Obesity: Personality and Psychiatric Factors

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Eating Disorders

- Anorexia Nervosa
- Bulimia Nervosa
- Binge Eating Disorder

- Obesity is not an eating disorder
Psychiatric conditions associated with obesity

- Binge Eating Disorder
- Depression
- Borderline Personality Disorder
  - Difficulties in ‘self-soothing’ due to trauma/attachment problems in early life
  - Comfort-eating/binging very effective in assuaging unpleasant and unbearable emotions
- Schizophrenia
- Antipsychotic meds
Most obesity not caused by...

- Psychiatric conditions
- Psychological issues
- ...or lack of will power or some other character weakness for that matter
Doctors slam ‘patient-blaming’ portrayal of obesity

- Doctors and allied health professionals have slammed media outlets for encouraging “patient-blaming” portrayals of obesity.
- Twenty-one doctors including endocrinologists have signed a statement calling for the media to offer “the same empathy and respect as a patient living with any other serious chronic condition medical condition”.
- “Obesity can be influenced by environmental, psychological and physiological factors, along with genetics or epigenetic causes, which all play a role in a person’s ability to balance their consumption and activity,” the statement reads.
- “Public discussion [on obesity] should be solutions-focused rather than patient-blaming.”
- Endocrinologist Professor Joe Proietto, who co-signed the statement, says evidence published in the last decade has increasingly questioned the idea that obesity is all about “poor self-control and people being gluttons”.
- The discovery of leptin and ghrelin as hormones that control the hunger response are examples of work that is changing the way researchers are looking at obesity, says Prof Proietto, who heads the weight loss clinic at Austin Health in Victoria.
- He has called for greater education of the media.
- “The media should be acknowledging the fact that [obesity] is not all about self-control. They can help us convince politicians to stop advertising junk food to children.”
- But there needs to be education for doctors too, because many were trained before these new findings about obesity came to light, says Prof Proietto.
Obesity often results in psychological problems

• Mediated by a society that harshly judges fat people and encourages ineffective and harmful dieting

• Extreme dieting can make both obesity and mental disorders such as Binge Eating Disorder worse
What causes Eating Disorders?

Events and associated mood change

Over-evaluation of shape and weight, and their control

Strict dieting, non-compensatory weight-control behaviour

Features of under-eating and a low weight

Compensatory vomiting/laxative misuse

Binge eating

**FIG 4** Transdiagnostic cognitive–behavioural formulation of maintenance of eating disorders (Fairburn 2008c).
Binge Eating Disorder is treatable

- Regular meals and snacks to stop urge to binge.
- Focus on better ways to cope with negative emotions
- Fluoxetine 60-80mg also helpful.
- But – treatment doesn’t usually result in weight loss
ANZAED Congress 2013: Prof Joseph Proietto

- World-renowned investigator of the management of obesity.
- Established first public obesity clinic in Victoria at the Royal Melbourne Hospital.
- Head of the Weight Control Clinic at Austin Health.
- Past President of the Australian and New Zealand Society Obesity Society (ANZOS).
Prof Proietto’s key messages

• Obesity is the scourge of the 21st century.
• Most people believe that the only cause of obesity is a poor lifestyle.
• In fact, there is very good evidence that to become obese it is necessary to have a genetic predisposition.
• This has been demonstrated by identical twin studies and adoption studies and many genes causing obesity have already been discovered.
• Weight loss improves health issues associated with obesity and leads to improvements in the quality of life.
• It follows that most obese individuals should lose weight.
• The problem is that the failure rate of weight loss programs is very high.
Minnesota Heart Study

• Most systematic extensive public health campaign ever taken to reduce obesity
• 3 intervention cities vs 3 control cities
• Intervention =
  • Risk factor screening
  • Mass media education
  • Adult education classes
  • Worksite interventions
  • Home correspondence programs
  • School-based programs
  • Restaurant programs
  • Point-of-purchase education in supermarkets
  • Messages about benefits of wt loss and services available to assist people lose wt.
Why does education (and dieting) fail?

• The brain regulates weight

• Hypothalamus has two types of nerves
  • Neuropeptide Y nerves makes us hungry
  • POMC (Pro-OpioMelanoCortin) nerves take our hunger away

• Rate of firing influenced by hormones
  • Some increase hunger (ghrelin, insulin-like peptide 5)
  • Some suppress hunger (Leptin)

• Following wt loss, levels of multiple hormones (ghrelin, leptin, PYY, CCK, Amylin, Insulin, GIP, glucose, FFA) change in a direction to encourage weight regain:
  • Increase hunger
  • Reduce energy expenditure
  • Food intake increases and weight regained

Joseph Proietto
For a public health program to work:

- Would need to re-engineer society to restrict high-energy food by placing a ban on, or severely taxing, all fatty or high sugar foods, and...
- Placing the population on energy rationing
- **Rationing** would be essential because we can stay obese by overeating healthy food
- In addition, physical exercise would need to be obligatory
  - Ban cars, escalators, elevators
  - Slow pace of modern life so people can walk to meetings
- ‘Impossible’ to achieve in a democracy

Joseph Proietto
Creating and treating obesity in rats

• Levin et al, Am J Physiol, 2000

• Rats given extra food corn syrup and condensed milk and become obese

• Rats then put on diet and lose wt

• When allowed to eat as they wish again (even with healthy foods only) became obese again.

• Controls who never got access to corn syrup didn’t get fat
• Whether fat or normal, rats return to set point after dieting
Prepare to have your assumptions shattered...
There is a strong genetic contributor to obesity

- The Body-Mass Index of Twins Who Have Been Reared Apart.

- 93 identical twin-pairs reared apart
- 154 identical twin-pairs reared together
- 218 nonidentical twin-pairs reared apart
- 208 nonidentical twin-pairs reared together

- A shared family environment did not predict obesity. Genes did. Twin from fat biological family became fat even if adopted by skinny food-conscious family. Skinny-gene kids adopted into fat families stayed skinny.

- Similar findings in other twin and adoption studies
Why is treating obesity so difficult? Justification for the role of bariatric surgery.

- There is little evidence that public health measures adopted so far have had any impact on the rise in the prevalence of obesity.

- Weight-loss programs have a very high long-term failure rate.

- There is emerging evidence that weight is regulated by the hypothalamus and is physiologically defended.

- There is also a strong genetic predisposition to the development of obesity.

- The availability and promotion of high-energy foods and the absence of any obligatory need for physical activity compound the problem, but this social change is not easily reversible.

- One way forward is to focus public health measures on preventing obesity in children while making resources available to treat people who are already obese, including providing funding for bariatric surgery in public hospitals.
Dieting causes bingeing, weight gain, and eating disorders

  - 17000 kids 9-14. Dieting predicted wt gain, 5-12 X binge eating.
  - ‘In the long-term dieting to control wt not only ineffective, may promote wt gain.’

- Neumark-Sztainer et al 2006. *J Am Diet Assoc*
  - Teenage dieters twice as likely as nondieters to become overweight, even though baseline wts equal.

- Mann et al 2007. *American Psychologist*
  - A team of UCLA researchers reviewed 31 long-term studies on effectiveness of dieting.
  - Dieting consistent predictor of wt gain
  - 2/3 of dieters gained more wt than they lost.
The treatment of all eating disorders including Binge Eating Disorder = Stop Dieting
Focus on health not weight

• HAES movement

• Healthy diverse enjoyable diet

• Active life

• No ‘fat-shaming’, bullying, exhortation to diet or ‘torturecise’

• Embrace diversity

• Focus on wellbeing including mental health and social connectedness

AED Guidelines for Childhood Obesity Prevention Programs
S Daníelsdóttir, Deb Burgard, Wendy Oliver-Pyatt
Are we over-reacting? BMI vs Mortality


- A Systematic Review and Meta-analysis

- 97 studies, 2.88 million individuals, 270 000 deaths.
Looking to the future

- Prevent childhood obesity via legislation re advertising and sale of harmful foods

- Psychostimulants (Vyvanse/Lisdexamfetamine)

- Bariatric Surgery

- Embracing and tolerating diversity (esp in schools)

- Awareness of dangers of dieting and fat-shaming
Questions?