

## Chronic fatigue syndrome: overcoming the attitudinal impasse

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### **I. Introduction**

Despite a growing literature documenting biochemical and physiologic abnormalities in Chronic Fatigue Syndrome (CFS) many physicians continue to have difficulty believing CFS to be a genuine and serious medical disorder (Komaroff 2000). This disbelief has led to considerable conflict and ill feeling between patients and physicians. Patients with CFS express far more dissatisfaction with their physicians than other patients with chronic illness (Twemlow et al. 1997) and many seek alternative health care.

The objective of this chapter is to review the literature on doctor's attitudes towards CFS and to examine contributors to these attitudes. Data was gathered through a thorough review of the literature (1988 – 2000) using the medline, psychlit and sociofile search term "chronic fatigue syndrome". All abstracts were considered and relevant papers were retrieved. The bibliographies of the retrieved papers and The Journal of Chronic Fatigue Syndrome (not in medline) were hand searched.

The hypothesis is made that much of the attitudinal disease results from a poor fit between Chronic Fatigue Syndrome and the medical model of diagnosis and treatment. Rather than struggle with the complexities of a heterogeneous, poorly understood disorder, some physicians have given up trying to interpret the multidisciplinary CFS research and have settled for simplistic but incomplete explanations of CFS etiology. Physician discomfort with uncertainly, stigmatizing media representations of CFS and economic pressures to diagnose and treat quickly entice physicians towards simplistic formulations. The social and

psychological theories of CFS etiology are problematic because they cannot fully explain CFS presentation. The issue is not just one of semantics since treatment recommendations are based on etiologic hypotheses. The commonly recommended treatments of Cognitive Behaviour Therapy and Graded Exercise are critically reviewed.

The insistence by some of psychosocial etiology may perpetuate dismissive attitudes by physicians. These attitudes in turn lead to serious consequences for patients which include: damage to the therapeutic relationship, delay in diagnosis and treatment and in the most serious cases harmful treatment. The chapter concludes with suggestions to overcome the current impasse. The solutions are built upon an ethic of respect for patient's self knowledge and a functional medicine approach to investigation and management of symptoms. This chapter is not intended as a thorough review of the etiology or treatment of CFS but does include relevant examples to highlight useful concepts and some of the common misconceptions about the disorder.

## II. Do Physicians Believe in CFS? A Summary of the literature

Table 1 summarizes the published surveys of general practitioner acceptance of CFS. A sizable minority (10-54%) of GPs are uncomfortable with the concept of CFS as a clinical entity and do not accept it as a discrete disorder. In the same studies, as few as thirty percent of responding GPs were willing to diagnose CFS in patients meeting the diagnostic criteria. The data from Fitzgibbon et al was interesting since only 58% of the physicians believed CFS existed but 82% were willing to make the diagnosis. Presumably some physicians feel pressure to make a diagnosis in which they do not fully believe. It would be expected that in the wake of the CDC definitions of CFS being published in 1988 and revised in 1994 there would be increasing awareness of and acceptance of CFS. However these surveys do not show a trend towards increasing acceptance of CFS over time.

Is there a problem with the current acceptance rates? If one substituted other disorders of unknown etiology for CFS eg. rheumatoid arthritis or multiple sclerosis, anything less than 100% acceptance by primary care physicians would seem inadequate.

Table 1 GPs acceptance of CFS						
Study (reference)	Country	Selection method	Response Rate	Number of responding GPs	% Accepting existence of CFS	% Comfortable/able to diagnose CFS

Ho-Yen et al 1991 (Ho-Yen & McNamara 1991)	2 counties, Scotland	total sample	91%	178	71	n/a
Denz-Penhey et al 1993 (Denz-Penhey & Murdoch 1993)	Otago, New Zealand	total sample	85%	97	90	69.5
Woodward et al 1995 (Woodward, Broom, & Legge 1995)	Canberra, Australia	solicited from GP branch	unclear	20	n/a	30
Fitzgibbon et al 1997 (Fitzgibbon et al. 1997)	Ireland	random	72%	118	58	82
Steven et al 2000 (Steven et al. 2000) *	Australia	stratified by state	77%	1615	46	66 (made dx in past year)

\* survey completed in 1995 but not reported until 2000

n/a – not reported

### III. Contributors to Physician' Disbelief of CFS

CFS skeptics may argue that they are correct to withhold acceptance until there is a larger base of evidence supporting the existence of CFS as a discrete disorder which can be reliably differentiated from other disorders and for which there are distinguishing signs, symptoms or laboratory tests. It is true that there is no pathonomic test for CFS. However it is not logical to conclude from this that CFS is not a valid disorder or that it is primarily psychological in origin. What we can say with confidence is that we as a scientific community have not yet understood the disorder. Some of the reasons for this are elaborated upon below:

#### 1. Disorder specific factors

a) Inadequate definition - There are four working definitions for CFS. The 1988 CDC "Holmes" criteria are the most specific. This definition requires a 6 month history of fatigue which does not resolve with bed rest and results in at least 50% reduction in activity as well as six minor symptoms and two physical signs (Holmes et al. 1988). In addition patients are excluded if they have any other medical or psychiatric condition which may produce similar symptoms. These criteria while quite specific are not often used in clinical settings because they lack utility (Sharpe et al. 1991).

As a result the criteria were revised in 1994. The revised CDC “Fukuda” criteria require the concurrent expression for at least 6 months of fatigue that substantially limits functioning and is accompanied by at least four of the following symptoms: post-exertional fatigue, muscle or joint pain, cognitive changes, axillary or cervical lymphadenopathy, headache, sore throat and sleep disturbance (Fukuda et al. 1994). This definition allows for comorbid disorders as long as they are optimally treated and does not exclude patients with uncomplicated depression or anxiety.

Less often used are the “British” criteria which require no signs or symptoms other than debilitating fatigue of at least 6 months duration which affects both physical and mental functioning (Sharpe, Archard, Banatvala, Borysiewicz, Clare, David, Edwards, Hawton, Lambert, Lane, McDonald, Mowbray, Pearson, Peto, Preedy, Smith, Smith, Taylor, Tyrrell, Wessely, & White 1991) and the “Australian” definition (Lloyd et al. 1990) which requires fatigue and neuropsychiatric symptoms in the absence of alternative diagnoses but no other physical symptoms. These definitions have been criticized for allowing the inclusion of psychiatric and chronic fatigue patients who do not have CFS.

Unfortunately none of these definitions is sufficient. Virtually all patients report one or more symptoms not included in any of the above definitions including: visual blurring, paresthesias, paralysis, nocturia, nausea, orthostatic intolerance, gastrointestinal and sicca symptoms. (Komaroff & Buchwald 1991; Lloyd, Hickie, Boughton, Spencer, & Wakefield 1990; Smith et al. 1999). All four definitions of CFS rely for specificity on the exclusion of patients with comorbid disorders or abnormal test results rather than by endorsement of specific symptoms (Holmes, Kaplan, Gantz, Komaroff, Schonberger, Straus, Jones, Dubois, Cunningham-Rundles, & Pahwa 1988; Lloyd, Hickie, Boughton, Spencer, & Wakefield 1990; Sharpe, Archard, Banatvala, Borysiewicz, Clare, David, Edwards, Hawton, Lambert, Lane, McDonald, Mowbray, Pearson, Peto, Preedy, Smith, Smith, Taylor, Tyrrell, Wessely, & White 1991). The resulting heterogeneity makes it difficult to generate consistent research findings or to compare reports using different patient samples.

A recent factor analysis of the largest CFS patient set yet studied (n=1573) suggests that CFS is comprised of at least three relatively independent symptom clusters: general (immune, infective, neurologic, GI), musculoskeletal and cognitive clusters. Each of these symptom clusters reliably differentiates CFS patients as defined by the CDC Holmes and Fukuda criteria from healthy controls (De Becker, McGregor, & De Meirleir 2000). Several of the discriminating symptoms in the factor analysis eg. sensitivity to food and drugs, cold hands, paraesthesias, tinnitus, blackouts, spatial dysfunction are omitted from all of the current definitions. A fourth factor grouping of emotional/psychiatric symptoms failed to discriminate. This suggests that the current definitions need to be

revised to: include more discriminating symptoms, consider multiple symptom dimensions and to decrease the emphasis currently given to psychiatric disorder.

b) CFS is a host response disorder - The symptoms of CFS as currently defined comprise non-specific host responses to infective or other challenges. The primary symptoms of CFS are similar to those of common viral illnesses such as influenza and are similar to the side effects caused by treatment with exogenous cytokines such as interferon (Gupta et al. 1997; Vollmer-Conna et al. 1998). These clinical observations have led to the search for a viral cause of CFS. No one viral agent can be identified in all subjects with CFS. However the recent independent findings from two groups of an abnormal 37 kDa 2-5' RNase L in 88% of CFS patients and only 11% of healthy controls is compelling evidence that the host immune response plays a role in CFS (De Meleir et al. 2000; Suhadolnik et al. 1994). Although RNase L is generally a response to certain viral infections (eg. HHV6) which have been implicated in CFS, the same abnormality has been found in subjects with known exposures to methyl tertiary-butyl ether and benzene (Plioplys 1997).

c) CFS is multifactorial - Factor analyses of patients with carefully defined CFS suggest the presence of at least 3 independent symptom groupings (De Becker, McGregor, & De Meirleir 2000; Friedberg et al. 2000). This suggests that CFS is the result of three or more coincidental pathological processes which may have different predisposing, precipitating, perpetuating and protective diatheses which may interact with each other in complex ways. The factor groupings in CFS are remarkably similar to those in Gulf War Syndrome (Haley 1997), a disorder with significant clinical similarity to CFS (Nicolson et al. 1999). This data is certainly inconsistent with a linear medical model.

d) CFS has a variable clinical presentation - One of the clinical hallmarks of CFS is its variability over time. Fennell has proposed a four stage progressive model not dissimilar to Kubler Ross's stages of grief as a way of understanding patient's reactions and adaptation to their illness over time (Fennell 1995). In addition there is considerable variability of symptoms on a day to day basis and within each day as many symptoms are responsive to environment and behavior. It is the combination, severity and progression of symptoms over time rather than the specificity of any one symptom that is unique to CFS. Unless physicians are familiar with the temporal clinical picture of CFS, they may not be able to make the diagnosis with confidence.

CFS is a misleading label - Many argue that the label "Chronic Fatigue Syndrome" contributes to the disorder's lack of legitimacy because fatigue is such a non-specific common symptom. The fatigue in CFS is different from every day fatigue as it is both mental and physical and is not substantially relieved by rest. There is a tendency in the literature to omit mention of symptoms other than fatigue. This skews the hypotheses and findings towards consideration of a very heterogeneous group of less severely ill patients. As a

result many findings may not pertain to patients with tightly defined CFS who have multisystemic involvement.

## 2. Clinician and Societal factors

a) Physician discomfort with uncertainty – Up to 80% of patients presenting to general practitioners cannot be given a diagnostic label that fully accounts for their symptoms (Bridges-Webb et al. 1992; Kroenke & Mangelsdorff 1989). Nevertheless, being uncertain of diagnosis or treatment is unsettling to many GPs and can lead to feelings of helplessness and incompetence. Patient demands can amplify the intrapsychic pressure for certainty. Physicians vary in their ability to tolerate the uncertainty of not knowing what is wrong with their patients. The greater their discomfort, the more likely they are to jump to conclusions based on partial evidence. This is especially true when the incorrect conclusions are supported by colleagues held in high esteem.

b) Media and societal influences – Early on in the modern era of CFS research, the use of terms like the "yuppie flu" called into question the seriousness of CFS by implying that only "worried well" were affected. The myths of higher socio-economic prevalence in CFS and lack of morbidity have since been disproved (Jason et al. 1999) however the stigma remains. Access to information has made it possible for some patients to become expert on their own health. However rather than being appreciated by busy GPs, self-diagnosed patients are more likely to be judged by physicians as "difficult" (Scott, Deary, & Pelosi 1995) (Green, Romei, & Natelson 1999). This may indicate that some physicians are threatened by patients' increasing access to health information.

c) Economic rationalism - Straus has argued that it takes 4-6 months to make a diagnosis of CFS with confidence (Fukuda & Gantz 1995). In an attempt to control costs, both public and private health funders require that a diagnosis be made early after initial patient/physician contact. This, in many cases, forces physicians to make premature, simplistic and often inadequate diagnoses in patients with complex multi-system disorders such as CFS.

## 3. CFS and the Medical Model: a poor fit

The medical model encourages physicians to examine patients for signs and symptoms, make a diagnosis and then implement diagnosis based treatment. Though not explicit in the medical model, it is usually assumed that specific genetic or external factors result in specific clinical presentations. Advances in medical technology strengthen the belief that we know all there is to know. The corollary of this belief is that if patients present with symptoms or disorders that cannot be explained, the etiology must be psychosocial. Throughout history this assumption has led to many unfortunate conclusions. Schizophrenia, multiple sclerosis, peptic ulcer disease, inflammatory bowel disease, asthma, tuberculosis and myasthenia gravis are only a few of the disorders that have been viewed as

psychological or psychosocial in origin prior to adequate technology becoming available to prove otherwise.

It cannot be overemphasized that there is nothing inherent in the medical model that makes it ill suited to conditions such as CFS. Indeed bio-psycho-social formulations for all medical presentations are encouraged. However these holistic formulations are difficult to implement in a busy general medical practice (Straus 1996).

#### **IV. Etiologic Reductionism**

Explanations which purport to account for most or all aspects of CFS symptomatology seem attractive when one is struggling with ignorance and uncertainty. The most beguiling are the theories, proposed by physicians, which are cloaked in the guise of scientific rigor. However closer scrutiny shows that some of these "expert opinions" are lacking in solid evidence and that patients managed with paradigms based on these theories are denied symptomatic relief. The issue is not just one of semantics as treatment recommendations are based on etiologic hypotheses. Each of these etiologic theories has in common treatment recommendations of general psychosocial support rather than focussed symptomatic investigation and treatment. The most commonly published theories of CFS etiology are summarized below:

1. Social Construction - One explanation for clinical syndromes including CFS that are not encompassed by current diagnostic nosology is that they are socially constructed. In this model, it is believed that patients hear about CFS through the media or from personal contacts. The information serves as a template or schema around which preexisting and new symptoms are misinterpreted as being due to CFS. Once the schemata are solidified in the mind, they serve in turn to amplify symptoms creating self-perpetuating illness cycles (Abbey & Garfinkel 1991; Barsky & Borus 1999). In addition, these patients are thought to be vulnerable to suggestion by their physicians, the media and CFS support groups who encourage misattribution in an attempt to gain credibility for the concept of CFS (Barsky & Borus 1999). The presumed objective is for CFS to be considered a legitimate "physical" disorder and for patients to gain the benefits associated with "the sick role". These benefits include legitimacy in the eyes of others as well as more concrete gains such as time off from work or relief from family or social responsibilities. (See Barsky & Borus 1999 for a recent summary). An implicit corollary of the social constructionist view is that once the validity of CFS is disproven, the diagnosis will cease to be popular and may retreat into relative obscurity as hysteria and neurasthenia have done before it (Abbey & Garfinkel 1991).

At the extreme end of the social constructionist spectrum is the view that patients with CFS are knowingly taking advantage of public acceptance of

Chronic Fatigue Syndrome for specific secondary gain. A recent letter to a peer reviewed journal reflects this view: “to use terms like ‘CFS sufferers’ and ‘debilitating condition’ in a medical paper is a bit maudlin”... “ I have found that persons with this (CFS) and similar diagnoses can be highly energetic particularly when it comes to litigation, compensation and disability (Bohr 1999).

The research evidence is at odds with this statement. Most CFS sufferers strive to maintain their work and social roles despite being chronically ill. They learn ways of compensating for the lack of cognitive acuity and energy. This maintenance of social role is usually at the expense of personal and relational time (Ware 1998). Furthermore because CFS has not yet attained legitimacy most patients experience significant psychological suffering and impediments to social support and good medical care (Millen, Peterson, & Woodward 1998) rather than the privileges assumed by the social constructionist model of CFS.

Social context is a much overlooked contributor to illness and health. However there are several weaknesses in how this perspective has been applied to Chronic Fatigue Syndrome. The most significant shortcoming is that the authors have failed to acknowledge the biochemical, radiological and neuropsychological evidence that CFS despite it's poor definition and heterogeneity is distinguishable from normality and other medical conditions (Komaroff 2000; Komaroff & Buchwald 1998). Once we have a better understanding of CFS, it will likely be seen as an umbrella term for several related disorders. CFS will be redefined and/or renamed but there is little evidence that the patients or their symptoms will cease to exist.

Social context is an unconscious determinant of how each of us interprets and reacts to life experiences. It affects physicians and patients equally. However the social constructionist view of CFS omits mention of physicians' susceptibility to social pressures and the significant impact of social and cultural assumptions on medical diagnostic nomenclature. They assume that patients are more vulnerable than physicians to social influences without providing any evidence to support the assumption.

2. Psychological Attribution - Another commonly held etiologic theory is that patients are genuinely suffering and are presenting their symptoms honestly but are mistaken about the primary cause of their complaints. Chronic Fatigue Syndrome along with other disorders lacking a known etiology are often given labels such as: psychosomatic disorder, functional somatic syndrome, somatization disorder and/or somatoform disorder (Wessely, Nimnuan, & Sharpe 1999). Each of these terms implies to a greater or lesser extent that disturbance in the soma or body is caused or influenced by the psyche. Given current knowledge about the universality of interactions between the central nervous system and the rest of the body, such distinctions are archaic. All conditions are “psychosomatic” making this classification of little use. However the proponents of the psychosomatic etiology of CFS use this label to differentiate CFS from

what they consider to be legitimate medical diagnoses for which pathogenic processes have been identified (Sharpe 1998).

Although the evidence cited in support of a psychosomatic etiology of CFS is correlational and heavily disputed, it is often presented as accepted fact. The arguments given for psychological causation of CFS are threefold. First, that patients with CFS have higher rates of psychiatric disorder than other patients with chronic illness, second that CFS patients have high rates of general emotional distress and dysfunctional personality traits and third that CFS patients have dysfunctional illness beliefs. Each of these arguments will be examined in turn.

With regards to psychiatric disorder, the instruments commonly used to detect depression, anxiety and somatization disorders include many of the symptoms of Chronic Fatigue Syndrome (Jason et al. 1997). Since the case definitions overlap, findings of comorbidity are inevitable. In studies where these items have been deleted or controlled for, the prevalence of psychiatric disorder in patients with CFS is no higher than in other patients with other chronic medical problems (Hickie et al. 1990; Johnson, DeLuca, & Natelson 1996a; Johnson, DeLuca, & Natelson 1996b).

It is true that patients with CFS generally show high levels of emotional distress as measured by measures such as the SCL-90 (McGregor et al. 1997). However it is not clear that levels of emotional distress correlate with outcome or illness severity (Bonner et al. 1994; Cope et al. 1996; Vercoulen et al. 1996a; Wilson et al. 1994). Nor is the assumption of causality clear. Ray et al stress that several chronic medical conditions are associated with emotional features but that this does not imply etiologic salience (Ray et al. 1992).

One of the common psychosomatic theories of CFS is that the sufferers tend towards the "type A" "overachiever" personality type and that illness provides a needed but intrapsychically disallowed reprieve from perfection. Indeed there are reports of perfectionistic and obsessive compulsive behavior being associated with CFS (Surawy et al. 1995; Van Houdenhove et al. 1995), however more recent reports suggest that CFS are no more perfectionistic than healthy controls (Blenkiron, Edwards, & Lynch 1999) or persons with Rheumatoid Arthritis (Wood 1999). Researchers who have assessed general personality in CFS have found patients to exhibit relatively healthy psychological defences and adaptive coping strategies that are quite different from those found in patients with either axis I or axis II psychiatric disorders (Saltzstein et al. 1998) (Christodoulou et al. 1999; Chubb et al. 1999). Furthermore Ware has found CFS patients to display complex and effective coping strategies in an attempt to maintain their family, social and work roles (Ware 1998).

Finally is the issue of whether CFS patients tend as a group to have dysfunctional illness beliefs that perpetuate their physical symptoms. The

psychosomatic hypothesis points to two commonly held patient beliefs: that CFS has a physical etiology (Sharpe et al. 1992;Wessely & Powell 1989;Wilson, Hickie, Lloyd, Hadzi-Pavlovic, Boughton, & Dwyer 1994) and that exertion should be avoided to prevent worsening of symptoms (Deale, Chalder, & Wessely 1998a;Joyce, Hotopf, & Wessely 1997)as being harmful. The cited evidence for this is that endorsement of these beliefs has been found to correlate with poorer prognosis in CFS (Butler & Rollnick 1996;Sharpe, Peveler, & Mayou 1992).

The weaknesses in this argument are as follows: (Peakman et al. 1997;Ray, Weir, Cullen, & Phillips 1992;Ware & Kleinman 1992) First the correlation between these beliefs and poor prognosis has been refuted by several independent researchers. (Cope, Mann, Pelosi, & David 1996;Deale, Chalder, & Wessely 1998a;Nunn & Germaine 1993;Ray, Jefferies, & Weir 1997;Vercoulen, Swanink, Fennis, Galama, van der Meer, & Bleijenberg 1996a). Second, even if a correlation were reliably found, it would not necessarily suggest a causal link between illness belief and outcome. It could be for example that patients with severe “physical” symptoms and those with the greatest post activity symptom exacerbation have the most severe symptoms and that these patients’ illness beliefs are accurate appraisals of their condition. This perspective is supported by evidence that both mental and physical activity have an adverse effect on the physical and cognitive functioning of persons with CFS (Blackwood et al. 1998;LaManca et al. 1998;Lane et al. 1998;Lapp 1997;Smith, Borysiewicz, Pollock, Thomas, Perry, & Llewelyn 1999).

It is important to note that how questions are asked significantly influences the results of research. In one study, as many as 46% of CFS subjects volunteered that psychosocial stressors had contributed to their illness, however these same patients bristled when asked if they considered their illness “psychological” (Clements et al. 1997). This implies that the connotation that “psychological” means “all in the head” or “imaginary” impacts on patient’s endorsement of questions and that the wording of questions can significantly effect study outcomes (Ray, Jefferies, & Weir 1995a).

Finally, a major criticism of the view that psychological functioning of patients with CFS is pathological is that patients’ thoughts and behavior do not occur in isolation and therefore cannot be attributed entirely to patients. Patients are reacting to cumulative psychodynamic, interactive and social influences at play in their world at any given point in time. The effect on patients of having a stigmatizing and unverifiable illness should not be underestimated (Millen, Peterson, & Woodward 1998). Similarly, discord in the doctor-patient relationship is a predictable interaction if physicians minimize or dismiss the patients’ complaints yet this discord is often incorrectly cited as evidence of patients’ psychopathology (Barsky & Borus 1999;Sharpe et al. 1996a). Indeed Tremlow et al have argued that the opposite is true; that for patients with CFS the interactions with physicians are so negative that they actually worsen the patient’s physical condition (Bruno, Creange, & Frick 1998).

3. Physical causation - There is considerable evidence that physical or biological factors are important in the pathogenesis of Chronic Fatigue Syndrome. Differences are consistently found between patient and control groups in endocrine (De Becker et al. 1999;MacHale et al. 1998;Scott, Medbak, & Dinan 1998), immunologic (Mawle 1997), neurotransmitter (Dinan et al. 1997;Lieberman & Bell 1993;Sharpe, Clements, Hawton, Young, Sargent, & Cowen 1996a), autonomic nervous system (Bou-Holaigah et al. 1995;Cordero et al. 1996;LaManca et al. 1999;Schondorf et al. 1999;Stewart et al. 1998), sleep (Fischler et al. 1997;Morriss et al. 1993;Morriss, Wearden, & Battersby 1997) and neuropsychiatric functioning (Christodoulou et al. 1998;Michiels, Cluydts, & Fischler 1998;Servatius et al. 1998). CFS can also be reliably differentiated from depression (Demitrack 1997;Marshall et al. 1996). Recent Australian work has delineated 6 metabolic subgroups based on amino acid and lipid analysis. The biochemical profiles correlate with clinical symptoms and reliably differentiate patients from control subjects (Dunstan et al. 2000;Dunstan, McGregor, & Watkins 1999;Jason, Richman, Rademaker, Jordan, Plioplys, Taylor, McCready, & Plioplys 1999).

Never the less, the connection between mind and body is strong and reciprocal. Most CFS patients report increased stressful life events in the 6 months prior to CFS onset (Ray, Jefferies, & Weir 1995b;Schmaling 1995). It is unlikely that the cause of CFS is entirely physical nor that a single factor can account for all cases. Patients or physicians who take extreme positions ignoring social or psychological imperatives are doing a disservice to their patients.

## **V. Efficacy of Currently Recommended Treatments**

There is growing evidence that the treatments currently recommended that are based on psychosocial causation of CFS are of limited effectiveness. Sixty-six percent of patients with CFS report that their illness has been made worse by their doctor's care as compared with only 22% of general medical patients (Twemlow, Bradshaw, Jr., Coyne, & Lerma 1997). Existing clinical guidelines recommend antidepressant therapy, cognitive behavior therapy (CBT) and graded exercise (1996;Working Group convened by the Royal Australasian College of Physicians 1997).

There is no controlled trial showing effectiveness of antidepressants for any symptom of CFS and are two studies reporting negative results (Deale, Chalder, & Wessely 1998b;Vercoulen et al. 1996b;Wearden et al. 1998).

1. Psychological treatment - Recommendations for CBT in CFS are based on the hypothesis that inaccurate beliefs (that etiology is physical) and ineffective coping (activity avoidance) maintain and perpetuate CFS morbidity (Deale et al. 1997;Sharpe et al. 1996b). However, it has never been proven that these illness beliefs contribute to morbidity in CFS. Where correlations do exist it is possible

that beliefs in physical etiology are correct and that activity avoidance is necessary for the more severely ill (Lloyd et al. 1993; Ray, Jefferies, & Weir 1995a).

Two studies using the Oxford criteria for CFS (Sharpe, Archard, Banatvala, Borysiewicz, Clare, David, Edwards, Hawton, Lambert, Lane, McDonald, Mowbray, Pearson, Peto, Preedy, Smith, Smith, Taylor, Tyrrell, Wessely, & White 1991) have shown benefit from CBT (Deale, Chalder, Marks, & Wessely 1997; Sharpe, Hawton, Simkin, Surawy, Hackmann, Klimes, Peto, Warrell, & Seagroatt 1996b). The subjects had high psychiatric co-morbidity (46%-67%), were relatively healthy and were functioning below their physical capacity (spending 1–3 days/wk in bed despite being able to care for self). Another study using the Oxford criteria had equivocal results (Wearden, Morriss, Mullis, Strickland, Pearson, Appleby, Campbell, & Morris 1998). Studies using other diagnostic criteria have had negative results (Friedberg & Krupp 1994; Lloyd, Hickie, Brockman, Hickie, Wilson, Dryer, & Wakefield 1993). It is important to note that no CBT study has reported changes in the physical symptom of CFS eg. muscle pain, lymphadenopathy, headache or orthostatic intolerance. Therefore to generalize the results of broadly defined fatigue patients to strictly defined CFS patients with numerous physical symptoms in addition to fatigue may be inappropriate.

2. Graded exercise – The rationale for graded exercise is that deconditioning due to excessive exercise avoidance increases morbidity. However no explanation is provided to explain the putative connection between deconditioning and lymphadenopathy, sore throat, alcohol intolerance or irritable bowel symptoms. Post exertion fatigue is a diagnostic criterium for CFS. Both mental and physical activity have an adverse effect on the physical and cognitive functioning of persons with CFS (Blackwood, MacHale, Power, Goodwin, & Lawrie 1998; LaManca, Sisto, DeLuca, Johnson, Lange, Pareja, Cook, & Natelson 1998; Smith, Borysiewicz, Pollock, Thomas, Perry, & Llewelyn 1999).

There are two studies of graduated exercise in CFS. Both used the Oxford criteria for diagnosis (Fulcher & White 1997; Wearden, Morriss, Mullis, Strickland, Pearson, Appleby, Campbell, & Morris 1998). In the Fulcher & White study the inclusion criteria were very strict excluding patients with significant insomnia which must have been difficult given that sleep disturbance is a diagnostic criteria for CFS. Only 66 of 167 screened subjects were included in the study. The graded exercise started at 40% of maximum predicted heart rate and increased gradually to 60%. This is equivalent to a heart rate of 90 – 110 bpm for most patients. Improvements were noted in peak oxygen use, fatigue and perceived exertion. The Wearden et al study which was less restrictive had equivocal results. Although peak oxygen consumption improved in the treatment group it is unclear whether the improvement was statistically greater than in the placebo group. The instructions in this study were to exercise at 75% of age adjusted

maximum heart rate. This may have been too strenuous as the drop out rate in the exercise group was considerable (25/68).

A recent study of 631 women has shown that during treadmill exercise patients with CFS arrive at the anaerobic threshold at a much lower heart rate (135 vs 150 beats per minute  $p < .00001$ ) and workload (72 vs 123 watts  $p < .00001$ ) than age and gender matched sedentary controls. This is the strongest evidence so far for an energy problem in CFS that is unrelated to fitness level or effort. In this sample, over 99% of subjects could be correctly classified based on exercise parameters using statistical modeling (De Becker et al. 2000).

3. involuntary psychiatric treatment – Although not a recommended treatment, involuntary psychiatric treatment can occur when physicians' belief in the psychosocial etiology of CFS and disrespect for patient self knowledge is played out to its fullest extent. It most commonly occurs with young patients. Many physicians doubt that CFS occurs in children and view young people with CFS as having school avoidance (Marcovitch 1997) or "pervasive refusal syndrome" (Nunn & Germaine 1993). As a result of this formulation they recommend psychiatric treatment. Parents who disagree with the prescribed treatment risk being labeled as medically negligent and there are cases in the US, UK and Australia of such children being made wards of the state and admitted against their will to psychiatric treatment (Breen 1998; Daly 1998; Hammond 1999; Ragg 1999). These forced separations from family have been traumatic and acrimonious (Ragg 1999) and may in future involve litigation against the physicians on the grounds of misdiagnosis.

## **VI. Consequences of Dismissive Physician Attitudes**

1. Damage to therapeutic relationship - A positive doctor-patient relationship has a positive impact on health outcome for patients with chronic illness (Kaplan, Greenfield, & Ware, Jr. 1989). Patients with CFS are in large measure unable to benefit from this relationship since more of them are dissatisfied with their physician than other chronic medical patients. Patients report that their concerns are not taken seriously and that they are not given the emotional or informational support that they need (Ax, Gregg, & Jones 1997; Green, Romei, & Natelson 1999; Twemlow, Bradshaw, Jr., Coyne, & Lerma 1997).

Physicians also express frustration with the quality of care they provide patients with CFS (Fitzgibbon, Murphy, O'Shea, & Kelleher 1997). They tend to attribute the problem to the patients reporting that: patients with CFS take up extra time during consultations (Ho-Yen & McNamara 1991) and are often "difficult" to treat (Scott, Deary, & Pelosi 1995; Sharpe et al. 1994).

Unfortunately the disagreement between physicians and their patients is not a disagreement between equals. Patients with CFS need physicians to validate the illness experience, treat CFS symptoms and other medical problems, advise

regarding new or alternative treatments, liaise with other professionals and provide access to needed services. If the physician and patient cannot agree on a diagnosis and management plan, the patient may fail to follow through with treatment recommendations and/or seek treatment elsewhere. In either case it is the patient who suffers most.

2. Delay in diagnosis - Physicians cite three reasons for not giving a diagnosis of CFS to patients who meet the diagnostic criteria. Some argue that it is unethical to diagnose a disorder that cannot be treated (Woodward, Broom, & Legge 1995). Given the huge number of untreatable disorders in medicine, this argument seems spurious. Others worry that a diagnosis of CFS will encourage illness behavior that will perpetuate disability (Steven, McGrath, Qureshi, Wong, Chern, & Pern-Rowe 2000). The research evidence does not support this concern. The reluctance to give a diagnosis results in patients remaining stressed and without information for longer than is necessary (Saltzstein, Wyshak, Hubbuch, & Perry 1998; Woodward, Broom, & Legge 1995) and may actually precipitate help-seeking behavior of the kind that physicians are trying to minimize. Lastly some physicians shy away from diagnosing and treating CFS in order to avoid controversy or scrutiny from their peers (Woodward, Broom, & Legge 1995).

3. Delay in appropriate treatment - Longer illness duration correlates with poor outcome in both naturalistic and treatment outcome studies of CFS (Joyce, Hotopf, & Wessely 1997; Vercoulen, Swanink, Fennis, Galama, van der Meer, & Bleijenberg 1996a). If patients remain undiagnosed and/or quit their physicians, they remain untreated and therefore at increased risk of poor outcome.

4. Lack of research funding – The consequences of physicians' discomfort with and ignorance about CFS are more far reaching than the impact on individual patients. In light of publications which imply that CFS is either non-existent or not as serious as patients claim, CFS research receives low funding priority from major national funders. In the United States, following the appropriation hearing in Congress in 1995, the Centers for Disease Control added CFS to the "Priority 1 – new and reemerging infectious diseases list". However in 1999 after receiving whistle blower protection, a high ranking CDC official disclosed that US\$12.5 million of funds targeted for CFS research were misappropriated for other activities (Strauss 19 A.D.). The prevalence of CFS is 100-400/100,000. Given that CFS is long lasting but not fatal, the ongoing cost in lost productivity and medical expenses is significant (Lloyd & Pender 1992). Given this, CFS is not getting the funding priority it deserves.

## **VI. Solutions to the Problem**

1. Underlying principles - The following assumptions inform a respectful and collaborative approach to CFS management: a) Current medical knowledge cannot adequately explain CFS. Absence of evidence is not evidence of

absence; b) Frustrations within the doctor-patient relationship are relational issues and not necessarily suggestive of either patient or physician psychopathology. c) The medical media is just as susceptible to the influences of power and society as the lay media.

2. Doctor-patient relationship – It goes without saying that a positive therapeutic relationship has a measurable impact on health outcome for patients with chronic illness (Kaplan, Greenfield, & Ware, Jr. 1989). Patients need physicians to validate their illness experience, advise regarding new or alternative treatments, liaise with other professionals and provide access to needed services. Without their physician's advice, patients may make poor decisions and spend money on ineffective or even harmful treatments.

3. Keep an open mind - When patients present with symptoms that seem “impossible” or “bizarre”, physicians must be willing to question both their patients and their medical knowledge. Instead of assuming that the patient is mistaken or neurotic, curious physicians search for data to explain what they see and resist the temptation of reductionism.

4. Use a functional approach – Functional medicine stresses the dynamic interaction between predisposing, precipitating, perpetuating and protective processes in health and disease. Each symptom is understood in the context of its function and it's relation to the rest of the body. Treatment includes supporting healthy function as well as treating disorder (Bland et al. 1999). There are effective treatments for many of the concomitant symptoms of CFS such as orthostatic intolerance (Rowe & Calkins 1998), hypocortisolemia (Cleare et al. 1999), irritable bowel symptoms (Paterson et al. 1999), nutritional deficiencies (Bland, Costarella, Levin, Liska, Lukaczer, Schiltz, & Schmidt 1999), and psychiatric disorders. Although treating concomitant disorders rarely “cures” CFS, it may decrease patient morbidity.

5. Do no harm - Harm can result from acts of omission and acts of commission. Failure of empathy and active listening leaves patients feeling alone and unsupported. Failure to diagnose and treat CFS results in prolonged and possibly increased morbidity. For patients who have made adaptive changes to their illness and are already functioning at their maximum activity level, CBT and/or graduated exercise may not be of any value and insistence on these treatments when they are of no benefit may be psychologically harmful to patients. Dismissive attitudes and forcing patients into treatment against their will is certainly to be avoided.

## **VII. Conclusions**

Despite advances in research a precise definition and understanding of CFS has not been reached. Many physicians have taken the absence of precise

information as evidence that CFS is psychosomatic or behavioral in nature and they refrain from making the diagnosis or from offering physical treatments to their patients with CFS. This attitude is understandable but unhelpful to patients who are desperate to regain quality of life. The medical field is at a crossroads. Accepting ignorance as an inevitable and challenging aspect of medicine will enable physicians to work in partnership with patients to discover the causes and mechanisms of CFS and to herald a new approach to disorders that are not yet well understood.

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