

Australian	UK	US	Canada	Differences	Common features
<ul style="list-style-type: none"> • Peak onset between 20-40 years • 2-3:1 female to male ratio • All socioeconomic groups are affected • Specific occupations may be at increased risk e.g. nurses • Incidence of new cases per year of CFS in primary care is about 0.4%, whereas the incidence of prolonged fatigue or chronic fatigue is 3-5%. <p>Community prevalence</p> <ul style="list-style-type: none"> • Prolonged fatigue: 5-20% • Chronic fatigue: 1-10% • CFS: 0.2-0.7%. <p>Primary care prevalence</p> <ul style="list-style-type: none"> • Prolonged fatigue: 10-25% • Chronic fatigue: 5-15% • CFS: 0.5-2.5%. 	<p>Epidemiological data is limited.</p> <ul style="list-style-type: none"> • Population prevalence is at least 0.2% - 0.4% • Commonest age of onset is early twenties to mid-forties • In children, the commonest age of onset is 13-15, but cases can occur as young as five years old • About twice as common in women as in men • Affects all social classes and ethnic groups • Due to the limited data, extrapolations from one study into different populations may be unreliable 	<p>The epidemiology of CFS seems to be unclear.</p> <ul style="list-style-type: none"> • It affects mostly women • The probability of exhibiting CFS may be genetically transmitted from parent(s) to child • While 'outbreaks' of CFS have been documented, it infrequently seems to be passed among family members 	<ul style="list-style-type: none"> • Primarily an endemic disorder, but occurs in both epidemic, and sporadic forms • Affects all racial/ethnic groups • Seen in all socioeconomic strata • Wide range of prevalence, from 0.75-2.6% • More prevalent in females • It may be difficult to extrapolate data to different populations 	<p>Specific occupations may be at risk.</p> <p>Peak onset 2-40 years.</p> <p>Genetic susceptibility</p> <p>Prevalence varies from 0.2% to 2.6% depending upon the population studied.</p>	<p>Epidemiology is unclear / limited data</p> <p>More prevalent in females.</p> <p>Affects all socioeconomic groups.</p> <p>Common age of onset In children is 13-15, but cases can occur as young as five years old</p>

CFS/ME
AETIOLOGY

Australian	UK	US	Canada	Differences	Common features
<p>There is growing evidence that the disorder is heterogeneous, and it will probably prove to have no single or simple aetiology.</p> <p>The leading hypotheses put forward over the past decade include:</p> <ul style="list-style-type: none"> • a unique pattern of infection with a recognised or novel pathogen • altered CNS function resulting from an abnormal immune response against a common antigen • a neuroendocrine disturbance • a neuropsychiatric disorder with clinical and neurobiological aspects suggesting a link to depressive disorders • a psychologically determined response to infection or other stimuli occurring in "vulnerable" individuals. <p>Other hypotheses exist but have not been scientifically evaluated.</p> <p>Infection evidence Common, non-specific infections (e.g. URTI) are not likely to trigger CFS).</p> <p>EBV may trigger CFS.</p> <p>Retroviruses: strong evidence against these being involved in CFS</p> <ul style="list-style-type: none"> • HHV-6, Ross river virus, Borna disease virus. • Q-fever, Lyme disease, non-pathogenic mycoplasmal commensal species. <p>Many studies that have suggested a link between various infections and CFS; however, elevated antibody titres are also found in healthy individuals many years after the original infection and there is no evidence increased prevalence of chronic viral replication in people with CFS.</p> <p>Immunological evidence Despite numerous studies there</p>	<p>The aetiology of CFS/ME is unclear, although several predisposing factors, disease triggers, and maintaining factors have been identified.</p> <p>Predisposing factors</p> <ul style="list-style-type: none"> • Female • Family history • Previous mood disorder • Fibromyalgia or irritable bowel syndrome <p>Triggers</p> <p><i>Infections</i></p> <ul style="list-style-type: none"> • Good evidence that certain infections are more common triggers - EBV, viral meningitis, viral hepatitis. • Can follow infections with herpes viruses, enteroviruses, some other viruses, and non-viral infections such as Q fever. • Reports of CFS after salmonellosis, toxoplasmosis and brucellosis. • Common URTIs don't seem to be triggers. • Abnormal persistence of infectious agents does not seem to occur in CFS, although certain chronic infections can cause similar symptoms. <p><i>Immunisations</i></p> <ul style="list-style-type: none"> • A few case reports only • Avoid immunisations during infections. <p><i>Life events</i></p> <ul style="list-style-type: none"> • Evidence for this is weak. <p><i>Physical injuries</i></p> <ul style="list-style-type: none"> • More likely to trigger FMS than CFS, • CFS has been reported after surgery /trauma. <p><i>Environmental factors</i></p> <ul style="list-style-type: none"> • Probably not a common trigger. • Isolated reports of association with toxins e.g. organophosphates. <p>Maintaining factors</p> <ul style="list-style-type: none"> • Sleep disturbance 	<p>CFS presents a unique mosaic of symptoms that cannot be explained by any single, known mechanism of disease.</p> <p>If CFS is caused by a single mechanism, that mechanism must be a broad-based mechanism - affecting multiple organ systems.</p> <p>Infection</p> <ul style="list-style-type: none"> • Many infectious agents seem capable of inciting CFS, but few good studies provide an epidemiologic link to specific agents. • It is clear that at least 50% of patients with CFS have an infectious episode as an initial trigger for the syndrome. • In some cases, the inciting event is clearly a mononucleosis-like illness, occasionally a standard EBV-associated mononucleosis. • More often, it is a non-specific URTI, a sinusitis or bronchitis, occasionally an influenza-like illness. <p>Other factors Additional clues will come from better understanding of the:</p> <ul style="list-style-type: none"> • increased prevalence of CFS in females • inherited tendency for CFS • role of environmental factors. 	<p>Likely to be multi-factorial.</p> <p>Infection</p> <ul style="list-style-type: none"> • ME/CFS most frequently follows an acute prodromal infection e.g. URTIs, bronchitis, sinusitis, gastroenteritis, or an acute "flu-like" illness. • A wide range of viruses and other infectious agents, such as EBV, HHV-6 and Enterovirus, CMV, Lentivirus, Chlamydia, and Mycoplasma, have been investigated, but findings are mixed and there is no conclusive support for any one pathogen. • Unclear whether the pathogens play a direct causal role, accompany an underlying infection, trigger latent pathogens, activate a neural response or modulate the immune system to induce ME/CFS. • Possibly a new microbe will be identified. <p>Other factors Reports that the following may also trigger ME/CFS:</p> <ul style="list-style-type: none"> • immunisation • anaesthetics • environmental pollutants, chemicals and heavy metals • motor vehicle accident, a fall or surgery • blood transfusion. <p>Known aggravators</p> <ul style="list-style-type: none"> • viral infections • change in sleep schedule • cold exposure • overexertion-physical or mental • prolonged muscular or mental activity • sensory overload-visual, auditory and olfactory senses • information overload • excessive stress • prolonged driving • air travel • in some patients - alcohol, caffeine, glutamate (e.g. MSG), aspartame. 	<p>Varying non-infectious aetiologies given, such as:</p> <ul style="list-style-type: none"> • anaesthetics • trauma • immunization • blood transfusions • environmental toxins <p>Infection URTIs Disagreement about whether URTIs are common triggers - the later two(US and Canada) claim URTIs are triggers, while the earlier guidelines categorically dismiss them.</p> <p>The later two guidelines state CFS often follows:</p> <ul style="list-style-type: none"> • Sinusitis • Bronchitis • A 'flu-like' illness <p>Variation in the range of infectious agents including:</p> <ul style="list-style-type: none"> • Viruses <ul style="list-style-type: none"> - Herpes - Meningitirs - Hepatitis - Enteroviruses - CMV - HHV-6 - Lentivirus - Ross river virus - Borna disease virus • Non-viral <ul style="list-style-type: none"> - Q-fever - Salmonellosis - Toxoplasmosis - Brucellocis - Chlamydia - Mycoplasma - Lyme disease - An as-yet unidentified microbe <p>Exacerbating factors:</p> <ul style="list-style-type: none"> • cold exposure • sensory overload • prolonged driving • air travel 	<p>Aetiology is unclear and is likely to be multifactorial.</p> <p>CFS more common in females</p> <p>Infections CFS frequently follows an infection.</p> <p>The role and action of infectious triggers are unclear.</p> <p>Infectious triggers include:</p> <ul style="list-style-type: none"> • EBV • other mononucleosis-like illness • other infections <p>Exacerbating factors (where given):</p> <ul style="list-style-type: none"> • sleep disturbance • overexertion • stress

<p>is no consensus on the pattern and prevalence of immunological disturbance in people with CFS.</p>	<ul style="list-style-type: none">• Mood disorders• Inactivity• Overactivity• Intercurrent stressors• Iatrogenic illness e.g. misdiagnosis, inappropriate advice• Illness beliefs			<ul style="list-style-type: none">• Mood disorders• Inactivity• Iatrogenic illness• Illness beliefs	
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CFS/ME DIAGNOSTIC CRITERIA					
Australian	UK	US	Canada	Differences	Common features
<p>1. fatigue</p> <ul style="list-style-type: none"> • unexplained • persistent • >6 months • new/definite onset • not resulting from exertion • not alleviated by rest • result in reduction in previous activity levels <p>AND</p> <p>2. other symptoms</p> <ul style="list-style-type: none"> • concurrent with fatigue • persistent • >6 months • new/definite onset <p>4 or more of the following:</p> <ul style="list-style-type: none"> • impaired short-term memory/concentration • sore throat • tender cervical/ancillary lymph nodes • muscle pain • multi-joint pain without arthritis • headaches (of new type/pattern/severity) • post-exertional malaise lasting > 24 hours <p>Idiopathic chronic fatigue: diagnose if formal criteria for CFS are not met and other conditions are excluded. In routine clinical practice, a diagnosis of CFS may be appropriate even though the requirement of 4 out of 8 additional symptoms above is not formally met.</p> <p>Such patients can have comparable levels of disability, and may also benefit from the assessment and intervention strategies described in these guidelines</p>	<p>1. Worsening of symptoms following physical or mental exertion beyond the person's tolerance with a delayed impact and a prolonged recovery period This is the prime feature of the condition.</p> <p>PLUS some of other common symptoms:</p> <p>2. Tiredness or Fatigue (physical and Cognitive)</p> <ul style="list-style-type: none"> • excessive • persistent (> 6 weeks) <p>3. Cognitive Impairment</p> <ul style="list-style-type: none"> • reduced attention span • impairment of short-term memory • word-finding difficulty • inability to plan/organise thoughts • spatial disorientation • loss of ability to concentrate <p>4. Post-exertional malaise</p> <ul style="list-style-type: none"> • may be flu-like symptoms <p>5. Pain</p> <ul style="list-style-type: none"> • persistent • poor response to standard analgesia <p>May include</p> <ul style="list-style-type: none"> • muscular pain • joint pain • neuropathic pain (with or without parasthesiae) • head pain and/or headache <p>6. Sleep disturbance</p> <p>May include</p> <ul style="list-style-type: none"> • early morning wakening • insomnia • hypersomnia • unrefreshing sleep • disturbed sleep/wake cycle <p>7. Other symptoms</p> <ul style="list-style-type: none"> • Temperature disturbance • Dizziness, vertigo, postural hypotension • Increased sensitivity to sensory stimuli 	<p>1. Unexplained Fatigue</p> <p>AND any of the following:</p> <ul style="list-style-type: none"> • Impaired memory loss • sore throat, • tender neck (cervical) or armpit (axillary) lymph nodes, • muscle pain (myalgia), • headache, • unrefreshing sleep, • post-exertional malaise lasting more than 24 hours, and • multi-joint pain (arthralgia) without swelling or redness <p>Symptom checklist:</p> <ul style="list-style-type: none"> • Prolonged (>24 hrs.) generalized fatigue • Non-refreshing sleep • Sore throat • Painful cervical or axillary lymph nodes • Unexplained generalized muscle weakness • Generalized headaches • Migratory painful joints without swelling or redness • Areas of lost or depressed vision • Visual intolerance of light • Forgetfulness • Excessive irritability • Confusion • Difficulty thinking • Inability to concentrate • Depression <p>Idiopathic chronic fatigue: diagnose if alternative causes for fatigue have been ruled out, but criteria for CFS are not met. Treat as CFS.</p>	<p>1. Fatigue (physical and mental)</p> <ul style="list-style-type: none"> • unexplained • persistent • new/definite onset • or • recurrent • results in substantial reduction in previous activity levels <p>AND</p> <p>2. Post-exertional Malaise / fatigue</p> <ul style="list-style-type: none"> • inappropriate loss of physical and mental stamina • rapid muscular and cognitive fatigability • post exertional malaise and/or • pain and a tendency for other associated symptoms to worsen • recovery period of > 24 hours <p>AND</p> <p>3. Sleep dysfunction</p> <ul style="list-style-type: none"> • unrefreshing sleep and/or • sleep quantity or rhythm disturbances - a small number of people may not suffer sleep dysfunction but CFS/ME is the only diagnosis that fits <p>AND</p> <p>4. Pain</p> <ul style="list-style-type: none"> • a significant degree of myalgia. • May be experienced in muscles and/or joints • May be migratory in nature • May be significant headaches of new type, pattern or severity - a small number of people may not suffer pain but CFS/ME is the only diagnosis that fits <p>AND</p> <p>5. Two or more of the following neurological / cognitive manifestations:</p>	<p>Required duration of fatigue for diagnosis</p> <p>From 6 weeks (for clinical purposes) to 6 months+ (based on research criteria)</p>	<p>1. Fatigue (physical and mental)</p> <ul style="list-style-type: none"> • unexplained • persistent <p>AND some of</p> <p>2. Post-exertional Malaise / fatigue inappropriate loss of physical and mental stamina with long recovery period</p> <p>3. Sleep disturbance May include</p> <ul style="list-style-type: none"> • early morning wakening • insomnia • hypersomnia • unrefreshing sleep • disturbed sleep/wake cycle <p>4. Pain May include</p> <ul style="list-style-type: none"> • muscles and/or joint pain • significant headaches of new type, pattern or severity • painful lymph nodes • sore throat <p>5. Cognitive Impairment</p> <ul style="list-style-type: none"> • Confusion • Difficulty thinking • Inability to concentrate • impairment of short-term memory • word-finding difficulty • inability to plan/organise thoughts • spatial disorientation <p>Idiopathic chronic fatigue: diagnose if alternative causes for fatigue have been ruled out, but criteria for CFS are not</p>

	<ul style="list-style-type: none"> • Serious neurological symptoms - double vision, blackouts, atypical convulsions, loss of speech, and loss of swallowing necessitating nasogastric feeding in a minority of severely affected patients 		<ul style="list-style-type: none"> • confusion • impairment of concentration and short-term memory consolidation • disorientation • difficulty with information processing, categorising and word retrieval 		met. Treat as CFS
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CFS/ME
DIAGNOSTIC CRITERIA (cont'd)

Australian	UK	US	Canada	Differences	Common features
	<p>7. Other symptoms (cont'd)</p> <ul style="list-style-type: none"> • Recurrent sore throat +/- lymphadenopathy • Digestive disturbances - nausea, loss of appetite, indigestion, bloating, abdominal cramps, alternating diarrhoea and constipation. Symptoms are similar to irritable bowel syndrome (a differential diagnosis) • Intolerances - alcohol, foods, medication, or other substances 		<p>Neurological / cognitive manifestations (cont'd):</p> <ul style="list-style-type: none"> • perceptual and sensory disturbances e.g. spatial instability, disorientation and inability to focus vision. <p>Ataxia, muscle weakness and fasciculations are common. Overload phenomena may occur leading to "crash" periods and/or anxiety - cognitive, emotional, and/or sensory e.g. photophobia, noise hypersensitivity.</p> <p>AND</p> <p>6. At least 1 symptom from 2 of the following categories:</p> <p>A. Autonomic dysfunction</p> <ul style="list-style-type: none"> • Orthostatic intolerance - neurally mediated hypotension, postural orthostatic tachycardia syndrome, delayed postural hypotension • Light-headedness, extreme pallor • Nausea and irritable bowel syndrome • Urinary frequency and bladder dysfunction • Palpitations with or without cardiac arrhythmias • Exertional dyspnea. <p>B. Neuroendocrine manifestations</p> <ul style="list-style-type: none"> • Heat/cold intolerance • Marked weight change - anorexia or abnormal appetite • Loss of adaptability and worsening of symptoms with stress. <p>C. Immune manifestations</p> <ul style="list-style-type: none"> • Tender lymph nodes, recurrent sore throat, recurrent flu-like symptoms • General malaise • New sensitivities to food, medications and/or chemicals. <p>AND</p>		

			<p>7. Chronic duration Symptoms persisting for at least 6 months. Preliminary diagnosis may be possible earlier. Three months is appropriate for children. It usually has a distinct onset (although it may be gradual).</p> <p>AND</p> <p>8. Exclusion of active disease processes that explain most of the symptoms.</p> <p>Idiopathic chronic fatigue: If the patient has unexplained prolonged fatigue (6 months or more), but has insufficient symptoms to meet the criteria for ME/CFS, it should be classified as idiopathic chronic fatigue.</p>		
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CFS/ME DIFFERENTIAL DIAGNOSIS					
Australian	UK	US	Canada	Differences	Common features
<p>In primary care, up to two-thirds of people with persistent fatigue have other identifiable medical or psychiatric disorder(s).</p> <p>Symptoms may overlap with other syndromes (eg fibromyalgia, irritable-bowel syndrome). The primary diagnosis will depend on which symptoms are the most dominant and disabling.</p> <p>Alternative causes include:</p> <p>Autoimmune disorders: e.g. SLE, rheumatoid arthritis, Sjögren's syndrome</p> <p>Cardiac and respiratory disease</p> <p>Connective tissue disorders</p> <p>Drugs: medication (e.g. β-blockers), alcohol and drug dependence</p> <p>Endocrine disorders: e.g. thyroid disease, diabetes mellitus</p> <p>Gastrointestinal disorders: e.g. coeliac disease, inflammatory bowel disease, giardiasis</p> <p>Infectious diseases: HIV/AIDS, chronic Hep B or C)</p> <p>Metabolic disorders: e.g. hypercalcemia</p> <p>Haematological disorders: e.g.</p>	<p>A diagnosis of CFS/ME should rely on the presence of a set of characteristic symptoms together with the exclusion of alternative diagnoses.</p> <p>Alternative diagnoses include:</p> <ul style="list-style-type: none"> • Addison's disease • anaemia (haematological conditions and other causes) • cardiac disorders • chronic infections (e.g. Lyme disease) • chronic somatisation disorder • coeliac disease, irritable bowel syndrome • immunodeficiency • malignancy • multiple sclerosis, myasthenia gravis • primary sleep disorder • rheumatic diseases • thyroid disease • psychiatric/psychological disorders <ul style="list-style-type: none"> - Anxiety and depressive disorders, school phobia, eating disorders, and (rarely) child abuse. - Depressive and anxiety disorders in particular, occur in a large minority of CFS sufferers. - Can mimic or coexist with CFS. - However, mood disorders can also be misdiagnosed in patients with CFS because of the overlap of key symptoms. 	<p>Other causes need to be excluded by history, examination and selected investigations.</p> <p>Alternative diagnoses include:</p> <ul style="list-style-type: none"> • adrenal insufficiency • anaemia • anxiety • <i>Bartonella henselae</i> (Cat scratch disease), Brucella, CMV, Cyclospora, EBV, Hepatitis B or C, HHV-6, HIV, Lyme disease, Parvovirus B-19, TB, Toxoplasmosis • chemotherapy • chronic liver disease • COAD • connective tissue disorders • cystic fibrosis • depression • dermatomyositis • diabetes mellitus • drugs e.g. antihypertensives • fibromyalgia (can overlap with CFS) • heart failure • inflammatory bowel disease • menopause • malignancy • malnutrition • mitochondrial dysfunction • multiple sclerosis • myasthenia gravis • neuropathy • obstructive lung disease • PMR 	<p>It is important to:</p> <ul style="list-style-type: none"> • exclude active disease processes as the cause of symptoms • consider the presence of co-morbid entities. <p>Alternative diagnoses include:</p> <ul style="list-style-type: none"> • Endocrine: Addison's disease, Cushing's syndrome, diabetes mellitus, thyroid disease • Haematological: iron deficiency, other anemias, iron overload syndrome • Immune: e.g. AIDS • Infectious: e.g. TB, chronic hepatitis, Lyme disease • Malignancy • Neurological: multiple sclerosis, Parkinson's disease, myasthenia gravis, B12 deficiency • Primary psychiatric disorders and substance abuse • Rheumatological: RA, SLE, PMR • Sleep disorders <p>If a potentially confounding medical condition is under control, then the diagnosis of CFS can be considered if the patient meets the criteria otherwise.</p> <p>Co-morbidities: These may occur with or</p>	<p>Different but overlapping lists of conditions to consider excluding.</p> <p>Mood disorders and other mental illness: Disagreement on the role of mental illness (where present), particularly mood disorders and anxiety. The guidelines range from including these as differential diagnoses or comorbidities.</p>	<p>Alternative diagnoses include:</p> <ul style="list-style-type: none"> • Autoimmune disorders • Cardiac disease • Respiratory disease • Endocrine disorders • Haematological disorders • Infectious diseases • Malignancy • Neuromuscular disease • Psychiatric/psychological disorders • Rheumatological disorders • Sleep disorders <p>Co-morbidities:</p> <ul style="list-style-type: none"> • Depression <ul style="list-style-type: none"> - common and can coexist with CFS. • Fibromyalgia <ul style="list-style-type: none"> - can coexist or mimic the symptoms of CFS. • Irritable bowel syndrome

<p>anaemia</p> <p>Neuromuscular disease: e.g. myasthenia gravis, multiple sclerosis</p> <p>Occupational/environmental factors: e.g. organic solvents, heavy metals</p> <p>Occult infection or malignancy</p> <p>Physiological: e.g. sedentary lifestyle, sleep deprivation</p> <p>Primary sleep disorders</p> <p>Psychiatric/psychological disorders:</p> <ul style="list-style-type: none"> • Major depression (common in CFS and need not exclude the diagnosis of CFS) • Anxiety, panic disorder, somatoform disorders, school phobia, eating disorders, child abuse, dementia, delirium 		<ul style="list-style-type: none"> • primary sleep disorders • Raynaud's phenomenon • renal failure • SLE • thyroid disease • valvular heart disease <p>Co-morbid conditions can include:</p> <ul style="list-style-type: none"> • depression, generalized anxiety disorder, panic disorder, somatisation disorder • fibromyalgia syndrome • irritable bowel syndrome. 	<p>preceding the CFS.</p> <ul style="list-style-type: none"> • TMJ syndrome, myofascial pain syndrome • Irritable bowel syndrome, irritable bladder syndrome, interstitial cystitis • Raynaud's phenomenon, sicca syndrome • Prolapsed mitral valve • Multiple chemical sensitivities, allergies, • Thyroiditis, Hashimoto's • Migraine <ul style="list-style-type: none"> • Fibromyalgia syndrome - ~75% of CFS patients also met the criteria for FMS and in some patients the symptoms are indistinguishable from CFS. - FMS may evolve into CFS and vice-versa. <ul style="list-style-type: none"> • Depression/psychiatric illness 		
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CFS/ME

DIAGNOSTIC TESTS

Australian	UK	US	Canada	Differences	Common features
<p>For most patients the following tests are sufficient:</p> <ul style="list-style-type: none"> • FBC and film, ESR • serum electrolytes, calcium, phosphate, urea and creatinine • LFTs, TSH • urinalysis for blood, protein and glucose <p>Note: The diagnostic yield of investigations beyond this restricted list is very low.</p> <p>Tests that have no role in the standard evaluation of CFS</p> <ul style="list-style-type: none"> • Serology for EBV, enteroviruses, or Lyme disease • Tests of immune function, including lymphocyte subsets, immunoglobulins and functional assays • Urinary protein metabolite screening • Neuroimaging studies, 	<p>Basic screening tests include:</p> <ul style="list-style-type: none"> • FBC • CRP • blood biochemistry • thyroid function tests • urinalysis <p>ADDITIONAL TESTS may be required to exclude differential diagnoses that are suggested by particular symptom patterns, or abnormal examination or tests, e.g:</p> <ul style="list-style-type: none"> • blood markers of rheumatic diseases • antibodies to gliadin or endomysium to identify coeliac disease <p>Tests used in research, such as specialist neuroimaging, do not currently seem necessary as part of routine care</p>	<p>Tests important to perform at some point in the workup:</p> <ul style="list-style-type: none"> • FBC • chemistry profile • early morning or spot serum cortisol level • hepatitis B and C serology • TSH • ANA • RPR • Lyme serology <p>CHILDREN AND ADOLESCENTS</p> <ul style="list-style-type: none"> • Baseline FBC, ESR • Multiple blood chemistry, thyroid function tests • ANA • Urinalysis • Perform several blood cultures if episodes of fever. A more aggressive workup will be needed if persistent fever <p>ADDITIONAL TESTS</p> <p>Other tests to consider:</p> <ul style="list-style-type: none"> • tests for tuberculosis - PPD (tuberculin) test, 	<ul style="list-style-type: none"> • FBC, ESR, CRP • Serum electrolytes, glucose, calcium, phosphate, creatinine, magnesium • CK • Ferritin • TSH • Protein electrophoresis screen • RF • ANA • Routine urinalysis <p>ADDITIONAL TESTS</p> <p>Additional tests depend on the patient's case history, clinical evaluation, laboratory findings and risk factors for co-morbid conditions.</p> <p>Clinicians should carefully consider the cost/benefit ratio of any investigative test for each patient, in addition to avoiding unnecessary duplication of tests.</p> <p>ADDITIONAL TESTS</p>	<ul style="list-style-type: none"> • Blood film • CRP • ESR • Early morning or spot serum cortisol level • Ferritin • CK • RF • ANA • RPR • Lyme serology • Protein electrophoresis • LFTs • Additional children/adolescent recommendations in U.S guideline <p>Large difference between the guidelines in the level of detail on tests to consider</p>	<p>Routine testing</p> <ul style="list-style-type: none"> • FBC • TSH • Biochemistry profile • Serum electrolytes • Urinalysis <p>Additional testing</p> <ul style="list-style-type: none"> - Hepatitis B, C serology - Thyroid function tests (rather than just TSH) - Other tests as indicated by history/symptoms <p>NOTES:</p> <ul style="list-style-type: none"> • Only US guideline gives recommendations for specialist tests for children and adolescents • Variation in recommended tests may arise from theoretical perspective of the guideline developing body rather than any evidence for the effectiveness of the tests suggested

<p>including MRI or radionuclide studies</p> <ul style="list-style-type: none"> • Autoantibody assays • Serum creatine kinase • Environmental toxin levels <p>ADDITIONAL TESTS should be ordered only if:</p> <ul style="list-style-type: none"> • the history or examination plausibly suggests other diagnoses (e.g., autoimmune connective tissue disease, coeliac disease, sleep apnoea, multiple sclerosis, fever, weight loss, enlargement of liver, spleen or lymph nodes) • abnormalities are found in the screening tests <p>Many other laboratory procedures have been proposed as "diagnostic tests" by non-medical or alternative practitioners, but have not been subjected to rigorous evaluation.</p> <p>Such "tests" have no basis in evidence and are not recommended</p> <p>e.g., dark field blood testing for red cell morphology or "candida" identification stool tests for "dysbiosis", environmental sensitivity testing</p>		<p>anergy panel</p> <ul style="list-style-type: none"> • RNA low molecular weight protein • serology for EBV, HHV-6, CMV, toxoplasmosis, HIV • other serologies • tests for HHV-6 viremia • RNase L determinations • mycoplasma, rickettsial, or chlamydia PCR DNA amplification • tilt table testing • MRI • SPECT, BEAM scans (research tools) <p>CHILDREN AND ADOLESCENTS A more intensive evaluation that would be performed as part of a research protocol or by a specialist on selected patients may include:</p> <ul style="list-style-type: none"> • serological assays or PCR assays for suspected infectious process (HHV-6, CMV, EBV, Paravirus B-19, mycoplasma, chlamydia) • lymphocyte subsets • quantitative immunoglobulin (IgG,A,M,E) and IgG subclass levels 	<p>Other tests to consider:</p> <ul style="list-style-type: none"> • Lab tests <ul style="list-style-type: none"> - Diurnal cortisol levels, 24 hour urine free cortisol - Hormones including free testosterone - B12 and folate - DHEA sulphate - 5-HIAA screen - Abdominal ultrasound, chest x-ray - Stool for ova and parasites - NK cell activity - Flow cytometry for lymphocyte activity - Western blot test for Lyme disease - Hepatitis B and C testing - TB skin test - HIV testing - 37-kDa 2-5A RNase L immunoassay (when it becomes available) • Differential Brain Function and Static Testing <ul style="list-style-type: none"> - MRI - Quantitative EEG - SPECT and PET Scans - Spectrography • Tilt table test • Sleep study • 24-hour Holter monitoring • Neuropsychological testing 		
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CFS/ME REFERRAL CRITERIA					
Australian	UK	US	Canada	Differences	Common features

<p>Referral is recommended if:</p> <ul style="list-style-type: none"> • the diagnosis remains uncertain • confirmation is needed for medicolegal purposes. <p>Referral may be useful:</p> <ul style="list-style-type: none"> • to formulate an appropriate management plan • in profound/prolonged depression or anxiety states • for paediatric behavioural problems or major disturbances in family functioning • for people who are persistently housebound with severe disability. <p>Patients may require input from:</p> <ul style="list-style-type: none"> • a specialist physician, adolescent physician or paediatrician • a psychiatrist, child psychologist • a specialist in rehabilitation medicine or pain management • physiotherapy, occupational therapy, social workers. 	<ul style="list-style-type: none"> • A GP should be able to make a firm diagnosis of CFS/ME in most instances among adult patients. • Referral will be needed in some patients to confirm a diagnosis, or CFS is complex, severe or prolonged. • However, there are shortages of specialists in CFS/ME at secondary and tertiary levels. • Ideal management is patient-centred, community-based, multidisciplinary and co-ordinated. • Openness on the referral and the reasoning behind it is vital. • Patient may request a second opinion. • Psychiatric/psychologist, occupational, physiotherapy, Disability Social Work Team input may be needed. • Some patients may benefit from a more structured approach to rehabilitation using cognitive behavioural therapy and/or graded activity/exercise • The severely affected will also be those who are least able to access care and support. Appropriate domiciliary provision should be provided. <p>Children</p> <ul style="list-style-type: none"> • Should usually be at least known to community paediatric services. • Many should be referred to a paediatrician to confirm both the diagnosis and because of the impact of the illness on their education and their social relationships 	<p>No specific referral criteria.</p> <p>Consultation with a specialist may be necessary as part of the diagnostic workup.</p> <p>A multi-disciplinary approach with physician, behavioural, psychotherapist, nutritionist, occupational and physical therapist input is beneficial.</p> <p>Patients with CFS may also benefit by referral to recognised CFS experts, who may also have access to clinical treatment trials.</p>	<p>No specific referral criteria.</p> <p>Referral may be needed as part of the diagnostic/differential diagnosis workup.</p> <p>Input may be needed from specialist physicians, physiotherapists, occupational therapists, psychologists and social workers conversant with ME/CFS.</p>	<p>Not all guidelines have specific sections on referral criteria.</p> <p>Variation on the form of input from specialist health professionals, including: physiotherapists occupational therapists, psychologists/psychiatrists social workers nutritionists</p> <p>Acknowledgement that there is a shortage of specialists.</p> <p>Clarity about the purpose of the referral is vital.</p> <p>Recognised CFS experts may have access to clinical treatment trials.</p>	<p>Referral may be needed as part of the diagnostic workup.</p> <p>Multidisciplinary input from specialists may be needed</p> <p>Note: those guidelines that address children and adolescents are consistent in recommending referral to specialist paediatricians</p>
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Australian	UK	US	Canada	Differences	Common features
<ul style="list-style-type: none"> • In the early stages, reassurance and supportive care is generally all that is required, as most prolonged fatigue states will resolve spontaneously. • Exclude differential diagnoses. • A definite diagnosis is important. • Develop an individualised management plan. • Goal should be improvement towards and maintenance of maximal achievable functional capacity. • Maintain regular contact with patient. • Provide support for the person and their family. • Discourage excessive rest and minimise social isolation • Help people understand the nature of their illness. • Sustained improvements are rarely achieved in short time frames (days to weeks), but many patients can return to acceptable levels of functioning over longer periods (e.g. 3-6 months). • Self-monitoring of key symptoms and associated disability is useful. • Rehabilitative, behavioural and cognitive approaches should be an integral component of managing people with CFS. • Physical and intellectual activities should be "paced" according to the individual's functional capacity. • Graded exercise and sleep management may be effective for some people. • Frequent switching of treatments in search of an elusive "cure" should be discouraged. • Carefully evaluate any new symptom/deterioration. <p>Medication</p> <ul style="list-style-type: none"> • No single agent has been reliably shown to be an effective treatment for CFS. • Treatment is symptomatic • Management is primarily 	<ul style="list-style-type: none"> • An early authoritative, positive diagnosis is key to improving outcomes. • All patients need appropriate clinical evaluation and follow-up, ideally by a multidisciplinary team. • An agreed flexible management plan is important. • Therapeutic strategies that can enable improvement include graded activity programmes, sleep management, cognitive behaviour therapy and pacing. • Intrusive symptoms/co-morbidities may also require specific management. • Overall aim is to optimise all aspects of care that could contribute to any natural recovery process. • Education and support need to be initiated as early as practicable. • Patients can be empowered to act as partners in care. Patients are often relatively intolerant of medication, so it is wise to start with lower doses and to use agents that are less likely to have adverse effects 	<ul style="list-style-type: none"> • Exclude differential diagnoses. • May treatments have not been validated. • Continuity of care is important. • Activity and sleep management play an important role. • Multiple pharmacological and non-pharmacological approaches can be palliative for CFS. • Patients tend to more sensitive than average to medication side effects. <p>Fatigue management program All patients with CFS or idiopathic chronic fatigue should be offered the opportunity to participate in a FMP even in they have been fatigued less than 6 months.</p> <p>FMP approach</p> <ul style="list-style-type: none"> • psychological and physical evaluations • preventing increases in symptoms • reducing symptoms if possible • slowly, but consistently, increasing function without increasing symptoms. 	<ul style="list-style-type: none"> • Exclude differential diagnoses. • No known cure for ME/CFS. • Reduction in symptom severity is usually possible. • A positive diagnosis, realistic hope and reassuring continuity of care are important. • Many of the recommendations are expert opinion only. • The primary goal is lifestyle adjustment. • Aims are to optimise the ability to maintain function in everyday activities, being as active as possible within their boundaries, and then gently extending those boundaries. • Periodic questionnaires (e.g. SF-36), patient diaries, and scales can be very helpful in the management of patients. • Treatment programmes should be individualised with realistic goals. • Education of the patient, family and support network is important. • Encourage appropriate exercise/activity programmes. • Uncertain role of cognitive behavioural therapy (may be beneficial, ineffective or harmful). • New symptoms need to be appropriately investigated. <p>Medication general principles</p> <ul style="list-style-type: none"> • Many patients are hypersensitive to medications. • Always start at a lower dose than recommended. • Add or subtract remedies one at a time, and give remedies enough time to show their effects. • Keep testing them to see if they are still necessary. 	<p>Self-monitoring/patient diaries can be helpful in management.</p> <p>Carefully evaluate new symptoms.</p> <p>A multi-disciplinary approach is important.</p> <p>Cognitive behavioural therapy - role differs between guidelines from uncertain role to an integral part of management.</p> <p>Discourage frequent changing of therapies.</p>	<p>Exclude differential diagnoses and treat co-morbid conditions.</p> <p>A positive diagnosis) is important (rather than only by exclusion.</p> <p>There is no definite known cure for CFS/ME</p> <p>Many therapies have not been validated</p> <p>Treatment should be individualised</p> <p>Management plans should be developed</p> <p>Activity and sleep management are important</p> <p>Aim to slowly, but consistently, increase function without increasing symptoms.</p> <p>Prescribing and monitoring must take into account that people with CFS/ME are often susceptible to medication side effects</p> <p>Education and support of the person with CFS and their family should be promptly provided</p>

symptom relief.

- Ongoing use should be reviewed regularly.
- Often an increased susceptibility to side effects, and it is advisable to start with small doses.

<p>Initial avoidance of physical activity may lead to subsequent worsening of symptoms and delayed recovery.</p> <p>Graded exercise programs have been shown to be beneficial for some people with CFS, and can improve functional status.</p> <p>Plan an individualised physical activity programme:</p> <ul style="list-style-type: none"> • start with divided sessions of relatively short duration at a level of activity that can be achieved, without causing prolonged fatigue • gradually increase the duration and intensity • discourage abrupt resumption of strenuous activity after prolonged periods of inactivity • regularly review in order to achieve feasible increases in activity over a realistic time-frame (e.g., several months) • alter the level of physical activity to match the fluctuations in fatigue that can occur. 	<p>Too much activity (physical or mental) or too much rest can each be harmful.</p> <p>Any rehabilitation or increase in activity should start from an agreed, and possibly very low, baseline and should be gradual.</p> <p>Graded activity/exercise is potentially beneficial.</p> <ul style="list-style-type: none"> • The aim is to establish sustainable activity levels. • Activity diaries are useful to guide therapy. • Set appropriate goals. • Gradually increase activity as tolerance develops until longer-term targets are reached (usually several months). • The role of graded exercise in more severely affected individuals is uncertain, but may be beneficial. • Cognitive-behavioural techniques may be useful for patients that have difficulties in modifying activity <p>'Pacing'</p> <ul style="list-style-type: none"> • An energy management strategy that aims for balance between rest and activity. Activity is maintained within perceived limits to avoid symptom exacerbation. • Based on the concept of finite and limited available energy. • Some disagreement over the value of pacing, and may be seen as contrary to active rehabilitation principles. • Popular with patients, voluntary organisations and some clinicians, but sparsely researched. 	<p>Postural changes and frequent stretching during the day is recommended to reduce muscle pain.</p> <p>Only as fatigue comes under control though energy conservation is any non-fatiguing exercise considered.</p> <p>While exercise benefits some patients, it can exacerbate symptoms in ~50% of patients. Patients may benefit from limited exercise (therapeutic strengthening/breathing exercise, yoga) that gives a psychological lift, but that is not so strenuous that it results in a relapse of more severe fatigue.</p> <p>Cognitive Behavioural Treatment implementing behaviour modification and appropriate exercise (e.g. yoga) may significantly improve symptoms in some patients; however, the literature is sparse.</p> <p>Some evidence that in patients with FMS (majority of patients with CFS also meet criteria for FMS), incremental stationary bicycle cardiovascular fitness training improves both fitness and some symptoms.</p> <p>Don't exercise before bedtime as it may interfere with sleep.</p>	<p>Patients should be encouraged to:</p> <ul style="list-style-type: none"> • establish habits of good body mechanics for sitting, driving, lifting, etc • improve balance and orientation if needed • stay as active in their daily activities as they can • avoid house and yard work beyond their capacity • maintain an appropriate exercise program (see below); however, this not recommended for some patients. <p>Individualised exercise programmes</p> <ul style="list-style-type: none"> • Patients whose fatigue, pain and concomitant conditions are under control may benefit from mild non-fatiguing exercise. • Undertake exercise cautiously as symptoms may be worsened in ~50% of patients. • Activities that would be considered trivial to a healthy person can cause pain and injury in the CFS patient. • Assess history and examination with special attention to cardiac function. Many patients have an inability to reach predicted maximum heart rates. • Identify pain generators and risk factors for adverse events during exercise. • Optimise medical management before introducing exercise. • Warm up and down. • Patients will vary greatly as to what and how much they can do. • Keep intensity level low and limit exercises to those that do not cause significant pain. • Begin with 3 two-minute sessions 3 times weekly, and gradually increase to the 3 ten-minute or two 15-minute sessions if tolerated. • Gently stretch, but not to the point of pain. Warm up first. • Undertake gentle strength training and endurance training (non-impact loading exercises such as walking, gentle aquasize) • Avoid overhead strength and endurance training. • Appropriate pacing is encouraged. • Incorporate adequate rest periods. • Goal is to gradually (over months) build up an <i>accumulation</i> of 30 minutes of exercise/activity on most, but not all days. 	<p>Differing levels of detail on exercise programs, with the Canadian guidelines having the most detail.</p> <p>UK guidelines mention that activity management also involves mental tasks.</p> <p>Note: Graded exercise programmes (mentioned in the earlier guidelines) have been recently identified as harmful</p>	<p>There is considerable variation in how much people with CFS can do, and variation in the same person from day to day</p> <p>Non-fatiguing, limited exercise may benefit some people with CFS/ME, but exercise needs to be cautiously introduced as it can cause worsening of symptoms in a large proportion.</p> <p>Too much exercise can exacerbate symptoms and be harmful</p> <p>Slowly progressing levels of activity/exercise, suitable for the person's level of energy and pain, may be beneficial</p>
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CFS/ME
PAIN MANAGEMENT

Australian	UK	US	Canada	Differences	Common features
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<p>Rehabilitative, behavioural and cognitive approaches should be an integral component of managing people with CFS.</p> <p>Medication Management strategies are primarily directed at relief of symptoms.</p> <ul style="list-style-type: none"> • Antidepressant drugs: may provide symptomatic relief of pain, sleep disturbance, and depressed mood in people with CFS. • Muscle and joint pain: consider amitriptyline. • Overlapping FMS: low-dose TCA and an NSAID benefits muscle pain and sleep disturbance, but not fatigue or mood. <p>Early phase of physical rehabilitation: analgesics, NSAIDs or both may be necessary.</p>	<p>Difficulties with pain, sleep, and mood should be specifically elicited and treated, as each may compound the others.</p> <p>Psychological techniques and referral to a specialist pain team may be valuable.</p> <p>Medication</p> <ul style="list-style-type: none"> • Patients are often relatively intolerant of medication, so it is wise to start with lower doses and to use agents that are less likely to have adverse effects. • Use the usual "toolkit" of symptomatic measures where appropriate, adapted to patient need. • Simple analgesics may suffice, but pain is often difficult to alleviate with standard analgesia. <p>Pain with neuropathic quality (and the related paraesthesiae). Agents that "gate out" pain can be especially useful e.g., low-dose TCAs, or the anticonvulsants carbamazepine, sodium valproate, and gabapentin.</p> <p>Muscle pain accompanied by twitching, fibrillation, muscle jumps, or cramps. Muscle relaxants (such as baclofen) may be helpful.</p> <p>Headaches with a migranous character</p> <ul style="list-style-type: none"> • Agents used for migraine can be helpful e.g., triptans, and migraine prophylaxis agents, such as low-dose TCAs, pizotifen, or sodium valproate (beta-blockers are often poorly tolerated in CFS). <p>Dietary changes can reduce such headaches, and trials of dairy or wheat exclusion may be worth considering in patients with recalcitrant headaches.</p>	<p>Multiple non-pharmacologic and medicative approaches can be palliative for both CFS (and FMS).</p> <p>Non-Medicinal Pain Therapies</p> <p><i>Efficacy Shown In Controlled Therapeutic Trials</i></p> <ul style="list-style-type: none"> • Cardiovascular Fitness Training • Aqua Therapy • EMG-Biofeedback • Electroacupuncture • Cranial-electrotherapy stimulation • Hypnotherapy • Cognitive Behavioral Therapy <p><i>Anecdotal Efficacy Shown In Uncontrolled Trials</i></p> <ul style="list-style-type: none"> • Transcutaneous Nerve Stimulation • Local Injection • Multidisciplinary Therapy • Resonance Biofeedback • Reiki • Feldenkrais • Neuromuscular Therapies (including Tai Chi, Yoga, Myofascial Release Technique, Cranial Sacral Therapy, Alexander Technique, Stain Counter Strain Therapy) <p><i>Efficacy Lacking in Uncontrolled Trials</i></p> <ul style="list-style-type: none"> • Ultrasound <p>Medication for musculoskeletal pain</p> <ul style="list-style-type: none"> • Anticonvulsants: gabapentin, clonazepam • Antidepressants: <ul style="list-style-type: none"> - Tricyclics: amitriptyline¹ (consistently better than placebo in clinical trials), desipramine, doxepin, nortriptyline - SSRIs: fluoxetine¹, paroxetine¹, nefazodone¹, sertraline¹ - Miscellaneous: trazodone, venlafaxine¹ • Centrally Acting Sympathetic Agonists: tizanidine HCL • Hormonal Agents: somatostatin, growth hormone¹, GH releasers (amino acids), oxytocin, DHEA • Mild CNS Stimulants: mogafinil, methylphenidate 	<p>Lifestyle/management techniques can help the patient to minimise their impairments and maximise their coping skills.</p> <p>Approximately 75% of CFS patients meet the criteria for FMS. Therefore, it is reasonable to assume that research concerning the pain state in FMS will also apply to the pain states in CFS.</p> <p>Medication (all level of evidence IV)</p> <ul style="list-style-type: none"> • Paracetamol: use as baseline analgesic therapy • Tricyclics: start on lowest dose and gradually increase e.g., amitriptyline, doxepin, nortriptyline • NSAIDs: ibuprofen, naproxen, Ketorolac, celecoxib, rofecoxib • Gabapentin: sometimes used for severe pain • Cyclobenzaprine • Baclofen (for muscle spasm and pain) • Stronger analgesics or narcotics: patients with severe pain may need these; however, their use requires a clear rationale with documentation. 	<p>Variation in the levels of evidence provided for the various interventions.</p> <p>Dietary management and other non-pharmaceutical interventions for pain covered inconsistently - US guideline is most thorough</p> <p>Medication: The US and Canadian guidelines provide the most detail</p> <p>Inconsistent coverage of:</p> <ul style="list-style-type: none"> • Anaesthetics • Anticonvulsants • Centrally Acting Sympathetic Agonists • Hormonal Agents • migraine prophylaxis agents • Mild CNS Stimulants • narcotics • NMDA Receptor Antagonists • Substance P Antagonists • Newer antidepressants (SSRIs and SNRIs) 	<p>Frequent co-occurrence of FMS</p> <p>Non-pharmacological approaches and psychological (cognitive) approaches may help the person cope with the pain</p> <p>Medication</p> <p>People with CFS?ME often have low tolerance of medication, and prescribing and monitoring should be planned accordingly</p> <p>Medication use is primarily symptomatic</p> <p>Consistent recommendation of</p> <ul style="list-style-type: none"> • tricyclic antidepressants¹ • NSAIDs and other analgesics • muscle relaxants <p>¹ the production dates of the guidelines may have influenced the recommendations for antidepressants, with changes in research and psychotropic medications over recent years</p>
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CFS/ME PAIN MANAGEMENT (cont'd)					
Australian	UK	US	Canada	Differences	Common features
		<ul style="list-style-type: none"> • Monoamine Oxidase Inhibitors: phenelzine • Muscle Relaxants: carisoprodol, cyclobenzaprine¹ (consistently better than placebo in clinical trials), metaxalone, methocarbamol, orphenadrine • NSAIDs: naproxen², ibuprofen, celecoxib, rofecoxib² <ul style="list-style-type: none"> - Not significantly better than placebo in clinical trials - May have a synergistic effect when combined with CNS active medications, but may be no more effective than simple analgesics - Better utilized where there are arthralgias and myalgias rather than FMS complaints • Opioids: codeine, morphine, oxycodone, tramadol¹ • Opioids and Combination Opioids: • oxycodone and acetaminophen (paracetamol), oxycodone and aspirin • Opioid Agonists/Antagonists: nalbuphine • Opioid Extenders/Antiemetics: hydroxyzine • OTC: paracetamol, aspirin, ibuprofen, SAMe¹, malic acid¹, magnesium¹ • Detoxifier (alleged): guaifenesin • 5-HT3 Receptor Antagonists: tropisetron (experimental use in U.S) • Anaesthetics: lignocaine • Substance P Antagonists: capsaisin¹ • NMDA Receptor Antagonists: ketamine, dextromethorphan <p>¹ Efficacy shown in placebo-controlled trials ² Anecdotally successful</p>			

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CFS/ME SLEEP MANAGEMENT					
Australian	UK	US	Canada	Differences	Common features

<p>Sleep interventions may reduce symptoms and improve functional capacity, although direct evidence for this is lacking.</p> <p>Behavioural approaches are more likely to be successful than pharmacological approaches.</p> <p>Concurrent primary sleep disorders require specific intervention (e.g., sleep apnoea, restless leg syndrome, narcolepsy).</p> <p>Aim to establish a normal sleep-wake pattern</p> <ul style="list-style-type: none"> • Avoid stimulants during evening • Avoid going to bed too early • Go to bed when "sleepy" rather than "tired" • Put the light out immediately • Wake at a regular time • Get out of bed at a regular time • Reduce (to <30 minutes) or abolish daytime naps • Engage in daytime physical and mental activities (within the limits of the individual's functional capacity). <p>Sleep hygiene strategies can also be incorporated into a cognitive behaviour therapy program.</p> <p>Consider judicious use of medication</p> <ul style="list-style-type: none"> • Sleep disturbance (amitriptyline, nefazodone) • Muscle pain and sleep disturbance (low-dose TCA plus analgesics/NSAIDs). <p>Note: SSRIs may disturb the sleep-wake cycle.</p> <p>Where appropriate, seek advice of a specialist sleep physician, either to exclude a primary sleep disorder or to manage the sleep disturbance.</p>	<p>Sleep disturbance in CFS is often treatable.</p> <p>Exclude primary and secondary sleep disorders</p> <ul style="list-style-type: none"> • Primary disorders (e.g., sleep apnoea, restless leg syndrome, PLMD, delayed sleep phase syndrome) • Secondary sleep problems may be due to mood disorders or pain. <p>Substantial efforts should be made to manage pain, sleep and mood, as without treatment, they may compound each other.</p> <p>Establishment a sleep routine</p> <ul style="list-style-type: none"> • First approach before considering medication • Early on, keep a diary of bedtime, sleep time, wake up time, the time they get up, 'catnaps', and calculate total hours spent asleep • Go to bed and get up at pre-planned times • Attempt to reduce or eliminate daytime sleeping as far as possible (however, daytime 'catnaps' are not proven to disrupt night-time sleep, and some individuals will need to have a 'siesta' or similar period of daytime rest). <p>Medication</p> <p>Low dose TCAs are often effective in restoring sleep quality and rhythm, and are preferable to hypnotic agents.</p> <p>Note: if treating any associated mood disorder, the use of more activating agents (e.g. SSRIs) may interfere with sleep patterns.</p>	<p>Pharmacologic and non-pharmacologic measures, including cognitive therapies, can be of benefit</p> <p>Exclude treatable sleep disorders</p> <p>If chronic pain, sleep apnea, PLMD, anxiety or depression is a dominant problem, treat with their standard therapies.</p> <p>Sleep hygiene principles</p> <ul style="list-style-type: none"> • Consider if medications, caffeine or alcohol might be disrupting sleep • Keep sleep schedule regular • Create a habit of staging down activities • Keep the bedroom dark and quiet, leave marital conflicts outside, and bed should be used only for sleep and sex • Clear the mind of the day's events and worries • Don't exercise just before bed • Take a hot bath in the early evening • A modest carbohydrate snack or warm milk can promote sleep • Use relaxation techniques • Consider ear plugs, eye shades • Use white noise (e.g. a fan) or calm music to soothe out and block out unwanted sounds. <p>Behavioural techniques for sleep onset insomnia</p> <ul style="list-style-type: none"> • Sleep restriction/Consolidation therapy • Paradoxical intention • Relaxation skills • Cognitive therapy <p>Medication: start at a very low dose, as people with CFS tend to be very sensitive.</p> <ul style="list-style-type: none"> • Consider trazadone or sedating tricyclic antidepressants (e.g. doxepin, nortriptyline, amitriptyline, imipramine) • Sleep onset insomnia: consider short-acting agents, such as zafepylon or triazolam • Sleep maintenance insomnia: consider zolpidem, clonazepam, temazepam, or lorazepam • Nefazodone has also been reported to improve sleep <p>Complementary medicine: may be of help to some patients e.g:</p> <ul style="list-style-type: none"> • melatonin • valerian root, lemon balm, hops, passion flower and skullcap • 5-hydroxytryptophan • lavender extract aromatherapy. 	<p>Rule out treatable sleep disorders (e.g., upper airway resistance syndrome, obstructive and central sleep apnea and restless leg syndrome).</p> <p>Sleep hygiene principles</p> <ul style="list-style-type: none"> • Periodically keep a one-week diary of sleep quantity and quality • Pace daytime activities appropriately to conserve energy • Establish a regular bedtime • Quiet activities for an hour before bedtime • Use bed for sleeping only • Establish a dark and quiet sleep environment • Support the body: use a mattress and pillow that are supportive but not too hard - a contoured pillow and a pillow between the legs and under the top arm may help alleviate pain • Consider supportive cervical pillows • Keep the bedroom as a "worry free zone" • Consider relaxation techniques. <p>Medication (Level IV evidence) Amitriptyline, zopiclone, trazodone, doxepin, clonazepam, L-tryptophan, cyclobenzaprine.</p> <p>Note: SSRIs may interfere with sleep.</p> <p>Other Remedies (Level V evidence) Melatonin, valerian, calcium and magnesium salts such as the citrate or gluconate, aromatherapy at bedtime.</p> <p>Consider sleep clinic assessment if no improve with medication and sleep hygiene.</p>	<p>Variation in precise details of 'sleep hygiene' routines</p> <ul style="list-style-type: none"> - avoidance of stimulants (coffee etc) - use of sleep diary - exercise during the day - avoidance of daytime naps - use bed for sleep and sex only - relaxation techniques - white noise - snack, milk before bed - quiet activities before bed <p>Medication:</p> <p>Variation in level of detail provided on possible medications and complementary therapies to use</p>	<ul style="list-style-type: none"> • Exclude treatable sleep disorders • Use behavioural therapy before considering medication • Establishment of a sleep routine (sleep hygiene) <ul style="list-style-type: none"> - regular timing - reduce distraction <p>Medication:</p> <ul style="list-style-type: none"> • Cautious use of medication • Recommendation of sedating tricyclics • SSRIs may cause sleep disturbance <p>Referral</p> <ul style="list-style-type: none"> • Consider referral to sleep specialist for exclusion of a primary sleep disorder or if sleep dysfunction is persistent and severe
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Consult a sleep specialist if sleep dysfunction remains persistent and severe.

CFS/ME
PROGNOSIS

Australian

UK

US

Canada

Differences

Common features

<p>Mainly been evaluated within tertiary referral settings (biased towards chronic illness and limited patterns of recovery).</p> <ul style="list-style-type: none"> • Full recovery is not that common. • Self-reported improvement rates vary from 11-64%. • Worsening at 12-18 months in 15-20%. • 5-year recovery rate of 31%. • In 1 study of patients with CFS duration of 5 years, 63% improved over the next 3 years, but only 6% made a complete recovery. <p>Children and adolescents</p> <ul style="list-style-type: none"> • Outcome is significantly better than in adults. • 77-94% recover or improve. • Average duration of illness is 2-4 years. 	<p>Prognosis is extremely variable. Data is limited by the shortage of good studies and selection bias with studies including those with a poorer prognosis.</p> <ul style="list-style-type: none"> • The likelihood is that most patients will show some degree of improvement over time, especially with treatment. • Many patients have a fluctuating course with some setbacks. • Most will improve to some degree. • Many improve relatively quickly. • Some have more prolonged illness and in a minority, the duration is very long. • Prognosis is better if a diagnosis is made and appropriate treatment and support are provided. • The emphasis should be on improvement and adjustment rather than 'cure'. • Health and functioning rarely return completely to the individual's previous healthy levels. • Gradually progressive deterioration is unusual in CFS/ME and warrants further review to ensure that there is no other explanation. 	<ul style="list-style-type: none"> • Prognosis is uncertain. • Often long-term debilitating syndrome. <p>No formal discussion of prognosis in the guideline (due to the individual author chapter style of the guideline).</p>	<ul style="list-style-type: none"> • General tendency for the clinical course to plateau from between 6 months and 6 years. • In one study, 12% of patients reported recovery over 9 years. • Other studies suggest that <10% of patients return to premorbid levels of functioning. • Patients with the least severe symptomology seem most likely to recover. • Patient with comorbid FMS demonstrate greater symptom severity and functional impairment than individuals with CFS alone. • The less stringent the clinical criteria, the better the prognosis. ~25% of chronic fatigue patients report recovery, whereas 0-6% of ME/CFS patients recover. • Therefore, do not classify patients with chronic fatigue as ME/CFS patients unless they meet all the criteria for ME/CFS, as the outcomes for these two patient groups are substantially different. <p>Prognosis for children is better.</p> <p>In one study, 80% had satisfactory outcomes, although most had mild to moderate persisting symptoms, and 20% remained ill with significant symptoms and activity limitations.</p>	<ul style="list-style-type: none"> • Do not classify patients with chronic fatigue as CFS, unless they meet all the criteria, as the prognosis is different • Tendency for the course to plateau from between 6 months and 6 years • Full recovery is not common (may be as low as <10%) • Patients with the least severe symptomology seem most likely to recover • Prognosis is better if a diagnosis is made and appropriate treatment and support are provided • Gradually progressive deterioration is unusual in CFS/ME and warrants further review to ensure that there is no other explanation 	<ul style="list-style-type: none"> • Prognosis is variable • Most people show some improvement • Often people have long-term disability • Children and adolescents have a better outcome
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