Eating Disorders

Eating disorders are characterized by severe disturbances in eating behaviour, coupled with distorted cognitions involving body weight or shape.

The DSM-IV identifies two specific syndromes, *Anorexia Nervosa* and *Bulimia Nervosa*.

- Obesity in itself is not classified as a psychopathology, because it does not appear to involve a consistent psychological syndrome (e.g., cognitive distortions).
Anorexia Nervosa

Anorexia nervosa is characterized by:

• a refusal to maintain a minimally normal body weight

  › usually accomplished through reduced caloric intake

  › may also involve purging behaviours and/or excessive exercise

• intense fear of gaining weight

• significant disturbance in individual's perception of their body size or shape

• loss of menstrual cycle (amenorrhea) in postmenarcheal females (due to malnutrition)
Occurs in 0.5-1.0% of females in late adolescence/early adulthood (no good estimate for men).

Prevalence appears to have increased in recent decades.

Mean age of onset is 17.

Onset usually after some sort of stressful life event.

- Stressor usually not catastrophic, but involves ordinary "points-of-passage", e.g.,
  - onset of menarche
  - going to university
  - getting married
Course and outcome are highly variable

- some recover after single episode
- some have periods of relapse
- others show chronic deteriorating course over many years

Long-term mortality is over 10% (with death commonly resulting from starvation, suicide, or electrolyte imbalance).

**Bulimia Nervosa**

The characteristics of bulimia nervosa are:

- recurrent episodes of binge eating, meaning
  - eating larger amounts of food in a discrete period of time than most people would eat in a similar period in similar circumstances
  - sense of lack of control over eating during the episode
• recurrent inappropriate compensatory behaviour to prevent weight gain
  
  ‣ in the purging subtype, involving self-induced vomiting [80-90% of all sufferers], abuse of laxitives, diruetics, and/or enemas; in the non-purging subtype, fasting or excessive exercise

• both binging and compensatory behaviour occur at least twice a week

• self-evaluation is unduly influenced by body shape and weight

Individuals with bulimia nervosa are typically within the normal weight range, and may even be slightly overweight (cf. anorexia nervosa)

Occurs in 1-3% of adolescent/young adult females, 0.1-.03% in males.

Usually begins in late adolescence or early adult life. Often will persist for several years (may be chronic or intermittent). Long-term outcomes are not yet fully known.
How similar are anorexia and bulimia?

- Anorexia and bulimia share similar features:
  - age of onset
  - gender ratio
  - bulimia often follows anorexia

However, not completely similar.

- Personality characteristics
  - Personality characteristics of individual with anorexia are fairly consistent:
    - perfectionistic, compliant, conscientious.
  - Some bulimia sufferers show similar profile, but others seem opposite: impulsive, rebellious, emotionally unstable.
• Also, the comorbidity patterns are different:
  - anorexia may be accompanied by OCD
  - bulimia often occurs with Substance Abuse (~1/3 time, particularly stimulants or alcohol)
    - often (~1/3 to 1/2) the individual has a personality disorder as well (usually Borderline Personality Disorder).

Cognitive Models of Eating Disorders

Cognitive accounts of eating disorders emphasize the role of dysfunctional beliefs about weight and shape in maintaining the symptoms of the disorders.

Garner & Vitousek's model of anorexia (see text p. 195) postulates a number of distal factors involved in the etiology of the disorder, along with specific personality, sociocultural, and stressor variables that produce the symptom pattern.
Maintaining the symptom pattern are a set of dysfunctional beliefs about weight and shape.

Compared to individuals without an eating disorder, the meanings of weight and shape are

- more elaborated,
- less flexible
- idiosyncratic
- emotionally charged

These beliefs may exist prior to the disorder, or may arise after initial experiences with weight loss.

Anorexics may find reinforcement for their behaviour externally in either admiration for their restraint, or in concerns over their emaciation.

However, more significant appears to be the positive self-reinforcement that anorexics provide themselves.
Individuals with anorexia generally do not view their symptoms as a disorder to be avoided, but as an achievement in which they are heavily invested emotionally -- lost weight is the positive goal.

- Indication of control or “will”
- Seen as “lifestyle choice”

View often emphasized by “pro-ana”/”pro-ED” websites and online forums.
This lack of recognition of their symptoms as an affliction make anorexics extremely unlikely to seek treatment, or to cooperate initially with therapeutic attention from others.

Additionally, negative reinforcement (reinforcement through the avoidance of negative consequences) by avoiding "fatness" also helps to maintain symptoms.
Because they isolate themselves from stimuli that provoke anxiety (such as weight gain), they avoid opportunities to disconfirm their beliefs about the consequences of stimuli.

(Weight preoccupation may also serve as "avoidance" in offering a concrete, unitary concern which can concentrate anxieties about achievement and self-worth.)

Over time, schemata around weight and its self-implications develop, further influencing the processing of information.

- Perceptions and interpretations of experiences become filtered by the concerns of weight.
A further influence are the effects of starvation on cognition:

- poor concentration
- concrete or rigid thinking
- obsessive-compulsive behaviour

Although bulimia differs in symptoms from anorexia, it shares the same central beliefs about weight and shape as measures of self-esteem, and the dedication to weight control.
Prolonged dieting almost always occurs prior to the onset of bulimia.

Such dieting can produce cognitive/affective effects to increase the tendency to binge, by making food highly rewarding.

Food consumption may be useful in mitigating negative moods such as depression, anxiety, or anger

- directly through the rewarding nature of food, or
- by focussing the attention on the immediate situation and away from unpleasant thoughts and feelings.

Binging in part involves beliefs that consuming any unplanned food means the individual has already lost their usual control, and might as well consume without restriction.
Weight and Shape Beliefs

Researchers have attempted with various instruments to determine the central attitudes and beliefs involved in eating disorders.

Generally, eating disorder subjects differ from normal controls, obese subjects, and dieters in their motivation for thinness and concerns with body shape and weight.

Furthermore, anorexics and bulimics show specific irrational beliefs about food and weight, such as:

- controlling weight is the only way to produce self-control in other domains
- ingested food is instantly converted to stored fat
- any small increase in weight will eventually lead to obesity.

These beliefs appear to decrease with response to treatment.
However, it is difficult to gauge properly beliefs in eating disorders with self-report or interviews, as anorexics and bulimics are extremely poor at reporting on their internal experiences.

This is especially true of anorexia:

- the desire to prevent interference in their positively-valued symptoms often produces *intentional distortions* in their self-report

- the *overcompliance* common to the anorexic personality may mean that such subjects misrepresent to conform to what they believe are the researcher's desires
• poor introspective skills can impair ability to report internal states

• starvation can produce *diminished capacity for abstraction* and impoverishment of thought

Generally, bulimic subjects are more reliable subjects

• less likely to feel need to protect symptomatology

• do not suffer cognitive effects of starvation

Although it is clear that anorexics and bulimics have distorted beliefs, there has been little systematic theorizing about what particular kinds of beliefs are necessary to maintain eating disorders.
Schematic processing and attentional bias

The cognitive model of eating disorders suggests that food- and weight-related schemata arise in these syndromes, which should produce detectable processing biases.

Numerous studies have been done examining whether individuals with eating disorders have an bias toward attending to food and weight stimuli.

- Some evidence has been found with
  - dichotic listening (Schotte, McNally, & Turner, 1990)
  - memory studies (e.g., King, Polivy, and Herman, 1991)
  - interpretation of ambiguous stimuli (e.g., homophones and homographs; Vitousek, Ewald, Mew, & Manke, 1992)
Numerous other studies have used our old friend, the Stroop task.

To summarize the research:

- eating disorder subjects show colour-naming interference for food- and weight-related stimuli - with the effect seemingly stronger for food words.

- interference disappears with recovery (Ben-Tovim, Walker, Fok, & Yap, 1989; Cooper & Fairburn, 1994)

The obvious interpretation of these results is that such biases reflect stable trait features of the disorder, caused by schematic processing of information.

However...

It is also possible that these findings may simply be due to the state of being hungry.
• Channon & Hayward (1990)
  ‣ non-eating disordered participants
  ‣ deprived them of food for 24 hours
  ‣ tested with food and neutral words on Stroop

  Results: show similar interference for food stimuli on the Stroop.

• Mogg, Bradley, Hyare, & Lee (1998)
  ‣ High vs. low hunger participants
  ‣ Dot-probe task
    - food & nonfood words presented either “suprathreshold” (500 ms) or “subthreshold” (14 ms and masked)
    - subthreshold thought to tap automatic, pre-attentive processes
Results:

- High hunger produced greater bias for food-related words in suprathreshold condition (compared to low hunger participants)
- No effect for subthreshold condition

Hunger produces attentional bias.

Also findings with restrained eaters

- Restrained eaters do not have a psychopathology, but like eating disorder subjects
  - restrict food intake to reduce weight
  - when dieting efforts are disrupted, tend to overeat.

(Analogue group)
• Schmidt and Telch (1991) compared a group of restrained eaters with controls on the Stroop.

  ▶ Under normal conditions, restrained eaters showed interference for food and weight stimuli.

  ▶ In the other condition, subjects were given a dietary "preload" (a milkshake).

    - It was thought that this would make the food concerns of the restrained eaters even more salient, and increase interference

• Instead, both groups showed a reduction in interference for food words.

  Interference may thus merely be due to hunger effects.
But:

• Mahamedi & Heatherton (1992) performed two studies of restrained and unrestrained eaters using a Stroop task before and after a preload.

  ‣ In both studies, no difference between groups prior to preload.

  ‣ After preload, both groups showed increased interference for body words, but no change for either group on food words.

• While contrary to Schmidt & Telch findings, like that study these results question whether bias findings in pathological samples are specific to that pathology.
• More sophisticated materials and methods may help determine if underlying biases exist independent of hunger.