

# Chronic fatigue syndrome (CFS or CFS/ME)

**Chronic fatigue syndrome (CFS or CFS/ME) G93.3.** CFS is commonly referred to as (benign) myalgic encephalomyelitis (encephalopathy) or ME.

A range or spectrum of disorders exists, characterized by abnormal levels of and unusual types of fatigue, along with other features and symptoms. Whether these represent distinct entities or variations on a common theme is uncertain. Aetiology and pathogenesis are not always known. Terminology is therefore problematic.

## Terminology and concepts

International terminological differences exist. The terminology used may reflect incidental factors such as specialty of clinician, historical or social factors - all of which can influence different recording practices both nationally and internationally. The terms used derive from the following:

- The apparent trigger (eg Post-viral fatigue syndrome).
- The research/surveillance definition (Chronic fatigue syndrome).
- A clinically characterized entity falling short of CFS criteria ([idiopathic] chronic fatigue). All terms focus on fatigue, even though the patient experience may go well beyond this single symptom.
- An historical term implying a particular locus and process of disease (ME, [benign] myalgic encephalomyelitis/encephalopathy). This term has also been incorporated emblematically into lay parlance; it is used by many as synonymous with CFS but is also used by some to designate a discrete entity.
- A different historical term derived from an earlier model of disorders of nervous system dysfunction (neurasthenia), which is now rarely used clinically in the UK but remains popular in many countries.

The terms 'Post-viral fatigue syndrome' and '(benign) myalgic encephalomyelitis' (classified under G93.3 'neurological disorders') have been used where there is excessive fatigue following a specific trigger such as a viral disease and/or where the symptoms do not fulfil the criteria for F48.0. 'Fatigue syndrome', both chronic and not, with or without an established physical precursor, has been classified under 'neurasthenia', F48.0. In practice, there is extensive overlap in symptoms (up to 96%).

In the absence of a simple biological marker or test, the diagnosis of CFS and other fatigue states requires the fulfilment of clinical criteria.

The research/surveillance definition for CFS has enabled better characterization of this disorder; however, it implies a distinction from other fatigue states that may be artefactual, since research has shown considerable overlap in the symptoms of many chronic fatigue states. The approach to clinical management is similar for these fatigue states, although differences in severity and type influence the level and model of management used.

Fatigue states associated with other medical conditions, such as inflammatory, autoimmune or malignant disorders, may have clinical similarities, and may respond similarly to treatment, usually aimed at perpetuating factors such as poor sleep, depression and lack of exercise. Likewise, fatigue and other symptoms can characterize certain mental health disorders.

## Common presenting complaints and main symptoms

- intrusive fatigue and lack of energy – physical and mental
- post-exertional malaise
- musculoskeletal aches and pains.
- sleep disturbances, especially hypersomnia and non-refreshing sleep quality
- headaches of a new type or pattern
- other somatic symptoms

CFS may additionally be characterized by the following: (ref 43)

- increased symptoms after physical or mental activity, often delayed
- prolonged recovery times, despite rest
- subjectively tender cervical lymph nodes
- a wide variety of other somatic symptoms
- onset after infection or other physical or psychological stressors
- insidious onset in a minority of cases

All definitions state that CFS in adults can be diagnosed when substantial physical and mental fatigue of new onset lasts for more than six months, is substantial and impairs daily activities, and there are no relevant findings on physical examinations or laboratory investigations. Early diagnosis might help with treatment and improve prognosis (see Box 1) (ref 44)

### **Box 1: Criteria for CFS** (as defined by Fukuda et al., 1994) (ref 44)

These have become the most internationally accepted criteria for the diagnosis of CFS for research and surveillance purposes and have proved remarkably robust in various settings. However, clinicians must recognize that there are no agreed or validated clinical criteria for use in clinical practice. The constraints of the existing definitions designed for research or surveillance need modification in this setting, especially in respect of allowing for co-morbid conditions, for example.

#### **Fukuda criteria:**

1. Clinically evaluated, unexplained, persistent or relapsing chronic fatigue that:

- is of new or definite onset (ie has not been life-long)
- is not the result of ongoing exertion
- is not substantially alleviated by rest
- results in substantial reduction in occupational, educational, social or personal activities.

2. The concurrent occurrence of four or more of the following symptoms, all of which must have persisted or recurred during six or more consecutive months of illness and must not have pre-dated the fatigue:

- self-reported impairment in short-term memory or concentration, severe enough to cause substantial reduction in previous levels of activities
- sore throat
- tender cervical or axillary lymph nodes
- muscle pain
- multi-joint pain without joint swelling or redness

- headaches of a new type, pattern or severity
- unrefreshing sleep
- post-exertional malaise lasting more than 24 hours.

3. The following conditions exclude a patient from the diagnosis of unexplained chronic fatigue:

- Any active medical condition that may explain the presence of chronic fatigue, such as untreated hypothyroidism, sleep apnoea, narcolepsy and the side-effects of medication.
- Any previously diagnosed medical condition whose continued activity might explain the chronic fatiguing illness, such as previously treated malignancies and unresolved cases of Hepatitis B or C infection.
- Any past or current diagnosis of a major depressive disorder, with psychotic or melancholic features, bipolar affective disorders, schizophrenia of any subtype, delusional disorders of any subtype, dementias of any subtype, anorexia nervosa, or bulimia nervosa.
- Alcohol or other substance abuse within two years before the onset of the chronic fatigue and at any time afterward.
- Severe obesity, as defined by a body mass index of >45.

## References

**43** An Independent Working Group. Working Party on CFS/ME to the Chief Medical Officer for England and Wales. London: Department of Health, 2002.

**44** Fukuda K, Strauss SE, Hickie I, Sharp M et al. and the International Chronic Fatigue Study Group. The Chronic Fatigue Syndrome: a comprehensive approach to its definition and study. *Ann Intern Med* 1994, 121: 953-959.

## Severity

The severity of the illness among some, its prevalence among children, and its impact on people of all ethnic backgrounds and class are often misunderstood and were highlighted in the Chief Medical Officer Working Group on CFS/ME (ref 43). This working group set out a helpful categorization of severity in CFS/ME, although care must be taken not to diminish inadvertently the experience of any patient by descriptors of severity.

- **Mild:** Patients are mobile and can care for themselves and can do light domestic tasks with difficulty. Most will still be working; however, in order to remain in work, they will have stopped all leisure and social pursuits, often taking days off. Most will use the weekend to rest in order to cope with the week.
- **Moderate:** Patients have reduced mobility and are restricted in all activities of daily living, often having peaks and troughs of ability, dependent on the degree of symptoms. They have usually stopped work and require rest periods, often sleeping in the afternoon for one or two hours. Sleep quality at night is generally poor and disturbed.
- **Severe:** Patients are able to carry out minimal daily tasks only - for example, face washing and teeth cleaning; they have severe cognitive difficulties and are wheelchair-dependent for mobility. They are often unable to leave the house except on rare occasions, leading to a severe and prolonged after-effect from the effort.
- **Very severe:** Patients are unable to mobilize or carry out any daily tasks for themselves and are in bed most of the time. They are often unable to tolerate any noise, and are generally extremely sensitive to light.

## References

43 An Independent Working Group. Working Party on CFS/ME to the Chief Medical Officer for England and Wales. London: Department of Health, 2002.

## Differential diagnosis and co-existing conditions

Patients with many medical conditions may exhibit fatigue as a symptom, but do not meet the case definition of CFS or lack other characteristic features.

Other diagnoses to consider include:

- Depression - F32# (if low or sad mood is prominent)
- Chronic mixed anxiety and depression - F41.2
- Panic disorder - F41.1 (if anxiety attacks are prominent)
- Somatization disorders

Co-morbidity of CFS and mood disorder is common (ref 45). Patients may have both; and both will need management. In clinical practice the two are not mutually exclusive, although the research definitions necessarily try to avoid co-morbidity.

## Assessment

The clinical history is crucial. A well-taken history might also help the patient in validating their problem, and encourage a good clinician-patient relationship. (ref 46,47). Physical examination is obligatory, usually normal, and largely serves to exclude other conditions. Assessment must also include examination of the patient's mental state and a psychosocial assessment. Investigations should include a full blood count, C-reactive (CRP) (or ESR), thyroid function tests, urea and electrolytes, blood sugar and liver function tests. If clinically indicated, screening for gluten-sensitive enteropathy or autoimmune disease might be helpful.

Alternative diagnoses should be considered in particular circumstances, for example where there us:

- significant weight loss
- a history of foreign travel
- any documented fever
- extremes of life (very young or very old)
- any physical sign
- myalgic symptoms only after exertion and not associated with any symptoms of mental fatigability (suggests possible myopathy).

## References

45 Abbey S, Garfinkel P. Chronic fatigue syndrome and depression: cause, effect or covariate. Rev Infect Dis 1991, 13(suppl 1): S73-S83.

46 Prins J, Bleijenberg G, Rouweler E et al. Doctor-patient relationship in primary care of chronic fatigue syndrome: Perspectives of the doctor and the patient. *J Chronic Fatigue Syndrome* 2001, 7: 3-15.

47 Butler C, Rollnick S. Missing the meaning and provoking resistance: a case of myalgic encephalomyelitis. *Family Pract* 1996, 13: 106-109.

## Essential information for patient and family

- Fatigue as a symptom is extremely common and could relate to a diversity of underlying physical and/or psychological pathologies.
- Chronic fatigue often improves spontaneously.
- Management of chronic fatigue is possible with good results.
- No single management approach to CFS has been found to be universally successful, but effective treatment does exist. The patient's belief about their condition may guide the choice of treatment.
- Symptoms are genuinely disabling and are not 'all in the mind'. Symptoms following exertion are not synonymous with physical damage and long-term disability.

## General management and advice to patient and family

- Management of the fatigue state should focus on maximizing useful and sustainable functional activity, while avoiding levels and types of activity that cause setbacks. It should also focus on recognizing individual perpetuating factors.
- Approaches that have been shown to be successful include (ref 48) cautiously implemented graded exercise programmes, (ref 49,50) cognitive behavioural therapy, (ref 51) 'Pacing' and/or 'living within limits' is considered by some to be useful.
- Gather information from the patient's previous experience to identify level of functioning, types of triggers for setbacks and factors leading to improvements. A diary might be useful.
- The patient may be able to build endurance by gradually increasing activity. Start with a manageable level and increase a little each week, if tolerable and sustainable without increased symptoms or disability.
- Emphasize pleasant or enjoyable activities to balance necessary tasks. Consider mixing the types of activity.
- Assess sleep patterns and normalize as much as possible. Encourage a regular sleep routine and, where appropriate, avoid daytime sleep. Consider medication (see [Medication](#)).
- Avoid excessive rest and/or sudden changes in activity.
- Recognize and treat psychological or physical co-morbidities.
- Explore what the patient thinks their symptoms mean. Offer appropriate explanations and reassurance.
- Involving families could be important, and is essential when the patient is a child (see [Unexplained medical symptoms \(including chronic fatigue\)](#)).

## References

**48** Whiting P, Bagnall A, Sowden A et al. Interventions for the treatment and management of chronic fatigue syndrome: a systematic review. JAMA 2001, 286: 1360-1368. (All) Forty-four studies were analysed. Interventions that have shown promising results include cognitive behavioural therapy and graded exercise therapy.

**49** Fulcher K, White P. Randomised controlled trial of graded exercises in patients with chronic fatigue syndrome. Br Med J 1997, 314: 1647-1652. (All) Fatigue, functional capacity and fitness were significantly better after exercise than after flexibility treatment in patients with chronic fatigue syndrome.

**50** Powell P, Bentall R, Nye F, Edwards R. Randomised controlled trial of patient education to encourage graded exercise in chronic fatigue syndrome. Br Med J 2001, 322: 387-390. (All) Treatment of patients with Chronic fatigue syndrome incorporating evidence-based physiological explanations for symptoms was effective in encouraging self-managed graded exercise. This resulted in substantial improvement compared with standardized medical care.

**51** Price JR, Couper J. Cognitive behaviour therapy for chronic fatigue syndrome in adults (Cochrane Review). In: The Cochrane Library, Issue 4, 1998. Oxford: Update Software. (All) Three studies were analysed. Cognitive behaviour therapy appears to be an effective and acceptable treatment for adult outpatients with chronic fatigue syndrome.

## Medication

- Pain and poor sleep might respond to low-dose tricyclic 'antidepressants'. (Their rationale should be explained.)
- Anxiety and depression might respond to the less sedating antidepressants in full doses.
- Antidepressants have not been shown to be effective, but are widely used in the management of CFS in the absence of mood disorder.
- Consider analgesics for headache or muscle pain.
- Severe or neuropathic pain might require management by a specialist pain service or neurologist.
- Be aware that some patients are sensitive to a wide variety of drugs, and doses may need to be reduced accordingly.

## Referral

- Consider referral to an appropriate specialist physician if there is uncertainty about diagnosis.
- Referral to secondary services for assessment and management of CFS depends on local provision. Services might be provided by liaison psychiatrists, infectious diseases consultants, pain clinics or rheumatologists.
- Referral to Community Mental Health Teams may be indicated in special circumstances:
  - where there is a risk of suicide
  - in cases of bipolar disorder
  - in patients with eating disorders.
- Complex and bed- or house-bound patients might need domiciliary medical and social care; a small percentage may require admission for specialized rehabilitation programmes.(ref 52,53)

- Misunderstanding about the purpose and nature of referrals is common. Explanation and shared decision-making, which may include carers, are important.

## References

**52** Essame C, Phelan S, Aggett P, White P. Pilot study of a multidisciplinary inpatient rehabilitation of severely incapacitated patients with chronic fatigue syndrome. *J Chronic Fatigue Syndrome* 1998, 4: 51-60. (CIV) This is a descriptive outcome study of multidisciplinary inpatient rehabilitation. Intervention might be effective, but the studies carried out have not been well controlled.

**53** Cox, Findley L. Severe and very severe patients with chronic fatigue syndrome: perceived outcome following an inpatient programme. *J Chronic Fatigue Syndrome* 2000, 7: 33-47. (CIV) This is a descriptive outcome study of an inpatient unit. There is a tentative trend towards positive outcomes.

## Resources for patients and families

**Action for ME (AfME)** 01749 670799

Email: [admin@afme.org.uk](mailto:admin@afme.org.uk); website: <http://www.afme.org.uk>

This is a national charity campaigning for patients and a useful source of information.

M.E. A Guide to Symptoms, Causes and Treatments. Available from: Action for ME, PO Box 1302, Wells, Somerset BA5 1YE, UK. Tel: 01749 670799, Email: [admin@afme.org.uk](mailto:admin@afme.org.uk). Price: £2..

**Coping with Chronic Fatigue** by Trudie Chalder, Sheldon Press, 1995

A book with self-help advice.

**Facing and Fighting Fatigue: A Practical Approach** by B Natelson, Yale University Press, 1998.

**Chronic Fatigue Syndrome: The Facts** by M Sharpe and F Campling, Oxford University Press, 2000

Self-help advice for more severe symptoms.

The King's College London website: Chronic Fatigue and Chronic Fatigue Syndrome: A Practical Self Help Guide, <http://www.kcl.ac.uk/cfs>. This site includes a full patient-management package for more severe symptoms of chronic fatigue syndrome. It provides information on the disorder and suggestions to aid self-management, as well as special material for families and children.