Abstract

Fibromyalgia is a common and chronic disorder characterized by widespread pain, diffuse tenderness, and a number of other symptoms. Diagnosis and treatment of fibromyalgia requires clinicians to have an understanding of risks and causes of the disease. Research indicates pain pathways function abnormally, which leads to an enhanced pain experience in affected individuals. Treatment includes medication and lifestyle changes to reduce the level of pain felt. The role of healthcare professionals to provide education for patients with a diagnosis of fibromyalgia about factors influencing symptoms of pain, fatigue and psychological effects is discussed here.
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Policy Statement
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Continuing Education Credit Designation
This educational activity is credited for 2.5 hours. Nurses may only claim credit commensurate with the credit awarded for completion of this course activity.

Pharmacology content is credited for 0.5 hours (30 minutes).

Statement of Learning Need
An understanding of current research and treatment recommendations of fibromyalgia, focused on medication and lifestyle changes, is important for nurses to gain in order to provide patients with a holistic level of care.

Course Purpose
To provide nursing professionals with knowledge of the risks, cause, and treatment of fibromyalgia.
Target Audience
Advanced Practice Registered Nurses and Registered Nurses
(Interdisciplinary Health Team Members, including Vocational Nurses and Medical Assistants may obtain a Certificate of Completion)

Course Author & Planning Team Conflict of Interest Disclosures
Elizabeth Boldon, RN, MSN, William S. Cook, PhD, Douglas Lawrence, MA, Susan DePasquale, MSN, FPMHNP-BC – all have no disclosures

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There is no commercial support for this course.

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Please take time to complete a self-assessment of knowledge, on page 4, sample questions before reading the article.

Opportunity to complete a self-assessment of knowledge learned will be provided at the end of the course.
1. **Fibromyalgia is more common in:**
   a. Men
   b. People who are left handed
   c. People who live in warm climates
   d. Women

2. **A common symptom of fibromyalgia is:**
   a. Pain
   b. Fatigue
   c. Sleep difficulties
   d. All of the above

3. **Which of the following statements about fibromyalgia is true?**
   a. The cause is well understood
   b. There is no cure
   c. It affects more men than women
   d. Medications are useless to treat it

4. **Diagnosis of fibromyalgia is made by:**
   a. A common blood test
   b. A rheumatologist only
   c. Excluding all other possible causes of symptoms
   d. A 24 hour urine collection

5. **Other classifications of drugs that may be used to treat fibromyalgia symptoms include:**
   a. NSAIDs
   b. Diuretics
   c. Anti-seizure
   d. a & c
Introduction

Fibromyalgia is a chronic condition that affects millions of people. The word “fibromyalgia” comes from the Latin term for fibrous tissue (fibro) and the Greek words for muscle (myo) and pain (algia).\(^1\) It is characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory and mood issues. Researchers believe that fibromyalgia amplifies painful sensations by affecting the way the brain processes pain signals.\(^1\)

Symptoms of fibromyalgia sometimes begin after a physical trauma, surgery, infection or significant psychological stress. In other cases, symptoms gradually accumulate over time with no single triggering event.

Women are much more likely to develop fibromyalgia than are men. Many people who have fibromyalgia also have tension headaches, temporomandibular joint (TMJ) disorders, irritable bowel syndrome, anxiety and depression. Symptoms may flare and subside but usually do not disappear completely.\(^1\)

While there is no cure for fibromyalgia, a variety of medications can help control symptoms. Exercise, relaxation and stress-reduction measures also may help.\(^2\)

This course will provide the learner with information on fibromyalgia, including symptoms, causes, risk factors, complications and treatments as well as other issues faced by those living with fibromyalgia.
What Is Fibromyalgia?

As described above, fibromyalgia is a disorder of unknown etiology characterized by widespread pain, abnormal pain processing, sleep disturbance, and fatigue, and often there is psychological distress. People with fibromyalgia may also have a variety of other symptoms. Symptoms can wax and wane; with severe symptoms being extremely debilitating and can interfere with an individual’s basic daily activities. The American College of Rheumatology (2013) reports that fibromyalgia affects two to four percent of the population, primarily women.

Fortunately, fibromyalgia is not progressive or life threatening and does not lead to joint, muscle or nerve damage. People who have fibromyalgia sometimes worry that continued symptoms mean the condition is getting worse. Although pain and other chronic symptoms can decrease a person’s quality of life and functioning, this is not regarded as disease progression.²

Fibromyalgia can be frustrating as well as exhausting. It can drain one’s energy and may interfere with work, school and family responsibilities, emotional health and personal relationships. Fortunately, there are ways to manage fibromyalgia and regain control of one’s life; these methods are discussed later in this course.

Prevalence of Fibromyalgia

Fibromyalgia is one of the most common chronic pain conditions. The disorder affects an estimated ten million people in the U.S. and an estimated 3-6% of the world population. While it is most prevalent in women (75-90% of the people with fibromyalgia are women) it also occurs in men and
children of all ethnic groups. The disorder is often seen in families, among siblings or mothers and their children. The diagnosis is usually made between the ages of 20 to 50 years, but the incidence rises with age so that by age 80, approximately eight percent of adults meet the American College of Rheumatology classification of fibromyalgia.¹

**Economic Impact of Fibromyalgia**

The cost of fibromyalgia to both the individual and to society is extensive. A 2007 study found that 34% of fibromyalgia patients spend between $100-$1,000 per month above their insurance to see a healthcare professional. Prominent fibromyalgia researchers and specialists estimate the costs in the U.S. between $12-14 billion each year and accounts for a loss of one to two percent of the nation’s overall productivity.⁶

According to a 2003 published study in the Journal of Rheumatology:

- The total annual costs for fibromyalgia claimants were more than twice as high as the costs for the typical insurance beneficiary.

- The prevalence of disability among employees with fibromyalgia was twice as high as among all employees.

- For every dollar spent on fibromyalgia specific claims, employers spent approximately $50 - $100 on additional direct and indirect costs.
Additional studies show:

- Work and disability status of 1,668 patients with fibromyalgia reported that 25% had received disability payments (Wolf, J Musculoskeletal Pain, 1993).

- Failure to diagnose a true case of fibromyalgia has its own costs, largely in excess general practitioner visits, investigations and prescriptions (Annemans, Arthritis & Rheumatism, March 2008).

- Use of complementary and alternative medicine is two to three times higher in patients with fibromyalgia (Lind, Arthritis & Rheumatism, February 2007).

- Working adults with fibromyalgia average almost 17 days of missed work per year compared to six days for persons without fibromyalgia (Centers for Disease Control, 2009).

**Symptoms Of Fibromyalgia**

Chronic, widespread body pain is the primary symptom of fibromyalgia. Most people with fibromyalgia also experience moderate to extreme fatigue, sleep disturbances, sensitivity to touch, light, sound, and cognitive difficulties. Many individuals also experience a number of other symptoms and overlapping conditions, such as irritable bowel syndrome, lupus and arthritis.\(^5\)

**Pain**

The pain of fibromyalgia is profound, chronic and widespread. It can migrate to all parts of the body and vary in intensity. Fibromyalgia pain has been described as stabbing and shooting pain and deep muscular aching,
throbbing, and twitching. Neurological complaints such as numbness, tingling, and burning are often present and add to the discomfort of the patient. The severity of the pain and stiffness is often worse in the morning. Aggravating factors that affect pain include cold or humid weather, non-restorative sleep, physical and mental fatigue, excessive physical activity, physical inactivity, anxiety and stress.

The pain associated with fibromyalgia often is described as a constant dull ache that lasts for at least three months. To be considered widespread, the pain must occur on both sides of the body and above and below the waist. However, the pain may initially be localized, often in the neck and shoulders. Common patient descriptions include "I feel as if I hurt all over," or "it feels as if I always have the flu." Patients typically describe pain predominantly throughout the muscles, but often state that their joints hurt, and sometimes describe joint swelling as well.\(^5\)

**Fatigue**

In today's world many people complain of fatigue; however, the fatigue of fibromyalgia is much more than being tired after a particularly busy day or after a sleepless night. The fatigue of fibromyalgia is an all-encompassing exhaustion that can interfere with occupational, personal, social or educational activities. Symptoms include profound exhaustion and poor stamina.

The fatigue is often especially notable when arising from sleep, but is also marked in the mid-afternoon. Seemingly minor activities aggravate the pain and fatigue, although prolonged inactivity also heightens symptoms. Patients
are stiff in the morning and feel unrefreshed, even if they have slept eight to ten hours. Patients with fibromyalgia characteristically sleep "lightly," waking frequently during the early morning and have difficulty getting back to sleep. A common quote is "No matter how much sleep I get, it feels like a truck ran me over in the morning."5

**Sleep Problems**

People with fibromyalgia often awaken tired, even though they report sleeping for long periods of time. Sleep is often disrupted by pain, and many patients with fibromyalgia have other sleep disorders, such as restless legs syndrome and sleep apnea.

Many fibromyalgia patients have an associated sleep disorder that prevents them from getting deep, restful, and restorative sleep. Medical researchers have documented specific and distinctive abnormalities in the stage four, deep sleep, of fibromyalgia patients. During sleep, individuals with fibromyalgia are constantly interrupted by bursts of awake-like brain activity, limiting the amount of time they spend in deep sleep. Such sleep disturbances contribute to the symptom of fatigue.5

**Psychiatric Symptoms**

Depression and/or anxiety are present in 30 to 50 percent of patients at the time of diagnosis. In one large research study, 1635 subjects with fibromyalgia were three times more likely to have depression compared with subjects without fibromyalgia. Twenty-two percent of the fibromyalgia group had concurrent major depression. Depression in that group correlated with younger age, female gender, unmarried status, food insecurity (adequate
food or nutrition is limited by a lack of money or other resources), number of chronic conditions, and limitations in activities. Two-fifths of those with depression and fibromyalgia had not discussed mental health concerns with any health professionals in the previous year.\textsuperscript{5}

**Other Symptoms or Overlapping Conditions**

Additional symptoms may include: headache, irritable bowel and bladder, headaches and migraines, restless legs syndrome (periodic limb movement disorder), impaired memory and concentration, skin sensitivities and rashes, dry eyes and mouth, anxiety, depression, ringing in the ears, dizziness, vision problems, Raynaud's Syndrome, neurological symptoms, painful menstrual periods, endometriosis and impaired coordination.\textsuperscript{1}

Additional symptoms may include:

- Difficulty with memory, concentration or thought organization (sometimes called “fibro fog”)
- Facial pain
- Chest wall pain
- Heightened sensitivity to odors, noises, bright lights and touch
- Stiffness
- Numbness or tingling in the arms and legs
- Dizziness

**Causes Of Fibromyalgia**

Experts don't know what causes fibromyalgia, but it most likely involves a variety of factors working together. These may include:
• Genetics:
  Because fibromyalgia tends to run in families, there may be certain
genetic mutations that may make some more susceptible to
developing the disorder.

• Infections:
  Some illnesses appear to trigger or aggravate fibromyalgia.

• Physical or emotional trauma:
  Post-traumatic stress disorder has been linked to fibromyalgia.

The causes of fibromyalgia are unknown, but there are probably a number of
factors involved. Many people associate the development of fibromyalgia
with a physically or emotionally stressful or traumatic event, such as an
automobile accident. Some connect it to repetitive injuries. Others link it to
an illness. For others, fibromyalgia seems to occur spontaneously. Specific
causes may be different for different people.\(^5\)

Many researchers are examining other causes, including problems with how
the central nervous system (the brain and spinal cord) processes pain. Some
scientists speculate that a person’s genes may regulate the way his or her
body processes painful stimuli. According to this theory, people with
fibromyalgia may have a gene or genes that cause them to react strongly to
stimuli that most people would not perceive as painful. There have already
been several genes identified that occur more commonly in fibromyalgia
patients, and researchers are currently looking at other possibilities. Recent
studies show that genetic factors may predispose individuals to a genetic
susceptibility to fibromyalgia. For some, the onset is slow; however, in a
large percentage of patients the onset is triggered by an illness or injury that
causes trauma to the body. These events may act to incite an undetected physiological problem already present.\textsuperscript{3}

Most researchers agree that fibromyalgia is a disorder of central processing with neuroendocrine or neurotransmitter dysregulation. The fibromyalgia patient experiences pain amplification due to abnormal sensory processing in the central nervous system. An increasing number of scientific studies now show multiple physiological abnormalities in the fibromyalgia patient, including increased levels of substance P in the spinal cord, low levels of blood flow to the thalamus region of the brain, hypothalamic-pituitary-adrenal (HPA) axis hypofunction, low levels of serotonin and tryptophan and abnormalities in cytokine function.\textsuperscript{3}

Exciting new research has also begun in the areas of brain imaging and neurosurgery. Ongoing research will test the hypothesis that fibromyalgia is caused by an interpretative defect in the central nervous system that brings about abnormal pain perception. Researchers are just beginning to untangle the truths about this life-altering disease.

**Risk Factors for Fibromyalgia**

Risk factors for fibromyalgia include:\textsuperscript{3}

- **Gender:** Fibromyalgia is most common in women, though it can occur in men.

- **Age:** Fibromyalgia tends to develop in early to middle adulthood but can occur in the teen years and in old age. Younger children can also develop widespread body pain and fatigue.
• Family history: One may be more likely to develop fibromyalgia if a relative also has the condition.

• Rheumatic disease: If one has a rheumatic disease, such as osteoarthritis, rheumatoid arthritis or lupus, they may be more likely to develop fibromyalgia.

Pathophysiology of Fibromyalgia

Definitive data on the cause and mechanism of fibromyalgia is not yet fully understood and agreed upon, but there are a handful of scientific theories that have been supported by evidence that when combined reveal much about the functional changes that occur in patients with this condition. Six probable pathological mechanisms behind the chronic, diffuse pain and other symptoms of fibromyalgia are: 7

1. central nervous system (CNS) sensitization
2. dysfunction of descending inhibitory pain pathways
3. peripheral nervous system (PNS) sensitization
4. release of inflammatory mediators
5. endocrine irregularity in the hypothalamic-pituitary-adrenal (HPA) axis
6. neurotransmitter abnormalities

Sensitivity of CNS neurons to painful stimuli is inherent for normal pain transmission. In fibromyalgia, the CNS neurons become hypersensitive, which exaggerates and prolongs pain sensation from an acute protective mechanism to one that is chronic and pathologic. Additionally, the negative
feedback loop that physiologically initiates the cessation of pain sensation is inhibited, causing the already amplified pain sensation to continue indefinitely. The PNS neurons are similarly affected, causing enhanced pain perception. When mild tactile stimulation is transmitted as pain from the periphery to the brain, regions in the brain send CNS signals, which in turn result in the perception of musculoskeletal pain.7

Sleep disruptions associated with fibromyalgia may be a direct manifestation of endocrine dysfunctions in the hypothalamic-pituitary-adrenal (HPA) axis. During times of chronic stress, the body experiences continual increases in cortisol secretion. Over time, the body attempts to restore homeostasis and overcompensates for the cortisol elevation by intensifying the normal physiological negative feedback loop initiated by glucocorticoids, resulting in a cortisol deficiency. Rather than having the continuous increased levels of cortisol that naturally exist during stress and during the early phases of fibromyalgia, cortisol secretion becomes diminished later into the course of the condition, resulting in disrupted sleep.7

As for the neurotransmitters, research shows abnormalities of both dopamine and serotonin are involved in fibromyalgia. Plasma and cerebrospinal fluid serotonin have been found to be lower in patients with fibromyalgia when compared with patients that do not exhibit this pain syndrome. Serotonin is partly responsible for the inhibition of pain pathways and therefore the lack of this neurotransmitter in patients with fibromyalgia adds to the problem of stopping the pain response. Dopamine levels in fibromyalgia patients are also decreased when compared with patients that do not exhibit a pain syndrome. In times of acute stress, an increase in dopamine levels is the natural physiologic response for enhanced analgesic
effects; however, in times of continual stress, dopamine will become decreased as the body overcompensates in an attempt to restore homeostasis (similar to cortisol). This dopamine deficiency then contributes to the increased pain perception. The result of this dopamine deficiency in fibromyalgia patients also creates an additional risk factor for depression.\(^7\)

**Diagnosis Of Fibromyalgia**

No specific test can confirm fibromyalgia. Diagnosis is based on exclusion, which means that health care providers first rule out other diseases or conditions that may be causing pain and other symptoms. Research shows that people with fibromyalgia typically see many health care providers before receiving the diagnosis. One reason for this may be that pain and fatigue, the main symptoms of fibromyalgia, overlap with those of many other conditions. Therefore, health care providers often have to rule out other potential causes of these symptoms before making a diagnosis of fibromyalgia. Another reason is that there are currently no diagnostic laboratory tests for fibromyalgia; standard laboratory tests fail to reveal a physiologic reason for pain. Because there is no generally accepted, objective test for fibromyalgia, some health care providers unfortunately may conclude a patient’s pain is not real, or they may tell the patient there is little they can do. This is a valid cause of frustration and concern for those with fibromyalgia.\(^1\)

After reviewing the medical history and performing a physical exam, health care providers may recommend blood tests, X-rays or other tests to help rule out other conditions that can cause similar symptoms (for example, rheumatoid arthritis, lupus, low thyroid hormone production and multiple sclerosis).\(^6\)
Health care providers previously used the fibromyalgia classification criteria, established by the American College of Rheumatology (ACR) in 1990, which included a history of widespread pain in all four quadrants of the body for a minimum duration of three months, and pain in at least 11 of the 18 designated tender points when a specified amount of pressure is applied. These points include:

1. Occiput or the back prominence of the head (2 points) – there are muscle attachments at the back of the head. Two of these points may be tender.

2. Low cervical (2 points) – these are present at the front of transverse processes of the 5th and 7th cervical vertebrae in the neck.

3. Trapezius muscle (2 points) – these are present at the midpoint of the upper border of the shoulder muscles.

4. Supraspinatus muscle (2 points) – the point is present over the scapular spine near its central portion.

5. Second rib (2 points) – these are beside the junctions of the ribs to the breastbone or the costochondral junctions, on the upper rib surfaces.

6. Lateral epicondyle (2 points) – these are located near the elbows where the brachioradialis muscle is attached to the bone.

7. Gluteal muscles (2 points) – these points are located in the upper and inner edges of the buttocks in the front folds of the muscle.

8. Greater trochanter (2 points) – these points are behind the trochanteric prominence at the hips.

9. Knees (2 points) – these points lie at the inner side of the knee at the fat pad that lies over the joint line.
However, health care providers now use the new diagnostic criteria, which were developed by the American College of Rheumatology (ACR) in 2010. These criteria do not use tender points but focus upon pain being widespread and accompanied by allied symptoms such as sleep problems, problems with thinking clearly, and fatigue. Since people with fibromyalgia tend to look healthy and conventional tests are typically normal, a health care provider knowledgeable about the disorder is necessary to make an accurate diagnosis.

Although it can be frustrating for patients not to understand the cause of their symptoms, further tests and examinations may not be the answer. After a thorough medical evaluation has ruled out serious underlying causes for the condition, managing symptoms effectively may be more helpful than additional tests.

The time it takes to diagnose fibromyalgia tends to be protracted. Most patients have symptoms for two to three years before a diagnosis is made; moreover, when a diagnosis is made it is usually marked by uncertainty. Patients often feel that they have to convince healthcare professionals that they have a condition that is real. However, it is only by receiving a diagnosis that patients will be able to learn about the condition and receive appropriate advice on managing their symptoms.

Treatment Of Fibromyalgia

Fibromyalgia can be difficult to treat. Not all health care providers are familiar with fibromyalgia and its treatment, so it is important for patients to find a provider experienced with its treatment. Many family physicians,
general internists, or rheumatologists (health care providers who specialize in arthritis and other conditions that affect the joints or soft tissues) can treat fibromyalgia.

Fibromyalgia treatment often requires a team approach, with the provider, a physical therapist, possibly other health professionals, and most importantly, the patient, all playing an active role. The combined expertise of these various professionals can help improve the patient’s quality of life. There are pain clinics that specialize in pain and rheumatology clinics that specialize in arthritis and other rheumatic diseases, including fibromyalgia.

**Medications**

Only three medications, duloxetine (Cymbalta), milnacipran (Savella), and pregabalin (Lyrica), are approved by the U.S. Food and Drug Administration (FDA) for the treatment of fibromyalgia. Duloxetine was originally developed for and is still used to treat depression. Milnacipran is similar to a drug used to treat depression but is FDA approved only for fibromyalgia. Pregabalin is a medication developed to treat neuropathic pain (chronic pain caused by damage to the nervous system) or seizures. Other medications to treat fibromyalgia are currently in development and may be approved for use by the FDA in the future.⁶

The following table provides information on the three medications currently approved by the FDA to treat fibromyalgia:⁴
<table>
<thead>
<tr>
<th>Medication</th>
<th>Pharmacologic Class</th>
<th>Adverse Effects</th>
<th>Dosing</th>
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<tbody>
<tr>
<td>Duloxetine</td>
<td>SNRI</td>
<td>Nausea, dry mouth, constipation, diarrhea, fatigue, decreased appetite, dizziness, somnolence, insomnia, headache, LFT (liver function test) elevation</td>
<td>Starting: 30mg/day Maximum: 60 mg/day (60 mg twice daily has been studied in clinical trials)</td>
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<tr>
<td>(Cymbalta)</td>
<td></td>
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<tr>
<td>Milnacipran</td>
<td>SNRI</td>
<td>Headache, GI complaints, orthostatic dizziness, lethargy, palpitations, sweating, hot flashes</td>
<td>Starting: 12.5mg/day Maximum: 50 mg twice daily (FDA indicated at 50mg-100mg twice daily)</td>
</tr>
<tr>
<td>(Savella)</td>
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<tr>
<td>Pregabalin</td>
<td>Anticonvulsant</td>
<td>Dizziness, somnolence, dry mouth, asthenia, peripheral edema</td>
<td>Starting: 75mg two times per day (total 150 mg/day) Maximum: 450 mg/day (600 mg/day has been studied in clinical trials)</td>
</tr>
<tr>
<td>(Lyrica)</td>
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Health care providers also treat fibromyalgia with a variety of other medications developed and approved for other purposes.

All medicines can have side effects; some side effects may be more severe than others. Patients should be informed of these potential side effects and be instructed to report them to their health care providers.
Analgesics

Analgesics are painkillers. They range from over-the-counter products to prescription medicines. For a subset of people with fibromyalgia, narcotic medications are prescribed for severe muscle pain. However, there is no solid evidence showing that, for most people, narcotics actually work to treat the chronic pain of fibromyalgia, and most health care providers hesitate to prescribe them for long-term use because of the potential risk that the person taking them will become physically or psychologically dependent on them.\(^7\)

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)

As their name implies, nonsteroidal anti-inflammatory drugs, including aspirin, ibuprofen, and naproxen sodium are used to treat inflammation. Although inflammation is not a symptom of fibromyalgia, NSAIDs also relieve pain. The drugs work by inhibiting substances in the body called prostaglandins, which play a role in pain and inflammation. These medications, some of which are available without a prescription, may help ease the muscle aches of fibromyalgia. They may also relieve menstrual cramps and the headaches often associated with fibromyalgia.\(^6\)

Antidepressants

Antidepressant medications, such as duloxetine (Cymbalta) and milnacipran (Savella) may help ease the pain and fatigue associated with fibromyalgia. Health care providers also sometimes prescribe amitriptyline (Elavil) or fluoxetine (Prozac) to help promote sleep in patients with this associated symptom.\(^6\)
Anti-Seizure Medications

Medications designed to treat epilepsy are often useful in reducing certain types of pain. Gabapentin (Neurontin) is sometimes helpful in reducing fibromyalgia symptoms.6

Non-Pharmacological Treatment of Fibromyalgia

One of the most important factors in improving the symptoms of fibromyalgia is for the patient to recognize the need for lifestyle adaptation. Most people are resistant to change because it implies adjustment, discomfort and effort. However, in the case of fibromyalgia, change can bring about recognizable improvement in function and quality of life. Becoming educated about fibromyalgia gives the patient more potential for improvement.1

An empathetic health care provider who is knowledgeable about the diagnosis and treatment of fibromyalgia and who will listen to, and work, with the patient is an important component of treatment. This may be a family practitioner, an internist, or a specialist (rheumatologist or neurologist, for example). Conventional medical intervention may be only part of a potential treatment program. Alternative treatments, nutrition, relaxation techniques, and exercise play an important role in fibromyalgia treatment as well. Each patient should, with the input of a health care practitioner, establish a multifaceted and individualized approach that works for him or her.2
Psychological Support

Learning to live with a chronic illness often challenges an individual emotionally. The patient with fibromyalgia needs to develop a program that provides emotional support and increases communication with family and friends. Many communities throughout the U.S. and abroad have organized fibromyalgia support groups. These groups often provide important information and have guest speakers who discuss subjects of particular interest to the patient. Counseling sessions with a trained professional may help improve communication and understanding about the illness and help to build healthier relationships within the patient's family.

Individual or group therapy strives to improve the ability to cope with symptoms and increase self-confidence. Cognitive behavioral therapy (CBT), which helps replace negative or inaccurate thoughts with more positive, accurate thinking, may be especially effective for relieving depression, stress and anxiety.⁶

Other Treatments

Complementary therapies can be very beneficial. These include physical therapy, therapeutic massage, myofascial release therapy, water therapy, light aerobics, acupressure, application of heat or cold, acupuncture, yoga, Tai Chi, relaxation exercises, breathing techniques, aromatherapy, cognitive therapy, biofeedback, herbs, nutritional supplements, and osteopathic or chiropractic manipulation.⁶
Self-Care

Self-care is critical in the successful treatment of fibromyalgia. Even with the many treatment options, patient self-care is vital to improving symptoms and daily function. In concert with medical treatment, healthy lifestyle behaviors can reduce pain, increase sleep quality, lessen fatigue and help patients cope better with fibromyalgia. These include the following interventions and behaviors.

Sleep Management

Improved sleep can be obtained by implementing a healthy sleep regimen. This includes going to bed and getting up at the same time every day; making sure that the sleeping environment is conducive to sleep (i.e., quiet, free from distractions, a comfortable room temperature, a supportive bed); avoiding caffeine, sugar, and alcohol before bed; doing some type of light exercise during the day; avoiding eating immediately before bedtime; and practicing relaxation exercises as one falls asleep. When necessary, there are new sleep medications that can be prescribed, some of which can be especially helpful if the patient's sleep is disturbed by restless legs or periodic limb movement disorder.6

Getting enough sleep and the right kind of sleep can help ease the pain and fatigue of fibromyalgia. Even so, many people with fibromyalgia have problems such as pain, restless legs syndrome, or brainwave irregularities that interfere with restful sleep. It is important to discuss any sleep problems with the care provider, who can prescribe or recommend treatment for them.
Other tips for getting good sleep include:

- Keeping regular sleep habits. Getting to bed at the same time and getting up at the same time every day — even on weekends and vacations.

- Avoiding caffeine and alcohol in the late afternoon and evening. If consumed too close to bedtime, the caffeine in coffee, soft drinks, chocolate, and some medications can keep one from sleeping or sleeping soundly. Even though it can make one feel sleepy, drinking alcohol around bedtime also can disturb sleep.

- Timing of exercise. Regular daytime exercise can improve nighttime sleep. But patients should avoid exercising within three hours of bedtime, which actually can be stimulating, keeping them awake.

- Avoiding daytime naps. Sleeping in the afternoon can interfere with nighttime sleep. If one feels they cannot get by without a nap, they should set an alarm for one hour. When it goes off, they should get up and start moving.

- Reserving the bed for sleeping. Watching the late news, reading a suspense novel, or working on a laptop in bed can be stimulating, making it hard to sleep.

- Keeping the bedroom dark, quiet, and cool.

- Avoiding liquids and spicy meals before bed. Heartburn and late-night trips to the bathroom are not conducive to good sleep.

- Winding down before bed. Avoid working right up to bedtime; do relaxing activities, such as listening to soft music or take a warm bath that may get one ready to sleep — a warm bath may also soothe aching muscles.
Exercise

Although pain and fatigue may make exercise and daily activities difficult, it is crucial for those with fibromyalgia to be as physically active as possible. Research has repeatedly shown that regular exercise is one of the most effective treatments for fibromyalgia. People who have too much pain or fatigue to do vigorous exercise should begin with walking or other gentle exercise and build their endurance and intensity slowly.\(^4\)

When people are inactive, they lose muscle tone and strength, and the cardiovascular system (heart and blood vessels) works less efficiently. Inactivity can disrupt sleep and worsen fatigue, stress and anxiety.

Regular exercise can help those with fibromyalgia become more physically fit. When they are fit, their risk of disease decreases and they are better able to face life’s challenges. In addition, during physical exercise, the body releases chemicals that block pain signals from reaching the brain. These chemicals also help improve brain function and decrease stress, anxiety and depression, making pain easier to control.

Some benefits of becoming more active include:\(^4\)

- Stronger bones, muscles and joints
- Weight control
- Greater flexibility and balance
- More energy, stamina and confidence
- Less stress
- Better sleep and mood
- Lower blood pressure
• Less risk of heart disease, diabetes and other medical problems

Patients with fibromyalgia may wonder how they can possibly exercise regularly when, on many days, they are so tired they can hardly get out of bed. The key is graded exercise — an exercise plan that starts gently and gradually becomes more challenging. Graded exercise lets the body slowly adjust to increased activity while improving physical fitness.4

Following a graded exercise program can help to motivate patients on difficult days when they feel like doing nothing. And it can help to avoid overexertion on good days when they are tempted to do too much. A physical therapist or exercise specialist can help to design an exercise program that includes the following routines.

Flexibility (Stretching) Exercises:

Stretching exercises increase range of motion, reduce joint and muscle stiffness and help lower the risk of injury. They also may improve posture, reduce low back pain and help the body recover from vigorous activity or exercise sessions. Activities that improve flexibility range from simple stretching exercises to yoga.

Flexibility exercises should be done before and after other parts of the exercise program to reduce the chance of ligament, tendon or muscle strain. Gentle stretches should be done in the morning and as needed throughout the day.
Strengthening Exercises:

Strengthening exercises help strengthen muscles. Strong muscles improve physical fitness, reduce fatigue, support joints and give strength to perform daily tasks. To become stronger, muscles must push or pull against a force, such as weight or gravity; this can be achieved by moving or pushing one’s body, pulling on an elastic band or lifting weights.

Aerobic Exercises:

Aerobic exercise refers to any activity that repeatedly contracts large muscle groups (such as legs and arms) and increases breathing and heart rate. Aerobic activity benefits the heart, lungs and circulatory system, increases cognitive function, and improves stamina for daily activities. Aerobic activities include walking, bicycling, hiking, skiing, tennis, dancing, jogging and swimming.

Warm Water Exercises:

These non-impact activities use water resistance to help build strength and improve balance. Water exercise is easier for some people than exercising on land. Water decreases the pull of gravity so movement requires less effort. Warm water also can help reduce muscle tension, promote relaxation and lessen pain.³

Workplace Environment

Most people with fibromyalgia continue to work, but they may have to make big changes to do so. For example, some people cut down the number of hours they work, switch to a less demanding job, or adapt a current job. If
patients face obstacles at work, such as an uncomfortable desk chair that leaves their back aching or difficulty lifting heavy boxes or files, their employer may make adaptations that will enable them to keep their job. An occupational therapist can help design a more comfortable workstation or find more efficient and less painful ways to lift.³

*Diet and Nutrition*

Although some people with fibromyalgia report feeling better when they eat or avoid certain foods, no specific diet has been proven to influence fibromyalgia. Of course, it is important for patients to have a healthy, well-balanced diet. Not only will proper nutrition provide more energy, and generally makes one feel better, it will also help patients avoid other health problems.³

Healthful eating simply means paying attention to what, when and how much food is eaten. Patients should be instructed to think about when and what they eat. For example, if they often eat to comfort themselves, the food choices may not provide proper nutrients. Patients should be reminded that vitamin, mineral and herbal supplements are not substitutes for healthful eating. They cannot replace the nutrients in foods needed for a balanced diet.³

Although no one diet fits everyone, the general principles of healthy eating include:

- Eating a variety of foods
- Eating more fruits, vegetables and whole grains (especially fruits and vegetables that are most colorful, since they typically are most nutritious)
• Reducing saturated fat and cholesterol
• Limiting sugar and salt
• Eating moderate-sized portions
• Drinking at least eight 8-ounce glasses of water or other fluids daily, which helps with circulation and absorption of vitamins and minerals
• Drinking caffeinated and alcoholic beverages in moderation, if at all

_Social Support_

Maintaining a network of social support can provide great benefit to those living with fibromyalgia. Libraries, hospitals, doctor’s offices, the internet, and local newspapers are all places for those with fibromyalgia to search for a support group. Members of groups can offer encouragement, an understanding ear, friendly advice, and education. At meetings, fibromyalgia patients can share their experiences without fear of being judged or criticized. Group leaders offer patients and families an opportunity to discuss common concerns, share successes, and benefit from the experiences of others. Patients with fibromyalgia, chronic fatigue syndrome, or other chronic pain conditions often say they feel isolated or alone with their illness. Being a member of a group or simply contacting a group leader can help patients reduce these feelings of isolation.

Spouses or other family members are often welcome to attend these gatherings to help understand how they, too, can provide a beneficial support foundation at home.

Local support groups offer their own individual format. In addition to friendly gatherings, groups may host speakers to discuss the latest in therapies and
treatments, or offer a professional’s point of view in managing life-altering chronic illnesses.¹,²

**Stress Reduction**

Patients should develop a plan to avoid or limit overexertion and emotional stress and allow time each day to relax. That may mean learning how to say “no” without guilt. But it is important not to change one’s routine completely. People who quit work or drop all activity tend to do worse than those who remain active. Patients should be encouraged to try stress management techniques, such as deep-breathing exercises or meditation. Deep-breathing exercises and meditation can help reduce the stress that can bring on symptoms.

Living with fibromyalgia can be stressful, and stress can worsen fibromyalgia symptoms. Stress can increase pain by causing tensing of muscles, gritting of teeth and stiffening of shoulders. Increased pain can limit the ability to handle everyday tasks, causing frustration, anger, tension and depression.⁶

The body responds to stress by releasing hormones that prepare one to face a challenge or run from it (“fight-or-flight” response). For example, the heart beats faster, breathing quickens, blood pressure rises and muscle tension increases. As a positive force, this response can save a life during physical danger and provide energy to grow, act and change. However, the stress response is meant to be temporary. After a crisis or challenge, the body and mind must relax to regain the strength and energy needed for future challenges. What’s good in a short-term situation can be harmful over long periods of time.⁶
Long-term stress can impair physical, mental and emotional health, strain personal relationships, and increase irritability. Stress plays a role in many health problems, including headaches, poor sleep, ulcers, high blood pressure and heart disease.\(^6\)

Managing stress doesn’t mean eliminating all stressors. Managing stress means finding positive ways to cope with stressful events or relationships and avoid the negative results of stress overload. If one thinks of stress as a reaction to an event, not the event itself, finding healthy ways to face stress becomes easier. While it’s not always possible to control some stressors, it is possible to control the response to them.

It may be beneficial to identify and evaluate the stressors in one’s life. This allows the patient to determine if they can do anything to lessen or avoid the stressors. The following strategies may help patients reduce those sources of stress they control and better cope with those they can’t:\(^3\)

**Role-play**

Ask-a family member, friend or counselor to help in practicing handling stressful situations.

**Focus on the moment**

Whenever possible, focus entirely on what is happening at the moment — whether working on a task, playing or conversing.
Be positive

Keep a sense of humor. Avoiding negative thinking. Spending time with people who have a positive outlook, don’t take themselves too seriously or have a great sense of humor. Laughter can help ease pain by releasing brain chemicals that enhance a sense of wellbeing.

Adjusting outlook

Think of stressful situations as challenges rather than impossible hurdles. Focusing on strengths and drawing on past successes.

Taking a break from worry

Take one’s mind off stressors and symptoms by getting involved in activities that are meaningful (i.e., volunteer work or hobbies).

Stay connected

Discuss feelings and concerns with a family member or friend. Talking can relieve strain and restore perspective, and may lead to a healthy plan of action.

Successfully managing stress can lessen some of the symptoms of fibromyalgia and allow patients to cope with the condition more effectively.

Relaxation is another method of stress relief and a powerful tool in managing fibromyalgia. Relaxation does not cure fibromyalgia. But skills that relax the body and the mind may help decrease muscle tension, prevent muscle
spasms and relieve the stress that can aggravate pain and other symptoms. One can practice relaxation skills anytime and anywhere.\(^3\)

Benefits of relaxation:

- Refreshing mentally, emotionally and physically
- Helps shift focus away from symptoms
- Increases energy level
- Improves concentration
- Gives a sense of control over symptoms
- Increases confidence and ability to handle problems
- Increases blood flow to muscles, and reduces muscle tension
- Decreases blood pressure, breathing rate and heart rate

Relaxation is a skill. To improve that skill, it is helpful to practice relaxation once or twice a day. Pairing relaxation with a regular activity can improve the practice (for example, taking six relaxed breaths every time one brushes their teeth or sits down to eat).

It can take time to notice benefits, so patients should be encouraged not to give up. It is important to be patient and stay motivated to improve health by learning relaxation skills. A good goal to work toward is 30 minutes of relaxation daily.\(^3\) Relaxation can take many different forms, some that may be useful to those with fibromyalgia include:\(^3\)

- Relaxed breathing (breathing slowly, deeply and rhythmically)
  - Breathing in slowly and deeply through the nose to a count of six.
  - Keeping shoulders relaxed.
- Hold the air in the lungs to a count of one.
- Breathe out slowly through the mouth to a count of six.
- Repeat six to ten times.

- Passive muscle relaxation (relaxing body parts one at a time)
  - Start with the feet or head
  - Relax for 30 seconds
  - Continue with the next body part, working slowly up or down the body

- Imagery or Visualization (imaging oneself in a pleasant, peaceful place)
  - Close the eyes, breathe deeply and imagine being in a tranquil place
  - Use every sense to imagine how it feels (i.e., see the beach, smell the salt water, hear the waves, feel the sun’s warmth).

- Meditation (focusing on the moment; experiencing it calmly, whether pleasant or not, without fear or anxiety)

- Yoga, qigong and tai chi (using specific breathing, movement and posture exercises to enhance physical and mental control and well-being)

- Acupuncture (a Chinese medical system based on restoring normal balance of life forces by inserting very fine needles through the skin to various depths)
According to Western theories of acupuncture, the needles cause changes in blood flow and levels of neurotransmitters in the brain and spinal cord.

Some studies indicate that acupuncture helps relieve fibromyalgia symptoms, while others show no benefit.

- Other forms (may include soothing music or nature sounds, self-massage, prayer, relaxation audio and/or videotapes).

**Pacing and Finding Balance**

Pacing doesn’t mean waiting to be worn out to stop an activity. It means setting a schedule of activity and then gradually increasing the activity until finding the right balance between activity and rest. This is true for all activities, even when feeling well. It is important for patients to remember to “pace” even when they are having a good day. Often times it’s tempting to overexert, which leads to patients “crashing,” causing them to spend the next few days in bed or on a reduced schedule. This is not an effective way to manage symptoms. Experts agree that learning to pace activities by alternating between periods of rest and activity is the proper way. The key to this strategy is to pace activities even when feeling good. This will avoid a flare-up by doing too much.³

Here are some basics one can implement to improve symptom management through pacing.³

1. **Start using a stopwatch or timer**

Learn to pace activities by the clock. To start, set the timer for five minutes or longer if applicable. When the timer rings its time to change positions or
rest. One can gradually increase the interval of activity and rest as they learn what is the level of their endurance.

2. Change positions

If sitting, stand for few minutes and vice versa.

3. Stretch

At least twice an hour, do a little mild stretching. People with fibromyalgia need to be cautious about overdoing it with stretching, meaning “intensity” rather than frequency. Muscles respond to extreme stretching by contracting even more. The way to avoid this is for them to stretch mildly – just until feeling the muscle extend. “Easy does it” is best. Health care providers or physiotherapists can sometimes recommend some good stretching exercises, which can also be done while sitting.

4. Set a schedule

Plan out activities for the next week. Don’t overbook the schedule. Plan time for rest, personal time, family time, as well as work, as applicable. Remember, the schedule doesn’t have to be written in stone; it can be modified if needed, but try to stick to it. Some people find it best to create a schedule the night before or first thing in the morning.

5. Prioritize

One may find the schedule is too much to follow. It is important not to become discouraged, that can be a learning opportunity. Patients can make a list of the things to accomplish and assign each task a number according to its importance. Then when making the schedule, one can spread the tasks out over time. It is important not to try to do all the tasks together. There
should be a plan for rest breaks, as the goal is pacing.

6. Split tasks into smaller bits

It’s not necessary to wash all the dishes at once, or put them away right after washing. The same is true with vacuuming. Instead of doing the whole house, patients might only do one room each day. Learning to split these jobs up into smaller chunks is an important part of pacing.

7. Learn to delegate

This can be really challenging for some. Asking for help is not always easy. But for many people with fibromyalgia, it’s a necessary part of symptom management. Patients should be encouraged to try to enlist the help of family members. This might cause some friction at first, so it is vital that they first explain why they need their help. They may find it helpful to get some information on fibromyalgia, print out some copies to hand out, and then go through it with them. Once they more fully understand the situation, they may be more willing to help.

8. Learn to say “No”: This is often difficult. It is common to feel bad when refusing someone’s request. Patients can be instructed that an easy way to say “no” gracefully is “I’m sorry, but my schedule is really full right now. I don’t like to say yes and then not be able to fulfill my obligation and let you down.” The requester will understand that the refusal is based on not wanting to disappoint them and that it’s not against them personally.

A healthy, balanced day includes time for work or school, family, socializing, exercise, daily living tasks, relaxation and rest. Time-management skills can
help patients organize, so they can lessen stress, conserve energy and achieve a balanced life.

**Fibromyalgia Research**

The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) sponsors research that will improve scientists’ understanding of the specific problems that cause or accompany fibromyalgia, in turn helping them develop better ways to diagnose, treat, and prevent this condition.

The research on fibromyalgia supported by the NIAMS covers a broad spectrum, ranging from basic laboratory research to studies of medications and interventions designed to encourage behaviors that reduce pain and change behaviors that worsen or perpetuate pain. The following section describes some of the promising research now being conducted.

**NIH Supported Research and Understanding Pain**

Research suggests that fibromyalgia is caused by a problem in how the body processes pain, or more precisely, a hypersensitivity to stimuli that normally are not painful. Therefore, several National Institutes of Health (NIH)-supported researchers are focusing on ways the body processes pain to better understand why people with fibromyalgia have increased pain sensitivity. These studies include:

- The establishment of a tissue bank of brain and spinal cord tissue to study fibromyalgia and to determine the extent to which chronic pain in fibromyalgia patients is associated with the activation of cells in the
nervous system and the production of chemical messengers, called cytokines, that regulate immune cell function.

- The use of imaging methods (CT, MRI) to evaluate the status of central nervous system responses in patients diagnosed with fibromyalgia compared with those diagnosed with another chronic pain disorder and pain-free controls.

- An investigation to understand how the activation of immune cells from peripheral and central nervous system sources trigger a cascade of events leading to the activation of nerve cells, chronic pain, and the dysregulation of the effects of analgesic drugs against pain.

- An intensive evaluation of twins in which one of the pair has chronic widespread pain and the other does not, along with twins in which neither of the pair has chronic pain, to help researchers assess physiological similarities and differences in those with and without chronic pain and whether those differences are caused by genetics or environment.

- A study examining the use of cognitive behavioral therapy in pain patients, which researchers hope will advance their knowledge of the role of psychological factors in chronic pain as well as a new treatment option for fibromyalgia.

- The Patient-Reported Outcomes Measurement Information System (PROMIS) initiative. The PROMIS initiative is researching and developing new ways to measure patient-reported outcomes (PROs), such as pain, fatigue, physical functioning, emotional distress, and social role participation that have a major impact on quality of life across a variety of chronic diseases. The goal of this initiative is to improve the reporting and quantification of changes in PROs. The
NIAMS supports an effort to develop PROMIS specifically for use in patients with fibromyalgia.

**NIAMS and Symptom Improvement**

A better understanding of fibromyalgia and the mechanisms involved in chronic pain are enabling researchers to find effective treatments for it. Some of the most promising lines of research in this area include the following methods of improving symptoms.

**Exercise**

Although fibromyalgia is often associated with fatigue that makes exercise difficult, regular exercise has been shown to be one of the most beneficial treatments for the condition. Researchers are trying to determine whether increasing lifestyle physical activity (that is, adding more exercise such as walking up stairs instead of taking the elevator) throughout the day produces similar benefits to exercise for fibromyalgia, improving symptoms such as pain, fatigue, and tenderness. Scientists are also examining the potential mechanisms by which lifestyle physical activity might influence symptoms. Other research supported by the NIAMS is examining the effectiveness of a simplified form of Tai Chi on pain and other measures such as sleep quality, fatigue, anxiety, and depression.4

NIAMS-supported research is also examining ways to help people maintain helpful exercise programs. Because many people with fibromyalgia associate increased exercise with increased pain, doctors and therapists often have a difficult time getting patients to stick with their exercise program. The new research is examining patients’ fears that cause them to avoid exercise as
well as behavioral therapies to reduce fears and help them maintain exercise.  

Sleep Improvement

Researchers supported by the NIAMS are investigating ways to improve sleep for people with fibromyalgia whose sleep problems persist despite treatment with medications. One team has observed that fibromyalgia patients with persistent sleep problems share characteristics with people who have sleep-disordered breathing — a group of disorders, the most common of which is the obstructive sleep apnea, characterized by pauses in breathing during sleep. These researchers are studying whether continuous positive airway pressure (CPAP), a therapy administered by a machine that increases air pressure in the throat to hold it open during sleep, might improve the symptoms of fibromyalgia.  

Other groups of researchers are examining the link between sleep disturbance and chronic pain in fibromyalgia and are studying whether behavioral therapy for insomnia might improve fibromyalgia symptoms. This research may provide the knowledge necessary to improve the care and treatment of those living with fibromyalgia in the future.

Fibromyalgia is a chronic pain condition. It is helpful for patients, their friends and families, as well as care providers to have a basic understanding of chronic pain, in order to better relate to and care for the patient living with fibromyalgia. Chronic pain is different from acute pain. Acute pain is triggered by tissue damage and usually has a known source or cause (i.e.,
illness, injury or surgery). Acute pain can vary from mild to extreme. Most acute pain resolves within days to months.⁶

Chronic pain lasts longer than three months. Chronic pain also can vary in severity; some days the pain may be worse. Sometimes, the source of chronic pain can be identified (i.e., arthritis), but often the cause is unknown.⁶

**The Chronic Pain Cycle**

When patients try to understand and cope with fibromyalgia, their behavior, thoughts and emotions may follow a common, cyclic pattern. Typically, when one experiences pain or other fibromyalgia symptoms, they reduce their level of physical activity. Not only does pain make regular tasks more difficult, but patients also may fear that activity will increase their symptoms or cause lasting damage. Lack of regular physical activity can leave them out of shape (deconditioned) and easily fatigued. If hope for improvement diminishes, depression and stress may occur, further reducing the motivation to stay active. If the decrease in physical activity continues, muscle tension and pain increase. Increased pain may lead to further limitations of physical activity, thus, continuing the cycle.¹²

**Symptom-Focused Behaviors**

Behaviors that signal pain, fatigue or other symptoms may include:

- Wincing or grimacing
- Groaning or crying
- Frequently talking about pain
• Moving slowly
• Rubbing the affected area
• Using protective devices (such as a brace, cane or splint)
• Lying down
• Withdrawing from others
• Limiting activity

These behaviors are a natural response to symptoms, but with repetition, they can become learned habits. Sometimes, people use these behaviors to escape from symptoms or to seek care and support from others. However, rather than decreasing symptoms, these behaviors become a constant reminder. They consume energy that could be directed toward more productive activity, such as taking steps to manage symptoms. Symptom-focused behaviors can cause brain chemistry changes that can amplify pain signals.3

These behaviors, exhibited by those living with chronic pain conditions, like fibromyalgia, may cause others around them to respond in various ways. They may try to take care of the individual or do things for them. They may focus more on the symptoms than on the healthy parts of their life. Or, they may become annoyed by repeated symptom-focused behaviors and distance themselves from the individual.

Identifying the typical symptom-focused behaviors may help those with fibromyalgia to substitute more positive responses. The list above can be used to identify habitual behaviors and then patients can try to substitute healthy behaviors. For example, rather than lying down or withdrawing when hurting, they can try taking a walk or telephoning a friend.3
**Goal Setting**

It may be beneficial for those living with fibromyalgia to set goals related to the coping and self-care aspects of managing their condition. Setting goals is crucial to creating an action plan. Goals organize and direct one toward change. They encourage movement in a positive direction, provide purpose and enable accomplishments that can build self-esteem and confidence.\(^3\)

As patients with fibromyalgia set goals, they should be encouraged to start slowly and do not overdo. It is helpful to take small, successful steps and enjoy building on successes. They should set goals for the present, but remember that goals should change as situations change. Also, it is important to remember that motivation to change may not come first. One may need to take action to become motivated to do more.\(^3\)

Patients should be encouraged to use the “SMART” acronym below to develop meaningful goals.\(^3\) A “SMART” goal is:

- **Specific** — Each goal should be written plainly. The patient should state exactly what they want to achieve, when they want to achieve it and how they will do it.
- **Measurable** — Patients should focus on clear, measurable outcomes, and plan to track their progress. A goal does no good if one does not know whether they have succeeded. “I want to be physically fit” is not a good goal because it is hard to measure. “I want to walk for five minutes each day” is clear and measurable.
- **Attainable** — Patients should be encouraged to ensure each goal is realistic and that they have the time and resources to achieve it.
• **Relevant** — Patients should think about how each change will impact their life. They should be encouraged to choose goals that fit their stage and style of life.

• **Time-limited** — It is beneficial to start with goals that can be achieved within a week to a month. One may become discouraged and give up on goals that take too long to reach. Those living with fibromyalgia may have difficulty with grief and loss related to the effect the condition, and their management of the condition, has had on their lives. The stress of living with fibromyalgia can produce strong, often negative emotions, such as fear, anxiety, grief and anger. Negative emotions can sap energy, intensify symptoms and harm relationships. Adopting new approaches to feelings can make life more enjoyable and satisfying.

**Grieving Losses**

Fibromyalgia can create a sense of loss in every aspect of daily life. Patients may miss:

- The health they once enjoyed
- Feeling happy, energetic and confident
- Their normal routine without pain
- Job satisfaction
- Enjoyable leisure activities or hobbies
- Untroubled relationships with family and friends

These losses are difficult. The natural response to loss is grief, which can trigger various emotions and behaviors. Patients may experience the following responses to grief shown in the table below.
Patients living with fibromyalgia may have a difficult time dealing with grief, loss and other negative emotions. Some suggestions to help them work through these emotions include:

**Recognize Losses**

Acknowledging loss is the first step in the grief process. Many people who have fibromyalgia do not consider the changes in their lives to be losses. It can be helpful for them to recognize how fibromyalgia affects what they can do, but they should try not to exaggerate the impact of the symptoms.

**Express Feelings**

Allow grief for the old life. Feelings should be shared with family, friends or a counselor. It may be useful for patients to try writing their thoughts and feelings in a notebook or journal.

**Stay Positive**

A positive outlook improves the ability to face upsetting emotions.

<table>
<thead>
<tr>
<th>Emotional</th>
<th>Behavioral</th>
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</thead>
<tbody>
<tr>
<td>• Sadness</td>
<td>• Preoccupation with the loss</td>
</tr>
<tr>
<td>• Depression</td>
<td>• Blaming others for loss</td>
</tr>
<tr>
<td>• Anger, frustration, anxiety</td>
<td>• Withdrawing from others</td>
</tr>
<tr>
<td>• Despair, helplessness, hopelessness</td>
<td>• Increased medication, alcohol or drug use</td>
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<tr>
<td>• Guilt</td>
<td>• Reduced physical or mental activity</td>
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<tr>
<td>• Denial</td>
<td></td>
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<tr>
<td>• Less enjoyment of life</td>
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</tbody>
</table>
Focus on Abilities, Not Limitations

Patients should try not to dwell on the way things used to be or believe that, if they can’t do something exactly as before, they can no longer do it at all. Instead, they should be encouraged to modify or change their expectations and activities when necessary. For example, to play nine rather than 18 holes of golf; reduce the hours at work; or setting aside an extra day to clean the house.

It is important for those with fibromyalgia to build in rest periods to maintain their energy level.

Enhance the Sense of Purpose and Meaning

Patients should do things they find rewarding and meaningful. For example, doing volunteer work or helping someone in need can boost feelings of self-worth, take the mind off losses and remind one that they make a difference. It can also be helpful to keep a list of things for which one is grateful.

Explore Spirituality

Many people rely on religious faith or other spiritual practices to help them face grief and loss.

Seek and Accept Support

Those living with fibromyalgia should be encouraged to ask for help from family and friends, especially those whose outlook is positive and hopeful.
Be Patient

It takes time to process and cope with the thoughts and feelings surrounding loss and to adopt new habits and ways of thinking.

Consider Professional Help

If feelings of loss or grief are overwhelming or keep one from functioning well, they should speak with a health care provider. Patients should be reminded that seeking professional help is not an admission of defeat but a positive step toward emotional health.\(^1\) Patients living with fibromyalgia may also be experiencing anger. This could be related to the diagnosis itself, the pain and other symptoms that may limit their activities, or the way in which managing the condition affects their life.

Factors such as chronic pain, fatigue, disturbed sleep, job worries and troubled relationships can easily produce anger. Anger is a natural emotion, but it’s not productive to stay angry, bottle up anger or express it with harsh outbursts. Denied or buried anger often surfaces as physical complaints (i.e., headaches, backaches or high blood pressure), mental stress or strain and explosive behavior toward others. Anger management strategies can help those living with fibromyalgia express anger appropriately.\(^1,2\) At first, changing unhelpful anger reactions may require intense focus. But with time and practice, healthier responses can become automatic. Some ideas to help establish new patterns include:

- Taking a time-out by counting to 10, breathing deeply a few times or briefly leaving the area to avoid saying or doing things one may regret.
- Doing something physical or creative to release emotions and cool down. For example, walking, running, dancing, cleaning, biking or swimming; or
listening to music, singing, playing an instrument, drawing, painting, writing in a journal or practicing relaxation techniques.

• Pausing before speaking or acting.
• Expressing anger as soon as one is calm. Anger should not be ignored, bottled up or stewed about.
• Expressing anger directly to the person involved. If that is not possible, expressing feelings to a caring person.
• Role-playing solutions to anger-provoking situations.
• Using humor to put things in perspective.

Patients with fibromyalgia may struggle with the cognitive difficulties sometimes referred to as “fibro-fog”. This can interfere with managing stress and maintaining healthy habits. Thinking difficulties may include confusion, memory problems, and trouble concentrating, focusing or finding the right words. Such difficulties result from the combined effects of fatigue, pain and emotional stress, not from brain damage or disease.\textsuperscript{1,2} Some tips that may help patients with fibromyalgia cope with these cognitive difficulties and help their minds perform at their best are listed below.\textsuperscript{3}

• Keeping things in perspective:
  Patients should be reminded not to be too hard on themselves — everyone forgets from time-to-time.

• Exercising the mind:
  Just as physical activity strengthens the body, mental activity can sharpen the mind. To challenge the mind, one can play word games, read, do crossword puzzles, take a class or try a new hobby.
• Creating routines and rituals:
  A routine makes managing daily activities easier. For example, setting
days and times to clean, watering plants or buying groceries. Keeping
frequently used items in specific places at work and home.

• Using memory cues:
  For example, placing items to mail by the door so they are not forgotten.

• Making associations:
  To aide in remembering new information, associate it with something
familiar. For example, thinking about how someone a person has just met
is like someone they already know. Or, when driving, looking for
landmarks, such as a school or park, to aide in remembering the route.

• Tracking important information:
  Listing events and appointments in a daily planner. Creating a to-do list
for tasks. Keeping a file with names, addresses and phone numbers for
key people.

• Organizing paperwork:
  Sorting bills and other items immediately. Throwing away useless
material, acting on items requiring immediate attention, and filing papers
needing review later.

• Maintaining healthy habits:
  As described previously, it is important for those with fibromyalgia not to
smoke, or drink to excess. They should be encouraged to get regular
physical activity, plan a nutritious diet and get the sleep they need. These
choices can help one think clearer and feel better.
Summary

In summary, fibromyalgia is a complex condition that can have a serious impact for those affected by it. It is associated with significant pain and fatigue and may involve a variety of other symptoms. The exact cause is not widely understood and there is no cure, however, there are effective treatments, both pharmacological and non-pharmacological.

The behavior, thoughts and emotions of a patient follow a cyclical pattern as they try to understand and cope with fibromyalgia. The experience of pain or other fibromyalgia symptoms tends to lead to a reduction of physical activity; because pain makes regular tasks more difficult. Additionally, patients may fear that activity will increase their fibromyalgia symptoms or cause lasting damage. The importance of regular physical activity to avoid becoming out of shape (deconditioned) and easily fatigued, and other lifestyle changes, has been highlighted here. This course has described fibromyalgia as a condition, as well as some useful strategies for dealing with patients coping and living with fibromyalgia.

Please take time to help NurseCe4Less.com course planners evaluate the nursing knowledge needs met by completing the self-assessment of Knowledge Questions after reading the article, and providing feedback in the online course evaluation.

Completing the study questions is optional and is NOT a course requirement.
1. **Fibromyalgia is more common in:**
   a. Men
   b. People who are left handed
   c. People who live in warm climates
   d. Women

2. **A common symptom of fibromyalgia is:**
   a. Pain
   b. Fatigue
   c. Sleep difficulties
   d. All of the above

3. **Which of the following statements about fibromyalgia is true?**
   a. The cause is well understood
   b. There is no cure
   c. It affects more men than women
   d. Medications are useless to treat it

4. **Factors that are believed to affect the risk for fibromyalgia are:**
   a. Sex, age, family history
   b. Sex, family history, socioeconomic status
   c. Family history, climate, sex
   d. Age, emotional trauma, race

5. **Diagnosis of fibromyalgia is made by:**
   a. A common blood test
   b. A rheumatologist only
   c. Excluding all other possible causes of symptoms
   d. A 24 hour urine collection
6. Other classifications of drugs that may be used to treat fibromyalgia symptoms include:
   a. NSAIDs
   b. Diuretics
   c. Anti-seizure
   d. a & c

7. Relaxation is a skill and should be practiced:
   a. Weekly at most
   b. Only when feeling anxious
   c. With a partner
   d. Once or twice per day

8. In relation to setting goals, the “M” in the SMART acronym stands for:
   a. Monetary
   b. Mostly
   c. Moderately
   d. Measureable

9. Symptoms of fibromyalgia may include all of the following except:
   a. Dizziness
   b. Chest wall pain
   c. “fibro-fog”
   d. Bone fractures

10. What percentage of those with fibromyalgia are women?
    a. 75-90
    b. 50-75
    c. 20-40
    d. Less than 10
Correct Answers:

1. d 6. d
2. d 7. d
3. b 8. d
4. a 9. d
5. c 10. a

References Section

The reference section of in-text citations include published works intended as helpful material for further reading. Unpublished works and personal communications are not included in this section, although may appear within the study text.


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