



# Fibromyalgia Syndrome: Current Considerations in Symptom Management

Evidence-based nonpharmacologic and pharmacologic strategies.

## ABSTRACT

Fibromyalgia syndrome (FMS), one of the most common rheumatic disorders, is estimated to affect up to 15 million people in the United States, 80% to 90% of whom are women. The syndrome is characterized by the presence of chronic widespread pain and various concurrent symptoms, which may include fatigue, cognitive disturbances (memory problems, difficulty concentrating, confusion), distressed mood (anxiety, depression), nonrestorative sleep, and muscular stiffness. Symptom management appears to be best addressed using a multimodal approach, with treatment strategies tailored to the individual. While medication may provide adequate symptom relief for some patients, experts generally recommend integrating both pharmacologic and nonpharmacologic approaches. Some patients may benefit from the adjunctive use of complementary and alternative medicine (CAM) modalities. Because symptom remission is rare and medication adverse effects can complicate symptom management, well-informed nursing care practices and patient education are essential. This article describes the existing treatment guidelines, discusses pharmacologic and nonpharmacologic approaches (including CAM-based modalities), and outlines nursing approaches aimed at enhancing patient self-management.

**Keywords:** complementary and alternative medicine, fibromyalgia syndrome, rheumatic disorder, self-management

Originally known as “fibrositis,”<sup>1</sup> fibromyalgia has come to be identified as a syndrome rather than as a discrete disease—one with no known etiology and no known cure. Fibromyalgia syndrome (FMS), as it’s now called, is characterized by the presence of chronic widespread pain and a variety of concurrent symptoms. These symptoms can include fatigue, distressed mood (anxiety, depression), cognitive disturbances (memory problems,

difficulty concentrating, confusion; sometimes collectively called “brain fog” or “fibro fog”), nonrestorative sleep, and muscular stiffness.<sup>2,3</sup> There is no consistent pattern; symptoms tend to wax and wane with varying degrees of severity and duration.<sup>4</sup> Such polysymptomatic distress contributes to a decreased ability to manage activities of daily living, and can lead to a diminished quality of life.<sup>3,5,6</sup> In one survey of 2,569 adults who reported an FMS

diagnosis, 83% indicated that emotional distress exacerbated their symptoms, particularly pain.<sup>7</sup>

FMS is one of the most common rheumatic disorders, occurring in an estimated 2% to 8% of the population worldwide.<sup>8</sup> In the United States, it's estimated that FMS currently affects between 4 and 15 million people, 80% to 90% of whom are women.<sup>9-12</sup> Yet many people with FMS must contend not only with symptom management but also with health care providers and others who doubt the syndrome's validity.<sup>7,13</sup> Diagnosis is often unduly delayed; patients can spend years seeking symptom relief before they receive a diagnosis of FMS.<sup>14,15</sup> One large British study found that, compared with controls, people with undiagnosed FMS had much higher rates of primary care provider visits, prescriptions, and diagnostic tests during the 10 years before diagnosis.<sup>16</sup> Even after diagnosis, people with FMS may experience higher levels of stigmatization and lower levels of social support than people with more "widely accepted" chronic conditions.<sup>17</sup>

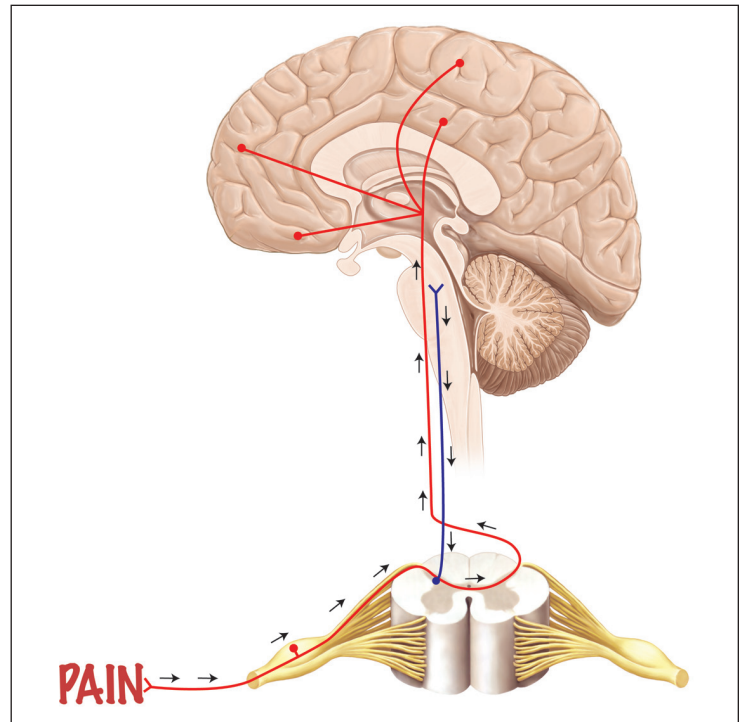
Combined, these factors contribute to reduced workplace productivity and to increased disability and health-seeking efforts. According to one large study, up to 65% of FMS patients miss workdays as a result of their illness, for an average annual cost of \$3,300.<sup>18</sup> The same study found that FMS patients have total annual health care costs averaging \$11,000 per patient. Total FMS-related costs in this country have been estimated at between \$12 and \$14 billion annually.<sup>19</sup>

### PREDISPOSING FACTORS AND DIAGNOSIS

Despite increasing efforts directed toward understanding the biological mechanisms underlying FMS, researchers report a wide variety of potential causes. The syndrome is currently believed to stem from complex interactions of the nervous, endocrine, and immune systems. These systems, either singly or together, may in turn be influenced by myriad factors that either increase the risk of FMS or trigger or perpetuate its symptoms. Such factors include familial history; neurochemical imbalances that result in abnormal processing of sensory stimuli; environmental factors such as trauma stemming from motor vehicle accidents or physical or sexual abuse; and certain infections such as Lyme disease and viral hepatitis, as well as various psychosocial stressors.<sup>2,5,8,20,21</sup> Patients with FMS may also have other chronic pain conditions, such as osteoarthritis, rheumatoid arthritis, and lupus.<sup>8</sup>

**Diagnosis.** In 1990, physicians affiliated with the American College of Rheumatology (ACR) developed diagnostic criteria for use in clinical trials.<sup>22</sup> The criteria required both a history of chronic widespread

**Figure 1. Pain Pathways**



Neurotransmitters that enhance pain signals (such as glutamate and substance P) or inhibit them (such as dopamine, serotonin, and norepinephrine) are found in both the central and peripheral nervous systems. Select antidepressants and anticonvulsants are thought to exert their effects on pain by influencing neurotransmitters in the descending (blue) pathway. Illustration by Anne Rains.

musculoskeletal pain (duration of longer than three months) and the finding of pain on digital palpation in at least 11 of 18 possible tender points upon physical examination.<sup>22</sup> Over the next 20 years these criteria, especially the use of tender point counts, became widely used in clinical diagnosis.<sup>23</sup> But eventually it became clear that many providers performed the tender point examination incorrectly or not at all, and this examination was determined to be unreliable as a diagnostic tool.<sup>23</sup>

In 2010 Wolfe and colleagues developed an evidence-based modification of the 1990 ACR criteria.<sup>24</sup> They eliminated the tender point count requirement, added a widespread pain index (WPI), and developed a symptom severity (SS) scale. Currently, a diagnosis of FMS may be reached when the following three criteria are met<sup>23</sup>:

- the patient's WPI score is 7 or greater and SS score is 5 or greater, or the WPI score is between 3 and 6 and the SS score is 9 or greater

- symptoms have been present at a similar level for at least three months
- the patient does not have a disorder that would otherwise explain the pain

(For details on assessment and scoring, see *Diagnostic Criteria for Fibromyalgia Syndrome*.<sup>24</sup> A related worksheet is available from the National Data Bank for Rheumatic Diseases: [www.arthritis-research.org/sites/default/files/FM%20Criteria%20Work%20Sheet.pdf](http://www.arthritis-research.org/sites/default/files/FM%20Criteria%20Work%20Sheet.pdf).) While these criteria have eliminated the need for physicians to palpate a patient at specific tender points,

relying instead on the patient's self-reported pain sites and symptom severity, it's important to note that diagnosis still requires a comprehensive physical examination.

There are still no identified biomarkers that can be used in assessing a person's risk of FMS, diagnosing the syndrome, or evaluating the effectiveness of treatment.<sup>8</sup> Because diagnostic biomarkers for FMS are lacking and total symptom relief is seldom achieved, current best practice strategies for improving patients' quality of life include acknowledging their symptoms

## Diagnostic Criteria for Fibromyalgia Syndrome

### Criteria

A patient satisfies diagnostic criteria for fibromyalgia if the following three conditions are met:

1. Widespread pain index (WPI)  $\geq 7$  and symptom severity (SS) scale score  $\geq 5$ ; or WPI 3–6 and SS scale score  $\geq 9$ .
2. Symptoms have been present at a similar level for at least three months.
3. The patient does not have a disorder that would otherwise explain the pain.

### Ascertainment

1. WPI score: Note the number of areas in which the patient has had pain over the last week. In how many areas has the patient had pain? For each positive answer, score one point. The final score will be between 0 and 19.

Shoulder girdle, left	Hip (buttock, trochanter), left	Jaw, left	Upper back
Shoulder girdle, right	Hip (buttock, trochanter), right	Jaw, right	Lower back
Upper arm, left	Upper leg, left	Chest	Neck
Upper arm, right	Upper leg, right	Abdomen	
Lower arm, left	Lower leg, left		
Lower arm, right	Lower leg, right		

2. SS scale score:

Fatigue  
Waking unrefreshed  
Cognitive symptoms

For each of the three symptom areas above, indicate the level of severity over the past week using the following scale:

- 0 = no problem
- 1 = slight or mild problems: generally mild or intermittent
- 2 = moderate: considerable problems, present often or at a moderate level (or both)
- 3 = severe: pervasive, continuous, life-disturbing problems

Considering somatic symptoms<sup>a</sup> in general, indicate whether the patient has:

- 0 = no symptoms
- 1 = few symptoms
- 2 = a moderate number of symptoms
- 3 = a great deal of symptoms

The SS scale score is the sum of the severity of the three symptom areas (fatigue, waking unrefreshed, cognitive symptoms) plus the extent (severity) of somatic symptoms in general. The final score will be between 0 and 12.

<sup>a</sup>Somatic symptoms that might be considered: muscle pain, irritable bowel syndrome, fatigue or tiredness, thinking or remembering problems, muscle weakness, headache, pain or cramps in the abdomen, numbness or tingling, dizziness, insomnia, depression, constipation, pain in the upper abdomen, nausea, nervousness, chest pain, blurred vision, fever, diarrhea, dry mouth, itching, wheezing, Raynaud's phenomenon, hives or welts, ringing in ears, vomiting, heartburn, oral ulcers, loss of or change in taste, seizures, dry eyes, shortness of breath, loss of appetite, rash, sun sensitivity, hearing difficulties, easy bruising, hair loss, frequent or painful urination, and bladder spasms.

Adapted with permission from Wolfe F, et al. *Arthritis Care Res (Hoboken)* 2010;62(5):600-10.<sup>24</sup>

as real and not imaginary; and educating them on FMS and evidence-based symptom management options.<sup>25</sup>

### TREATMENT GUIDELINES

To date, the need to address symptom management for people diagnosed with FMS has led to the development of treatment guidelines in Canada,<sup>15</sup> Germany,<sup>25</sup> and Israel.<sup>26</sup> As yet, no treatment guidelines have been developed in the United States; the ACR recommends following the Canadian guidelines.<sup>8</sup> All of these guidelines emphasize the importance of patient education and self-care strategies, and all recommend integrating nonpharmacologic with pharmacologic treatment. American experts generally concur. Clauw has stated that “fibromyalgia is best approached by integrating pharmacological and nonpharmacological treatments while engaging patients as active participants in the process,”<sup>8</sup> a statement reflected in the ACR’s patient education materials.<sup>27</sup>

hypothalamic–pituitary–adrenal axis, increased proinflammatory and decreased antiinflammatory processes, and disturbed neurotransmitter function are associated with this centralized pain state.<sup>30</sup> Pharmacotherapy for FMS symptom management seems most often to be approached within the context of various neurotransmitters and their role in analgesic activity. For example, the pain-relieving effects of anticonvulsants have been attributed to the reduced release of several neurotransmitters, including glutamate and substance P, which play a role in pain processing.<sup>30,31</sup> Other neurotransmitters implicated in FMS pain include dopamine, serotonin, norepinephrine, and gamma-aminobutyric acid.<sup>8,31</sup> There is some evidence supporting the use of selective serotonin reuptake inhibitors (SSRIs) and selective serotonin–norepinephrine reuptake inhibitors (SNRIs).<sup>8,31</sup>

Current recommended pharmacologic strategies for managing FMS symptoms include, among others, the use of select anticonvulsants (such as gabapentin

## Current best practice strategies for improving patients’ quality of life include acknowledging their symptoms as real.

That said, the three guidelines differ somewhat with regard to which treatments are emphasized, particularly regarding nonpharmacologic therapies. As a review by Ablin and colleagues has noted, “Aerobic exercise, cognitive behavioral therapy, and multicomponent therapy [are] first choice treatments” in all three guidelines.<sup>28</sup> The Canadian guideline states that “regular physical activity should form the cornerstone of treatment and received the highest grade of recommendation,” but adds that “in the absence of evidence” no complementary and alternative medicine (CAM) therapies can be recommended.<sup>15</sup> The German and Israeli guidelines do recommend some CAM therapies, according to Ablin and colleagues, including acupuncture, hypnosis or guided imagery, and tai chi.<sup>28</sup>

### PHARMACOLOGIC TREATMENT

Pharmacologic approaches are predicated on the current understanding of FMS as a centralized pain condition.<sup>8,29</sup> Centralized pain conditions are those in which persistent pain occurs as a result of damage to or dysfunction of the central nervous system’s ascending and descending pain pathways, resulting in altered pain processing (see Figure 1). That is, pain persists in the absence of anatomic anomalies and without objective evidence of nociceptive input from the peripheral nervous system. Researchers have suggested that, in FMS, hyporeactivity of the

[Neurontin and others] and pregabalin [Lyrica]), SNRIs (such as duloxetine [Cymbalta] and milnacipran [Savella]), SSRIs (such as citalopram [Celexa]), tricyclic antidepressants (such as amitriptyline), and muscle relaxants (such as cyclobenzaprine [Amrix]).<sup>8,32</sup> Drugs commonly used to treat peripheral pain, such as nonsteroidal antiinflammatory drugs, and strong opioids, are reported to be ineffective for managing FMS symptoms, as are corticosteroids, which are also sometimes prescribed.<sup>8,32</sup> The wide range of drug classes that have been tried speaks to the challenge of helping people with FMS manage a wide range of symptoms that can include pain; fatigue; and cognitive, mood, and sleep disturbances. (For a more detailed list of drugs that are commonly prescribed to treat FMS, see Table 1.<sup>8,32</sup>)

### NONPHARMACOLOGIC APPROACHES

Various nonpharmacologic strategies—in particular, exercise, cognitive behavioral therapy (CBT), and patient education—are effective in helping individuals with FMS manage their symptoms.<sup>8,33</sup> For example, in a meta-analysis of 17 studies that examined the effect of walking interventions on chronic musculoskeletal pain in people with low back pain, osteoarthritis, or fibromyalgia, the authors reported that pain was significantly less at short-term (less than two months) and medium-term (two to 12 months) follow-up, though longer-term effectiveness wasn’t clear.<sup>34</sup> All

**Table 1.** Commonly Prescribed Oral Medications for Fibromyalgia Syndrome<sup>8, 32, a</sup>

Drug Classification	Drug Name
Anticonvulsants	gabapentin (Neurontin and others) pregabalin (Lyrica)
Antidepressants	
SNRIs	duloxetine (Cymbalta) milnacipran (Savella) venlafaxine (Effexor)
SSRIs	citalopram (Celexa) fluoxetine (Prozac and others) sertraline (Zoloft)
TCAs	amitriptyline desipramine (Norpramin)
Muscle relaxants	cyclobenzaprine (Amrix)
Centrally acting synthetic opioid (given with or without acetaminophen)	tramadol (Ultram and others)
Strong opioids	hydromorphone (Dilaudid, Exalgo) morphine methadone (Dolophine, Diskets) oxycodone (OxyContin and others)
NSAIDs	celecoxib (Celebrex) diclofenac (Cataflam and others) ibuprofen (Advil and others) indomethacin (Indocin, Tivorbex) ketorolac (Acular and others) naproxen (Aleve and others) tolmetin

NSAID = nonsteroidal antiinflammatory drug; SNRI = serotonin–norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant.

<sup>a</sup>This list is not comprehensive. Note that although NSAIDs and opioids are included because they're often prescribed, evidence of their effectiveness is lacking.

of the walking interventions were associated with significant improvements in self-reported functional status. These findings suggest that some form of movement should be encouraged as a main treatment goal for people with FMS. Yet movement can be challenging in this population; many people with FMS report feeling more “hurt and . . . fatigued” after exercising,<sup>35</sup> possibly because they “try to do too much too soon.”<sup>8</sup> Patients should be advised to begin with mild or moderate forms of exercise and to increase the intensity and duration slowly.<sup>8</sup>

CBT is a multimodal approach that seeks to alter patterns of negative thoughts and attitudes by fostering more adaptive thoughts and attitudes. In patients with FMS, CBT has been investigated as a way to address pain and improve function and self-management skills. For example, Nielson and colleagues evaluated the effects of a three-week inpatient CBT program by assessing FMS symptoms on three occasions: five

months before admission to the program, on admission, and at discharge.<sup>36</sup> Program participants received intensive, individualized training in progressive muscle relaxation, cognitive restructuring, activity pacing, and exercise. Data analysis revealed that upon completing the program, participants reported significant reductions in pain severity, the perceived interference of pain in their lives, and emotional distress, as well as improvements in their sense of control over pain.

In another study, Williams and colleagues investigated the efficacy of a CBT intervention in improving functional status in people diagnosed with FMS.<sup>37</sup> Participants were randomly assigned to one of two groups: one group received usual care; the other group received a six-hour CBT intervention given over the course of four weeks that included training in cognitive restructuring, guided imagery, and communication and assertiveness skills. After four weeks,

## Treating Fibromyalgia Syndrome with CAM: The Evidence

A limited number of meta-analyses and systematic reviews of the literature have been conducted with regard to the use of specific complementary and alternative medicine (CAM) modalities in people with fibromyalgia syndrome (FMS). The following discussion summarizes findings in four areas: hypnosis and guided imagery, mindfulness-based interventions, CAM-related exercise modalities, and acupuncture.

**Hypnosis and guided imagery.** In a meta-analysis of studies evaluating the effectiveness of hypnosis or guided imagery in managing FMS symptoms, Bernardy and colleagues defined guided imagery as a therapist-led “dynamic, psychophysiologic process in which a person imagines and experiences an internal reality in the absence of external stimuli.”<sup>44</sup> (They included studies of both guided imagery and hypnosis because both involve similar underlying theoretical assumptions and therapeutic techniques.) After analyzing findings from six randomized controlled trials involving 239 participants, the authors concluded that because of methodological limitations to the studies, they couldn’t fully recommend either modality. But they also reported that a systematic review by German researchers had found hypnosis and guided imagery to be “superior to controls in reducing pain, sleep disturbances, and fatigue,” and pointed out that both modalities are recommended as adjunctive FMS treatments by the German interdisciplinary guideline. They concluded that regular home use of audiotapes featuring hypnotic suggestions and guided imagery “could be useful.”

**Mindfulness-based interventions.** In a systematic review of the literature on the effectiveness of mindfulness-based interventions in managing FMS symptoms, Henke and Chur-Hansen analyzed 10 studies involving 702 participants.<sup>47</sup> Although the quality of the studies was generally moderate to high and the intervention designs were consistent (all used a mindfulness-based group program design, though one also included qigong), the reported outcome measures and data presentation varied widely. Such limitations prevented statistical pooling and made direct comparison of results impossible. Nevertheless, the authors noted that some studies reported modest improvements, with patients in the intervention groups reporting decreased pain, improved sleep, or reduced psychological distress. Acknowledging the potential for mindfulness-based interventions to enhance self-management of FMS symptoms, Henke and Chur-Hansen recommended further research using large-scale randomized controlled clinical trials.

**CAM-related exercise modalities.** In a meta-analysis of studies investigating the use of CAM-related exercise modalities in managing FMS symptoms, Mist and colleagues found that most studies reported a medium to high effect size in pain reduction.<sup>10</sup> Their analysis covered 16 studies involving 832 enrolled participants; examined modalities included qigong, tai chi, yoga, Pilates, and lesser-known movement therapies such as Biodanza, a dance-based movement program. The authors found that a majority of studies reported overall improvement in FMS symptoms. Although no single modality emerged as superior to another, qigong and tai chi, featured in the largest number of trials, demonstrated the strongest effects in pain reduction.

**Acupuncture.** In a systematic review of the literature examining the use of acupuncture for FMS symptom management, Deare and colleagues looked at findings from nine clinical trials involving 395 participants.<sup>43</sup> Although acupuncture appeared safe, it demonstrated only a low to moderate level of effectiveness in improving pain and physical functioning. Although the measured symptom variables were similar across studies, outcome measures varied widely, weakening the applicability of findings. Moreover, the authors noted that the reported positive effects of acupuncture on pain, fatigue, sleep, and global well-being didn’t differ from those reported with sham acupuncture.

**Summary.** More rigorous studies investigating the use of CAM modalities in FMS symptom management are needed. Most of the studies in these meta-analyses and systematic reviews had small sample sizes, reported low to moderate adherence or did not report adherence, had moderate to high attrition rates, reported inadequately on adverse events, and didn’t include long-term follow-up.<sup>10, 43, 44, 47</sup> Nonetheless, despite these methodological limitations, there appeared to be consensus among the authors that these CAM interventions had potential as adjunctive treatments for people with FMS.

all participants were contacted monthly for another 12 months and were asked about their health care use and, for those in the intervention group, their use of CBT skills. The researchers found that, compared

with controls, participants in the intervention group “were nearly three times as likely to achieve meaningful and lasting improvements in physical functional status.”

Among people with FMS, patient education is often studied in conjunction with or in comparison to other treatment modalities such as exercise,<sup>38</sup> autogenic relaxation training,<sup>39</sup> or CBT.<sup>40</sup> For example, in a study by Vlaeyen and colleagues, participants were randomly assigned to one of three groups: one group received a combination of CBT and education, a second group received education only, and a third group served as wait-listed controls.<sup>40</sup> The CBT component included the use of cognitive reconceptualization and guided imagery. The educational component included information about ergonomics and psychosocial factors that influence pain, and each session ended with physical exercise. Participants in both intervention groups showed significant improvement in pain coping skills compared with controls, but differences between the intervention groups were not statistically significant. The researchers suggested that the CBT intervention may have been too complex for it to be more effective than education alone.

In another study, participants were randomly assigned either to an intervention group or to a control group.<sup>39</sup> The intervention group received a multimodal intervention in nine hour-long sessions that included education on FMS, the benefits of exercise, and barriers to behavior change, as well as autogenic relaxation training; the control group received usual care. Participants in the intervention group showed greater improvement in functionality than controls. In a third study, King and colleagues compared the efficacy of combined education and exercise, education alone, or exercise alone in improving patients'

perceived ability to cope with FMS symptoms.<sup>38</sup> They found that participants receiving both education and exercise reported the most improved coping ability, and that education alone was not effective. Such findings suggest that while education is an important component of FMS symptom management, by itself it is not sufficient.

The National Center for Complementary and Integrative Health defines CAM as various "health care approaches developed outside of mainstream Western, or conventional, medicine" that are either complementary ("a non-mainstream practice [that] is used together with conventional medicine") or alternative ("a non-mainstream practice [that] is used in place of conventional medicine").<sup>41</sup> Some researchers have explored the efficacy of various CAM modalities in treating people with FMS. While such research has been limited, and although the therapeutic mechanisms underlying these modalities aren't yet fully understood,<sup>42</sup> CAM modalities such as acupuncture<sup>43</sup>; hypnosis or guided imagery<sup>44-46</sup>; mindfulness-based interventions such as meditation<sup>47</sup>; and meditative movement therapies such as qigong, tai chi, and yoga<sup>10, 48</sup> have demonstrated moderate usefulness as adjunct treatments in managing FMS symptoms.

For example, in a study several colleagues and I conducted among women diagnosed with FMS, participants were randomized either to usual care or to usual care plus a 10-week intervention involving daily guided imagery practice.<sup>45</sup> We found that, compared with controls, participants in the intervention group reported statistically significant decreases in pain intensity, fatigue, and depression. We also found that "time since diagnosis" was a significant predictor of these outcomes—the longer the duration of time since FMS diagnosis, the more effective the intervention seemed to be. For more information on specific CAM modalities, see *Treating Fibromyalgia Syndrome with CAM: The Evidence*.<sup>10, 43, 44, 47</sup>

Nonpharmacologic strategies (including CAM modalities) are often used in tandem with medication in treating FMS symptoms. But for many of these strategies, the research evidence is limited, and questions remain regarding their efficacy and long-term effects. Further studies are needed. What we do know is that such strategies can potentially enhance a patient's ability to self-manage her or his symptoms.

#### **PATIENT SELF-MANAGEMENT AND NURSING IMPLICATIONS**

Self-management can be defined as the ability to cope simultaneously with symptoms, treatment, and psychosocial sequelae (such as illness-related changes in self-identity and lifestyle).<sup>49</sup> Several studies have shown that self-management strategies can help patients living with chronic pain to better accept their symptoms and life situations, and can enhance their

### **Resources**

#### **National Data Bank for Rheumatic Diseases**

Offers free fibromyalgia diagnostic criteria questionnaires and auxiliary materials to download.

[www.arthritis-research.org/research/fibromyalgia-criteria](http://www.arthritis-research.org/research/fibromyalgia-criteria)

#### **National Fibromyalgia Association**

Provides assistance in locating local support groups and supports conferences and research.

[www.fmaware.org](http://www.fmaware.org)

#### **University of Michigan Chronic Pain and Fatigue Research Center**

Offers patient education materials in various areas, including communication, memory, problem solving, physical activity, relaxation, sleep, and stress management.

[www.med.umich.edu/painresearch/patients/self.htm](http://www.med.umich.edu/painresearch/patients/self.htm)

sense of empowerment.<sup>50-54</sup> Shared decision-making is an inherent aspect of self-management, in that patients are no longer passive recipients of care; rather, they become active, informed, and responsible participants working in collaboration with their nurses and other health care professionals.

Because remission of FMS symptoms is reportedly rare or nonexistent and because the adverse effects of medication can complicate matters, it's essential for both nurses and patients to be well-informed about both the illness and symptom management. Indeed, there is evidence to suggest that once other pain disorders have been ruled out and patients receive a diagnosis of FMS, they experience a sense of relief; as Clauw has noted, one result may be "decreased health care utilization, with fewer referrals and reduced diagnostic testing seeking causes of pain."<sup>8</sup> This suggests that once the diagnosis is "believed" by others, the patient may be more receptive to education, health coaching, and shared decision making about symptom management strategies.

An important first step for nurses, then, in building nurse-patient rapport is to express belief in the validity of the patient's diagnosis. Nurses might conduct a self-assessment for any biases they may have with regard to FMS. Any unacknowledged or unexamined attitudes have the potential to influence nurse-patient interactions, whether negatively or positively. Research has also found that when nurses use active listening and "empathic responding" with regard to FMS patients' concerns, nurse-patient communication is enhanced, contributing to improved patient-centered care.<sup>55</sup>

To help people with FMS become more proactive in managing their symptoms, with the goal being an improved quality of life, several nursing approaches are recommended. These include providing<sup>8</sup>

- education on centralized pain and the potential effects of medications used to treat FMS.
- encouragement and coaching with regard to developing good movement and exercise habits.
- education on sleep hygiene.
- suggestions for incorporating relaxation and mindfulness-based strategies, such as guided imagery, yoga, and meditation.
- general lifestyle coaching that includes stress management skills.

For example, offering sleep hygiene education can help the patient to understand the importance of one's sleep regimen and behaviors, such as going to bed at the same time each night, avoiding daytime napping, and going to bed only when sleepy.<sup>8</sup> Movement and exercise can be promoted by first addressing pain management needs, then encouraging the patient to progress gradually from breath awareness and relaxation training to flexibility, then to strength and balance work, and lastly to aerobic exercise.<sup>35</sup> Stress management coaching might begin with asking

the patient to identify which coping strategies have worked in helping her or him to alleviate stress and manage FMS symptoms. It may also be helpful to discuss with patients ways in which they might begin to adjust the pace of daily activities to their current physical and cognitive abilities. People with FMS sometimes overextend themselves, either in response to the attitudes of others or to prove to themselves that they can "beat the pain." But such behavior can backfire, putting the patient at increased risk for disability.<sup>56</sup>

To facilitate provider-patient partnerships, the ACR has compiled a list of online resources for patients and health care providers that offer opportunity for continued self-education: visit [www.rheumatology.org/I-Am-A/Patient-Caregiver/Diseases-Conditions/Fibromyalgia](http://www.rheumatology.org/I-Am-A/Patient-Caregiver/Diseases-Conditions/Fibromyalgia) and click on "Additional Information." See *Resources* for a selection of other useful Web sites. ▼

For 15 additional continuing nursing education activities on topics related to complementary and alternative medicine, go to [www.nursingcenter.com/ce](http://www.nursingcenter.com/ce).

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