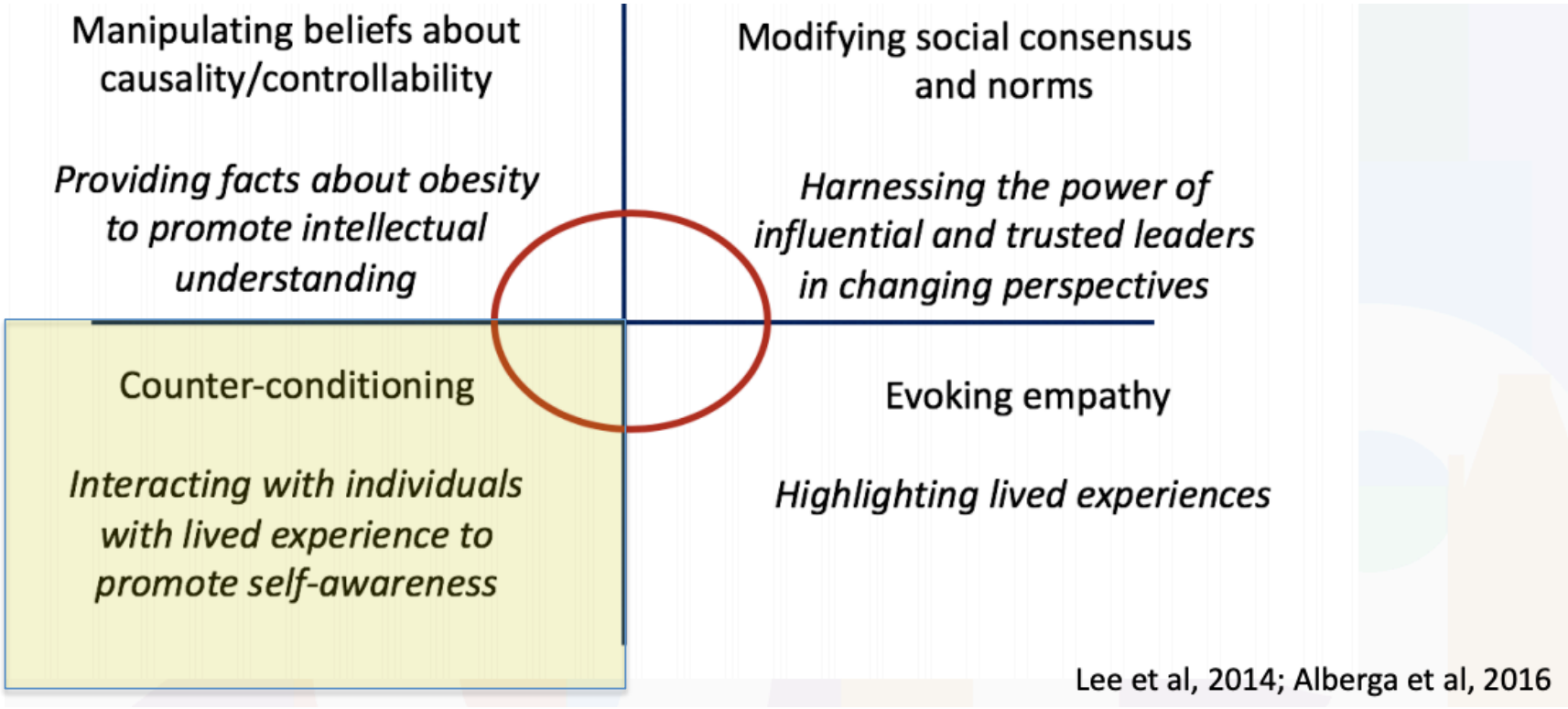
Fattertainment

- The perpetuation of stereotypes against obesity in the media:
  - Reality TV shows
  - Comedy
  - “FAT JOKES”
  - Reporting….
  - Dramatization of Obesity


OBESITY

Negative images

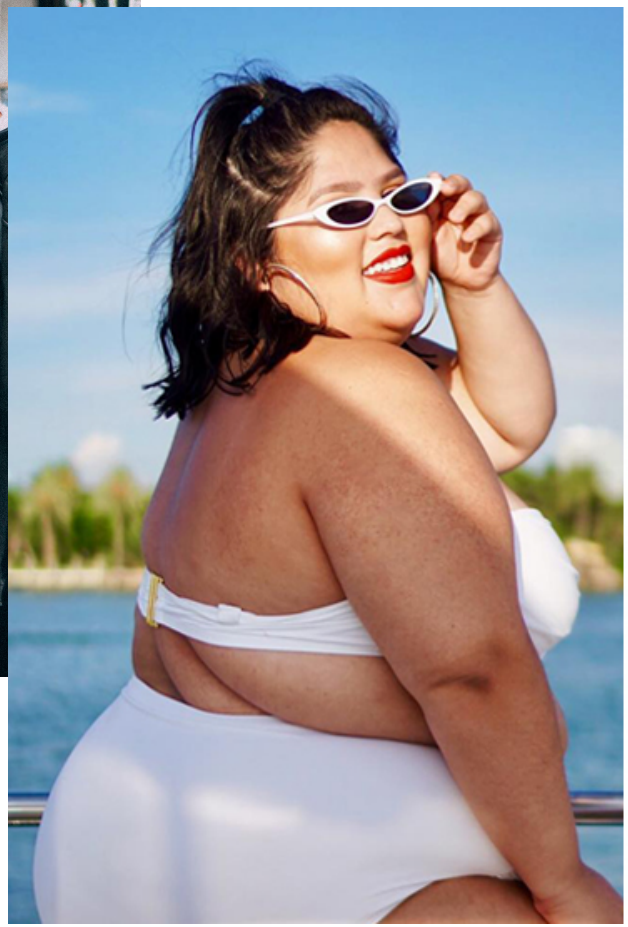
Approach to Mitigating Weight Bias



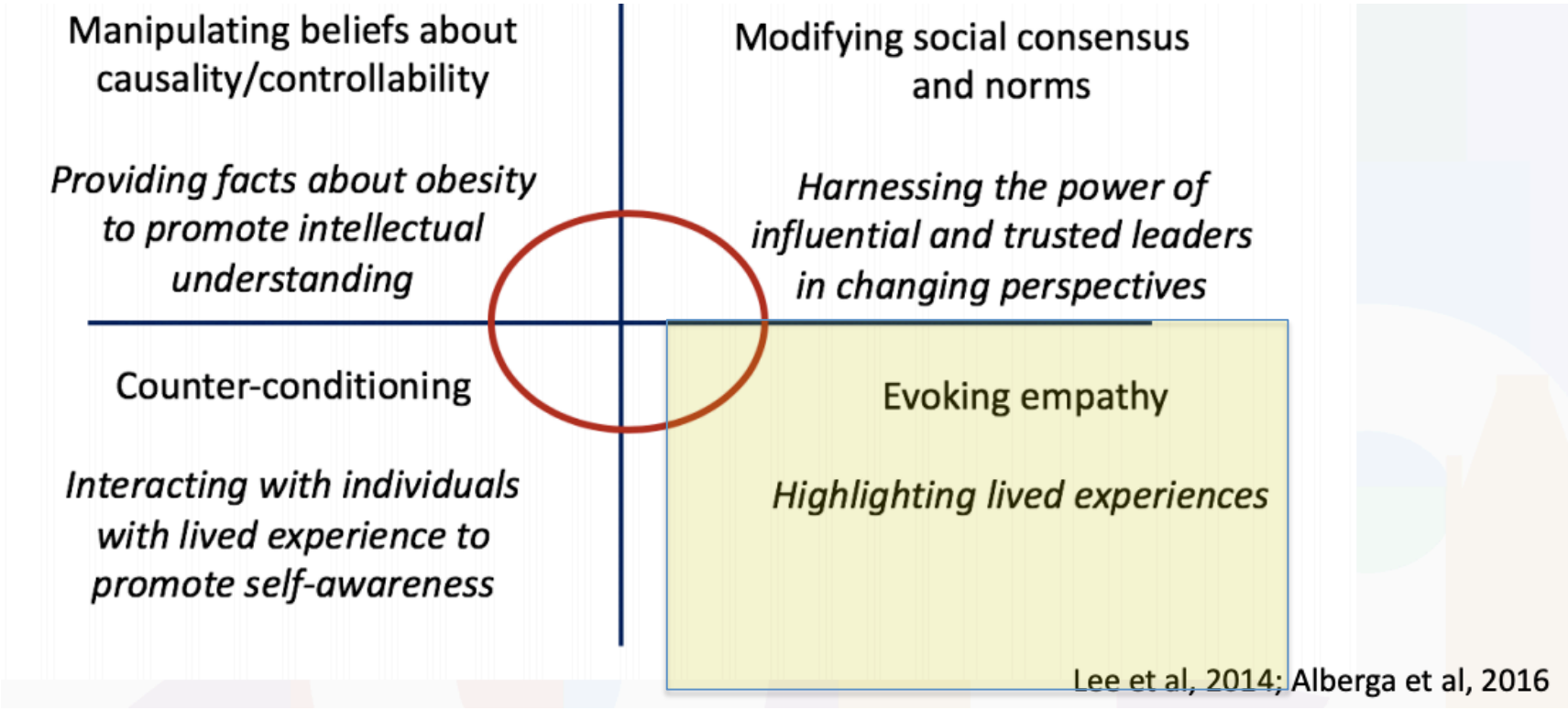
Lee et al, 2014; Alberga et al, 2016

Effects of Bias

Positive images



Approach to Mitigating Weight Bias



Changes you can make

- Space
- Mind
- Mouth

In your office

- Improve the patient experience in your clinic for people with obesity
  - Scale
  - Gown
  - Cuff
  - Magazines and messaging
  - Create a safe and empathic space

In your mind

- recognize that many patients with obesity have tried to lose weight repeatedly;
- consider that patients may have had negative experiences with health professionals.

In your mouth

- PERSON FIRST LANGUAGE
- Focus on meaningful health gains – less weight centred
- Patient partnered approach
- explore all possible causes of a presenting problem and avoid assuming it is a result of an individual's weight status.
- Acknowledge the difficulty of achieving sustainable and significant weight loss.

Preference

Published in final edited form as:
Obesity (Silver Spring). 2012 January ; 20(1): 147–150. doi:10.1038/oby.2011.217.

Patients' Preferred Terms for Describing their Excess Weight: Discussing Obesity in Clinical Practice

Sheri Volger, M.S., R.D.[1], **Marion L. Vetter, M.D., R.D.**[1,2], **Megan Dougherty, B.S.**[1], **Eva Panigrahi, B.S.**[1], **Rebecca Egner, B.S.**[1], **Victoria Webb, B.A.**[1], **J. Graham Thomas, Ph.D.**[3], **David B. Sarwer, Ph.D.**[1], and **Thomas A. Wadden, Ph.D**[1]

[1]University of Pennsylvania School of Medicine, Department of Psychiatry, Center for Weight and Eating Disorders, Philadelphia, PA

[2]University of Pennsylvania School of Medicine, Department of Medicine, Division of Endocrinology, Diabetes, and Metabolism, Philadelphia, PA

[3]Brown Medical School, Department of Psychiatry and Human Behavior, Weight Control and Diabetes Research Center, Providence, RI

Abstract

The increasing prevalence of obesity has become one of the most challenging problems facing healthcare providers. Despite recommendations from the U.S. Preventive Services Task Force many health professionals fail to discuss obesity with their patients. This study sought to identify terms that individuals with obesity and being treated in primary care find the most and least acceptable for describing their excess weight. Three-hundred ninety obese adult primary care patients in the Philadelphia area were administered the Weight Preferences Questionnaire from January 2008 through February 2009. Ratings of 11 terms used to describe excess weight were transformed to a five-point scale, ranging from "very desirable" (+2) to neutral (0) to "very undesirable" (-2). The term "fatness" (mean score -1.1 ± 1.3) was rated as significantly more undesirable than all other descriptors ($p < 0.001$). The terms "excess fat" (-0.6 ± 1.3), "large size" (-0.6 ± 1.3), "obesity" (-0.5 ± 1.4), and "heaviness" (-0.4 ± 1.2) were rated as significantly more undesirable then the remaining terms, which included weight problem, body mass index (BMI), and excess weight ($p<0.001$). In contrast, the term "weight" was viewed as the most desirable term for characterizing excess weight. Patients' preferences for terms were not significantly influenced by gender, race/ethnicity, or a BMI ≥ 40 kg/m^2. Practitioners who treat obesity are encouraged to avoid undesirable terms when discussing this condition with their patients. Instead practitioners may want to consider broaching the topic using more patient-friendly term such as "weight," "BMI," "weight problem," or excess weight."

More stigmatizing

- Heavy
- chubby
- Obese
- Fat
- morbidly

More Blaming

- Heavy
- Chubby
- Obese
- Fat
- Morbidly obese

Acceptable

- weight
- Increased weight
- Excess weight
- Weight gain
- BMI

Challenges in education: Energy Balance Model

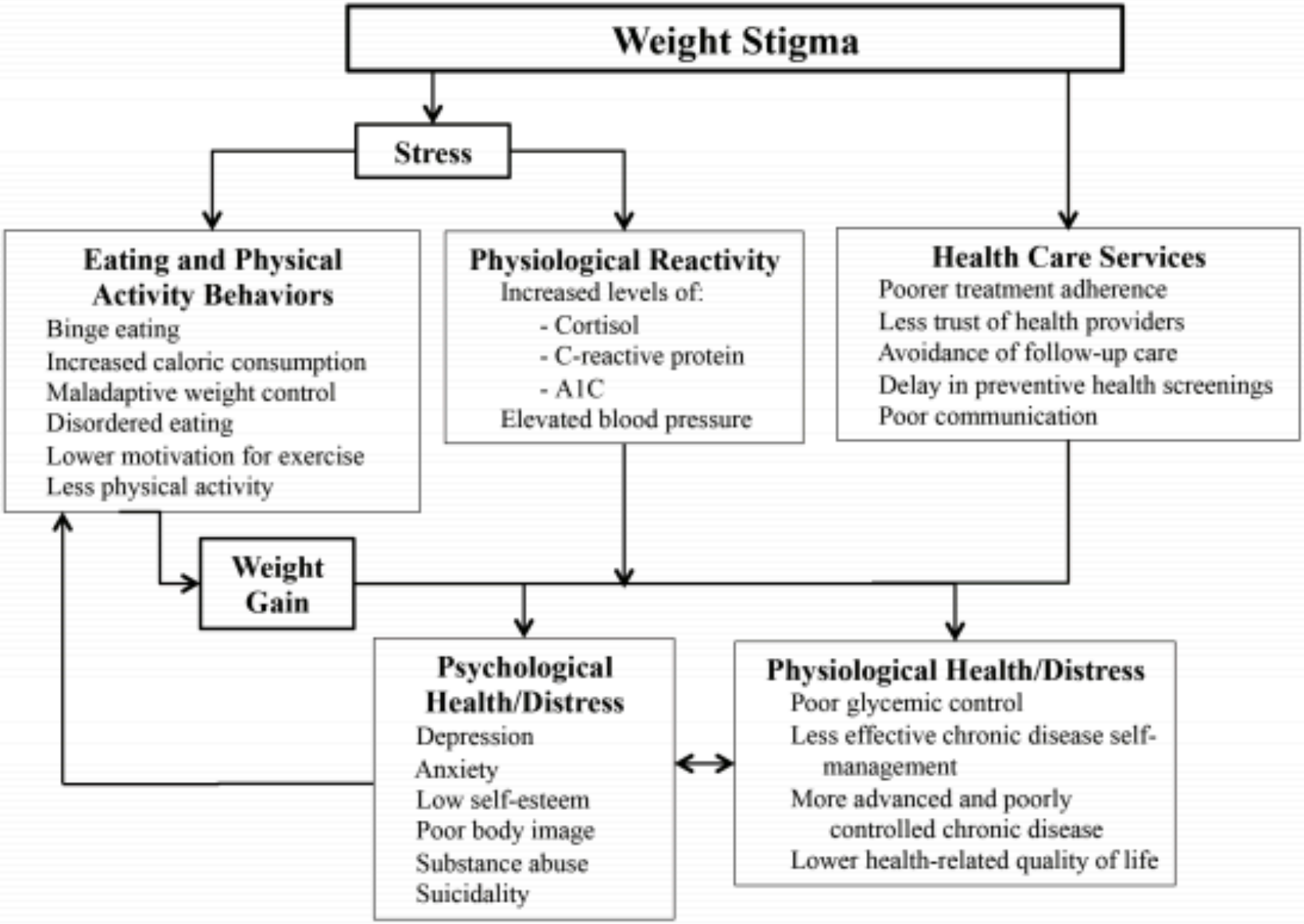
- Many providers support the energy balance model of weight gain and loss almost exclusively
- This can limit the scope of the counselling they give patients and may contribute to beliefs that obesity is simply an issue of personal responsibility.

How to address/treat unconscious weight bias

- Acknowledge it exists
- Exposure to counter-stereotypes
- BOOSTING EMPATHY:
  - Shared experience
  - Positive contact bias
  - Patient centred communication
- Empathy focused interventions
- Zero tolerance policy:
  - Person First language

Effect of Weight Stigma

- Physiological
- Cultural
- Barrier to care


Weight Stigma
Stress
Eating and Physical Activity Behaviors
Binge eating
Increased caloric consumption
Maladaptive weight control
Disordered eating
Lower motivation for exercise
Less physical activity
Physiological Reactivity
Increased levels of:
- Cortisol
- C-reactive protein
- A1C
Elevated blood pressure
Health Care Services
Poorer treatment adherence
Less trust of health providers
Avoidance of follow-up care
Delay in preventive health screenings
Poor communication
Weight Gain
Psychological Health/Distress
Depression
Anxiety
Low self-esteem
Poor body image
Substance abuse
Suicidality
Physiological Health/Distress
Poor glycemic control
Less effective chronic disease self-management
More advanced and poorly controlled chronic disease
Lower health-related quality of life

Studies confirm that doctors approach patients with obesity differently

- Less time with patients
- Less quality of care
- Screen less
- Less discussions
- More ascribing of negative symptoms

Addressing Weight Bias in Clinical Practice

- Addressing weight bias in clinical practice is challenging
  - Because it is pervasive
  - Because it is more socially acceptable than other types of bias

Summary

- Assess you own biases
- Watch your language
- Weight is not a behaviour
- Weight bias harms health and well being
- Physical environments
- Focus on health and quality of life

CANADIAN OBESITY PEER SUPPORT

HOME MISSION COURSE CURRICULUM VIRTUAL LIBRARY COURSE VIDEOS CLINICAL TOOLKIT CONTACT

HI, ALI | LOG OUT

Type to enter a caption.

www.canadaobesitypeersupport.com

- Sign up is free and confidential
- It will only be used to track utility of the site.
- The website was made and is constantly updated by Dr. Ali Zentner

www.nofatshame.com

zentner@gmail.com

Psychological Science
2015, Vol. 26(11) 1803–1811

DOI: 10.1177/0956797615601103
pss.sagepub.com

Weight Discrimination and Risk of Mortality

Angelina R. Sutin[1], Yannick Stephan[2], and Antonio Terracciano[3]

[1]Department of Behavioral Sciences and Social Medicine, Florida State University College of Medicine; [2]Dynamics of Human Abilities and Health Behaviors Laboratory, University of Montpellier; and [3]Department of Geriatrics, Florida State University College of Medicine

Abstract

Discrimination based on weight is a stressful social experience linked to declines in physical and mental health. We examined whether this harmful association extends to risk of mortality. Participants in the Health and Retirement Study (HRS; N = 13,692) and the Midlife in the United States Study (MIDUS; N = 5,079) reported on perceived discriminatory experiences and attributed those experiences to a number of personal characteristics, including weight. Weight discrimination was associated with an increase in mortality risk of nearly 60% in both HRS participants (hazard ratio = 1.57, 95% confidence interval = [1.34, 1.84]) and MIDUS participants (hazard ratio = 1.59, 95% confidence interval = [1.09, 2.31]). This increased risk was not accounted for by common physical and psychological risk factors. The association between mortality and weight discrimination was generally stronger than that between mortality and other attributions for discrimination. In addition to its association with poor health outcomes, weight discrimination may shorten life expectancy.

Table 2. Results of the Proportional Hazards Regression Analysis of the Association Between Mortality Risk and Perceived Discrimination in the Health and Retirement Study (HRS) Sample

Predictor	Model 1 (n = 13,692)	Model 2 (n = 13,400)	Model 3 (n = 12,307)
Age	2.36 [2.26, 2.47]**	2.34 [2.23, 2.45]**	2.20 [2.07, 2.33]**
Gender (female)	0.70 [0.64, 0.77]**	0.65 [0.60, 0.72]**	0.66 [0.60, 0.73]**
Race			
Black	1.21 [1.06, 1.37]**	1.22 [1.08, 1.39]**	1.04 [0.90, 1.19]
Other or unknown	0.75 [0.51, 1.11]	0.76 [0.51, 1.11]	0.89 [0.59, 1.35]
Education (years)	0.95 [0.94, 0.96]**	0.95 [0.94, 0.96]**	0.99 [0.98, 1.01]
Body mass index category			
Underweight	—	2.55 [2.03, 3.21]**	2.54 [1.98, 3.21]**
Overweight	—	0.77 [0.69, 0.85]**	0.73 [0.65, 0.82]**
Obese	—	0.84 [0.74, 0.96]**	0.66 [0.57, 0.75]**
Morbidly obese	—	1.63 [1.29, 2.06]**	0.91 [0.71, 1.17]
Poor subjective health	—	—	1.37 [1.29, 1.44]**
Disease burden	—	—	1.18 [1.13, 1.22]**
Depressive symptoms	—	—	1.04 [1.01, 1.06]**
Positive smoking history	—	—	1.41 [1.26, 1.57]**
Moderate physical activity	—	—	0.83 [0.80, 0.86]**
Attribution of perceived discrimination			
Weight	1.57 [1.34, 1.84]**	1.48 [1.25, 1.75]**	1.31 [1.10, 1.57]**
Ancestry	1.26 [1.07, 1.49]**	1.31 [1.11, 1.56]**	1.44 [1.21, 1.72]**
Race	1.06 [0.90, 1.26]	1.08 [0.91, 1.28]	1.11 [0.93, 1.33]
Sex	1.10 [0.94, 1.28]	1.08 [0.92, 1.26]	1.13 [0.96, 1.33]
Age	1.09 [0.99, 1.19]	1.08 [0.98, 1.19]	1.01 [0.92, 1.12]
Physical disability	2.28 [2.01, 2.57]**	2.21 [1.95, 2.50]**	1.50 [1.30, 1.72]**
Appearance	1.31 [1.11, 1.55]**	1.27 [1.08, 1.51]**	1.14 [0.95, 1.37]
Sexual orientation	1.17 [0.85, 1.60]	1.13 [0.81, 1.56]	1.07 [0.76, 1.49]

Note: The table presents hazard ratios, with 95% confidence intervals in brackets. *N*s differ across the models because data were missing for some covariates.
**$p < .01$.