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Fibromyalgia

Fibromyalgia is a condition which causes pains and tenderness in different areas of the body, associated with unrefreshing sleep and physical tiredness. There are various treatments that ease symptoms in many cases. Non-medication treatments which may help include exercise (the most highly recommended approach), heated pool treatment, and cognitive behavioural therapy (CBT). Medication that may help includes certain painkillers, including low-doses of antidepressants (used for their pain-relieving effects).

What is fibromyalgia?

The word fibromyalgia means pain (-algia) coming from the muscles (my-) and fibrous tissues (fibro-) such as tendons and ligaments. Most people with fibromyalgia also have physical tiredness and unrefreshing sleep as well as some other symptoms, listed below. Therefore, fibromyalgia is sometimes called fibromyalgia syndrome (FMS). It is a persistent (chronic) condition. Fibromyalgia does not affect the joints and so is not an arthritis.

Evidence suggests that people who have fibromyalgia have excess sensitivity (hypersensitivity) to pain receptors in the brain (central nervous system) as well as hypersensitivity to light, smells and sound. Whereas normally pain is associated with harmful stimuli to the area that feels painful; in fibromyalgia or other conditions with hypersensitivity, the pain is felt despite the absence of these stimuli.

Fibromyalgia symptoms

The main symptoms are pains felt in many areas of the body, and tiredness (fatigue). Some people also develop other symptoms. The severity of symptoms varies from person to person and can vary from time to time within the same person.

Pain

Pains can occur in any area of the body. Typically, many areas of the body are affected, and some people feel the pain all over. The neck and back are the most common places to feel pain.. The severity of the pain can vary from day to day. The pains may be made worse by stress, cold or activity. Many areas of the body may also be tender to the touch.

Tiredness

Tiredness is common and is sometimes severe. It is often associated with a poor sleep pattern where people wake feeling unrefreshed.

Various other symptoms have been reported by people with fibromyalgia. The following are perhaps the most common, but it is not an exhaustive list of every possible symptom that may occur:

- [Headaches](#) are common.
- Irritable bladder is common - needing to pass water more frequently than usual.
- Irritable bowel syndrome occurs commonly in up to 70% of people with fibromyalgia - with tummy (abdominal) pains, sometimes with diarrhoea, constipation or bloating.
- About 1 in 5 people with fibromyalgia also have restless legs syndrome. [See the separate leaflet called Restless Legs Syndrome for more detail.](#)
- Some people describe a feeling as if their hands or feet are swollen (although they are not actually swollen).
- [Depression](#) or [anxiety](#) develops in some people. 90% of people with fibromyalgia describe depression, anxiety or both.
- Some people with fibromyalgia also have [chronic fatigue syndrome/myalgic encephalomyelitis \(CFS/ME\)](#).
- Muscle weakness is not usually a feature of fibromyalgia at first, although if the condition prevents exercise then, over time, muscles will become weaker. [See the separate leaflet called Muscle Weakness to read more about other causes of muscle weakness.](#)

Tiredness is a nonspecific symptom – which means it can be a symptom of many different conditions, not just fibromyalgia. [See the separate leaflet called Tiredness \(Fatigue\)](#).

Fibromyalgia causes

The cause of fibromyalgia is not known, but the most widely accepted theory is that fibromyalgia is a central pain problem, caused by excessive levels of pain stimulators or amplifiers in the central nervous system, in response to triggers in the muscles which should not normally cause pain (because there is no corresponding injury).

Research has shown that people with fibromyalgia have subtle changes in chemicals called neurotransmitters, which are found in the brain and nervous system. These chemicals transmit messages between nerves and between brain cells. This includes an increased amount of a protein called 'substance P', which is both a neurotransmitter and a neuromodulator (it modifies signals in the brain).

Substance P is thought to be involved in the way pain messages are transmitted, and may amplify (increase) pain signals. What this means is that the central nervous system in patients with fibromyalgia produces pain signals which would normally indicate injury but in the absence of injury.

This increased level of pain producing neurotransmitters is called central sensitisation. The triggers for these changes are not known, but this means that treating the muscles themselves is not usually the answer. Fibromyalgia is not due to abnormality or damage to muscles, tendons or ligaments, even though this is where the brain perceives pain and damage to be taking place. Treatments therefore need to focus on modifying pain signals in the central, not the peripheral, nervous system.

In many cases, the condition appears to be initially triggered by physical or emotional stresses.

Risk factors

For many patients, fibromyalgia comes out of the blue. However, some factors that may increase the risk of developing fibromyalgia are:

- **Sex.** It is very much more common in women than in men.
- **Age.** It usually begins between the ages of 25 and 55.
- **Family history.**
- **Trauma.**
- **Illnesses.** Some patients report fibromyalgia beginning after an illness like [flu](#), which causes muscle inflammation and pain.

About 1 in 25 people develop fibromyalgia at some stage in their lives. It has typically been present for over a year by the time it is diagnosed (sometimes much longer). It is uncommon in children.

Can fibromyalgia be confused with lupus?

There is some overlap of symptoms between fibromyalgia and lupus, as both can cause pain and tiredness.

Lupus affects skin, joints and other body organs. It usually produces more visible signs than fibromyalgia. It is usually diagnosed on blood testing – certain blood tests that are normal in fibromyalgia are abnormal in lupus. [See the separate leaflet called Lupus \(Systemic Lupus Erythematosus\).](#)

Fibromyalgia diagnosis

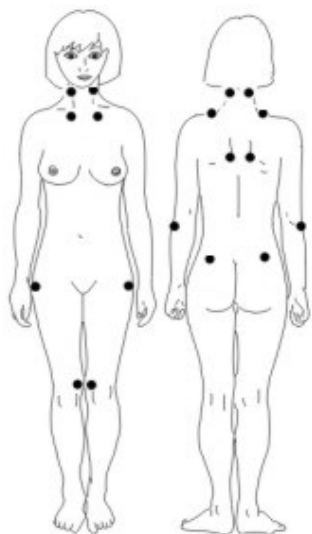
Fibromyalgia is usually diagnosed following a physical examination and a discussion of symptoms and health history. Apart from finding multiple areas of tenderness, the examination by a doctor will usually find no other abnormality. A GP will normally refer to a rheumatologist to make the diagnosis if fibromyalgia is being considered as a potential diagnosis.

Where are the fibromyalgia tender points?

The typical tender points that are used in the diagnosis of myalgia are shown in the diagram below. It is important to remember that everyone's symptoms are different; it is quite common to have many more points than these, or to have some variation in tender points.

A doctor's examination will check for particularly tender spots. During the examination the doctor may press firmly with a thumb on these areas. The amount of pressure used by the doctor does not cause pain in people without fibromyalgia

The increased sensitivity to pressure (being tender to mild pressure) can be in many places in the body, and may be all over. However, a doctor will usually press on specific sites which are particularly helpful in the diagnosis of fibromyalgia. To make a firm diagnosis, symptoms need to include widespread pain involving both sides of the body, above and below the waist, as well as the neck, back and pelvis, and to have been present for at least three months.



● = sites of tender points used to diagnose fibromyalgia

Is there a fibromyalgia test?

There is no laboratory test that confirms the condition. It is diagnosed on the history (the symptoms that you describe to your doctor) alongside normal examination findings other than typical findings of tenderness. The presence of the other symptoms listed above tends to support the diagnosis.

Many of these symptoms are 'nonspecific' – which means they are found in other conditions such as [irritable bowel syndrome](#), [medication headache](#), [Addison's disease](#) and [obstructive sleep apnoea](#). However, if they all occur together, at the same time as pressure point tenderness, they suggest a diagnosis of fibromyalgia.

On the other hand, other symptoms which are not on the list – for example, joint swelling, fever or weight loss – those do not support a diagnosis of fibromyalgia. Another cause for the symptoms will be looked for.

Simple blood tests will usually be ordered to rule out other diseases that can cause similar symptoms, such as an [underactive thyroid gland](#), early [osteoarthritis](#), [rheumatoid arthritis](#), or [anaemia](#). In fibromyalgia, all blood tests are usually normal.

Fibromyalgia treatment

There is no cure for fibromyalgia. Treatments aim to reduce symptoms as much as possible and to improve quality of life. Remission can be achieved. Over the years several different treatments have been advocated, with variable rates of success.

Fibromyalgia has been intensively studied by scientists and clinicians trying to find the best treatments. The most experienced group is the European Alliance of Associations for Rheumatology (previously known as the European League against Rheumatism, EULAR). They have published guidelines on evidence-based recommendations for the management of fibromyalgia.

Not all treatments help all people with fibromyalgia and not all treatments are available in every location. Most people need a combination of treatments; this won't always include medication but it may do.

Fibromyalgia medication

Painkillers

[Painkillers](#) – such as [paracetamol](#), [anti-inflammatory painkillers](#) such as [ibuprofen](#), or [stronger painkillers](#) such as [codeine](#) – are often tried to reduce pain. However, they often do not work very well in fibromyalgia. This is because painkillers work in the periphery (on muscles, skin etc) and do not affect the hypersensitivity of the CNS (brain) pain receptors seen in fibromyalgia. Anti-inflammatory painkillers, in particular, showed no evidence for benefit, and can themselves be harmful if used in the long term.

[Tramadol](#) is a stronger painkiller that has been shown to be of limited benefit in fibromyalgia but only when used with paracetamol. However the studies have not shown strong evidence and, due to the fact that tramadol is addictive and can cause dependency issues, it is not generally recommended.

Very strong opiate painkillers such as morphine are not recommended. This is because fibromyalgia is a long-term condition and it is unwise to take strong opiates long-term, as they can lead both to problems with medication dependence and to a general impairment in cognitive performance, meaning memory, mental agility and alertness can be impaired.

Antidepressants

Antidepressant medicines are sometimes helpful for fibromyalgia because they also function as painkillers. Antidepressants modify levels of neurotransmitters. Because pain and depression involve the same neurotransmitters working in different but closely related parts of the brain, it is thought that antidepressants affect the pain sensors in the brain..

As well as helping by easing pain, antidepressants can also help with disturbed sleep and may improve overall function.

Some people with fibromyalgia feel that, in offering them an antidepressant, their doctor is failing to appreciate that their main symptom is pain or is assuming their symptoms are imaginary or "all in their head". This isn't the case - the problem is that antidepressants are also anti-central (or brain) pain but that isn't reflected in their name. Antidepressant medicines are used to treat various conditions apart from depression.

[Tricyclic antidepressants ease pain separately to their action on depression.](#) They can be helpful in fibromyalgia, both for pain and for insomnia, with patients who benefit reporting their pain scores down by an average of about a third. A trial of 4-6 weeks of low-dose [amitriptyline](#) is often advised, and continued if found to be helpful. Only low doses are used (the dose is very low when compared to a dose that may be used to treat depression).

[Selective serotonin reuptake inhibitors \(SSRIs\)](#) which include [fluoxetine \(Prozac®\)](#), seem not to be of benefit in helping with the pain symptoms of fibromyalgia although they can improve mood in people with fibromyalgia.

Serotonin-norepinephrine reuptake inhibitors (SNRIs), such as [duloxetine](#), do appear to show benefit for pain, in some patients.

Mirtazapine seems to be of limited value in fibromyalgia; although some people did report reduction in pain and improvement in sleep, studies did not show significant benefit.

Sleeping tablets

These are not often used, as they do not help with fibromyalgia, and can be addictive. [See the separate leaflet called Insomnia \(Poor Sleep\) for tips on getting a good night's sleep.](#)

Sodium oxybate, a medicine used to treat narcolepsy, has also been tested, but has been found to be ineffective.

Muscle relaxants

One study examine the effects of a medicine called [cyclobenzaprine](#), which is a muscle relaxant. It seemed to help sleep slightly, but not pain – and this was at the expense of significant side-effects in most patients.

Other medicines

Pregabalin and gabapentin have both been shown to be of benefit in reducing pain in people with fibromyalgia. Pregabalin appears to be more beneficial than gabapentin and the most effective dose appears to be 450 mg a day. Both these medications can cause significant side-effects and the dose needs to be increased gradually to manage these. There are concerns about the potential for dependency on these medications so they are used with caution.

Capsaicin gel

Capsaicin gel can be purchased over the counter but there is no evidence suggesting it is helpful for the symptoms of fibromyalgia.

Which is the best treatment for fibromyalgia?

Studies show that the best treatment for fibromyalgia is exercise. This is described in more detail below.

The National Institute for Health and Care Excellence (NICE) produced new guidelines on the management of chronic pain (one of the major features of fibromyalgia) in 2021. This guidance focuses on a multidisciplinary approach to chronic pain, which involves a combination of healthcare professionals such as physiotherapists, occupational therapists and counsellors helping to improve people's day-to-day functioning.

These guidelines stress that the risks of many medications outweigh the potential benefits. They recommend that opioid medication should be avoided because of the high risk of addiction and the fact that they are not effective in the medium-long term.

NICE recommends an antidepressant, either [amitriptyline](#), [citalopram](#), [duloxetine](#), [fluoxetine](#), [paroxetine](#) or [sertraline](#), to treat chronic pain.

NICE also advises that the following medicines should not be used to manage chronic primary pain:

- Antiepileptic drugs, including gabapentinoids (eg, gabapentin or pregabalin).
- Antipsychotic drugs.
- Benzodiazepines.
- Corticosteroid, or local anaesthetic/corticosteroid combination, trigger point injections.
- Ketamine.
- Local anaesthetics (topical or intravenous).
- Non-steroidal anti-inflammatory drugs.
- Opioids.
- Paracetamol.

[You can find out more from our separate leaflet Chronic Pain.](#)

There is a limited availability of NHS specialist pain services with access to these multi-disciplinary teams in many areas in the UK.

Natural remedies for fibromyalgia

Exercise

Exercise improves symptoms in a very high proportion of cases.. Aerobic exercises which cause very little pounding, such as walking, cycling and swimming, and resistance exercises (which are strengthening with no pounding impact at all) are thought to be best. Stretching exercises such as yoga may also help. Gradually increasing the amount of exercise (time and intensity) has been shown to have the best effect on fibromyalgia symptoms.

EULAR recommends this strongly. A physiotherapist, particularly one with an interest in fibromyalgia, will be able to offer advice and guidance on suitable programmes for specific individuals.

The aim is to exercise safely and without increased pain. A typical goal to aim for is to build up exercise to 4-5 times a week for at least 20 to 30 minutes a session, but it may take several months to build up to this level.

One study describes how people with fibromyalgia were prescribed an exercise class - mostly walking on treadmills, or using exercise bicycles. Each person was encouraged to increase the amount of exercise gradually. When people first started they typically did two sessions of exercise per class, each lasting about six minutes. By three months some people had increased to doing two sessions in each class lasting 25 minutes. At three months, about 1 in 3 people who did the exercise programme rated themselves as much better.

Note: pain and stiffness can get worse for a short while when first starting on an exercise programme.

Heated pool treatment with or without exercise

Heated pool treatment (balneotherapy) has been shown to improve symptoms in some cases. Some trials that looked into this included exercise in addition to heated pool treatment, and some looked at heated pool treatment alone. Each seemed to help in some cases.

One study of fibromyalgia patients, who received 20 minutes' bathing, once a day, five times per week, for three weeks (total of 15 sessions), suggested that the treatment resulted in significantly less tenderness and pain for as long as six months after the treatment had finished.

If no hydrotherapy pool is available, a heated swimming pool or hot tub may suffice, and simply lying in a warm bath for 20 minutes per day may also be of benefit.

Cognitive behavioural therapy (CBT)

CBT may be of benefit to some people with fibromyalgia. CBT is a type of talking treatment (psychotherapy) used as a treatment for various mental health and physical problems. Unlike other types of psychotherapy it does not involve dwelling on events in your past. CBT tends to deal with the way thoughts and behaviours affect the way people feel.

CBT is problem-focused and practical. There is evidence that it helps to ease pain symptoms, as well as reducing their effects on people's lives. . This is thought to be because the parts of the brain that control responses to unpleasant things can be modified by CBT so it may affect the brain's responses to the false pain signals.

There is a lot of evidence in favour of CBT although the trials themselves were not felt to be of high scientific quality, so EULAR cautiously recommended this treatment. It is unlikely to cause harm, but its benefit has not been clearly proved.

Other therapies

Other therapies that show evidence of being useful for pain and tiredness in some patients include relaxation, acupuncture and psychological support. All of these may increase the levels of endorphins (which are effectively natural painkillers) in the central nervous system so that symptoms become more tolerable and activity levels can increase. Limited evidence suggested that meditation is helpful for sleep and fatigue.

Therapies which have not been found to be useful in studies include chiropractic treatment, biofeedback, hypnotherapy and massage.

Alternative medicines

Some people try complementary or alternative treatments such as aromatherapy, massage, etc. There is little evidence that such treatments relieve the core symptoms of fibromyalgia. However, some people find that certain treatments help them to relax and feel less stressed which helps them to cope better with their condition.

Fibromyalgia diet

Many people with fibromyalgia feel they have sensitivities to particular foods, particularly if they also have irritable bowel syndrome (IBS). If there is a suspicion that foods may aggravate symptoms, then a daily food journal might help to ascertain this further. If certain foods appear to be triggering symptoms then an elimination challenge diet can be tried where a certain food is completely removed from the diet for a few weeks and then added back to assess the symptoms. It is important that people do not miss out on essential nutrients when doing this. Any diet needs to be well balanced and high in fruits, vegetables, whole grains, and lean protein.

Breakfast is very important. It should include some protein and slow-release carbohydrate, which will provide the right kind of energy throughout the morning, even when in pain and feeling tired.

Living with fibromyalgia

Can fibromyalgia and depression be treated together?

90% of people with fibromyalgia describe depression or anxiety or both. In these cases, a full-strength dose of an antidepressant would be appropriate to treat both the pain of the fibromyalgia and the depression.

What is the outcome (prognosis) in fibromyalgia?

Fibromyalgia can last a short or a long time. It can affect quality of life negatively but does not shorten the lifespan. In some cases, symptoms ease or go after a few months. However, in many cases it is a persistent (chronic) condition which tends to wax and wane in severity.

Dr Mary Lowth is an author or the original author of this leaflet.

Further reading

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