

Weight Loss

Definition / Supporting Information

Newborns may lose 5–10% of birth weight in the first few days of life. Losses > 10% should have a clinical review, while losses > 15% are concerning. Birth weight is usually regained by 3 weeks of age. [NICE guideline NG75]

In children, weight loss > 5–10% from baseline may be concerning. There is no agreed definition of weight loss. The following should trigger further evaluation:

- Weight less than 80% of normal weight for age
- Weight decline across centiles (i.e. the 5th, 10th, 25th, 50th, 75th, 90th, and 95th centiles)
- In infants:
 - > 1 centile if birth weight was < 9th centile
 - > 2 centiles if birth weight 9th–91st centile
 - Current weight < 2nd centile, regardless of birth weight
- In children:
 - > 2 years old, recommend body mass index (BMI) centile is calculated
 - If BMI is < 0.4th centile suggests 'probable undernutrition'

In 95% of cases no underlying organic pathology is found; however, some patients have a combination of endogenous and exogenous causes, and neglect should always be considered.

Keywords / also known as: anorexia, appetite loss, bulimia, loss of appetite

Essential History

Ask about:

- Diet and assessment of calorie or volume intake
- Parental expectations
- Pregnancy
- Birth
- Family history
- Past medical, social and medication history
- Urination and bowel movements
- Detailed feeding history in infants

For children and adolescents

- Body image

- Social context, including:
 - Family function
 - Patient's emotional well-being
- Stressors
- Substance abuse
- Sports and exercise
- Pubertal history in all children
- Menstruation history in pubertal girls

'Red Flag' Symptoms and Signs

Ask about:

- Excessive fluid loss:
 - Vomiting
 - Diarrhoea
 - Polyuria

Look for:

- Weight loss
 - In newborns, weight loss of > 15% of birth weight
 - Weight decline across more than two major centiles (ie, 5th, 10th, 25th, 50th, 75th, 90th, and 95th centiles)
 - Rapidity of weight loss
- In older children weight loss as defined above
- Evidence of clinically significant dehydration or inability to maintain adequate hydration status
- Severe bradycardia
- Hypotension
- Hypothermia
- Evidence of maltreatment including neglect (see Child maltreatment: when to suspect maltreatment in under 18s [[NICE clinical guideline CG89, Section 1.3](#)])

Differential Diagnosis / Conditions

Newborns and young infants

- Difficulties in establishing feeding
- Prematurity
- Inappropriate dilution or choice of formula
- Maternal
 - Depression
 - Inexperience

- Lack of knowledge
- Infection
- Metabolic abnormality
- Craniofacial abnormalities (see Congenital Malformations)
- Central nervous system dysfunction
- Somnolence from maternal
 - Medications
 - Substance abuse
- Congenital heart disease
- Excessive losses secondary to vomiting or diarrhoea
- Cow's milk protein allergy
- Pyloric stenosis
- Vomiting because of gastrointestinal malformations (eg, duodenal atresia)
- Polyuria
 - Diabetes insipidus
 - Renal disease
- Neglect
 - Non-organic failure to thrive (see [When to suspect child maltreatment \[NICE clinical guideline CG89, Section 1.3\]](#))

Older infants, pre-schoolers, and school-age children

- Gastroesophageal reflux
- Central nervous system tumours
- Vomiting
- Diarrhoea
- Infections
- Diabetes mellitus
- Inadequate intake
- Tuberculosis
- Cancer
- Congenital heart disease
- Coeliac disease
- Malabsorption syndromes
- Inflammatory bowel disease
- Immunodeficiency disorders
- Psychosocial dysfunction
- Neglect
 - Non-organic failure to thrive (see [When to suspect child maltreatment \[NICE clinical guideline CG89, Section 1.3\]](#))
- Parental depression

- Childhood depression
- Childhood-onset eating disorders (less common)
- Food aversion
- Allergies
- Lead poisoning

Adolescents

- Dieting
- Adolescent eating disorders
 - Anorexia nervosa
 - Bulimia nervosa
- Psychiatric affective disorders, especially depression
- Cancer
- Inflammatory bowel disease
- Diabetes mellitus
- Hyperthyroidism
- Tuberculosis
- Sports-related weight loss
 - Adolescents may engage in unhealthy weight-control practices to seek advantage in their athletic activities especially wrestling, gymnastics, and dancing.
 - These may include food restriction, vomiting, excessive exercise, diet pills, stimulants, insulin, nicotine, and voluntary dehydration.

Investigations

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team):

- In infants, ensure that newborn screening has been performed
 - Urea, electrolytes and creatinine
 - Full blood cell count and differential
 - Erythrocyte sedimentation rate
 - Serum protein and albumin levels
 - Serum phosphate
 - Anti-transglutaminase antibodies (anti-tTG, coeliac screen)
 - Urine dipstix, including specific gravity
 - Urine culture

To be undertaken by specialist practitioners (eg, Emergency Department / General Paediatric Team(s)) if not already done:

- Specific tests of malabsorption
- Tuberculosis skin test

- See [Loss of Appetite](#) (anorexia), Laboratory Evaluation section
- Imaging is guided by clinical suspicion
- Toxin screens (eg, chronic lead exposure or acute lead intoxication) (see Toxbase [[National Poisons Information Service](#)])
- Diagnostic procedures may be performed as guided by clinical suspicion
 - Upper endoscopy with biopsy
 - Colonoscopy
 - Sweat chloride testing
 - Oesophageal motility testing
 - pH probes

Treatment Approach

To be undertaken by non-specialist practitioners (eg, GP Team):

- In breastfed infants with inadequate weight gain, support and education are appropriate interventions.
- Appropriate weight gain in the following few days provides evidence that the infant is well and confirms the diagnosis of initial underfeeding.
- Consider any psychological dysfunction
- Refer to Paediatrician if there is no weight gain following the above measures
- A dietetic referral should be considered for any vitamin and /or iron deficiency

To be undertaken by specialist practitioners (eg, Emergency Department / General Paediatric Team(s)):

- Treatment depends on the underlying condition
- Eating disorders (see see Eating disorders: recognition and treatment [[NICE guideline NG69](#)])

When to Refer

Refer to a paediatric specialist if:

- There is evidence or suspicion of:
 - Cancer (see Suspected cancer: recognition and referral [[NICE clinical guideline NG12](#)])
 - Endocrinopathy
 - Thyroid
 - Adrenal
 - Pituitary
 - Gastrointestinal disorder, such as:
 - Gastroesophageal reflux
 - Malabsorption, including cystic fibrosis

- Inflammatory bowel disease
- Coeliac disease
- Pancreatitis
- Heart disease
- Renal disease
- Pulmonary disease
- Rheumatological condition
- Central nervous system abnormality
- Metabolic disorder
- Surgical abdominal problem, for example:
 - Pyloric stenosis
 - Hirschsprung's disease
 - Volvulus
- Immunodeficiency
- Unusual infection
- Psychiatric diagnosis in child or parent/carer
- Anorexia nervosa or bulimia nervosa in the child or adolescent
- Suspected neglect, nonorganic failure to thrive (see Child Maltreatment: When to suspect child maltreatment in under 18s [[NICE clinical guideline 89, section 1.3](#)])

Patient / Carer Information

****Please note: whilst these resources have been developed to a high standard they may not be specific to children.***

- [Eating disorders in young people - what parents need to know](#) (Web page) (information for parents, carers and anyone who works with young people), Royal College of Psychiatrists
- [Worries about weight and eating problems](#) (Web page) (Information for young people), Royal College of Psychiatrists
- [Unintentional weight loss](#)(Web page) (applies to adolescents), the NHS website
- [Eating problems](#) (Web page), Young Minds
- [Your pregnancy and baby guide](#) (Web page), the NHS website
- [Conditions](#)(Web page), Child Growth Foundation

Resources

National Clinical Guidance

[Growth Charts](#) (Web page), Royal College of Paediatrics and Child Health

[Faltering growth: recognition and management of faltering growth in children](#) (Web page), NICE guideline NG75, National Institute for Health and Care Excellence

[Child maltreatment: when to suspect maltreatment in under 18s](#) (Web page), NICE clinical guideline CG89, National Institute for Health and Care Excellence

[Eating disorders: recognition and treatment](#) (Web page) NICE clinical guideline NG69, National Institute for Health and Care Excellence

[Suspected cancer: recognition and referral](#) (Web page) NICE clinical guideline NG12, National Institute for Health and Care Excellence

[Coeliac disease: recognition, assessment and management](#) (Web page), NICE clinical guideline NG20, National Institute for Health and Care Excellence

Medical Decision Support

[BMI Percentile Calculator for Child and Teen](#) (Interactive tool), Centers for Disease Control and Prevention.

[Neglect](#) (Web page), RCPCH Child Protection Companion

Suggested Resources

****Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.***

[CR168. Junior MARSIPAN: Management of Really Sick Patients Under 18 with Anorexia Nervosa.](#) College Report from the Royal College of Psychiatrists

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Paediatric Specialty Group: [British Association of General Paediatrics](#)

Update information

Created: 2015

Date last updated: 2018

Next review due: 2021