Chronic fatigue syndrome

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Definition

Chronic fatigue syndrome (CFS) is characterized by disabling fatigue that significantly interferes with a person's ability to carry out their normal daily activities. The core symptoms of CFS are:

- physical and mental fatigue exacerbated by physical and mental exertion
- cognitive impairment
- disturbed sleep patterns
- musculoskeletal pain
- headaches.

Levels of fatigue may fluctuate excessively from week to week or even day to day. Symptoms of CFS are also observed in a number of rare conditions (e.g. Lyme disease, multiple sclerosis, coeliac disease). Therefore, diagnosis is a matter of exclusion. A number of operational criteria to define CFS have been published. The US Center for Disease Control and Prevention (CDC) issued their current criteria in 1994, superseding the CDC criteria issued in 1988.[1] UK case definitions have also been published.[2] The principal distinction between the two is that the UK criteria insist that mental fatigue must be present, whereas the US criteria emphasize the importance of severe physical symptoms, reflecting the belief that CFS has a fundamental immunological pathology. The Fukuda *et al.* criteria, established by an international consensus, are the most recently published and widely implemented (Figure 1).

Diagnostic criteria for chronic fatigue syndrome

Inclusion criteria:

Clinically evaluated, medically unexplained fatigue of at least 6 months duration that is:

- of new onset
- not a result of ongoing exertion
- not substantially alleviated by rest
- associated with a substantial reduction in previous levels of activity

The occurrence of four or more of the following symptoms:

- subjective memory impairment
- tender lymph nodes
- muscle pain
- joint pain
- headache
- unrefreshing sleep
- post-exertional malaise lasting more than 24 hours

Exclusion criteria:

- Active, unresolved, or suspected medical disease
- Psychotic, melancholic, or bipolar depression (but not uncomplicated major depression)
- Psychotic disorders
- Dementia
- Anorexia or bulimia nervosa
- Alcohol or other substance misuse
- Severe obesity

(Adapted from: Fukuda K *et al.*, 1994.)[1]

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Aetiology

Patients with CFS are usually managed in a general medical setting, and hence, CFS is commonly considered to be a medical diagnosis. This medical label implies that it is a condition with an established pathology. However, this is not the case with CFS. Considerable research has investigated its aetiology, but the condition remains poorly understood. Much attention has been given to virological explanations but the role of infection is unclear. CFS can occur after viral or bacterial infections, with the risk increasing after certain infections, particularly the Epstein–Barr virus (EBV). However, there is no convincing evidence for viral persistence in CFS, suggesting that the infective agent acts as a trigger rather than an enduring focus of infection. CFS is generally considered as a syndrome of somatic symptoms believed to reflect an abnormality in bodily functioning and is not associated with specific structural disease pathology. The terms 'post-viral fatigue syndrome' and 'myalgic encephalomyelitis' (ME) are often used interchangeably with CFS. The current international consensus favours the term CFS. Some patients, however, still prefer the term ME, probably because it implies the condition is a neurological dysfunction and has a biological basis.

Risk factors

Previous psychiatric illness, encephalitic illnesses and lack of physical exercise may all be risk factors for the development of the illness. Patients seen in specialist clinics often conform to stereotypical characteristics (e.g. high-achieving individuals, perfectionists and from higher social classes). However, selection bias and illness attribution may better explain this trend rather than the nature of CFS itself.

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Onset, prognosis and prevalence

CFS typically starts after an acute illness or virus, such as flu or EBV, but may also start gradually. Physical complaints such as headaches, abdominal or limb pains may precede the onset of acute fatigue, but the latter must be the most significant and disabling symptom to warrant a diagnosis of CFS. The prognosis of adults with CFS is often poor, with fewer than 10% of adults with the condition returning to their premorbid levels of functioning. The prevalence of CFS in primary care is between 1 and 2%[3] and approximately half of these are unemployed.[4] Incidence is comparable across individuals from different economic and ethnic backgrounds.

Psychiatric illness and chronic fatigue syndrome

Many patients diagnosed with CFS also meet the criteria for common psychiatric disorders, particularly depression (Figure 2). It is difficult to determine the precise prevalence of comorbid disorders as it depends on the patient population studied, which diagnostic criteria are applied, and how they are used. It also depends on whether psychological disorders are in fact diagnosed. Many patients are reluctant to admit to and discuss emotional problems. Therefore, it is important to screen for psychological illnesses routinely at assessment to ensure psychological comorbidity is not missed. Diagnosis depends on whether the symptoms are interpreted as medical or psychological in origin. The absence of an agreed pathology of CFS means that one can really consider psychiatric diagnoses as comorbid only if one assumes the condition has an underlying medical origin. Until a consensus is reached regarding aetiology, it is perhaps more appropriate to consider CFS and psychiatric diagnoses as competing alternative diagnoses, the preference depending on the clinician and patient. The medical hypothesis is often more popular with patients who may be sensitive about the psychological and social implications of being 'labelled' as having a psychiatric disorder.

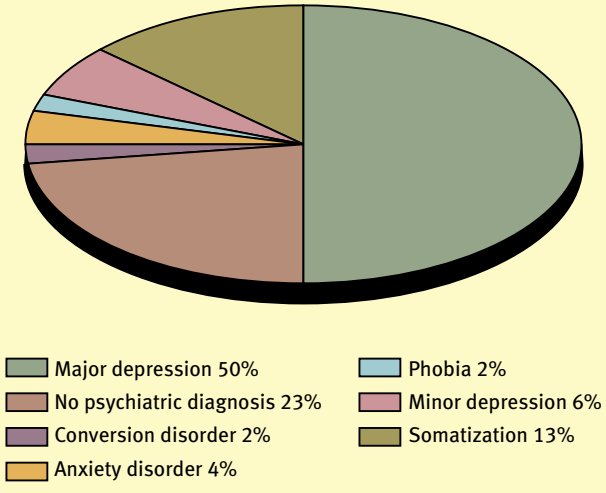
Models of chronic fatigue syndrome

Cognitive–behavioural model

A popular approach to understanding CFS is the cognitive–behavioural model which attempts to explain how life stresses or illness can precipitate CFS in predisposed people, and how cognitive, physiological, behavioural and social factors then interact to perpetuate the illness (Figure 3).

People who base their self-esteem on their abilities to live up to high standards and are highly achievement-orientated, are thought to be vulnerable. When these people encounter precipitating factors, such as a combination of extreme stress or an acute biological illness or injury, they often attempt to carry on with their lives and cope as before. They then attribute the resulting ongoing symptoms of fatigue to physical factors and rest in an attempt to recover. However, reduced activity levels conflicts with their achievement orientation, resulting in sporadic bursts of activity in an attempt to meet their own high expectations. This 'boom and bust' pattern worsens the symptoms, further reinforcing their belief that they have a serious illness, and creates a vicious circle (Figure 4).

Psychiatric diagnoses in patients with chronic fatigue syndrome



(Adapted from: Wessely S, Powell R, 1989.)[5]

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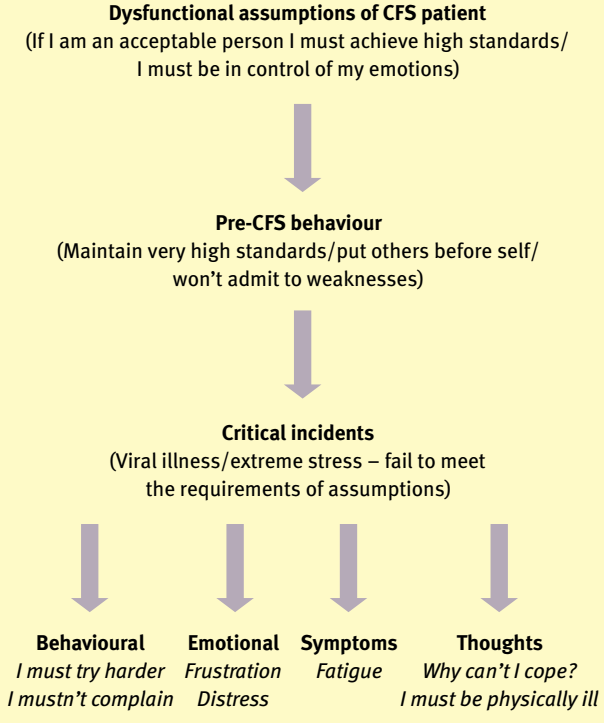
Theoretical cognitive model of the aetiology of chronic fatigue syndrome



(Adapted from: Suraway C *et al.*, 1995.)[6]

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