Assessment and Management of Fibromyalgia
Fibromyalgia (FM) is manageable in the primary care setting\(^1,2\)

Managing FM can be like managing other chronic conditions\(^2\)

Screening and diagnostic tools are available to facilitate identification of potential FM patients\(^3,4\)

Effective management integrates multimodal nonpharmacologic and pharmacologic approaches\(^2\)

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1. Brown TM, et al. Pain Week\textsuperscript{®} '10, the Annual Meeting of the ASPE; September 8-11, 2010; Las Vegas, NV.
## Goals of FM management:

- Result in fewer visits to the healthcare provider (HCP) and has the potential to save money for the primary care practice\(^1\)
- Streamline follow-up visits\(^2\)
- Empower patients to better manage their disease\(^2,3\)
- Improve patients’ functional ability\(^2,3\)

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HCP = healthcare provider.

1. Brown TM, et al. Pain Week® ’10, the Annual Meeting of the ASPE; September 8–11, 2010; Las Vegas, NV.
Managing FM is similar to managing other complex chronic conditions (eg, asthma, diabetes)

Key features of FM and other chronic conditions:
- There is no cure
- The condition is associated with comorbidities
- The condition affects many aspects of patients’ lives
- The condition requires patient self-management

Key features of disease management:
- Pharmacologic therapy
- Nonpharmacologic therapy
- Patient self-management strategies and behaviors
## A Chronic Disease Management Framework for Managing FM\textsuperscript{1}

<table>
<thead>
<tr>
<th>Explain the Condition</th>
<th>Set Treatment Goals</th>
<th>Apply Multimodal Therapy</th>
<th>Track Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Integrate disease education with diagnosis</td>
<td>• Assess symptom severity</td>
<td>• Consider pharmacotherapy as appropriate</td>
<td>• Measure progress against treatment goals</td>
</tr>
<tr>
<td>• Provide credible information sources</td>
<td>• Prioritize functional areas and symptoms to be treated</td>
<td>• Treat comorbid conditions</td>
<td>• Adjust treatment plan accordingly</td>
</tr>
<tr>
<td>• Set expectations for patients</td>
<td></td>
<td>• Incorporate nonpharmacologic therapies</td>
<td></td>
</tr>
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What Are the Benefits of Engaging the Patient to Understand FM?

- Diagnosis and subsequent education sets the stage for effective management
  - Diagnosis provides validation, relief, and reassurance\(^1\)
    - May improve certain outcomes\(^2\)
  - Education provides empowerment, leading to better self-management\(^2,3\)
- Setting basic expectations for you and your patient can help establish a productive, more efficient partnership, and may minimize frustration\(^4\)

Pain Pathophysiology
Chronic Pain Conditions Can Be Classified Based on Type of Pain Pathophysiology

Three Main Types of Pain Pathophysiology:

- **Nociceptive Pain**: Pain related to damage of somatic or visceral tissue, due to trauma or inflammation
  - EXAMPLES: rheumatoid arthritis, osteoarthritis, gout

- **Neuropathic Pain**: Pain related to damage of peripheral or central nerves
  - EXAMPLES: painful diabetic peripheral neuropathy (pDPN), postherpetic neuralgia

- **Sensory Hypersensitivity**: Pain without identifiable nerve or tissue damage; thought to result from persistent neuronal dysregulation
  - EXAMPLES: fibromyalgia

Patients with FM often exhibit\textsuperscript{1,2}:

- Pain in multiple body regions
- Multiple somatic symptoms
  - eg, fatigue, memory difficulties, sleep problems, disturbance
- Higher current and lifetime history of chronic pain in several body regions
- Family history of chronic pain
- More sensitive to other sensory stimuli
  - eg, bright light, loud noises, odors
- Pain may be triggered or exacerbated by stressors
- Generally normal physical examination except for diffuse tenderness and nonspecific neurologic signs

Identifying the FM Patient
Clinical Features of FM

FIBROMYALGIA

Chronic Widespread Pain

1. CORE criteria of FM
   - Pain is in all 4 quadrants of the body ≥3 months
   - Patient descriptors of pain include:
     - Aching, exhausting, nagging, and hurting

Tenderness

2. Sensitivity to pressure stimuli
   - Tender point exam given to assess tenderness
3. Features of FM
   - Hyperalgesia
   - Allodynia

Other Symptoms

3. Fatigue
4. Pain-related conditions/symptoms
   - Chronic headaches/migraines
   - Subjective morning stiffness
5. Neurologic symptoms
   - Subjective, tingling in extremities
6. Sleep disturbances
   - Non-restorative sleep, RLS

References:
Other Pain States
- IBS
- Headaches/migraines

Infection and Inflammation
- Crohn’s disease

Psychological Disorders
- Depression
- Anxiety disorders

Rheumatic Disorders
- Rheumatoid arthritis
- Systemic lupus erythematosus

Consider FM in patients with chronic conditions who also suffer from chronic widespread pain, fatigue, and sleep disturbances

Proper screening is a critical first step to managing fibromyalgia\(^1\)

- Several validated screening tools include:
  - FibroDetect\(^2\)
  - Fibromyalgia Survey Questionnaire (FSQ)\(^3\) – ACR 2010 modified for patient report
  - London FM Epidemiology Study Screening Questionnaire (LFES-SQ)\(^4\)

These screening tools are provided to inform choice and their use is not prescriptive. They are not a clinical diagnosis, nor designed to take the place of a physician consultation.\(^3,4\)

The 1990 ACR criteria for the classification of FM include:

- Chronic widespread pain (core feature) for ≥3 months
  - Pain above and below the waist
  - Pain on left and right sides of body
  - Pain in the axial skeleton
- Pain at ≥11 of 18 tender points when palpated with 4 kg/cm² of digital pressure

The 1990 ACR criteria are¹:

- Sensitive (88.4%) – proportion of patients correctly identified as having the condition
- Specific (81.1%) – proportion of patients correctly identified as not having the condition

According to the 2010 ACR preliminary criteria, FM can be diagnosed based on a HCP-administered questionnaire:

1. Widespread pain index (WPI)
   - The number of painful body regions

2. Symptom severity (SS) scale that assesses the severity of:
   - Fatigue
   - Waking unrefreshed
   - Cognitive symptoms
   - Quantifies the occurrence of other somatic symptoms

3. Pain and symptoms present for 3 months or longer

The 2010 preliminary ACR criteria¹:

- Not meant to replace current ACR classification criteria, but to offer an alternative method of FM diagnosis
- Accurately identified 88% of the same FM cases initially identified by the 1990 ACR classification criteria

### ACR: Two Types of Classification and Preliminary Diagnosis Criteria for FM

<table>
<thead>
<tr>
<th>Parameter</th>
<th>1990 Classification Criteria$^1$</th>
<th>2010 Preliminary Diagnostic Criteria$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider pain to be a central symptom of FM</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Although definition of FM is broadened to include other symptoms</td>
</tr>
<tr>
<td>Include assessment of symptoms other than pain in diagnosis</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Symptom Severity Scale assesses somatic symptoms such as fatigue, sleep, cognition</td>
</tr>
<tr>
<td>Specify use of a tender point exam</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>However, a physical exam is recommended for all patients</td>
</tr>
</tbody>
</table>

- A May 2010 article in *Arthritis Care & Research* proposed new criteria for the diagnosis of FM$^2$
- Among the objectives of the study was to identify non-tender point diagnostic criteria$^2$
- These criteria are not intended to replace the 1990 ACR Classification Criteria, but to represent an alternative method of diagnosis$^2$

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Managing the Fibromyalgia Patient
Manage Expectations Upfront

<table>
<thead>
<tr>
<th>Expectations Regarding the Course of Disease</th>
<th>Expectations Regarding the Treatment Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Goal of treatment = improvement in function and symptoms (not cure)&lt;sup&gt;1&lt;/sup&gt;</td>
<td>• Process of care utilizes a collaborative healthcare team&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>• FM is dynamic, with potential for flare-ups and setbacks&lt;sup&gt;2&lt;/sup&gt;</td>
<td>– The patient is a critical member of this team</td>
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</table>

• Other expectations may include:
  – Frequency of office visits
  – How much time will be available at each visit
  – Prioritization of goals
  – Position on disability

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What Are the Benefits of Setting Meaningful Treatment Goals?

• Goal setting helps focus and streamline follow-up visits\(^1,2\)
  – Provides a plan of action
  – Focuses the patient on targeted functional outcomes
  – Provides structure for follow-up visits

• Appropriate goals for FM management\(^2,3\)
  – Specific
  – Realistic
  – Measurable
  – Reflect the patient’s priorities
  – Have a target date for completion
  – Aim for improved functionality in key domains

• Assess potential barriers and help the patient problem-solve to minimize them\(^4\)

# Tools to Document Baseline Status and Manage Treatment Progress

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
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</table>
| Revised Fibromyalgia Impact Questionnaire (FIQR)¹      | • 21 questions to assess functional status and symptoms over previous 7 days  
• Can be used to track specific functional domains or symptoms at initial assessment and at each visit thereafter  
• Physician or office staff administer, taking <2 minutes |
| Modified Visual Analog Scale of the Fibromyalgia Impact Questionnaire (mVASFIQ)² | • Quantifies the severity of individual FM symptoms  
• Provides the basis for initial treatment plan  
• Identifies most bothersome symptoms  
• Patients can complete, taking <2 minutes |
| ACR 2010 Preliminary Diagnostic Criteria³             | • Comprises widespread pain index (WPI) and 2 symptom severity (SS) scales  
• Provides alternative FM diagnostic criteria to ACR Tender Point Exam; SS portion may be used to track progress over time  
• Valid, reliable diagnostic tool; not yet validated for tracking progress  
• Physician or office staff administer |
| Numeric rating scale (NRS)⁴                           | • Can be used to assess functional impact/symptom severity  
• Values directly entered into patient’s chart or electronic medical record  
• Patient can complete, taking <2 minutes |

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The Multimodal Approach
Why Apply Multimodal Therapy?

No single treatment approach for FM targets every symptom; a multimodal treatment approach can enhance care and maximize results.

Mood disturbance
Sleep disturbance
Chronic widespread pain and tenderness
Morning stiffness
Fatigue

Key Facets of the Multimodal Treatment Approach

1. Be proactive and prepared: know your patient, team, and community
2. Maximize the effectiveness of pharmacotherapy
3. Promote nonpharmacologic therapies for FM management
4. Provide sleep hygiene advice

Offer strategies to improve adherence to physical activity

References:
Management of FM: A Multidisciplinary Approach

Pharmacotherapy¹

Patient education²,³
- Diet/nutrition
- Sleep hygiene
- Management of expectations
- Journaling

Cognitive behavioral Therapy⁴
- Biofeedback
- Communication skills training

Treatment Approaches

Alternative/complementary¹
- Massage
- Acupuncture
- Chiropractic

Exercise¹
- Cardiovascular exercise
- Strength training
- Stretching

References:
General Strategies When Initiating Medication Therapy

- **Evaluate previous or existing pharmacological/nonpharmacological therapies:**
  - Determine if previous drug treatment trials were adequate (duration and dose)
  - Consider potential drug interactions

- **Educate patients regarding rationale for medication therapy**¹

- **To help manage medication intolerance**²:
  - Start with one drug at a time
  - Initiate at lower dose and titrate up
  - Discuss strategies for managing side effects

- **If more than one medication is needed, be aware of potential drug interactions**²

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Integrate Patient Education Into Practice

Review educational messaging with patients

Provide patients with educational literature

Plan and make optimal use of existing resources

Have patients do their own research and bring in questions

Provide supplemental education
- Patient advocacy organizations
- Group education programs
- Suggested reading/resources
- Use of supplemental support staff

Patient Education

• Diet/Nutrition\textsuperscript{1,2}
  – Foods to recommend: fruits and vegetables, possibly omega-3 containing fish, multi-vitamins

• Sleep hygiene\textsuperscript{3,4}
  – 76% of FM patients report sleep problems
  – Counsel patients to:
    • Keep a regular sleep schedule and reserve bed for sleeping
    • Keep bedroom quiet, dark, and at a comfortable temperature

Patient Education

• Journaling\(^1\)
  – Keeping track of stress, activities, sleep, weather, etc, can help patients recognize and understand pain triggers and other symptoms
  – This may empower them to control/minimize their pain

• Management of patient expectations\(^2,3\)
  – Goal setting
  – Coping strategies to get through flares
  – Myths and misconceptions discussion

Exercise Recommendations

- Studies have shown that physical fitness reduces FM symptoms through\(^1\):
  - Decreased pain sensitivity
  - Increased tolerance to pain
  - Muscles that are less susceptible to damage

- Appropriate exercises\(^1,2\):
  - Low impact activity
    - Eg, walking, water running, bicycling
  - Strength training
    - Avoid eccentric muscle contractions
  - Stretching
    - Stretch to feel tightness but not pain
    - Hold for 20 to 30 seconds

**Alternative/Complementary**

• **Massage**¹,²
  – Myofascial release, connective tissue, and manual lymph drainage massages have all shown to significantly decrease pain scores in FM patients
  – All massages should be conducted **PAIN FREE!!**
  – Benefits are short-lived; for maximum benefit, have 1-2 massage sessions/week

Scientific evidence suggests that chiropractic therapies do not significantly improve pain control in FM patients with mixed findings for acupuncture\(^1,2\):

- Acupuncture and chiropractic therapies are not recommended for FM patients

Cognitive Behavioral Therapy (CBT)\textsuperscript{1}

- Focuses on two treatment aspects:
  - “Increasing a patient’s sense of personal control over their pain
  - Decreasing dysfunctional thought patterns, such as those involved in ‘catastrophizing’ (ie, exaggerating the significance of a negative event) about the pain and its effects and associated behavioral improvements in function”
- Studies have shown CBT significantly improves self-efficacy, coping strategies, and physical function in FM patients
- It may be considered as an adjunctive therapy in the management of FM patients who are emotionally distressed

Cognitive Behavioral Therapy (CBT)¹

Key elements for FM

- Educate patients about the pathophysiology of FM (eg, sensory hypersensitivity) and interaction between emotions, behavior, and cognition in coping and functioning
- Realistic goal setting for work, social, and family interactions
- Relaxation training
- Appropriate behavioral pacing of activities (not over- or under-do)
- Identification of dysfunctional thought patterns and techniques to counter negative automatic thoughts
- Communication skills training
- Strategies for relapse prevention and for managing painful flare-ups

Follow-up
The course of FM is often not straightforward; tracking progress helps keep patients from getting discouraged and helps monitor the effectiveness of the treatment plan.

Follow-up Visits Should Be Structured to Track and Promote Progress

- Structure office visits to focus on desired functional outcomes and monitoring symptoms in key domains\(^1\)
- Ask patients about their physical activity levels and how much they use self-management techniques\(^1\)
- Use each visit to assess the progress of the patient’s goals to cover important education and self-help topics\(^2\)
- Encourage patients to take ownership for managing FM by giving simple “homework”

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Treatment Adherence in Fibromyalgia

• A prospective study of 142 women with FM showed that adherence to both medications and general treatment (eg, exercise) was poor\(^1\)
  — About 50% of patients were non-adherent to medicines

• Another prospective study of 127 women with FM assessed factors affecting medication non-adherence\(^2\)
  — About 1/3 of patients were intentionally and unintentionally non-adherent

• Patients diagnosed with FM are often on multiple medications, which may contribute to poor adherence\(^1,2\)
  — 70% to 80% are on 3 or more medicines while 9% to 20% are on over 8 medicines

Predictors of Adherence

- A composite of barriers to treatment such as time, effort, stress, social support, cost, pain, and self-motivation contribute to overall treatment adherence\(^1,2\)
- A greater sense of self-efficacy (self-confidence) is associated with increased levels of adherence\(^2\)
- Lower discordance between patient and physician perception of disease and treatment is associated with increased levels of adherence\(^1\)
- A multimodal approach to treatment results in increased treatment adherence and positive outcomes\(^2\)

Enhancing Treatment Adherence in Patients With FM

- Ensure patient has a thorough understanding of FM and is involved in treatment decisions\(^1\)

- Educate patient on the role of treatment and set realistic expectations and timelines with regard to treatment outcomes\(^2\)

- Utilize a multimodal approach to treatment\(^3\)
  - For example, nursing, physiotherapy, occupational therapy, and psychology have been used to provide disease education, coping skills, stress management skills, and fitness training\(^3\)

Enhancing Treatment Adherence in Patients With FM

- Individualize treatment regimens (eg, custom tailor exercise programs)
- Simplify medication dosing regimens
- Provide written and verbal instructions and use reminder aids
- Identify, discuss, and reduce potential barriers to treatment such as time constraints, psychological stress, lack of social support, cost, and low motivation
- Seek to instill a sense of patient self-efficacy (self-confidence)

Summary

FM is manageable in the primary care setting\(^1,2\)

Managing FM can be like managing other chronic conditions\(^2\)

Screening and diagnostic tools are available to facilitate identification of potential FM patients\(^3,4\)

Effective management integrates multimodal nonpharmacologic and pharmacologic approaches\(^2\)

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