

Three vertical, textured, blue-grey shapes are positioned on the left side of the image. They appear to be elongated, somewhat irregular forms, possibly representing body parts or abstract figures, set against a solid blue background. The shapes have a mottled, almost crystalline texture.

Body Image & Eating Disorders

Overview

Eating well and health

- Societal views on weight
- **Eating disorders**
 - Anorexia Nervosa
 - Treatment
 - Bulimia Nervosa
 - Treatment
 - Binge Eating Disorder

Feeding disorders

- Pica
- Rumination Disorder
- Avoidant/Restrictive food intake disorder

Messages about Food

What messages do people receive (from parents, peers, media, etc.) about food?

Are messages about food different for women and men?



Some statistics

- Eating disorders have increased threefold in the last 50 years
- 10% of the population is afflicted with an eating disorder
- 90% of the cases are young women and adolescent girls
- Up to 21% of college women show sub-threshold symptoms
- 61% of college women show some sort of eating pathology

PwC in February 2015, estimates that more than 725,000 people in the UK are affected by an eating disorder (PricewaterhouseCooper)



HCIC (2014) - an 8% rise in the number of inpatient hospital admissions in the 12 months previous to October 2013.

A 34% increase in admissions since 2005-06 - approximately 7% each year.

Societal views on weight

Men and women estimate their weight differently.

The “ideal weight” varies across culture.

BMI objective calculation of weight/health.

Culture and evolution influence food choices.

Attitudes toward weight shaped by culture.

Generally, weight an indicator of nutrition and health.

Extreme views on weight and eating
- Eating disorders.

Eating disorders along a continuum

Occasional
dieting, skipping
meals to control
weight or binge
eating

Frequent dieting
and compensatory
behaviours and
concern about
weight

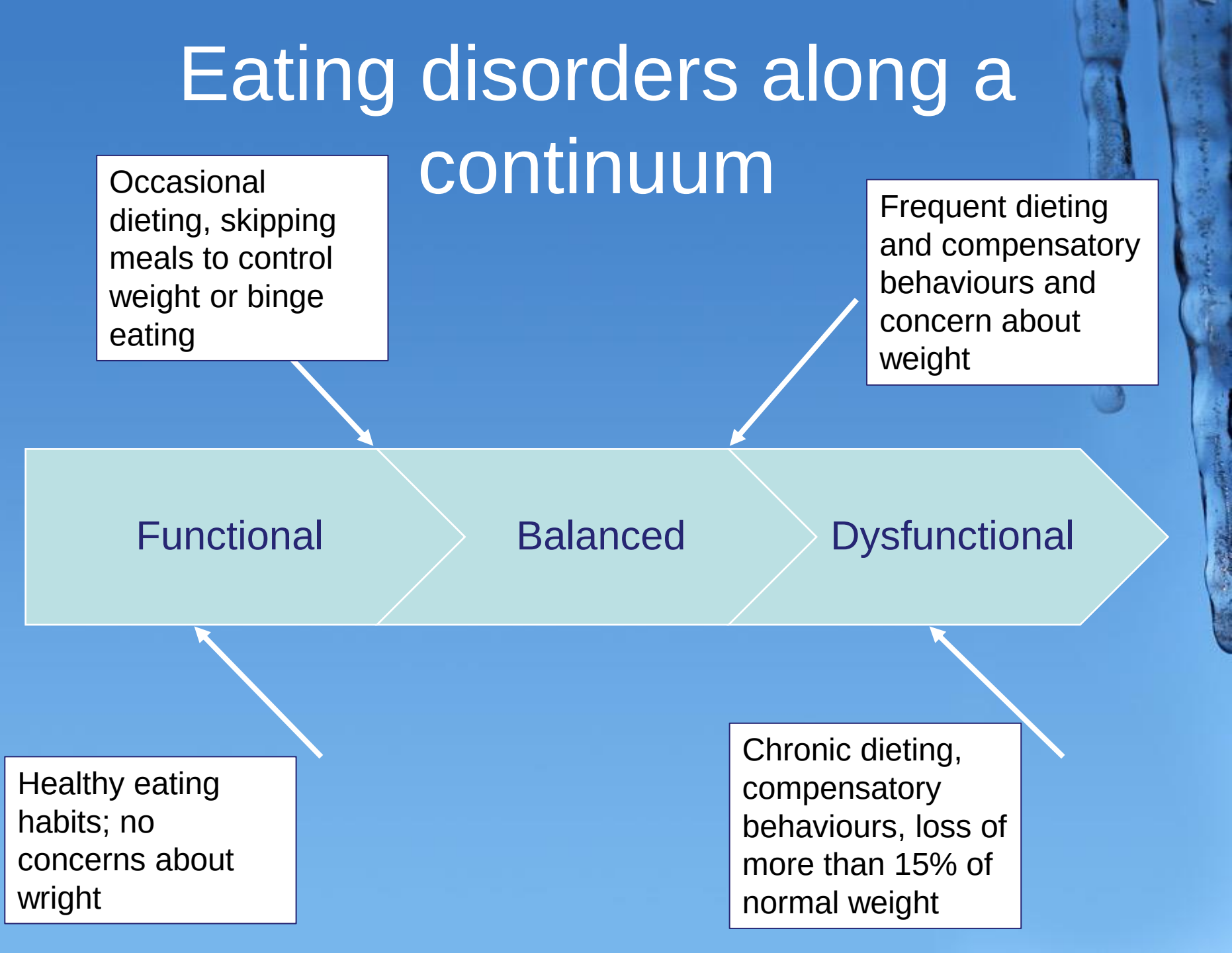
Functional

Balanced

Dysfunctional

Healthy eating
habits; no
concerns about
weight

Chronic dieting,
compensatory
behaviours, loss of
more than 15% of
normal weight



Three Types of Eating Disorders

Anorexia nervosa- characterized by a pursuit of thinness that leads to self-starvation

Bulimia nervosa- characterized by a cycle of bingeing followed by extreme behaviours to prevent weight gain, such as purging.

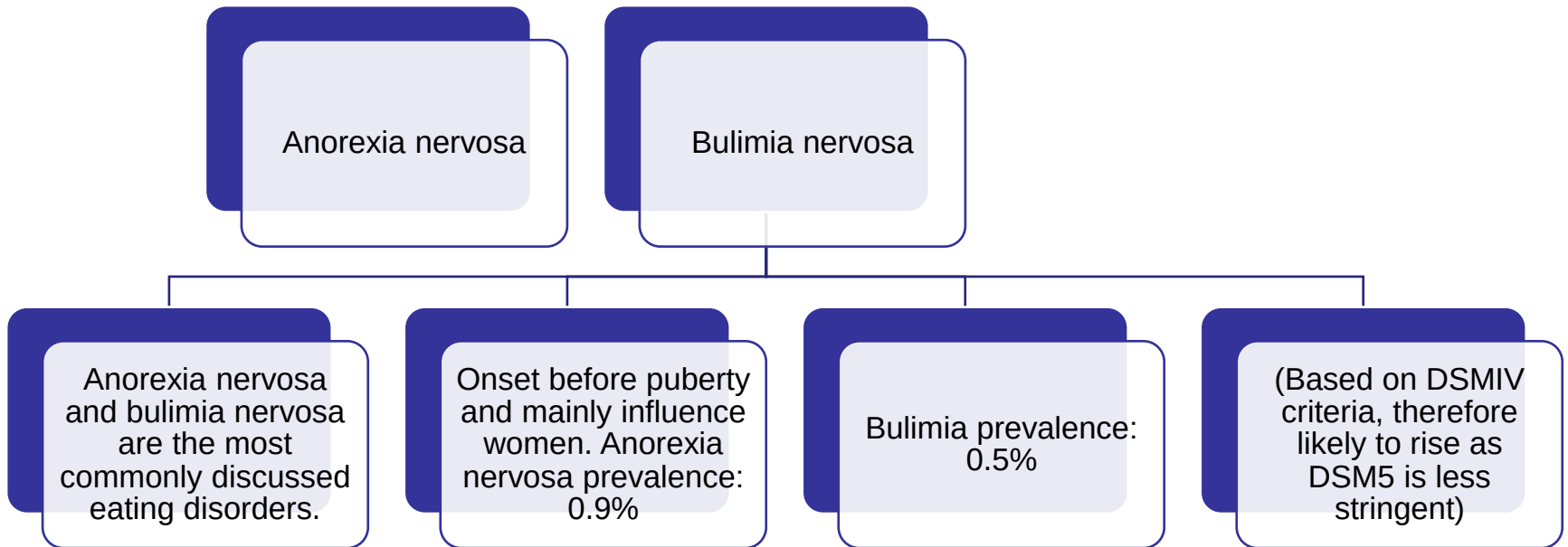
Binge-eating disorder- characterized by regular bingeing, but do not engage in purging behaviours.

Characteristics of eating disorders

Most individuals who meet the criteria for one disorder
`migrate` between the others.

Some individuals who meet the criteria partially for one or more of the disorders, but not fully are often given the diagnosis of `other specified eating or feeding disorder`.

Eating disorders: Overview



Binge eating

- Affects both genders with a somewhat varied onset
- Prevalence is seen to be 3.5% in females and 2% in males
- Eating disorders may have some genetic component.
- Those with eating disorders experience a number of serious medical conditions related to reducing body weight or purging.
- They also show a higher death rate including suicide between 4%-5%.
- Often, those with eating disorders conceal their symptoms and do not seek treatment.

Sample Items from Eating Disorders Inventory (EDI)

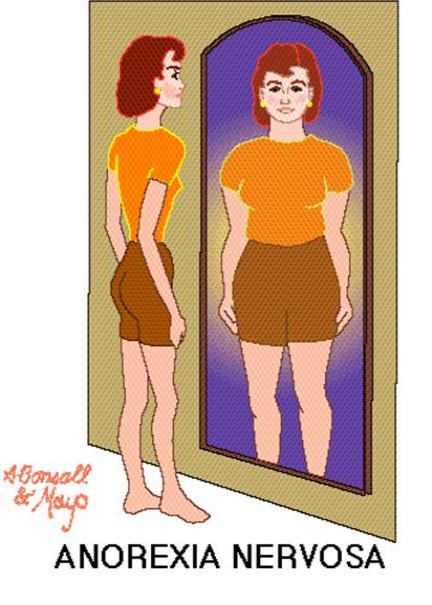
Table 11.2 Subscales and Illustrative Items from the Eating Disorders Inventory

Drive for thinness	I think about dieting. I feel extremely guilty after overeating. I am preoccupied with the desire to be thinner.
Bulimia	I stuff myself with food. I have gone on eating binges where I have felt that I could not stop. I have the thought of trying to vomit in order to lose weight.
Body dissatisfaction	I think that my thighs are too large. I think that my buttocks are too large. I think that my hips are too big.
Ineffectiveness	I feel inadequate. I have a low opinion of myself. I feel empty inside (emotionally).
Perfectionism	Only outstanding performance is good enough in my family. As a child, I tried hard to avoid disappointing my parents and teachers. I hate being less than best at things.
Interpersonal distrust	I have trouble expressing my emotions to others. I need to keep people at a certain distance (feel uncomfortable if someone tries to get too close).
Interoceptive awareness	I get confused about what emotion I am feeling. I don't know what's going on inside me. I get confused as to whether or not I am hungry.
Maturity fears	I wish that I could return to the security of childhood. I feel that people are happiest when they are children. The demands of adulthood are too great.

Source: From Garner et al. (1983).

Note: Responses use a six-point scale ranging from "always" to "never."

1. Anorexia Nervosa



Begins with individuals restricting certain foods, not unlike someone who is dieting

- Restrict high-fat foods first
- Food intake becomes severely limited

May exhibit unusual behaviours with regards to food.

- preoccupied with thoughts of food, and may show obsessive-compulsive tendencies related to food
- may adopt ritualistic behaviours at mealtime.
- may collect recipes or prepare elaborate meals for others.



Anorexia Nervosa: DSM-5 criteria

Persistent restriction of energy intake leading to significantly low body weight (in context of what is minimally expected for age, sex, developmental trajectory, and physical health).



Either an intense fear of gaining weight or of becoming fat, or persistent behaviour that interferes with weight gain (even though significantly low weight).

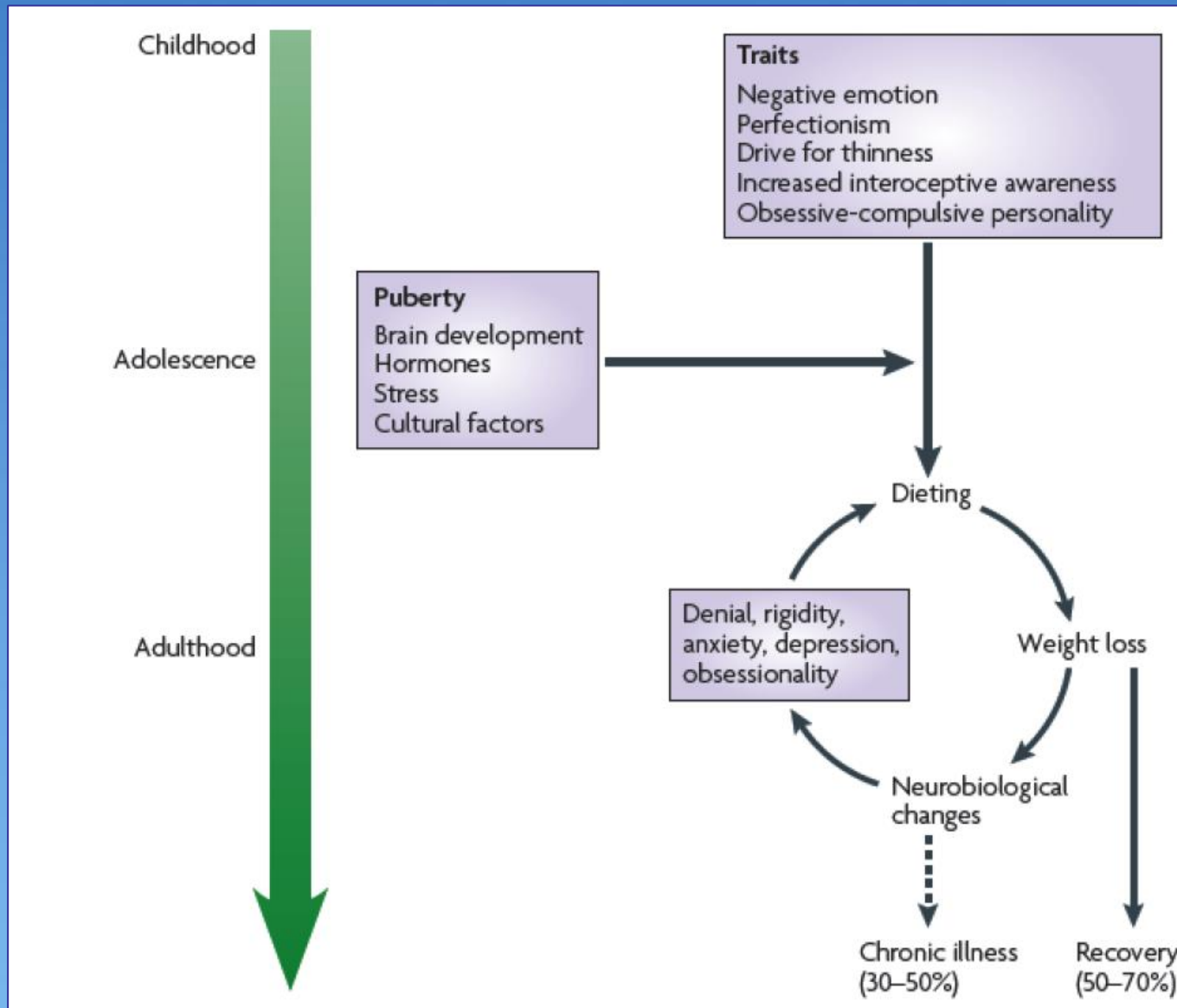


Disturbance in the way one's body weight or shape is experienced, undue influence of body shape and weight on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

Sub-types of AN

- (1) Restricting type
- (2) Binge-eating/purging type- associated with personality disorders, impulsive behaviour, alcohol and drug abuse and social withdrawal.
- However, Eddy (2002) found that two thirds of restricting types had switched over to purging within 8 years, therefore questioning the sub-types.

Time course and phenomenology of anorexia



Anorexia Nervosa

Onset: early to middle teen years

Usually triggered by dieting and stress

Women 10x as likely to develop disorder as men

Often comorbid with depression, OCD, phobias, panic, alcoholism and PDs

Suicide rates high in anorexia



- Symptomatology in men similar to that of women

- In men, comorbid with substance dependence, mood disorders, or schizophrenia

- 5% completing
- 20% attempting

Physical Changes in Anorexia

Low blood pressure,
heart rate decrease

Kidney and
gastrointestinal
problems

Loss of bone mass

Brittle nails, dry
skin, hair loss

Lanugo

- Soft, downy body hair

Depletion of
potassium and
sodium electrolytes

- Can cause tiredness,
weakness, and death

Prognosis of Anorexia

50-70% eventually recover

May
often
take 6 or
7 years

Difficult to modify distorted view
of self, especially in cultures
that highly value thinness.

Anorexia is life threatening

Death rates 10x higher
than general
population

Death rates 2x higher
than other
psychological
disorders

Relapse
common

Aetiology of Eating Disorders: Genetics

```
graph TD; A[Environmental factors] --> B[Family and twin studies]; B --> C[Body dissatisfaction]; C --> A; D((Genes))
```

Environmental factors (e.g., family interactions) play an even greater role in aetiology

- Further research on genetic/environmental interaction is needed

Genes tend to carry a general risk interacting with puberty in girls but not boys

Family and twin studies support genetic link

- First-degree relatives of individuals with both disorders more likely to have the disorder
- Higher MZ concordance rates for both anorexia and bulimia

Body dissatisfaction, desire for thinness, binge eating, and weight preoccupation all heritable

Anorexia risk factors

Figure 12-10 Suggestive Risk Factors in Anorexia Nervosa

A. Familial

1. A family member or relative with anorexia nervosa, bulimia nervosa
2. A family member or relative with depression or alcohol/drug abuse/dependence

B. Individual Biological Factors

1. Early menarche
2. Mildly overweight

C. Individual Psychological Factors

1. Perfectionistic—obsessional personality
2. Sense of ineffectiveness, lack of confidence, low self-esteem
3. Affective disorders (depression)

D. Individual Behaviors

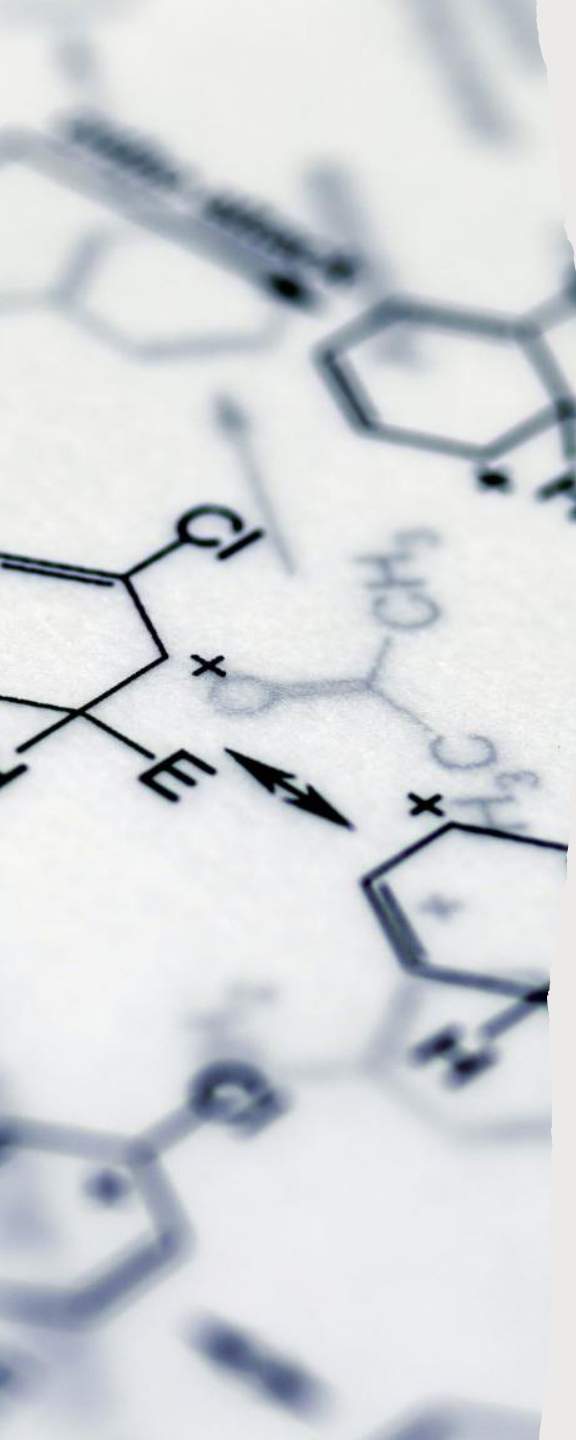
1. Dieting
2. Involvement in activities or professions that emphasize weight control: gymnastics, ballet, wrestling, jockeys, actors, and models

E. Cultural

1. Living in an industrialized country
2. Emphasis on thinness as beauty
3. General significant weight increase in the general population in the U.S. over the past 40 years

F. Stressful life events

1. Death of a close relative or friend
2. Sexual abuse



Biological factors in eating disorders

- The biological systems that regulate hunger, satiety, initiation and cessation of eating consist of the hypothalamus and the messages relayed via noradrenaline, serotonin, dopamine, cortisol and insulin (Trace et al., 2013)
- Eating disorders usually arise due to imbalances or structural and functional problems with the hypothalamus

Neurobiological Factors

Low levels of *endogenous opioids*

Substances that reduce pain, enhance mood, and suppress appetite

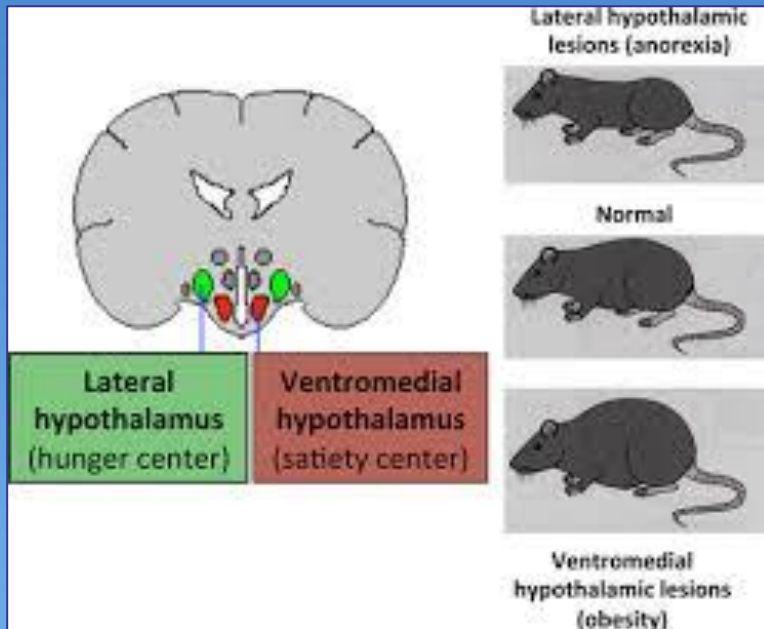
Released during starvation

- May reinforce restricted eating of anorexia

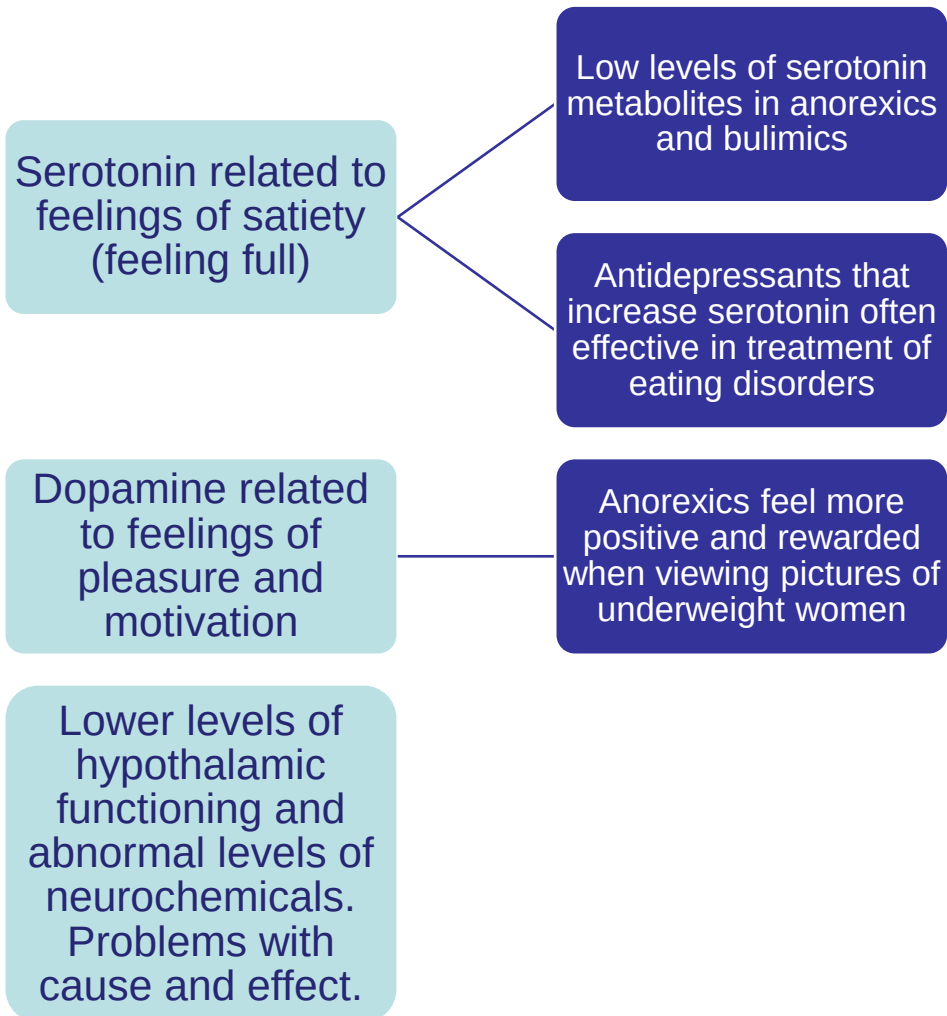
Excessive exercise increases opioids

Low levels of opioids (beta-endorphins) in bulimia promote craving

- Reinforce bingeing



Neurobiological factors



The Restraint Scale

Table 11.4 The Restraint Scale

1. How often are you dieting? Never; rarely; sometimes; often; always.
2. What is the maximum amount of weight (in pounds) you have ever lost within 1 month? 0-10-14; 15-19; 20+.
3. What is your maximum weight gain within a week? 0-1; 1.1-2; 2.1-3; 3.1-5; 5.1+.
4. In a typical week, how much does your weight fluctuate? 0-1; 1.1-2; 2.1-3; 3.1-5; 5.1+.
5. Would a weight fluctuation of 5 pounds affect the way you live your life? Not at all; slightly; moderately; very much.
6. Do you eat sensibly in front of others and splurge alone? Never; rarely; often; always.
7. Do you give too much time and thought to food? Never; rarely; often; always.
8. Do you have feelings of guilt after overeating? Never; rarely; often; always.
9. How conscious are you of what you are eating? Not at all; slightly; moderately; extremely.
10. How many pounds over your desired weight were you at your maximum weight? 0-1; 1-5; 6-10; 11-20; 21+.



Source: From Polivy, Herman, & Howard (1980).

2. Bulimia Nervosa

Qualitatively
distinct from
anorexia

characterized
by binge
eating

A binge may or
may not be
planned

marked by a
feeling of
being out of
control

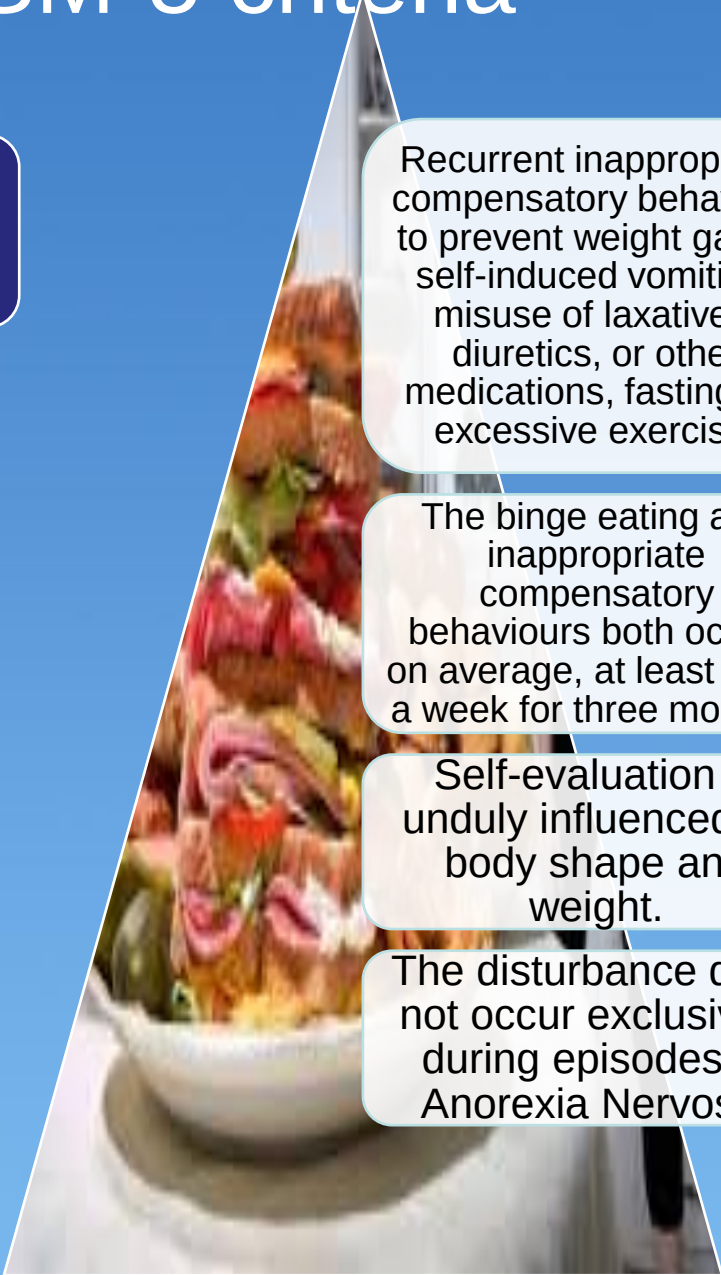
The binge
generally lasts
until the individual
is uncomfortably
or painfully full



Bulimia Nervosa: DSM-5 criteria

Recurrent episodes of binge eating.

- Eating, in a discrete period of time (e.g. within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.
- A sense of lack of control over-eating during the episode (e.g. a feeling that one cannot stop eating or control what or how much one is eating).



Recurrent inappropriate compensatory behaviour to prevent weight gain, - self-induced vomiting, misuse of laxatives, diuretics, or other medications, fasting, or excessive exercise.

The binge eating and inappropriate compensatory behaviours both occur, on average, at least once a week for three months.

Self-evaluation is unduly influenced by body shape and weight.

The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

Bulimia Nervosa

Common triggers for a binge

- dysphoric mood
- interpersonal stressors
- Intense hunger after a period of intense dieting or fasting
- feelings related to weight, body shape, and food are common triggers to binge eating



Feelings of being ashamed after a binge are common

- behavior is kept a secret

Tend to adhere to a pattern of restricted caloric intake

usually prefer low-calorie foods during times between binges

Two types of BN?

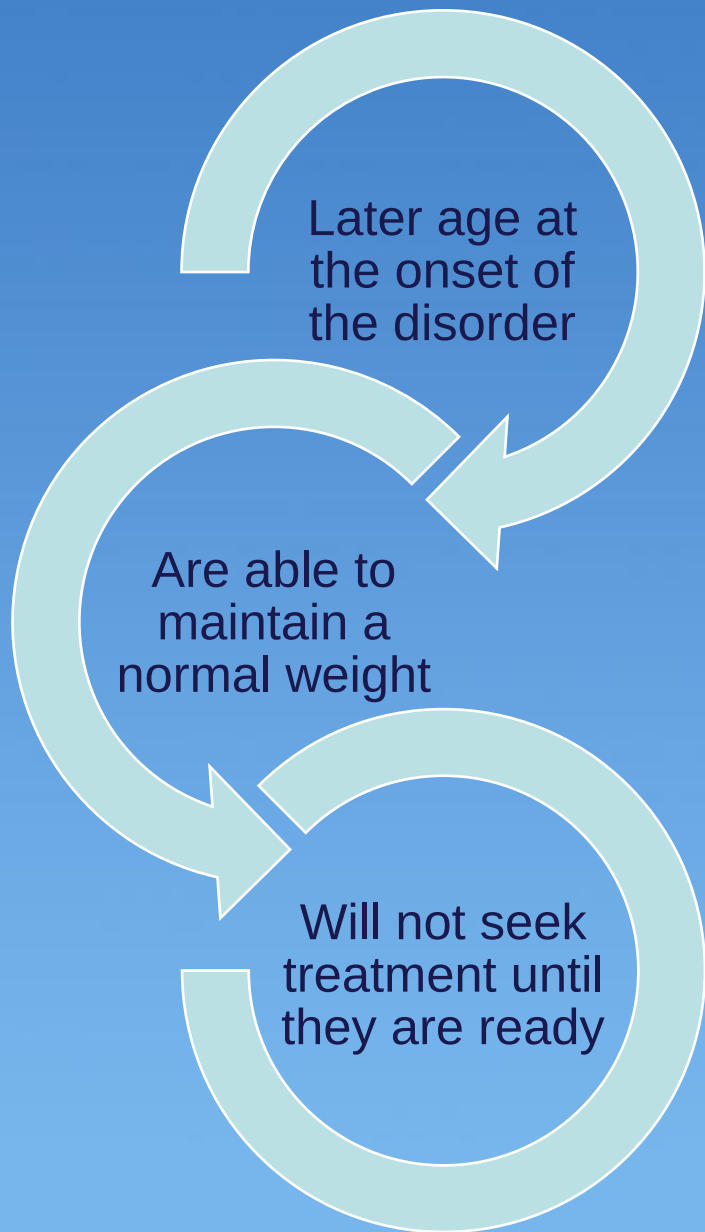
A purging type, and a non purging type in which patients exercise and fast in place of the purging.

But, not all agree: Stice & Fairburn (2003) distinguish between dietary subtype and a dietary depressive subtype.

Dietary subtypes are characterised by dietary restraint and dietary depressives are characterised by dietary restraint and persistent negative affect.

The former is rigid and strict eating, the latter is associated with anxiety/personality disorders severe bulimia and poor response to CBT.

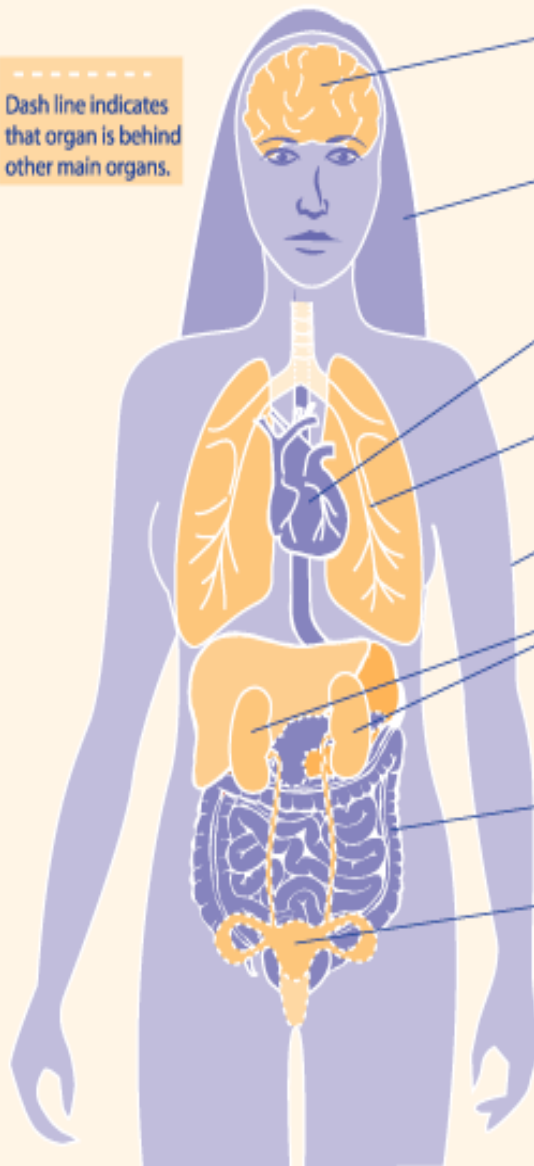
More on bulimia nervosa



- purging type
 - self-induced vomiting and laxatives to get rid of the extra calories they have taken in
 - non-purging type
 - use a period of fasting and excessive exercise to make up for the binge
- Most deal with the burden of hiding their problem for many years, sometimes well into their 30's

Anorexia affects your whole body

Dash line indicates that organ is behind other main organs.



Brain and Nerves

can't think right, fear of gaining weight, sad, moody, irritable, bad memory, fainting, changes in brain chemistry

Hair

hair thins and gets brittle

Heart

low blood pressure, slow heart rate, fluttering of the heart (palpitations), heart failure

Blood

anemia and other blood problems

Muscles and Joints

weak muscles, swollen joints, fractures, osteoporosis

Kidneys

kidney stones, kidney failure

Body Fluids

low potassium, magnesium, and sodium

Intestines

constipation, bloating

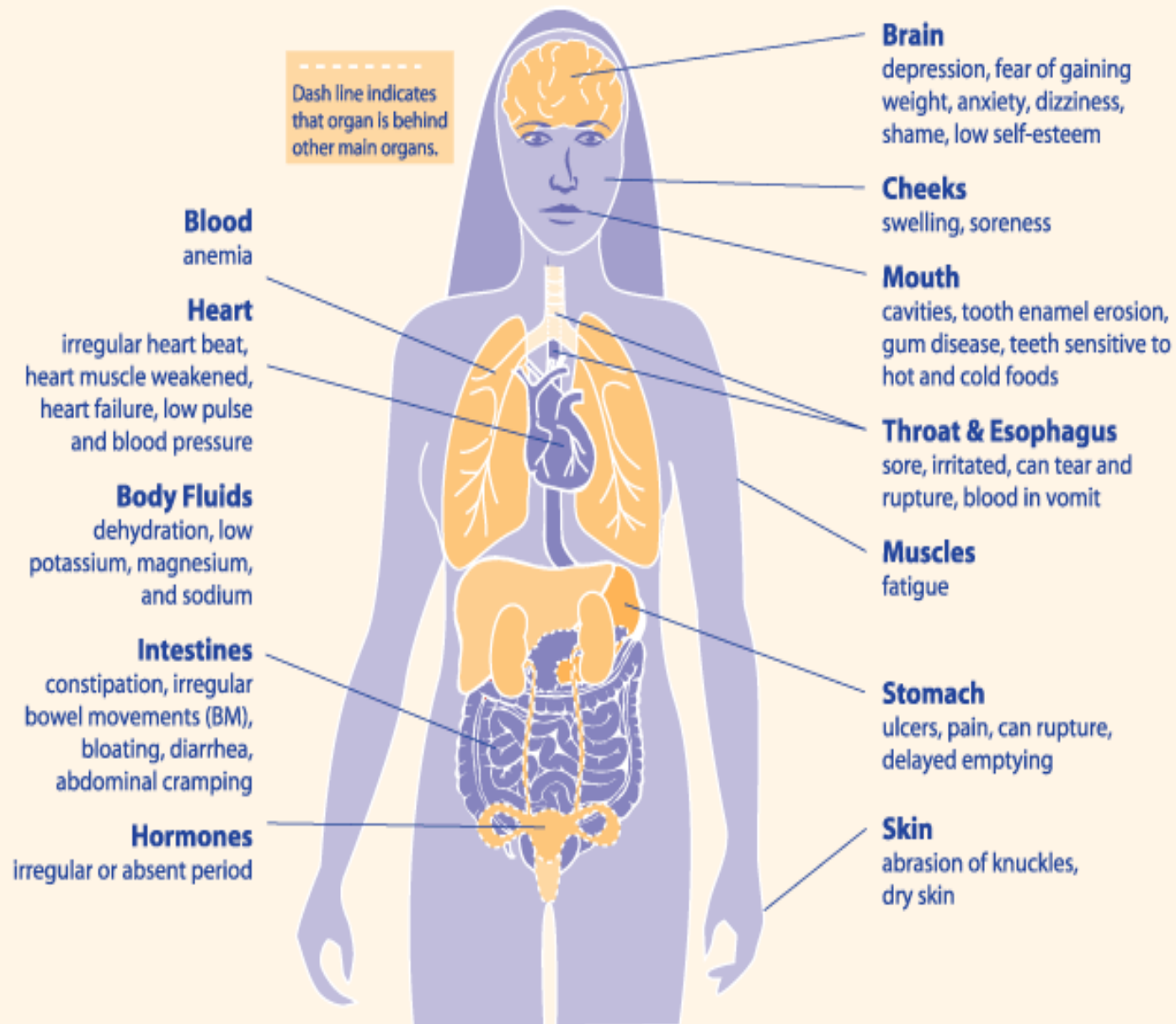
Hormones

periods stop, bone loss, problems growing, trouble getting pregnant. If pregnant, higher risk for miscarriage, having a C-section, baby with low birthweight, and post partum depression.

Skin

bruise easily, dry skin, growth of fine hair all over body, get cold easily, yellow skin, nails get brittle

How bulimia affects your body



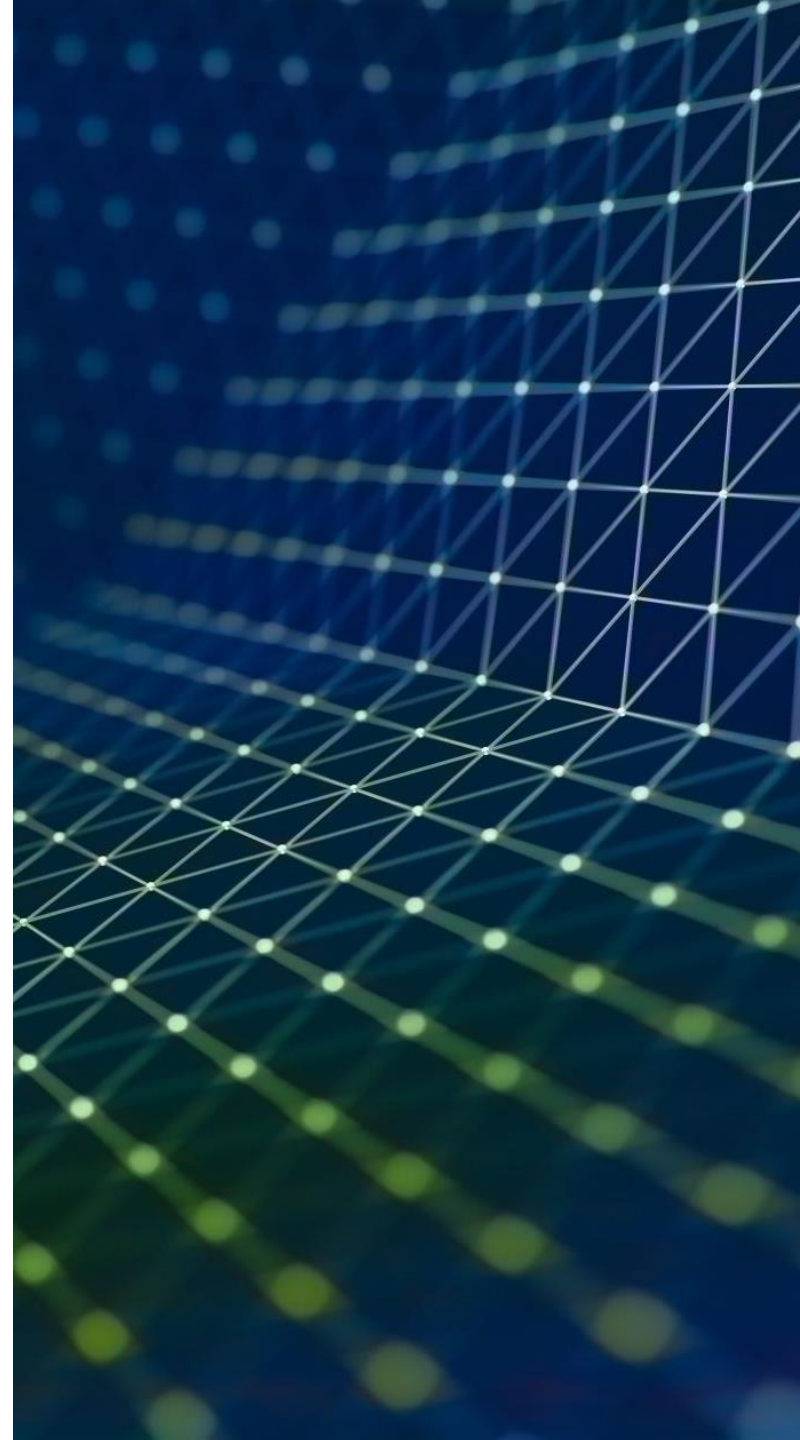
Bulimia Nervosa

BN begins in adolescence or adulthood and is notably co-morbid with other illnesses such as depression, anxiety and substance misuse.

The prognosis is-

Roughly 70% recover, with 10% remaining fully symptomatic.

Early intervention is crucial for a better prognosis.



3. Binge Eating Disorder

According to DSM5 this is a disorder that needs further investigation.

It includes recurrent bingeing usually twice a week for six months.

There is lack of control over the bingeing with distress regarding the bingeing.

Most people suffering will be obese.

Many reasons have been proposed which supported the request for its inclusion in DSM5.

Gender differences: Life time prevalence rate of 3.5% in women and 2% in men.

Eating much more rapidly than normal, eating until uncomfortably full, eating large amounts of food when not physically hungry, eating alone because of feeling embarrassed by how much one is eating and feeling disgusted, depressed, or guilty after overeating.



Binge eating disorder

- Episodes of binge eating without purging.
- Characterized by the consumption of large amounts of food.
 - As much as 10,000 calories during one binge session.
 - More common in those who are overweight: Prevalence is 2.9% in overweight individuals and 1.5% in normal weight individuals.
- Binge eating may run in families.
- Gender differences: Life time prevalence rate of 3.5% in women and 2% in men.
- Additional characteristics: Eating much more rapidly than normal, eating until uncomfortably full, eating large amounts of food when not physically hungry, eating alone because of feeling embarrassed by how much one is eating and feeling disgusted, depressed, or guilty after overeating.

Binge Eating Disorder

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Feeding disorders

25%-45% of normally developing children and up to 80% of those who are developmentally delayed experience some type of problem with feeding.

Examples of feeding problems:

- Delayed or absent development of feeding/eating skills.
- Difficulty managing or tolerating fluids or foodstuffs.
- Reluctance or refusal to eat based on taste, texture, and other sensory factors.
- Lack of appetite or interest in food.
- Utilizing feeding behaviors to comfort, self-soothe, or self-stimulate.

+ Other Specified Feeding or Eating Disorder (OSFED)

- A diagnosis might then be allowed that specifies a specific reason why the presentation does not meet the specified eating disorder (e.g., Bulimia Nervosa-low frequency). The following are further examples for OSFED:
- **Atypical Anorexia Nervosa:** All criteria are met, except despite significant weight loss, the individual's weight is within or above the normal range.
- **Binge Eating Disorder (of low frequency and/or limited duration):** All of the criteria for BED are met, except at a lower frequency and/or for less than three months.
- **Bulimia Nervosa (of low frequency and/or limited duration):** All of the criteria for Bulimia Nervosa are met, except that the binge eating and inappropriate compensatory behaviors occur at a lower frequency and/or for less than three months.
- **Purging Disorder:** Recurrent purging behavior to influence weight or shape in the absence of binge eating.
- **Night Eating Syndrome:** Recurrent episodes of night eating. Eating after awakening from sleep, or by excessive food consumption after the evening meal. The behavior is not better explained by environmental influences or social norms. The behavior causes significant distress/impairment. The behavior is not better explained by another mental health disorder (e.g., BED).

DSM-IV Diagnostic Criteria

- **Eating disorders not otherwise specified (EDNOS)**
- For females, all of the criteria for AN are met except that the individual has regular menses.
- All of the criteria for AN are met except for significant weight loss; the current weight is in the 15-17% range.
- The regular use of inappropriate compensatory behavior by an individual of normal body weight after eating small amounts of food.
- Repeatedly chewing and spitting out, but not swallowing, large amounts of food.
- Binge eating disorder: recurrent episodes of binge eating in the absence of the regular use of inappropriate compensatory behaviors characteristic of BN.





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Pica

- Eating things that are not be considered food.
- Common substances include: Clay, cornstarch, charcoal, flour, newspaper, coffee grounds, paint chips, and blackboard chalk.
- The term *pica pica* refers to the bird, the magpie. Magpies are known for apparently eating all sorts of things although some of these objects are only carried in their mouths to build a nest.



Avoidant/restrictive food intake disorder



- A condition in which an individual does not eat certain foods.
 - Usually avoidance of certain foods because of the sensory characteristics of the food. It could be taste, hardness, color, or any other characteristic.
- Although most people have food they like and dislike, their avoidance of certain foods do not lead to significant weight lost or nutritional deficiency.
- Garcia effect or one-trial learning (taste aversion).

Rumination disorder

A condition in which a person regurgitates their food.

- This swallowed food is then re-chewed, re-swallowed or spit out.



The choice of what to do with the food is often determined by whether the person is in a social situation or not.



To be diagnosed as a rumination disorder, the condition must occur for over a month and not be part of any of any other medical or eating disorder.

Aetiology of Eating Disorders: Cognitive Behavioural View

Anorexia

- Focus on body dissatisfaction and fear of fatness
- Certain behaviours (e.g., restrictive eating, excessive exercise) negatively reinforcing
 - Reduce anxiety about weight gain
- Feelings of self control brought about by weight loss are positively reinforcing
- Perfectionism and personal inadequacy lead to excessive concern about weight
- Criticism from family and peers regarding weight can also play a role

Aetiology of Eating Disorders: Cognitive Behavioral View

Bulimia

Self-worth strongly influenced by weight

Low self-esteem

Rigid restrictive eating triggers lapses, which can become binges

Many “off-limit” foods

After binging, disgust with oneself and fear of gaining weight lead to compensatory behaviour

e.g., vomiting, laxative use

Purging temporarily reduces anxiety about weight gain

Negative feelings about purging lead to lowered self-esteem, which triggers further bingeing

Stress, negative affect trigger binges

Restrained eating plays central role in bulimia

Restraint Scale measures dieting and overeating

Low self-esteem
and high negative
affect



Dieting to feel
better about self



Food intake is
restricted too
severely

Diet is
broken

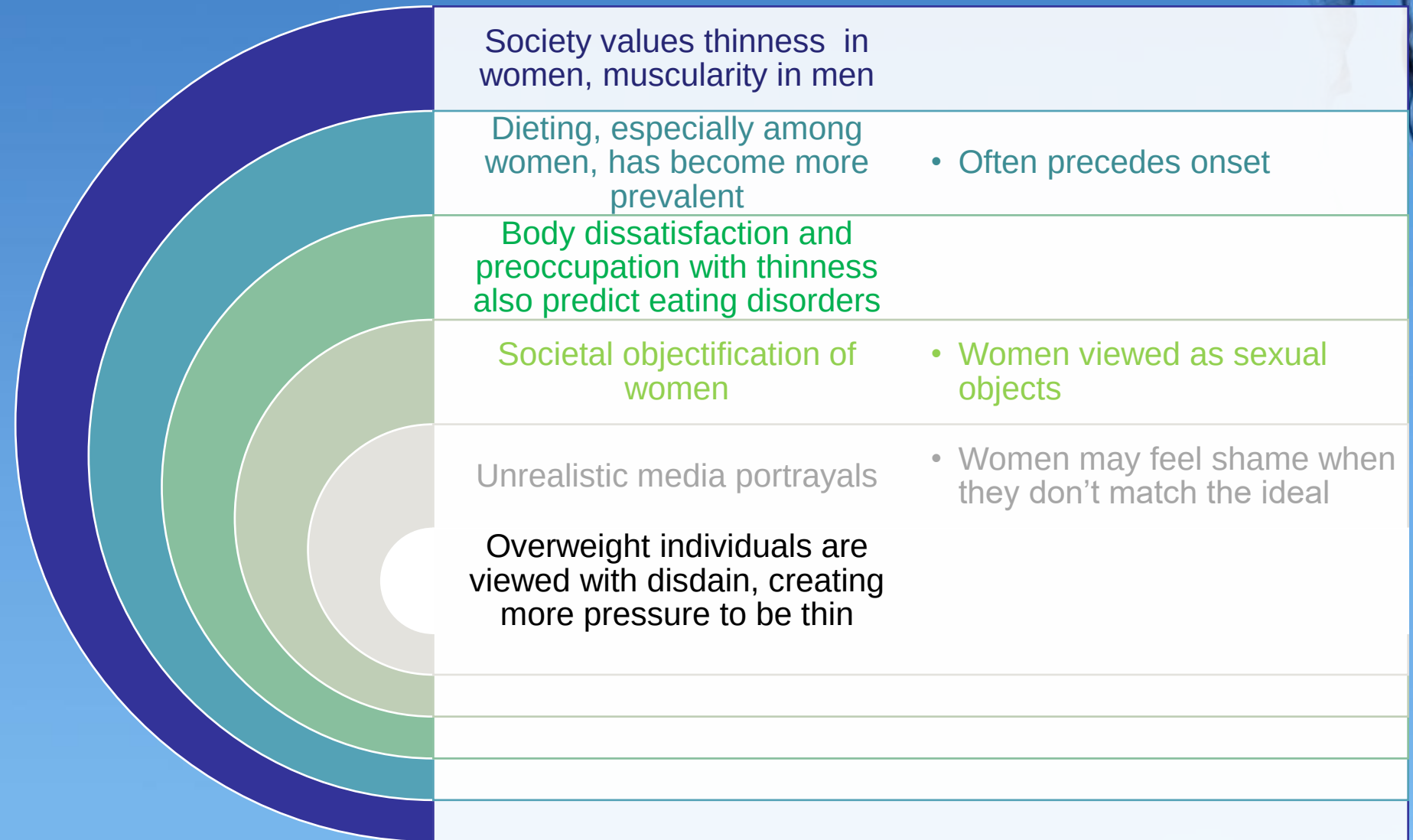


Binge

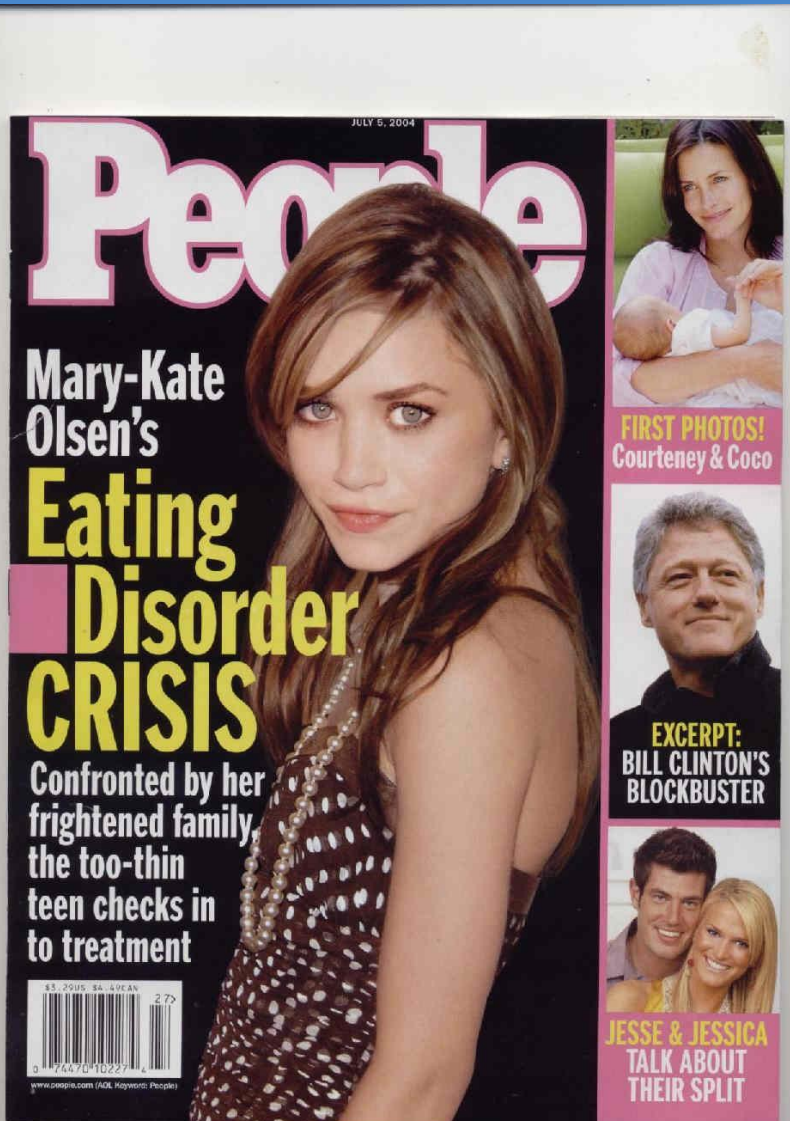


Compensatory behaviors
(e.g., vomiting) to reduce
fears of weight gain

Etiology of Eating Disorders: Sociocultural Factors



The Celebrity Thin Ideal



The Thin-Ideal



The average model weighs 23% less than the average American woman

Longitudinal study from 1979-1988 showed that 69% of playboy models and 60% of Miss America contestants met weight criteria for anorexia

Women's bodies in the media have become increasingly thinner

Etiology of Eating Disorders: Gender Factors

Objectification of women's bodies

- Women defined by their bodies; men defined by their accomplishments
- Societal objectification of women leads to "self-objectification"
 - Women see their own bodies through the eyes of others
 - Leads to more shame when fall short of cultural ideals

Aging and changes in life roles (having a life partner, or having children) associated with decreased eating-disorder symptoms

Etiology of Eating Disorders: Cross-Cultural Factors and Ethnicity

Anorexia found in many cultures

- Even those not under Western influence
- May not include fears of getting fat

In some cultures, higher weight is a sign of fertility and healthiness

As countries become more like Western cultures, eating disorders increase

Bulimia more common in industrialized societies than non-industrialized ones

White women compared to women of colour

- Gap in rate of eating disorders between these groups is diminishing, particularly with bulimia
- More dieting and body dissatisfaction in white teens
- BMI increases linked to greater body dissatisfaction

Body dissatisfaction and symptoms of bulimia strongly correlated with high acculturation stress (relating to changes in culture)

Prevalence of binge eating disorder and bulimia in Latina women comparable to Caucasian; anorexia is more rare

Etiology of Eating Disorders: Other Factors

Eating behaviours impact personality

- Semi-starvation leads to preoccupation with food and personality changes

Personality characteristics impact eating

- Perfectionism, lack of interoceptive awareness, and negative affect predicted disordered eating
- Perfectionism remains high even after treatment

Family characteristics

- Self report indicates high levels of family conflict
 - Parental reports don't always indicate family problems
- One observational study showed parents had no greater levels of negative statement than controls
- More observational studies needed

Self reports of high rates of childhood sexual and physical abuse

Reports of abuse not specific to eating disorders

- Also found in other diagnostic categories

Presence of abuse may be too general a variable

- Age and type of abuse may be more significant

Treatment of Eating Disorders

Antidepressants

- Effective for bulimia but not anorexia
- Dropout and relapse rates high
- Limited research suggests that antidepressant medications are not effective in reducing binges or increasing weight loss in binge-eating disorder

Anorexia

- Immediate goal is to increase weight to avoid medical complications and avoid death
- Second goal is long-term maintenance of weight gain
 - Can be even more challenging

CBT

- Reductions in symptoms through 1 year

Family-based therapy (FBT) found to be effective

- Anorexia viewed as an interpersonal, rather than individual issue. **The Maudsley Model**
- Use of “Family Lunch” sessions
- Early results show improved outcomes over individual therapy

Family therapy has not yet been studied for long term efficacy.

86% of 50 girls studied for effects of family therapy were still functioning well after 3 months -4 years after treatments.

A newer FBT has been implemented in England with promising preliminary evidence (Loeb et al 2007.)

Treatment of Eating Disorders

Bulimia

Challenge
societal ideals
of thinness

Challenge
beliefs about
weight and
dieting

Challenge all-
or-nothing
beliefs about
food

Increase self-
assertiveness
skills to
improve
interpersonal
relatedness

Increase
regular eating
patterns (three
meals a day)

CBT more
effective than
medication

One bite of
high-calorie
food does not
have to lead to
bingeing

Adding
Exposure and
Ritual
Prevention
(ERP)
increases
effectiveness of
CBT in the
short term

Bulimia

The outcome of CBT research is promising both short and long term. In a meta-analysis CBT was better than antidepressants and therapeutic gains were seen 1,6 and even 10 years later (Keel et al 2002).

Findings reveal less frequent binge and purging from 70-90%.

Extreme dietary restraint is reduced and improved attitude to body and weight.

- However, if we focus on the people themselves rather than the numbers of binge/purge episodes across people - over half of sufferers improve very little
- Improvements –investigating the `exposure and ritual prevention`-ERP component of therapy. - discouraging purging and it has been found to be most effective early on in treatment - research indicates that 70% of the reduction in binge/vomiting occurs in the first three weeks of treatment.
- ERP efficacy long term - research compared two groups over three years, one receiving ERP & CBT, the other CBT alone. Both groups had similar outcomes: 85% no longer met criteria for BN. Conclusions?
- People who successfully manage to control urge to binge/purge also are successful in related problems such as depression and low self esteem.
- Additionally, CBT alone is more effective than drug therapy, but outcomes are even better when the two are combined?

Treatment of Eating Disorders

Teaches restrained eating through self-monitoring, self-control, and problem solving skills

Supportive Expressive Therapy, Psychodynamic Therapy are also options

Overall, CBT is best (Fairburn et al., 2005)

For around half of patients the cycle can stop with treatment

CBT shown to be effective treatment modality

CBT more effective than medication

Interpersonal Therapy (IPT) can be as effective as CBT

Behavioral weight-loss programs may promote weight loss, but do not curb binge eating

Binge-Eating Disorder

Prevention of Eating Disorders

Psycho-educational approaches

- Educate early about the dangers of eating disorders

De-emphasize socio-cultural influences

- Dissonance reduction intervention to de-emphasize socio-cultural influences

Risk-Factor Approach

- Healthy weight intervention to develop healthy weight and exercise programs

Challenges to treatment

Lack of
motivation to
change

intrinsically
reinforced by the
weight loss,
because it feels
good to them

may deny the
existence of the
problem, or the
severity of it

Lack of insight

Not really about
food.

Concluding comments: the Impact on Women



- One study showed that 55% of college women thought that they were overweight though only 6% were
- 94% of one sample of women wanted to be smaller than they currently were
- 96% thought that they were larger than the current societal ideal
- Half the women in a study said they would rather be hit by a truck than be fat