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Fibromyalgia: do I tackle you with complementary medicines?

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Abstract

Recent guidelines for managing fibromyalgia highlight the importance of a graded-care approach, tailoring treatment to predominant symptoms, and appropriately integrating nonpharmacological treatments and complementary medicine (CM). Many fibromyalgia patients turn to nonpharmacological treatment and CM for various reasons, including concerns about medication side effects and persistent symptoms despite pharmacological treatment. In addition, these approaches are sometimes mistakenly, but often, perceived as natural and, therefore, widely accepted as well-tolerated with minimal risks. However, as with many patients using CM, fibromyalgia patients frequently engage in these practices without informing their physicians, often because of fear of a negative reaction. This can occur in contexts that lack adequate safeguards, such as treatment by noncertified practitioners, undocumented practices, excessive costs, or unsafe environments. In this narrative review, we first provide updated definitions of these practices, discuss their potential benefits and associated risks, and explore the challenges in their evaluation. We then summarize key findings from the literature before proposing a structured approach for discussing these practices with fibromyalgia patients. This includes assessing their prior experiences, expectations, and motivations for long-term adherence. We also offer guidance on selecting qualified practitioners and ensuring a sufficiently safe treatment environment. Finally, we highlight essential "red flags" that pain specialists and health care providers should discuss with patients, emphasizing the need for caution or even discontinuation of certain practices when these warning signs are present.

Keywords: Fibromyalgia, Complementary medicines, Non-pharmacological interventions, Non-pharmacological treatments, Integrative medicine

1. Introduction

The reported prevalence of complementary medicine use among the general population is high and likely underestimated. A systematic review of national studies from 14 countries published between 2010 and 2019 found that prevalence rates over the past 12 months ranged from 24% to 71%, with most individuals using it alongside conventional medicine.[45] In its report on a "Strategy for Traditional Medicine 2014 to 2023," the WHO states that traditional and complementary medicines "represent a significant and often underestimated aspect of health care."[72]

Nonpharmacological interventions and complementary medicines are now advised, and in some cases, they are recommended as first-line options for many chronic conditions, particularly in vulnerable patients who are at higher risk of adverse drug reactions, especially with long-term medication use. This is notably the case in chronic pain, both cancer related[49] and non–cancer related, and particularly in fibromyalgia syndrome (FMS),[10] where diagnostic and therapeutic delays and psychological comorbidities (such as anxiety disorders, insomnia, and addiction issues) are frequently observed.

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However, fibromyalgia patients, as many patients using complementary medicine (CM), often resort to these practices without informing their physician, fearing a negative reaction, and in environments that are often insufficiently regulated (eg, unlicensed practitioners, undocumented practices, excessive costs, or a practice setting with no safety assurances).[28]

Rather than offering a literature review on this topic, which has already been the subject of numerous studies, we have chosen to present a narrative review that takes into account our experience with both fibromyalgia patients and the benefits and risks of nonpharmacological treatments and complementary medicine. Thus, we will successively address the updated definitions of these practices, their potential benefits and associated risks, the challenges in their evaluation, and the key data from the literature. We will then propose a guide for interviewing fibromyalgia patients regarding these practices, followed by recommendations on selecting a practitioner with adequate training and a sufficiently safe practice.

2. Definitions

Before proposing key messages on referring fibromyalgia patients to complementary medicine practitioners, it is useful to first provide definitions[5,11]that benefit both patients and the health care providers overseeing their care[55] (Supplementary Material 1, http://links.lww.com/PR9/A308).

3. Challenges in evaluating NPT and CM in fibromyalgia

The evaluation of non pharmacological treatments (NPTs)/CM in fibromyalgia has primarily used quantitative research methods, with randomized controlled trials (RCTs) serving as the gold standard. Outcome measures such as improved quality of life, reduced disability, enhanced social and occupational integration, and decreased medication use are preferable to focusing solely on pain relief.

However, RCTs, originally designed for drug evaluation, have methodological limitations in the context of fibromyalgia, particularly in the following areas.

3.1. Challenges related to the patients

1. Most patients diagnosed with fibromyalgia frequently present psychological vulnerability, stemming both from often traumatic life histories and the psychological impact of chronic pain. Thus, they also often meet the criteria for mental health disorders and other chronic pain syndromes.[12,34] It is important to ensure that exclusion criteria in studies are not overly stringent, as this can exclude more severely affected patients who are regularly encountered in clinical practice. In addition, patients may report a variety of symptoms, often associated is pain, also fatigue (often the primary complaint), sleep disturbances, anxiety, and depression, among others.[46]
2. Patients often have high expectations for symptom relief,[13] especially given previous treatment.
3. Patients frequently report adverse effects from prescribed pharmacological treatments, often experiencing a "nocebo effect" with these treatments.[33]
4. Patients regularly demonstrate distrust toward conventional treatments and even toward conventional health care providers, with the therapeutic relationship often strained with primary or secondary care physicians and health care providers.[57,67]

3.2. Challenges related to the treatments

(a) Studying the efficacy of NPIs/CM

NPT/CM can have clinically meaningful effects on various FMS symptoms, including pain, sleep disturbances, fatigue, affective symptoms (depression/anxiety), functional impairment, and cognitive issues.[10,69] These positive effects are often sustained (albeit diminishing over time), especially with cognitive behavioral therapies and combined treatments.[7]

By contrast, patients frequently express concerns about the side effects of medications.[33] The potential symptom relief provided by pharmacological treatments is generally limited to the duration of use,[58,63] and patients may be frustrated by persistent symptoms despite continued pharmacologic treatment.

However, methodological difficulties exist in assessing the efficacy of these approaches:

1. Randomization can be challenging when patient preferences are strongly influential.
2. Selection of an appropriate control group: double-blind procedures are often not feasible on the patient side and are rarely achievable for the practitioner. Double blinding can be implemented for "technical" nonpharmacological therapies, such as brain stimulation or acupuncture (with a control group receiving a placebo, or sham, technique), but it is not possible for nontechnical therapies like exercise, manual therapies, or psychological and mind–body therapies, such as hypnosis or meditation.[25] For these, usual care or a waitlist control group is frequently used as a control.
3. Standardization of an intervention, which is recommended in RCTs to allow for future replication if the intervention proves effective, is possible but may not always be suitable for complementary medicines.

In addition, other factors may contribute to the often-insufficient quality of published trials on NPIs/CM[61]:

1. Small sample size, a common source of bias;
2. Recruitment bias (specialized centers, patients with less pain, highly motivated);
3. Lack of specification regarding the profession and/or qualifications of therapists;
4. Evaluators and therapists being the same individuals;
5. Heterogeneous patient treatment groups;
6. Existence of multiple control groups;
7. Nonvalidated outcome measures;
8. Programs with multiple therapeutic components, making it challenging to assess the specific effect of any single component within the program.

(b) Studying adverse effects of NPIs/CM
Safety and risks

NPT/CM approaches are often perceived by patients as more natural or environmentally friendly, and they are generally considered, well-tolerated with minimal harmful effects. They often carry fewer side effects than medications,[58] although adverse effects remain underevaluated in clinical trials, as they are presumed to be benign, which may not always be the case. Some NPT/CM can have undesirable effects, such as exacerbating pain.[20]

Many trials on NPIs/CM have not systematically evaluated adverse events,[64] although such assessments are essential in this type of study.

(c) Qualitative research methods (or mixed methods combining quantitative and qualitative approaches) are relevant in the evaluation of CM for fibromyalgia, offering an in-depth exploration of participants' perspectives and lived experiences through verbal data. This approach helps identify meaningful indicators of effectiveness from the patient's viewpoint, with the aim of developing patient-reported outcomes (PROs).[65] But qualitative or mixed-methods studies on fibromyalgia remain relatively rare in the literature.[19,47,50]

(d) **Limited access and thus nonadherence to certain pharmacological treatments can result from high costs and/or inadequate coverage** by health insurance or supplemental insurance, leading to dose reduction or treatment discontinuation sometimes.[24]

4. Standard criteria for assessing the effectiveness and risks of NPIs/CM in fibromyalgia[35]

(a) Efficacy of NPIs/CM

The most commonly observed clinical trial outcomes, consistent with clinical practice, include

1. clinically significant pain relief reported by participants (eg, a 30% or greater reduction in pain);
2. participant-reported disability/physical function;
3. clinically meaningful improvement in health-related quality of life (HRQoL), reported by participants, or Fibromyalgia Impact Questionnaire (FIQ), such as a total FIQ score improvement of 20% or more, or a relative difference of 15% from mean scores; and
4. improvement on the Patient Global Impression of Change (PGIC).

(b) Safety of NPIs/CM

This involves reporting participants who experienced a serious adverse event, including any medical event or adverse effect, that at any dose, results in death, is life threatening, requires hospitalization or prolongs an existing hospitalization, or results in persistent or significant disability.

5. Key data from the literature

The therapeutic management of patients with fibromyalgia is known to be challenging in clinical practice,[31] supported by clinical trials showing that only a minority of patients achieve clinically significant improvement with a single NPT intervention and that they often use multiple NPTs.[3,34] The number of available studies on each nonpharmacological therapy for FMS is very large. It was not reasonable, within the scope of this article, to attempt an exhaustive review of results. Therefore, we chose to focus on meta-analysis, systematic reviews, and international guidelines to provide readers with insights into their respective practical relevance in 2025.

A growing number of meta-analyses have been published over the past 5 years, reporting the results of randomized controlled trials on the following NPT,[42] but the precise number and types of NPTs available for fibromyalgia remain undefined.[8]

Apart from tailored exercise, which has strong evidence supporting its efficacy in fibromyalgia, most other NPT have only low to moderate levels of evidence. Meta-analyses[2] highlight the relatively small sample sizes of the studied groups, along with numerous biases and confounding factors. In addition, the precise protocols—such as the duration and frequency of NPT sessions—are often not standardized across studies.

5.1. Exercise, manual therapy, and other physical treatments

(a) Exercise: There is a consensus to recommend aerobic exercise (endurance training, including aquatic exercise training, low to moderate intensity, which has beneficial effects on physical function, pain, fatigue, and stiffness).[8,9,60] Tailored exercise dosing is recommended to optimize adherence and outcomes; fibromyalgia patients with the best compliance show greater improvement in pain, fatigue, and sleep.[56] Patient with fibromyalgia should engage in aerobic exercises two to three times a week, for 25–40 minutes in each session, aiming for more than a 100 minutes per week. Exercises should be based on personal preferences and accessibility to ensure long-term adherence.[14]

Balneotherapy can reduce pain intensity in the short term[26,29,36] and improve disability,[36] if combined with patient education in the short and medium terms.

(b) Manual therapy can reduce pain intensity (strong evidence)[15,36] and improve disability (moderate evidence)[36] and sleep (moderate evidence)[15,36] in the short term.

(c) Transcutaneous electrical nerve stimulation[38]: A meta-analysis published in 2024 by Garcia-Lopez et al.,[30] which included 12 studies and 944 patients, showed that transcutaneous electrical nerve stimulation interventions were effective in improving pain, disability, and physical dimension quality of life in patients with fibromyalgia.

(d) Noninvasive brain stimulation: The different modalities of noninvasive brain stimulation can yield interesting results in the treatment of fibromyalgia.[41] However, these techniques are not usually classified as NPT/CM and will not be discussed in this article.

5.2. Psychotherapies and mind–body practices:

(a) Cognitive–behavioral therapy and acceptance and commitment therapy[73]: According to a meta-analysis published by Cojocaru et al.,[18] these approaches, which appear to have potential benefits in reducing depressive and anxious symptoms in patients with fibromyalgia, could be integrated into a multidisciplinary management strategy to support emotional adjustments associated with chronic pain and disability in these patients.

In 2022, Climent-Sanz et al.[17] published a meta-analysis of 226 studies on the effectiveness of CBT for insomnia (CBT-i) in fibromyalgia, of which five were included. They found that CBT-I was associated with a significant improvement in sleep quality, pain, anxiety, and depression, although with small effect sizes, compared with other nonpharmacological treatments.

(b) Mind–body practices, such as mindfulness meditation, are among the most studied CM in fibromyalgia, although their evidence level generally remains low.[44,68,70] In 2024, Meng et al.,[51] published a meta-analysis conducted by which included 10 randomized controlled trials and 818 participants, concluded that mindfulness meditation provides very low to moderate evidence of improving the quality of life and alleviating stress, insomnia, and depression in patients with fibromyalgia in the short term. More interestingly, improvements in depression and stress levels persisted in the medium term. This likely warrant increased prescription in FMS, especially in cases with psychological comorbidity.

(c) Meditative movement therapies (like Qigong, Tai Chi[71] or Yoga) have data to allow positive recommendation (low-quality evidence, strong consensus). They can reduce sleep disturbances and depression and enhance quality of life.[22,43]

(d) Hypnosis, guided imagery, relaxation: The level of evidence for these practices is low,[6,7,75] but their tolerance and feasibility are good. They could be used as add-on therapies for fibromyalgia, particularly in association with to CBT.

5.3. Diet and lifestyle modifications

(a) Numerous dietary measures and lifestyle modifications have been evaluated in the management of fibromyalgia,[52] and they could find their place in multidimensional management, with a potential improvement in pain and/or fatigue in particular. Increased fiber intake, reduction of fat and sugars,[39] anti-inflammatory and gluten-free diet,[66] vitamin D supplementation in FM patients who are at risk for a deficiency,[40] and supplementation with Coenzyme Q10[62] may have potential benefits, but no sufficient level of evidence has been established to date.

(b) Sleep hygiene[16] and weight control[21,39] should probably be implemented as part of a patient-centered, multidisciplinary approach.

5.4. Acupuncture

Various available studies report variable results of acupuncture in the management of fibromyalgia patients.[23,74,76] In 2024, Ye et al.[74] published a meta-analysis including 41 prospective randomized trials encompassing 2977 patients. They concluded that acupuncture combined with massage and umbilical acupuncture emerged as the most effective needling therapies for relieving pain symptoms in FMS, with a high safety profile.

5.5. Data from Meta-analysis and Literature Reviews

In 2023, an overview of Cochrane Reviews[10] included 10 Cochrane reviews, analyzing 181 randomized or quasi-randomized trials on NPT for fibromyalgia (11,917 participants, with an average trial size of 66). The reviews examined exercise training, acupuncture, transcutaneous electrical nerve stimulation, and psychological therapies. The main findings of this Cochrane overview are as follows: "There is low-certainty evidence of clinically relevant reductions in mobility difficulties and improvements in health-related quality of life (HRQoL) among individuals with FMS through aerobic and mixed exercise training and cognitive behavioral therapies (CBTs) at the end of the intervention. There is low-certainty evidence that CBTs and mixed exercise training reduce mobility difficulties posttreatment and that mixed exercise training improves HRQoL at follow-up to clinically meaningful levels."

6. Recommendations for fibromyalgia management including NPT/CM

NPTs/CM have been introduced in different recommendations.[1,27,48,69] These recommendations have become increasingly consensual, with guidelines from the United States,[13] Germany,[32] Europe,[48] Canada,[27] and Israel focusing on complementary therapies,[1] as well as comparative analyses.[42,69] These guidelines emphasize the importance of gradual and progressive treatment, adapting care based on predominant symptoms (eg, pain, fatigue, insomnia) and the extent of disability, as well as appropriately prescribing NPIs and CM, such as exercise and psychological interventions. Consideration of patient expectations and preferences is also highlighted.[20] Pharmacological treatments may not be necessary, especially in moderate forms, where nonpharmacological treatments should be recommended as the first-line treatments.[48,59]

(a) **First-line recommendations:** it is recommended to diagnose FMS with written documentation,[48] offer patient education on FMS[37,53,54], and prescribe NPIs and CM, with a primary focus on tailored physical exercise.

(b) **Second-line recommendations:** treatment should be tailored to the patient's profile, particularly considering pain severity, sleep disturbances, the presence of major depressive disorder, and/or associated disability. Medication is reserved for cases of severe pain, significant sleep disorders, and/or moderate to severe depression. In instances of substantial disability, rehabilitative approaches are prioritized. In cases of anxiety, mood disorders, or ineffective coping strategies, cognitive–behavioral therapy and/or mind–body approaches are recommended.

(c) **Third-line recommendations:** for severe FMS, a multidisciplinary approach combining pharmacological treatments with nonpharmacological therapies is now recommended.[48,59]

7. How to conduct an interview with a fibromyalgia patient regarding nonpharmacological treatments and complementary medicines? (Supplementary Material 2, http://links.lww.com/PR9/A308)?

An interview with a fibromyalgia patient about complementary medicine should be structured to explore their past experiences, expectations, motivation, and potential commitment. The goal is to adopt a patient-centered approach based on active listening, validation of their experiences, and therapeutic education.

To maximize long-term benefits, practitioners should encourage patients to adopt self-practices for each therapy implemented,[14] whenever possible. This can reduce "medical nomadism" and help patients build confidence in their own abilities to alleviate symptoms.

7.1. How to implement NPT recommendations in practice

The efficacy of complementary therapies is enhanced, and risks are minimized when targeted symptoms are clearly defined, treatment goals are realistic, and care is delivered by skilled professionals in a controlled environment.

1. Monotherapy, regardless of its nature, often fails to provide sufficient relief from pain, disability, sleep disturbances, or mood symptoms, especially in cases of severe fibromyalgia.
2. The patient's previous experience and preferences regarding NPT influence their efficacy and long-term adherence. They should be taken into account.
3. Tailored exercise dosing is recommended to optimize adherence and outcomes.
4. When anxiety, mood disorders, sleep issues, or maladaptive coping strategies are present, cognitive–behavioral therapy and mind–body interventions should be prioritized.

To optimize long-term benefits, practitioners should encourage patients to engage in self-practice for each implemented therapy whenever possible. Similarly, active therapies should be favored over passive ones, as they are more likely to yield sustained improvements in fibromyalgia symptoms.

8. Recommendations for choosing a safe complementary medicine practitioner for FMS (Supplementary Materials 3 and 4, http://links.lww.com/PR9/A308)

To help fibromyalgia patients choose a practice and a practitioner that are sufficiently safe and effective,[4,5] caregivers can ask the key questions outlined in Supplementary Material 3, http://links.lww.com/PR9/A308.

The presence of red flags outlined in Supplementary Material 4, http://links.lww.com/PR9/A308,[5] should encourage the patient and caregivers to exercise caution regarding the practice, potentially discontinuing it or even reporting it to appropriate authorities.

9. Conclusions

Fibromyalgia patients frequently seek nonpharmacological and complementary medicine approaches. Current evidence reasonably supports the implementation of such interventions; however, they should be integrated into a comprehensive, multidisciplinary, management plan. Effective and regular communication among health care professionals involved in patient care is essential to ensure coordinated and patient-centered treatment.

Before initiating a complementary medicine, it is very important to gather the patient's perceptions of these therapies, their past experiences, preferences, expectations, and motivation, ensuring a genuine and sustained improvement. Pain specialists and health care providers have a responsibility to offer the most reliable and up-to-date knowledge regarding the benefits and risks of these approaches in fibromyalgia. In addition, when prescribing or recommending nonpharmacological interventions, they must ensure their safe implementation by qualified professionals.

Finally, access to these therapies and their reimbursement by health insurance or complementary coverage remain unresolved issues, particularly given that chronic pain—and fibromyalgia in particular—often lead to financial strain for patients.

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