Cambridgeshire and Peterborough NHS
NHS Foundation Trust

Understanding mental health, understanding people

Eating disorders

Dr Jane Shapleske

Adult Eating Disorder Service

Cambridgeshire and Peterborough NHS Foundation Trust

A member of Cambridge University Health Partners

I am going to talk about:

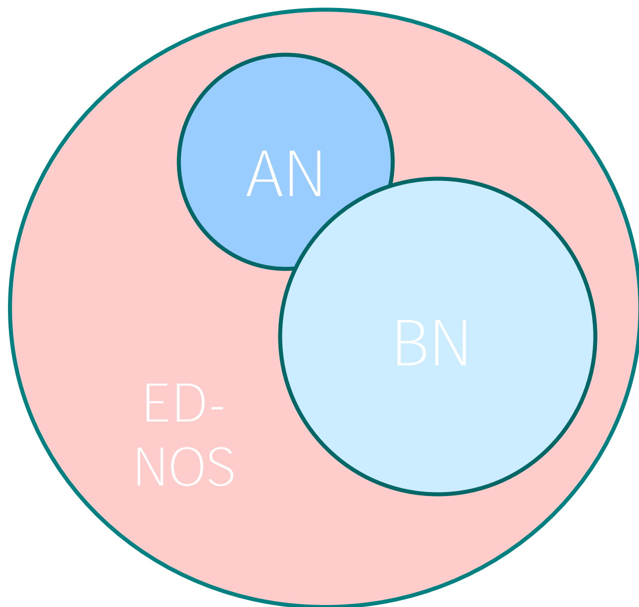
- What are Eating Disorders?
- How common are Eating Disorders?
- Aetiology
- Course
- Identification
- NICE Guidelines – assessment, including risk
- Co-morbid conditions
- Medical complications
- NICE Guidance – Treatment
- Mental Health Act

What are eating disorders?

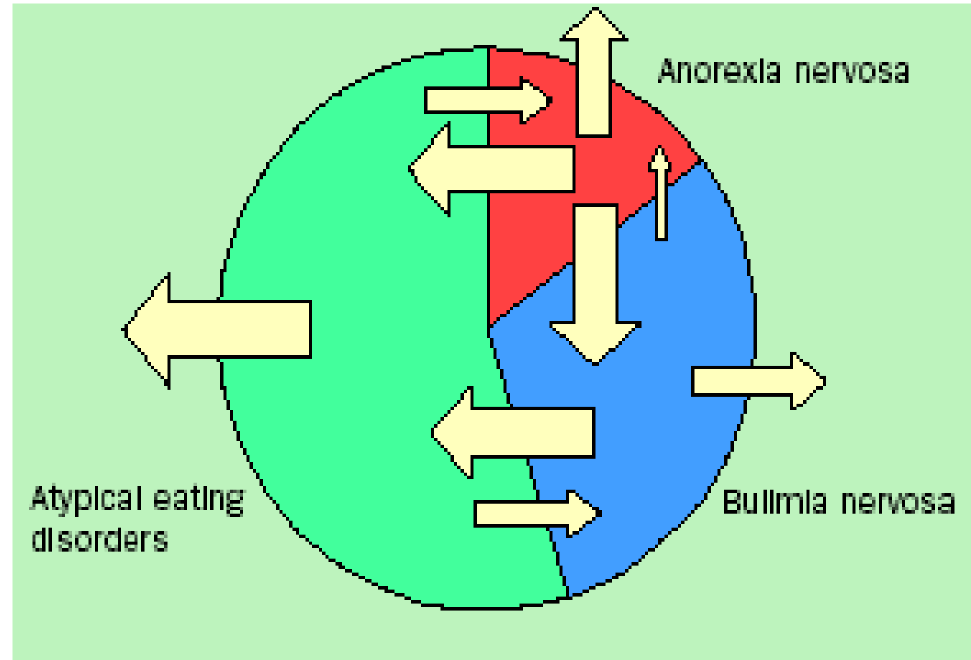
- Complex psychological disorders
- Serious:
  - Physical complications
  - Mortality increased
- Psychiatric co-morbidity
- People often ambivalent about treatment

Classification

Categories and movement between diagnoses



Fairburn & Harrison 2003



Fairburn & Harrison (2003). Lancet 361, 407-16.

Diagnostic Criteria - AN

- DSM-IV:
  - Body weight < 85% of expected
  - Intense fear of gaining weight
  - Weight and shape disturbance
  - Amenorrhea
    - Restricting type and binge-eating/purging type
- ICD-10 adds:
  - Ways of inducing weight loss
  - Physiological features
  - Delayed development if onset before puberty

Bulimia Nervosa

- Recurrent episodes of binge eating (2 binges a week for 3/12)
- Recurrent inappropriate compensatory behaviour in order to prevent weight gain
- Morbid fear of fatness (ICD-10)
- DSM-IV – two subtypes
  - Purging type
  - Non-purging type

ED – NOS or Atypical

- **Subclinical/partial cases**

  Disorders of eating or weight control behaviour which resemble AN or BN but do not reach their diagnostic criteria eg AN- regular menses or weight in normal range, eg BN-binge/compensatory behaviour not frequent enough

- **Proper atypical**

  Chewing and spitting, regular use of compensatory behaviour after eating small amounts of food in normal wt and BED - binge eating disorder

Binge Eating Disorder (BED)

- An eating disorder characterised by recurrent bulimic episodes (binges) in the absence of extreme methods of weight control
- Commonly co-occurs with obesity

Epidemiology

Yearly Incidence of AN in mental health care in Northern Europe in the 20th Century

6
5
4
3
2
1
0

1931-40 1941-50 1951-60 1960-69 1974-82 1985-89 1995-96

- 1931-40
- 1941-50
- 1951-60
- 1960-69
- 1974-82
- 1985-89
- 1995-96

Hoek & Van Hoeken (2003). Int J Eat Dis 34, 383-396.

Incidence of eating disorders (in women aged 10-39) in primary care in the UK

70
60
50
40
30
20
10
0

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

AN
BN

Turnbull et al., 1996; Currin et al., in preparation

How Common are Eating Disorders?

- About 5-10% of adolescent girls will have some form of eating disorder
- 1% will have anorexia nervosa
- 2% will have bulimia nervosa
- Women with eating disorders outnumber men by 10 to 1
- Anyone can develop an eating disorder regardless of age, sex, culture or race

Cambridgeshire and Peterborough NHS
NHS Foundation Trust

Understanding mental health, understanding people

Epidemiology

On an average GP list of 2000 people you might expect:

- 1-2 people with full anorexia nervosa
- 18 people with full bulimia nervosa
- Approx. 40 people with atypical eating disorders

Factors Contributing to the Development of an Eating Disorder

Family Functioning

Vulnerable Personality

Dieting

Genetic Predisposition

Major Life Change

Societal Pressure

Puberty Hormones

Upper Middle Class

Course of Eating Disorders

- All forms of eating disorder have a somewhat protracted course
- A.N. has a high medical risk and has the highest mortality rate of all psychiatric conditions
- Cases of A.N. can evolve into B.N
- Cases of B.N. can evolve into substance misuse
- Early intervention improves long term outcome

course continued

- 30% of cases of A.N. have a chronic course, the morbidity and mortality of this group is considerable

- Patients who have suffered with Anorexia/bulimia nervosa for more than 20 years stand a 20% chance of dying from their illness either by suicide or emaciation

Identification

- Primary Care
- Diabetic clinics
- Infertility clinics
- Gastroenterology clinics
- Psychiatric clinics
- Failure to grow (children)

Referral pathway

Primary Care Guidelines have been produced

Includes

- diagnostic criteria
- screening questions
- presenting symptoms
- physical exam checklist
- investigations to do
- care pathway
- referral form

Primary Care

- Do you make yourself **S**ick because you feel uncomfortably full?
- Do you worry you have lost **C**ontrol over how much you eat?
- Have you recently lost more than **O**ne stone in the last 3 months?
- Do you believe yourself to be **F**at when others say you are thin?
- Would you say **F**ood dominates your life?

NICE Guidelines

- Comprehensive assessment
- One grade A recommendation for treatment but expert opinion
- Psychological Treatment
- Physical monitoring
- Vast majority treat as outpatient
- Specialist inpatient unit

Assessment

- General principles
- Comprehensive assessment (NICE)
- Psychiatric
- Physical
- Social
- Psychological

General Principles

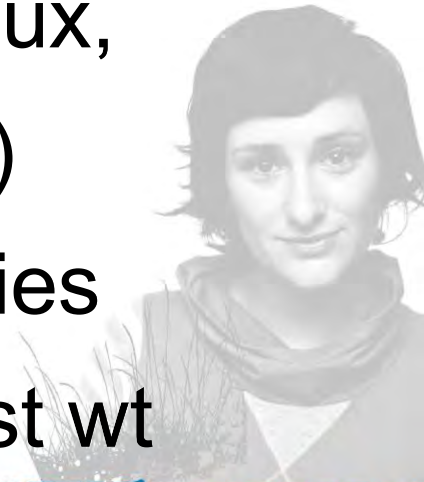
- Empathic- be aware of powerful counter transference, or reciprocal roles
- Build trust and alliance
- MET interviewing

Psychiatric and Social

- Eating Disorder psychopathology
- General psychopathology
- OCD, Anxiety, Depression, FHx same + ED
- Personal Hx, developmental, separation, abuse
- **Social** - support, education, work, social withdrawal, alcohol, drugs

Physical – Review of Systems

- Cardiovascular - SOB, chest pain, pulse
- Gynecological - periods, sex drive, urinary frequency, incontinence
- Osteoporosis, fractures, pain
- Abdominal - constipation, „IBS", reflux,
- Muscular-skeletal - strength (SUSS)
- Neurological - peripheral neuropathies
- Rate of weight loss, highest & lowest wt



Risk Assessment

- Physical risk, Kings Guidelines anorexia risk management, *www.iop.kcl.ac.uk/.../GUIDE_TO_MEDICAL_**RISK_ASSESSMENT**.pdf*
- Risk of self harm, suicide
- Risk to others
- NB - high mortality for AN

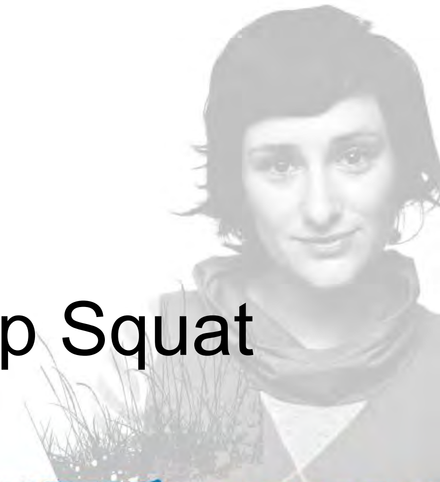
Risk assessment Anorexia Nervosa (Kings Guidelines)

- BMI: wt (Kg)/ht (m) squared
- AN <17.5
- Medium risk 13-15
- High risk <13

Risk Assessment - AN

2. Physical examination

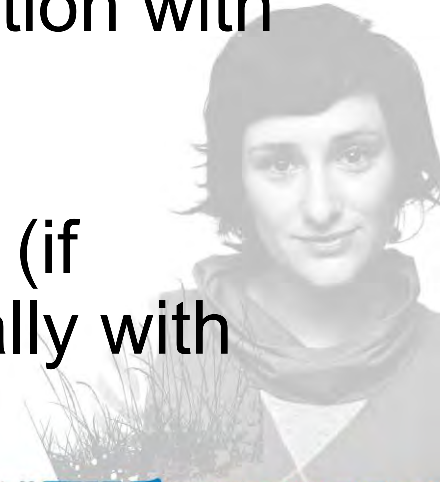
- Pulse – bradycardia
- BP sitting , standing
- core temperature – low
- Muscle power reduced -SUSS test (Sit Up Squat Stand)



Risk assessment - AN

3. Blood tests

- Na low: suspect water loading (<125 mmol/l High risk)
- K low: vomiting or laxative abuse (<3 mmol/l High risk)
- Note: low Na and K can occur in malnutrition with or without waterloading or purging
- Raised transaminases
- Hypoglycaemia: Blood glucose <3mmol/l (if present, suspect occult infection, especially with low albumin or raised CRP)



Risk Assessment - AN

4. ECG

- Bradycardia
- Raised QTc (>450ms)
- Non-specific T wave changes
- Hypokalaemic changes

Investigations

- First set of bloods include, FBC, U & E, ESR, TFT, LFT, Ca, PO4, Mg, bicarbonate, glucose, thiamine, (particularly if v low weight and vomiting), (folate , B12) (iron studies)
- Follow up blood test frequency will depend on physical state and chronicity
- Bone scan, (amenorrhoea >6-12 mths)

Psychiatric Assessment

- **Eating Disorder psychopathology**
- Day"s food and fluid intake, pattern, e.g. yesterday
- Rate of weight loss, highest & lowest wt
- Compensatory behaviours, exercise, purging, V, L,D
- Bingeing
- Body image, checking, weighing

Co-morbid conditions

- OCD
- Anxiety Disorders
- Depression (BPD)
- Personality,
  - cluster C - perfectionism, rigidity, anxious, dependent
  - Cluster B - borderline, (impulsivity) feelings of emptiness, unstable mood
- History of/current self harm, ODs
- Substance misuse

Co-morbid conditions

- Psychosomatic /hypochondrical /medical model, atypical AN

OCD

- 20-30% AN have OCD
- 11%-37% OCD have history of AN or abnormal eating behaviours
- AN develops subsequent to OCD
- OCD in first degree relatives AN (10% compared to 0% controls)
- OCPD increased
- Perfectionism and rigidity
- Asperger‟s syndrome

Life-time perfectionism

Mean for subscale

	AN N=44	BN N=28	CO N=28
Childhood perfectionism	~0.53	~0.34	~0.04
Adult perfectionism	~0.62	~0.59	~0.05

Brecelj et al. (2003) Am J Psych.

Social Assessment

- Family
- Friends
- Support, where does it lie?
- Social life
- Work, education
- Alcohol, substance misuse

Psychological Assessment

- Why now?
- What do they want?
- Functions of AN/BN
- Pros and cons of having vs not having
- Explore ambivalence and motivation and confidence to change (MET)
- Psychological formulation

The pros and cons of anorexia nervosa

DECISIONAL BALANCE

CON
CON CON
CON

PRO
PRO PRO
PRO
PRO PRO
PRO

(Serpell et al., 2002, 2003)

Formulation Letter/CPA

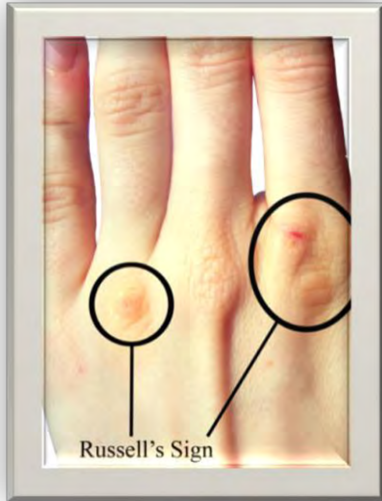
- Write to the patient trying to make sense, bringing pieces of information together
- Risk Assessment
- Advise of Diagnosis
- Management plan –e.g. Waiting List for psychological therapy, physical monitoring by primary care, or advise guided self help, other place to get psychological therapy or counselling

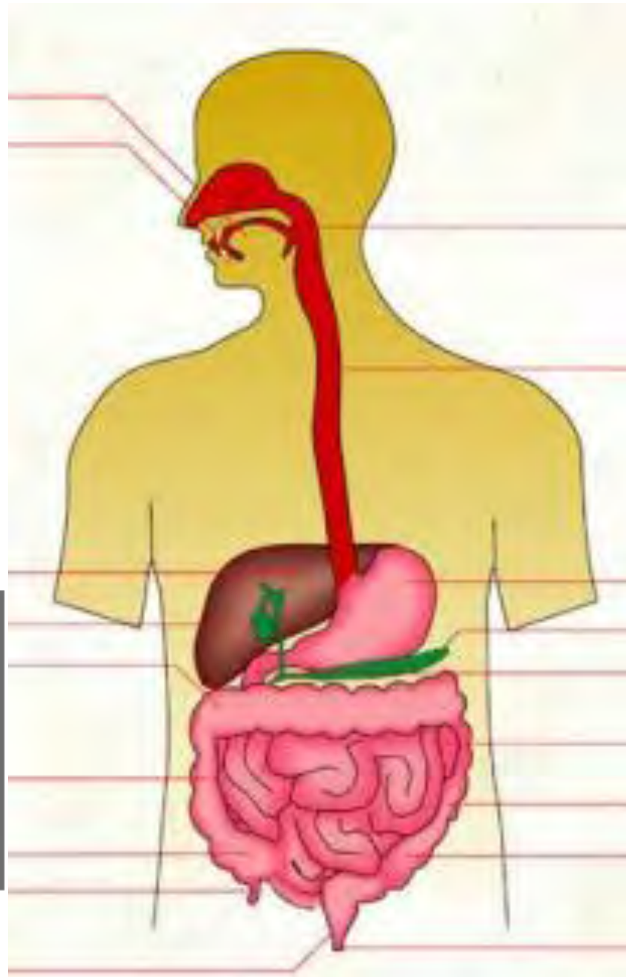
Medical Complications

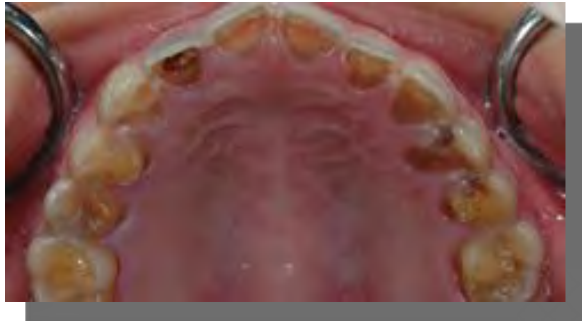
Aetiology

- Direct local damage due to eating disorder behaviour
- Fluid and electrolyte disturbance
- Starvation
- Refeeding
- Endocrine changes
- Changes in liver function

Direct local damage related to binge-eating and purging

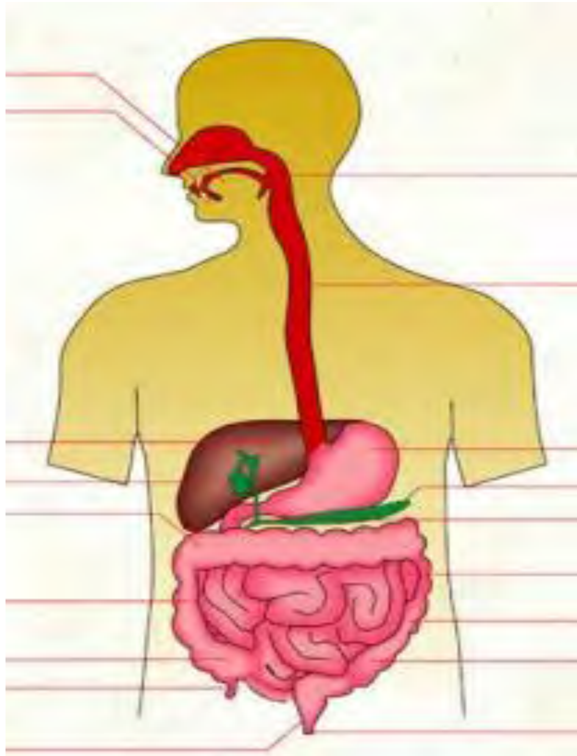






- Parotid swelling
- Oesophageal damage
- GER reflux
- Post-binge pancreatitis
- Acute gastric dilatation

Gastrointestinal system - chronic



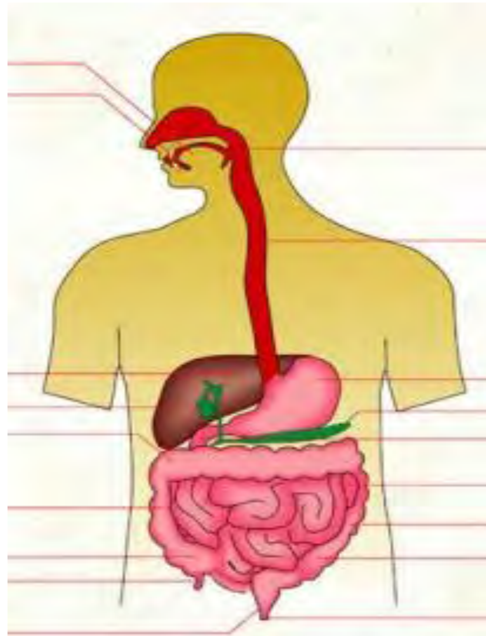
Due to starvation

- Abnormal oesophageal motility
- Delayed gastric emptying
- Increased colonic transit time

- Abnormal Liver Function (nutritional hepatitis)
- Bowel prolapse

Renal and electrolyte abnormalities

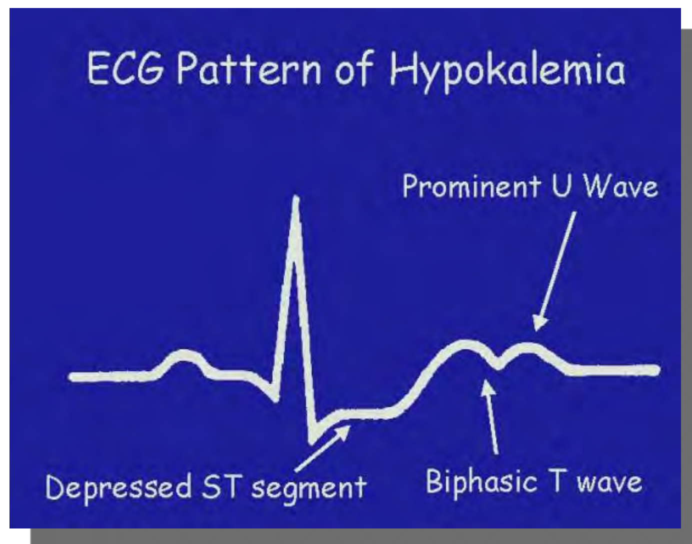
- Increased fluid intake
- Fluid restriction
- purging



- Sudden discontinuation of diuretics or laxatives
- IV fluids
- refeeding

Biochemical abnormalities

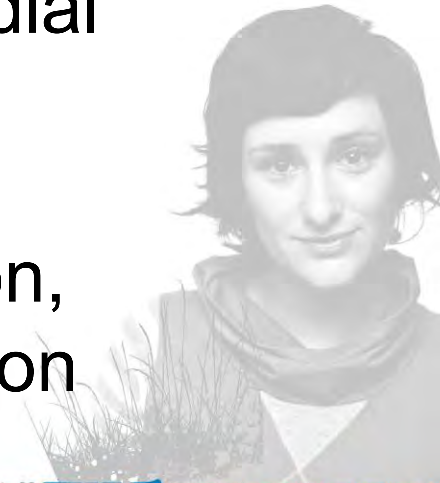
- Hypo – Potassium (K), Sodium (Na), Calcium (Ca), Magnesium (Mg), Phosphate (PO_4)
- BUT, depending on ED, can also be Hyper
- Hypoglycaemia



- Hypokalaemia most serious

Refeeding syndrome

- Refeeding of severely malnourished AN (esp parenteral) and bingeing
- Severe intracellular shifts in fluids and electrolytes, esp PO4 (also Mg, K, Thiamine)
- Clinical
  - Muscle weakness
  - Cardiac - arrhythmias, failure, pericardial effusion
  - Neurological – delirium, coma, death
  - Haematological – leukocyte dysfunction, haemolytic anaemia, platelet dysfunction



Cardiovascular System

- 1/3 of deaths in adults with eating disorders

Starvation related

- Hypotension and bradycardia
- Mitral valve prolapse

Fluid and electrolyte balance related (and severe starvation)

- Arrhythmias (prolonged QTc)

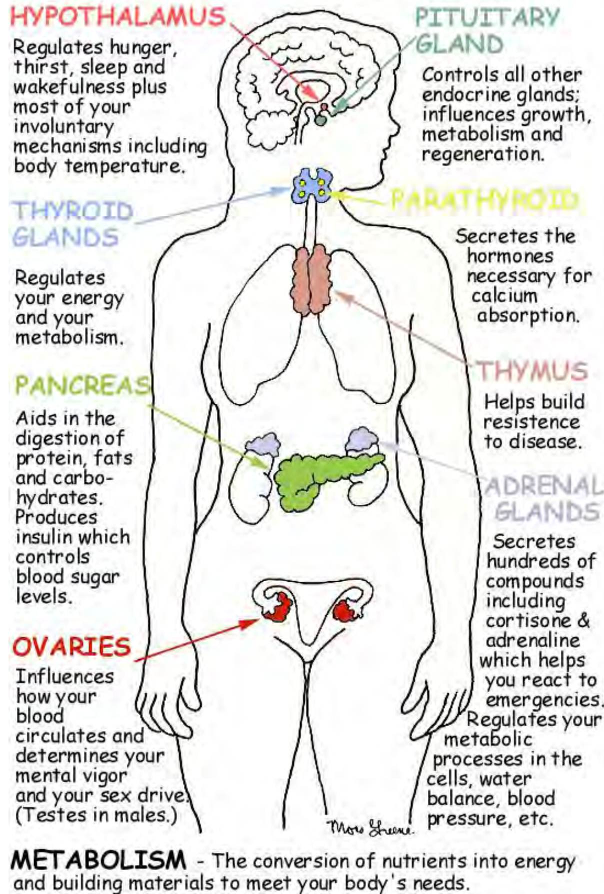
Refeeding

- Cardiac failure

Eating disorder behaviour related

- Ipecac related cardiomyopathy

Endocrine System



Reproductive
Low FSH, LH, oestrogen, testosterone

Adrenal
High cortisol

Growth hormone axis
High GH, low IGF-I

Thyroid Axis
Low T3/T4, normal or reduced TSH so called ‘sick euthyroid’

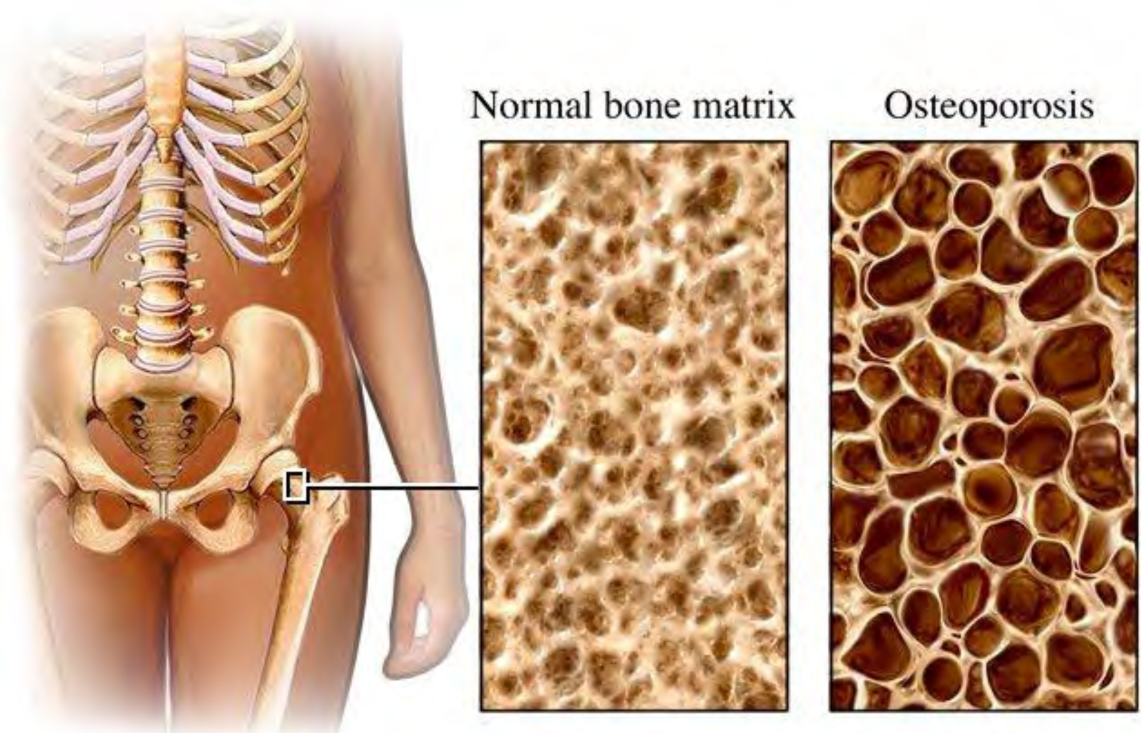
Appetite
Low leptin, high ghrelin and peptide YY

Osteoporosis
(oestrogen, cortisol, GH, IGF-I)

Early, frequent and serious complication of ED
40% of women with AN has osteoporosis (>2.5 SD)
92% of women with AN has osteopenia (>1 SD) (Vestegaard et al, 2002)
7x higher fracture rate than healthy women of same age

Treatment

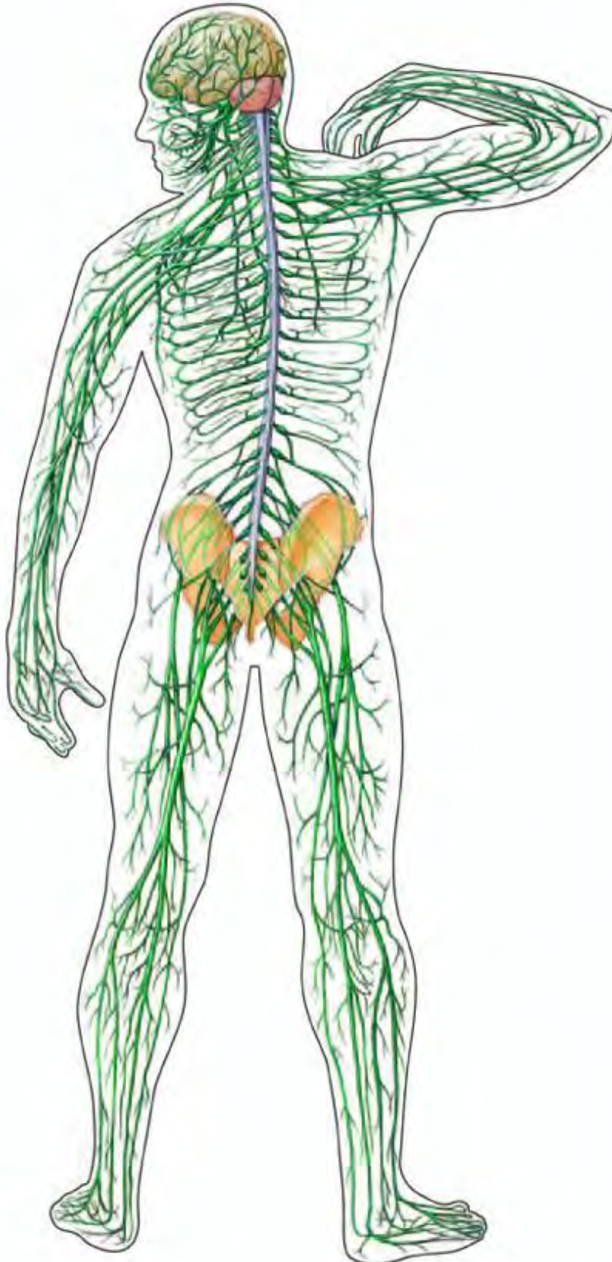
- Refeeding
- Weight bearing exercise?
- HRT?
- Bisphophanates



Haematological

- Anaemia
- Mild leucopenia
- Thrombocytopenia
- reduced ESR

Nervous System



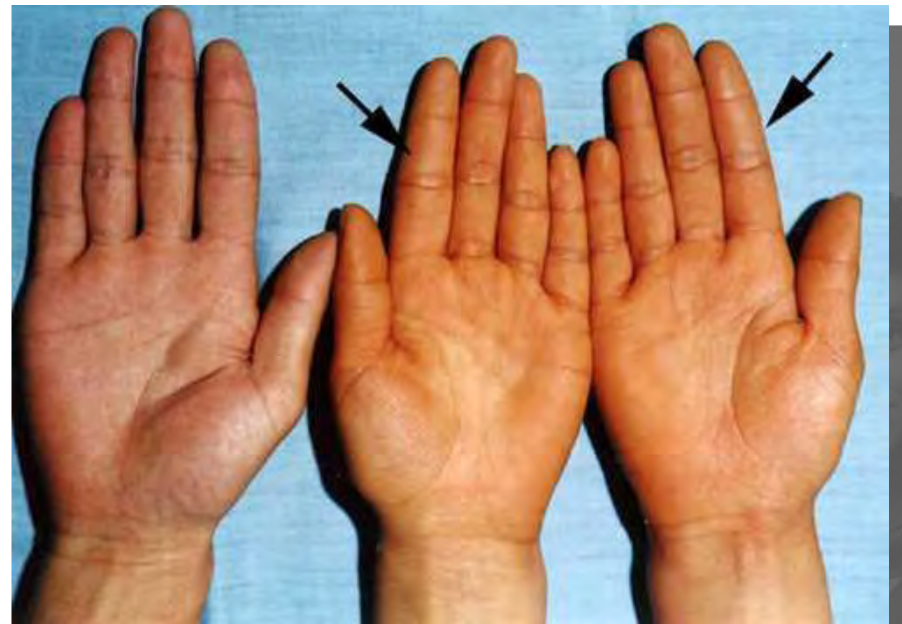
Starvation related:

- Pseudoatrophy, enlarged ventricles
- Cognitive impairment

- Peripheral neuropathy

Skin and Hair

- Self-injury
- Dry skin
- Skin breakdown, pressure sores
- Carotenemia
- Dry, brittle hair
- Hair loss



Comorbidity with Diabetes

- Type I
  - AN – no increase
  - BN – 3X increase
  - EDNOS – 2X increase
- Type II
  - BED most prevalent

Diabetes

- Insulin purging women > men
- Poor glycaemic control
- Early diabetic retinopathy
- Medical complications of ED higher
- Higher rate of other psychiatric diagnoses
- Treatment similar

Treatment Overview AN

Anorexia nervosa

- Acute risk (medical, suicidal) and longer term management
- Mainly managed as outpatients
- Medical management
- Psychological Treatment
- Medication, treatment of co-morbidities

Treatment of AN in Adults

- Specific psychotherapies (CAT, CBT, focal psychodynamic, family therapy) > TAU or dietary treatment alone (1st line or relapse prevention)
- No superiority of one type of specialist therapy over another
- Limited evidence of fluoxetine in relapse prevention
- Only 30% of adult cases are recovered at 1 year, 40-50% at 5 yrs

Treasure & Schmidt,,2003; Hay et al., 2003; NICE, 2004

Comparison of CBT and nutritional counselling in relapse prevention of AN

Cumulative Proportion Without Relapse

1.0
0.8
0.6
0.4
0.2
0.0

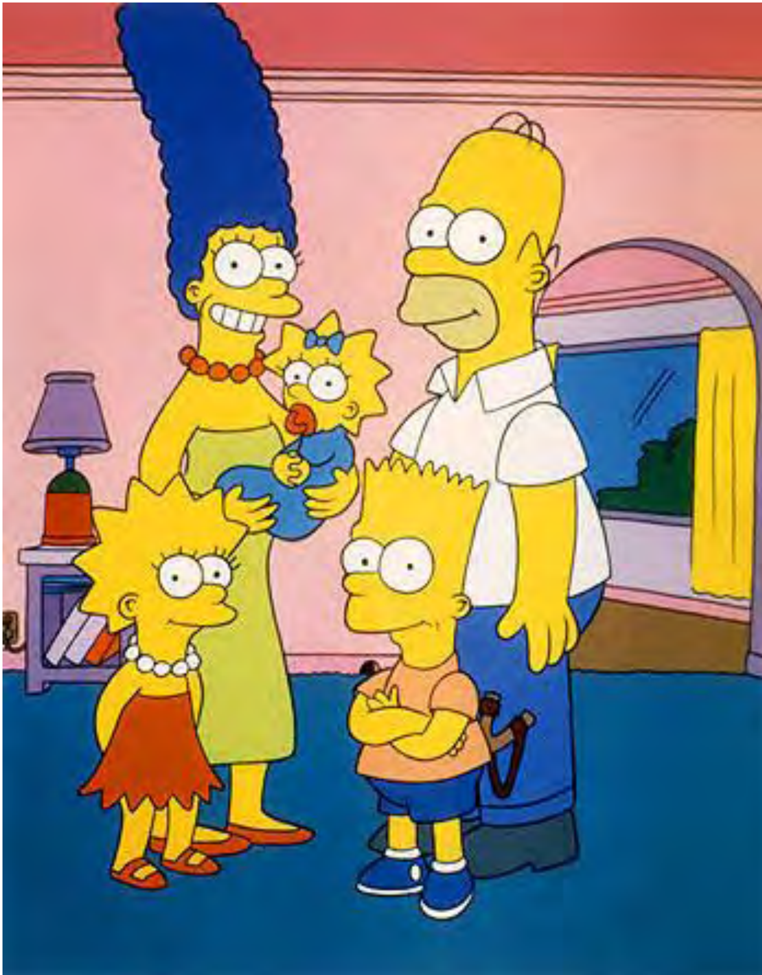
0 10 20 30 40 50

Session Number

Cognitive behavior therapy (N=18)
Nutritional counseling (N=15)

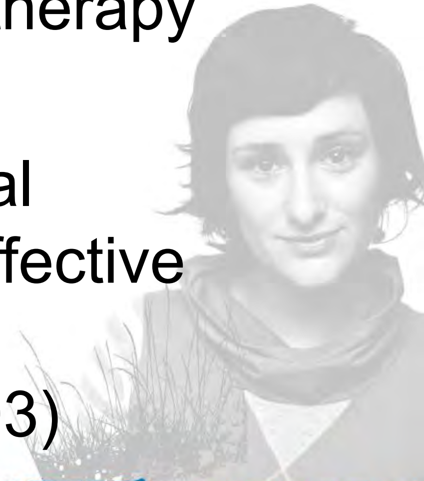
Pike et al., (2003) Am J 160, 2046-2049

AN: Psychological treatment of children and adolescents



- Family interventions (first line or relapse prevention) produce recovery rates of 60-70% at 1 year, 70-90% at 5 yrs
- Classical family therapy not necessary
- Separate parental counselling as effective

(Eisler et al., 2003)



Overview treatment BN

Bulimia Nervosa

- Almost exclusively outpatient (may require brief medical admissions)
- CBT and IPT
- CAT/DBT - high risk / complex cases (15-20%)
- Pregnancy

Treatments of BN

CBT: Leading evidence-based R_x, 30-40% symptom free at 1-year

- IPT slower effect
- (Guided) CBT self-help some evidence of efficacy (Lewis et al., 2003)

Antidepressants:

- Anti bingeing effect (temporary)
- Less effective than psychotherapy, some role in those with poor response to psychotherapy (Walsh et al., 2000)

(Hay & Bacaltchuk, 2002, NICE, 2004)

Cambridgeshire and Peterborough NHS
NHS Foundation Trust

Understanding mental health, understanding people

CD-ROM based CBT Self-Help for Bulimia Nervosa

Mental Health Act

Cambridgeshire and Peterborough NHS
NHS Foundation Trust
Understanding mental health, understanding people

- Avoid if at all possible – a paradox
- How you do it is important
- If you need to detain be clear why
- Use detention therapeutically if possible
- Food is medical treatment but no form 38
- Can use NG tubes with consent (usual)
- Can forcibly feed via NG tube or PEG – extreme and to be avoided

Case 1 – Anorexia nervosa

GP refers a 19-year-old woman to the local community mental health team. Her friends have persuaded her to attend the GP and are most distressed by her rapidly decreasing body weight, which has occurred over the past 8 months while at University. She has previously had an inpatient admission for anorexia nervosa.

At assessment, the patient is noted to be 62% of the expected weight for her height and age and weight is continuing to drop. At first the patient is unable to explain her rapid weight loss and seems unconcerned about her physical deterioration. On further assessment, she reveals that she feels she is still “too fat” and wishes to be left alone by everyone.

Her parents are now contacting both the GP and the community mental health team daily expressing their concern and demanding that something be done to help their daughter.

Case 2 – Bulimia nervosa

GP refers a 23-year-old single woman to the CMHT for assessment of a suspected eating disorder. She has been dieting strictly for the past 2 years but over the past year has started to eat excessive amounts of food in secret, which have become increasingly frequent.

She tearfully admits to making herself vomit repeatedly after daily binges. During these binge-eating episodes she eats an abnormally large amount of food (a whole loaf of bread, several bowls of cereal, 6 chocolate bars and sweets) and feels totally out of control. In between binges, she is attempting to eat only fruit and drinks only black coffee. She is unable to concentrate at work, as she has become increasingly preoccupied with her eating. She also meets the diagnostic criteria for depression.

Although she is an average weight for her height, she is extremely unhappy with her body weight and shape and weighs herself several times each day.

This woman is asking for help with reducing the binge eating but is not prepared to consider doing anything that might lead to weight gain.

Case 3 – Complex case

GP refers a 32-year-old, married woman to the CMHT. GP has become overwhelmed by her repeated consultations.

It is observed that this patient has a long history of disturbed behaviour, including two previous admissions to an acute psychiatric unit following overdoses. She has also had a detox programme for alcohol misuse and multiple episodes of deliberate self-harm (e.g. superficial cuts on the arms and legs).

At assessment, she reveals that she has eating problems, in that she can go for days without eating anything at all and then spend the day eating continuously. Her weight is within the normal range. She also complains of difficulties in her relationships with others, low mood and explains that she does not trust anyone.

Amongst other things, she is asking for help with her eating disorder.