

# Hands On

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## Fibromyalgia syndrome: management in primary care

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### Editorial

This is my first Hands On editorial since being appointed as Medical Editor. I hope that I can continue the excellent standard of articles set by my predecessor, Louise Warburton. This issue focuses on fibromyalgia, which is often a difficult and frustrating problem for both patients and their doctors.

There is no test for fibromyalgia and diagnosis is made clinically. The most widely used diagnostic guideline was published by the American College of Rheumatology (ACR) 20 years ago. This uses a combination of symptoms of widespread pain and the presence of specific tender points over the body. The experience over time is that the original guideline does not fit well with primary care, particularly as tender point examination is not performed accurately, if at all, and other symptoms are not taken into account. This year the ACR published an alternative set of diagnostic criteria which it hopes will be a more practical method of clinical diagnosis in primary care.

Making the diagnosis is one thing but the bigger challenge perhaps is how to manage the patient. Peter Glennon is a GP with an interest in rheumatic disease and GP education. In this report he emphasises the vital role played by primary care in the management of fibromyalgia and describes a very practical approach to it.

**Simon Somerville**

### What is fibromyalgia syndrome (FMS)?

The essence of fibromyalgia syndrome (FMS) is the presence of chronic widespread pain, often combined with other multiple symptoms, in the absence of any currently demonstrable pathology. Although traditionally the remit of the rheumatologist, and often a diagnosis of exhaustive exclusion, it is vital for GPs to be able to manage FMS because it is common, chronic, sometimes controversial and often severely disabling for patients. Furthermore, its optimal management requires a comprehensive biopsychosocial approach with a strong, consistent, trusting and long-term doctor–patient relationship, attributes ideally suited to a primary care environment.

One of the controversies surrounding FMS is whether it is a discrete condition at all. There is a substantial overlap of symptom clusters associated with FMS, irritable bowel syndrome, some dysmenorrhoea and headaches, premenstrual syndrome, atypical facial pain, non-cardiac chest pain and chronic fatigue syndrome. These so-called ‘medically unexplained physical symptoms’, or MUPS,

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form a large part of everyday general practice (approximately 30%). ‘Lumpers’ would say that they are all part of a spectrum of functional somatic disorders, whereas ‘splitters’ would say that they are discrete. Whichever school of thought one subscribes to a sound understanding of FMS should lead to better patient care for all of these related conditions.

## Natural history and epidemiology of FMS

FMS is about seven times more common in women than men. US studies suggest a primary care prevalence of 3.4% whereas a European community study estimated an overall prevalence of 4.7%. Peak onset is between 30 and

50 years and up to 8% of women will have the syndrome by the age of 70. Up to 20% of patients attending rheumatology clinics may have FMS. It used to be thought that FMS was inevitably a lifelong condition but recent studies suggest a 25% remission rate (although some residual symptoms are likely to persist even in these cases). To complicate matters FMS does occur in patients with other rheumatic disorders, particularly rheumatoid arthritis and lupus.

## How to diagnose FMS

There are currently no diagnostic tests for FMS. The diagnosis is therefore exclusively clinical. The widely publicised 1990 American College of Rheumatology (ACR) criteria have been considered the gold standard for diagnosis. These

**TABLE 1. Aide-mémoire for 2010 ACR preliminary diagnostic criteria for fibromyalgia syndrome.** (Adapted from Wolfe F et al. *Arthritis Care Res (Hoboken)* 2010;62(5):600-10. ©2010 American College of Rheumatology. This material is reproduced with permission of John Wiley & Sons, Inc.)

Widespread pain index (WPI)	Score (1 for each tick)	Symptom severity (SS) (circle one for each option A–D)	0	1	2	3
Shoulder girdle L		<b>A</b> <b>Fatigue</b>	No problem	Mild	Moderate	Severe
Shoulder girdle R						
Upper arm L						
Upper arm R						
Lower arm L		<b>B</b> <b>Waking unrefreshed</b>	No problem	Mild	Moderate	Severe
Lower arm R						
Hip (buttock, trochanter) L						
Hip (buttock, trochanter) R						
Upper leg L		<b>C</b> <b>Cognitive symptoms</b>	No problem	Mild	Moderate	Severe
Upper leg R						
Lower leg L						
Lower leg R						
Jaw L		<b>D</b> <b>Number of somatic symptoms</b>	None	Few	Moderate	Many
Jaw R						
Chest						
Abdomen						
Upper back		<b>Score</b>				
Lower back						
Neck						
<b>TOTAL WPI (0–19)</b>		<b>TOTAL SS (0–12)</b>				

### CRITERIA 1, 2 AND 3 ARE NEEDED FOR DIAGNOSIS OF FIBROMYALGIA SYNDROME:

- 1. EITHER: WPI  $\geq 7$  and SS  $\geq 5$  OR: WPI 3–6 and SS  $\geq 9$**
- 2. Symptoms present at a similar level for  $\geq 3$  months**
- 3. No alternative explanation for the pain**

involve the use of finger pressure (just enough to blanch the examiner's fingernails) to identify at least 11 out of 18 defined tender points. Palpation should be deemed 'painful' by the patient. The criteria have not been widely used by GPs, perhaps owing to their reliance on tender points and lack of consideration of other symptoms.

One of the hallmarks of FMS syndrome is in fact the multiplicity of symptoms. These include morning stiffness, non-dermatomal numbness, joint and muscle pains, Raynaud's phenomenon, cold intolerance, fatigue, non-restorative sleep, headaches, dizziness, cognitive impairment ('fibrofog'), anxiety, low mood, irritable bowel syndrome, dysuria, chest pain, dyspnoea, blurred vision and subjective weakness. Very recently the ACR has proposed a more streamlined and practical set of criteria for the diagnosis of FMS, recognising, perhaps, that FMS is a common spectrum disorder rather than a discrete one. The new criteria are more GP friendly as they do not require tender point examination. Furthermore they take into account both the severity and the number of somatic symptoms, as well as providing the prospect of a longitudinal scoring system. Table 1 summarises these criteria in a concise format that could be used in a general practice setting for both diagnostic and monitoring purposes.

A key primary care skill is the tolerance of diagnostic uncertainty while at the same time 'safety-netting' to exclude serious illness (red flags). Although FMS could be diagnosed without doing any investigations it would be wise to consider the differential diagnosis and subsequent list of suggested tests. These are listed in Tables 2 and 3 respectively.

## Pathophysiology

There have been many theories about the causation of FMS. Currently favoured causes include disturbances of stage 4 non-rapid eye movement sleep and disturbances of serotonin, growth hormone, substance P and cortisol levels. Autonomic dysfunction has also been implicated. Psychological problems are noted in about 30% of cases of FMS. Depression, anxiety, somatisation, eating disorders and childhood sexual and physical abuse are all significantly associated with FMS, but none are prerequisite. Perhaps the most

**TABLE 2. Causes of diffuse or widespread musculo-skeletal pain (differential diagnosis of fibromyalgia syndrome).**

- Inflammatory arthritis (including rheumatoid arthritis and spondyloarthropathies)
- Hypermobility syndromes
- Polymyalgia rheumatica
- Polymyositis/dermatomyositis
- Vasculitides
- Hypo-/hyperthyroidism
- Multiple sclerosis
- Neuropathies
- Osteomalacia
- Chronic fatigue syndrome/myalgic encephalomyelitis
- Statins

**TABLE 3. List of suggested investigations in suspected fibromyalgia syndrome.**

- Full blood count
- Erythrocyte sedimentation rate
- C-reactive protein
- Creatine kinase
- Calcium
- Alkaline phosphatase
- Blood glucose
- Thyroid-stimulating hormone
- Antinuclear antibody/rheumatoid factor  
*[remember risk of false positive results]*
- Urinalysis for protein, blood and glucose

useful model is to consider FMS as a disorder of central pain processing resulting in a maladaptive pain response. It is important to be able to explain this concept to patients taking into account their own ideas, concerns and expectations (ICE). Pejorative explanations implying that the condition is 'all in the mind' have been shown to have a 'number needed to offend' (NNO) of 2, whereas functional explanations incorporating a description of how pain is modulated in the nervous system have a lower NNO of around 9. Patients seem to be most satisfied by explanations that make sense to them, remove blame, integrate psychological and biological factors, and suggest concrete ideas for management. The quality of explanation offered is likely to be a key determinant of whether patients will seek a second opinion at this point.

## Management of FMS

Table 4 summarises the findings of the large EULAR review of 150 qualifying studies.

Although there is good evidence for the use of atypical analgesics such as tramadol, amitriptyline and pregabalin as well as various antidepressants for pain relief and improved function, it is important to adopt a holistic, tailor-made approach to each FMS patient. A pharmacological approach, in isolation, is unlikely to be successful.

It is helpful to try to modify any aggravating factors in the physical or social environment, taking care to avoid collusion with social withdrawal or fear of activity. The introduction of the fit note in April 2010 allows the GP to suggest intermediate and tailored levels of work appropriate to the individual patient. The thrust of documents such as Dame Carol Black's 'Working for a healthier tomorrow' and the NICE guidelines on long-term sickness absence and incapacity for work is to encourage early intervention with return-to-

work plans and the use of cognitive behavioural therapy, coping strategies, counselling, solution-focused group sessions, exercise programmes and workplace modifications for patients with chronic musculoskeletal pain and disability. Part of any management plan would be to assess the level of the patient's disability. The Fibromyalgia Impact Questionnaire (FIQ) is a useful and well-validated tool for assessing functional abilities, patient status and progress. It can be accessed at [www.myalgia.com/FIQ/FIQ\\_questionnaire.pdf](http://www.myalgia.com/FIQ/FIQ_questionnaire.pdf) and can feasibly be used during a GP consultation. Assessment of associated anxiety and depression is also part of this process and GPs will be familiar with the use of the PHQ-9 questionnaire for the latter.

Other non-pharmacological treatment offered by the GP might include advice about sleep hygiene, balneotherapy (warm baths) and physical therapies that engage the patient. The GP should also have a good understanding of the family structure and dynamics and be in a good position to assess

**TABLE 4. EULAR recommendations for the management of fibromyalgia.** (Reproduced with permission from Carville SF et al. *Ann Rheum Dis* 2008;67(4):536-41. ©2010 BMJ Publishing Group Ltd and European League Against Rheumatism.)

Recommendation	Level of evidence	Strength
<b>General</b>		
<ul style="list-style-type: none"> <li>Full understanding of fibromyalgia requires comprehensive assessment of pain, function and psychosocial context. Fibromyalgia should be recognised as a complex and heterogeneous condition where there is abnormal pain processing and other secondary features</li> </ul>	IV	D
<ul style="list-style-type: none"> <li>Optimal treatment requires a multidisciplinary approach with a combination of non-pharmacological and pharmacological treatment modalities tailored according to pain intensity, function, associated features such as depression, fatigue and sleep disturbance in discussion with the patient</li> </ul>	IV	D
<b>Non-pharmacological management</b>		
<ul style="list-style-type: none"> <li>Heated pool treatment with or without exercise is effective in fibromyalgia</li> </ul>	IIa	B
<ul style="list-style-type: none"> <li>Individually tailored exercise programmes, including aerobic exercise and strength training, can be beneficial to some patients with fibromyalgia</li> </ul>	IIb	C
<ul style="list-style-type: none"> <li>Cognitive behavioural therapy may be of benefit to some patients with fibromyalgia</li> </ul>	IV	D
<ul style="list-style-type: none"> <li>Other therapies such as relaxation, rehabilitation, physiotherapy and psychological support may be used depending on the needs of the individual patient</li> </ul>	IIb	C
<b>Pharmacological management</b>		
<ul style="list-style-type: none"> <li>Tramadol is recommended for the management of pain in fibromyalgia</li> </ul>	Ib	A
<ul style="list-style-type: none"> <li>Simple analgesics such as paracetamol and other weak opioids can also be considered in the treatment of fibromyalgia. Corticosteroids and strong opioids are not recommended</li> </ul>	IV	D
<ul style="list-style-type: none"> <li>Antidepressants: amitriptyline, fluoxetine, duloxetine, milnacipran, moclobemide and pirlindole reduce pain and often improve function, therefore they are recommended for the treatment of fibromyalgia</li> </ul>	Ib	A
<ul style="list-style-type: none"> <li>Tropisetron, pramipexole and pregabalin reduce pain and are recommended for the treatment of fibromyalgia</li> </ul>	Ib	A

who the patient's carers and allies are within the family. Education of both patients and carers is vitally important and the GP has an important role in signposting patients towards evidence-based information sources such as the Arthritis Research UK website, [www.arthritisresearchuk.org](http://www.arthritisresearchuk.org). Although management of FMS is often multi-disciplinary the GP is in a strong position to select which other agencies are best suited to each individual patient. Studies suggest that treating FMS in a specialised setting offers no clear advantages over primary care management.

Most FMS should be diagnosed and managed in primary care. However, indications for referral might include diagnostic uncertainty, significantly uncontrolled symptoms, and perhaps patient

request for a specialist opinion. It must be remembered, however, that for most FMS patients management is aimed at coping strategies and symptom relief rather than cure.

## Conclusion

FMS is a common, chronic, disabling and challenging condition. In the past it has often been tentatively diagnosed, inadequately treated and inappropriately referred and investigated. This has resulted in frustration for patients, doctors, carers and health economists alike. Confident and proactive management of FMS by GPs in a primary care setting with a tailored, holistic and patient-centred approach is the way forward.

## Further reading

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### Revalidation learning task for 1 credit

- Do a computer search on your GP clinical system for fibromyalgia (read codes = N239 and N248)
- Record the prevalence for your practice
- If this is less than 2% ask yourself why – could it be that you are underdiagnosing or undercoding FMS?

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