Fibromyalgia and IBS

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Definitions

Fibromyalgia (FM) is a condition marked by muscle pain all over the body, sleep problems, and fatigue. Fatigue describes feeling low energy and/ overly tired. FM is often accompanied by emotional and mental distress and affects about 4 million U.S. adults, or about 2% of the adult population.

Irritable Bowel Syndrome (IBS) is a disorder characterized by two key elements: 1) an abdominal component generally described as pain and/or discomfort and 2) a change in bowel habits which could include changes in stool texture (how the BM looks) and/or frequency (how often you have BM). Changes in stool texture includes experiencing constipation, diarrhea, or both. Constipation is commonly defined as having three (3) or fewer bowel movements (BMs) a week, and/or difficulty passing BMs. Diarrhea is defined as loose, watery, or frequent BMs. Symptoms significantly interfere with quality of life and disrupt productivity at school and work.

Overlap of Fibromyalgia (FM) and GI Conditions

GI conditions and symptoms often occur with FM. FM has been linked to the following GI conditions:

- ***IBS*** - A common GI condition marked by abdominal pain and/or discomfort. Patients often have a change in bowel habits that cannot be explained by other tests or diagnoses.
- ***Gastroesophageal reflux disease (GERD)*** – A common GI condition where patients feel burning in their chest and throat. This burning occurs in the esophagus, a muscular tube that connects the mouth and stomach. This results from acid that enters the esophagus from the stomach region. Patients refer to this as heartburn and oftentimes also regurgitate- or bring up their food or acidic contents from the stomach.
- **Functional dyspepsia** – A condition with discomfort or pain in the upper abdomen. This area includes the stomach or small intestine. Symptoms include burning or pain in the upper abdomen, early fullness, bloating, nausea, and rarely vomiting. Some causes of dyspepsia can be stress or excess acid production, but many other causes are unknown.

Overlap of Fibromyalgia (FM) and Irritable Bowel Syndrome (IBS)

We do not know what specifically causes IBS and FM to occur in the same person. Both conditions are found more in women. Also, fatigue and insomnia are often linked to both conditions. Due to the overlap of symptoms, treatment may be similar. Drugs and other therapies used for IBS and FM are common for both conditions. Treatments will vary from patient to patient because of the diverse range of symptoms shown in both IBS and FM.

> ***Fatigue*** describes feeling low energy and/ overly tired.
>
> **Insomnia** involves continually being unable to fall or stay asleep.

Researchers are trying to find out why FM and IBS seem to be linked. FM is the most studied condition that occurs with IBS since there are many people diagnosed with both. About 33% of people diagnosed with IBS are later diagnosed with FM. About 48% of people diagnosed with FM are later diagnosed with IBS. FM tends to occur later in life whereas most patients with IBS are diagnosed in their 20's or 30's.

IBS and FM can both have a large, negative impact on activities of daily living, and overall quality of life. In addition, they can lead to increased health care costs.

FM and IBS overlap in both treatments and many pain related symptoms. Some research studies suggest that IBS and FM may have the same cause. Changes in any or all of the following may be the source.

- The central nervous system (CNS): The CNS includes the brain, spinal cord, and nerves. There could be changes in how the CNS communicates with the rest of the body.
- Immune system: The immune system is the body's tool for preventing or limiting infection. Changes to the immune system may affect the body's ability to fight off foreign and harmful invaders like bacteria, viruses, fungi, and toxins.
- Psychosocial factors: This involves the relationship between thoughts, behaviors, and social factors. These factors can have a negative impact and impair quality of life.

Other Overlapping Conditions

Both IBS and FM share the same commonly occurring conditions. Diseases and conditions that occurs at the same time are often called comorbidities. Some of the overlap in commonly occurring conditions between IBS and FM exist well outside the GI tract. People with both conditions have higher rates of sleep problems, chronic fatigue, anxiety, and/or depression. Temporomandibular joint disorder (TMJD), interstitial cystitis (IC), and chronic fatigue syndrome (CFS) commonly occur with both IBS and FM.

- Temporomandibular joint disorder (TMJD) occurs when the joints that allow the jawbone to rotate and slide becomes painful or inflamed.
- Interstitial cystitis (IC) is a condition that causes pain or discomfort in the bladder. In addition, people affected often feel a need to urinate urgently and more frequently.
- Chronic fatigue syndrome (CFS) is a long-term illness that seriously affects many body systems. CFS can often make it difficult or impossible for people to do usual daily activities.

IBS, FM and Pain

The pain associated with IBS and FM is often described by patients as a feeling of pain with increased sensitivity.

- IBS may be associated with increased visceral (organ) pain sensitivity. Visceral refers to involuntary movements, which are in internal body organs. These nerves are responsible for functions that sustain life such as heart rate, GI tract movements, and bladder functions
- FM was first thought of as increased pain sensitivity relating to the somatic nervous system. Somatic refers to nerves that control voluntary movements. Walking, lifting, and opening a jar are all examples of these movements. Studies have shown that patients with IBS may also have similar somatic type pain.

The cause of the change in feeling pain has been studied in both FM and IBS. Visceral and somatic nerves that affect pain control overlap in certain areas of the CNS. Nerve signaling that occurs there may contribute to the greater pain intensity in patients with both conditions. Pain sensitivity is likely to occur most commonly in the lower back for people with IBS and FM. Nerves in the spine may be most sensitive. This results in increased pain in that area.

Severity of Symptoms

The severity of IBS and FM can be associated with many factors:

- intensity of GI symptoms
- symptoms in the belly that occur outside the intestines
- psychosocial factors such as stress, anxiety, and depression
- any limit to physical movement
- an urgent need to go to the bathroom
- migraine headaches

Patients with mild to moderate IBS and FM are more likely to have symptoms that are:

- related to bowel movements
- worsen with eating
- irregular, crampy abdominal pain
- nausea soon after meals
- leakage of stool

The severity of symptoms above can predict quality-of-life impairments such as mental and physical wellbeing and their social interactions.

Treatments of IBS and FM Occurring Together

Your healthcare provider should educate you about the similarities of the two conditions and come up with goals for your care. Patients benefit most from a multidisciplinary treatment that combines traditional drugs with complementary techniques such as exercise, diet changes and psychological support. This type of treatment is tailored to each person's needs and symptoms. The most studied alternate therapies include exercise, patient education, and cognitive behavioral therapy (CBT). Exercise therapy and CBT both show benefits when used together in patients with FM and IBS.

Developing a treatment plan with your healthcare provider geared at each individual person's needs is usually the best approach to their care.

Exercise

Improved physical fitness with both cardiovascular and strength training is the best option. This can reduce pain, improve quality of life, and decrease symptom severity, fatigue and depression. Exercise has also been shown to improve GI motility as well, further benefiting IBS patients.

Traditional exercises such as cycling, walking, swimming, and jogging can show benefits. Alternative exercise options such as tai chi and yoga can also be helpful. In fact, studies have shown improvements in many IBS symptoms after yoga.

Heated pool treatments, relaxation, and deep tissue massage have been effective in improving pain and function. Maintaining an exercise program and physical activity is vital to symptom improvement. Gradually increasing the intensity of your exercise is also an important consideration. Most patients want to maintain moderate exercise once they have worked up to that level.

Dietary interventions

The most effective, dietary treatment for IBS is the low fermentable oligosaccharides, disachrides, monosaccharides and polyol (FODMAP) diet. This is an elimination diet that helps find foods – mostly carbohydrates- that cause symptoms of bloating, distension, pain, and bowel habit changes. This includes fructose, fructans, galactooligosaccharides, lactose, and polyols. The low FODMAP diet can be effective for many patients with IBS; however, studies have not been done in FM. Determining which of the 5 food types worsen your GI symptoms helps to improve health and quality of life. For this method, all 5 types of food are removed from the diet. Each of the groups is brought back into the diet one at a time. This allows people to find what foods may cause specific symptoms. Gluten-free diets were previously recommended for treating IBS-D in people who suspected a gluten sensitivity. New research has shown this is not as effective of a treatment. For any diet changes and dietary treatment options, it is best to work with a registered dietitian.

IFFGD's **Dietitian Listing** is a resource that allows you to search for a dietitian that is in your area or treats a specific condition.

www.iffgd.org/dietitian-listing

Psychological Treatments

As part of the multidisciplinary approach to these disorders, CBT, mindfulness-based treatments and hypnotherapy may be useful. These treatments may improve pain, help to gain coping strategies, and improve overall physical function in some people. This has been found to be effective in short term relief of pain.

The most studied psychological treatment for IBS and Fibromyalgia is cognitive behavioral therapy (CBT). CBT is a type of psychological treatment that works to change thought patterns. The development of positive thought patterns and habits has been found to improve pain and other negative symptoms. The idea of CBT is that negative thoughts and responses create emotions that negatively affect the body. This impacts behavior, emotions, and the body's nerve responses. The goal of CBT is to help patients better understand and improve their thought patterns.

Medications for Irritable Bowel Syndrome and Fibromyalgia

Drugs to treat IBS and FM should correct the nerve pain that occurs as a result of the nerves being more sensitive to any pain and distension. Distension occurs with an uncomfortable swelling in the intestines where the abdominal area visibly expands. Nerves that do not signal at the proper rate will cause issues throughout the body and either produce too much or too little of the neurotransmitters needed for the gut to function

properly. Neurotransmitters are the chemicals in the body that regulate nerve signaling. Each chemical has a specific purpose. In IBS and FM, the amount of chemicals that signal for feeling pain are either too high or too low. One example is serotonin, a chemical involved in nerve impulses that aid in digestion. Some people with IBS-D have levels of serotonin that are too high, leading to increased diarrhea. Some with IBS-C have levels of serotonin that are too low, leading to increased constipation.

Listed below are drugs commonly used, but not approved by the FDA, for use with IBS. The most frequently prescribed medications for both conditions are:

- **Tricyclic antidepressants (TCAs)** – TCA's increase the amount of serotonin and norepinephrine. These are both chemicals that are involved in nerve impulses. They work by preventing nerves from using those chemicals. The result is a decrease in pain, or awareness of that pain. TCA's can be helpful in both treatment of FM and IBS. TCAs such as amitriptyline with nortriptyline have shown to be the most effective in FM.
- **Antispasmodics** – Antispasmodics are drugs which limit smooth muscle contractions in the GI tract. Smooth muscles are located throughout the body and contract, or put pressure on, internal organs and blood vessels. There are three major classes of antispasmodics:
    - Anticholinergics – These drugs reduce spasms or contractions in the intestines. The most common anticholinergics include hyoscyamine (Levsin®, NuLev®, Levbid®) and dicyclomine (Bentyl®).
    - Direct Smooth Muscle Relaxants – Smooth muscle relaxants are not currently available for use in the United States. These drugs appear more effective for treating overall IBS symptoms than the anticholinergics.
    - Peppermint Oil – Peppermint oil causes smooth muscle relaxation by blocking calcium entry into intestinal smooth muscle cells. Calcium triggers muscle contraction, so the lack of calcium results in relaxing intestinal muscles. It also has anti-inflammatory, anti-gas, and anti-serotonergic properties. Serotonin is a chemical found in the gut that accelerates movement. Examples of this medication include Pepogest ® and IBGard ®.
- **Selective serotonin and norepinephrine reuptake inhibitors (SSRIs and SNRIs)** – These include fluoxetine, duloxetine, and milnacipran. They are used for patients with both FM and IBS. Some studies have shown benefit in improving pain and function. In some patients with IBS-C these drugs can also help with constipation. Studies show that SSRIs and SNRIs may be best for patients who have FM, IBS, and anxiety and/or depression.
- **Gabapentin –** This is an anticonvulsive medication that is used to treat seizures. It has been found to help reduce pain in some patients that have FM and IBS. Careful dosing should be done with this medication as many side effects can limit its use for all people.
- **Pregabalin** – This is a drug that increases the amount of a specific neurotransmitter outside of cells. Some evidence shows that this drug helps reduce pain sensitivity, sleep issues, and fatigue for those with FM. In IBS this can reduce pain sensitivity, bloating, and diarrhea without significant side effects.

These medications have been studied and can reduce pain, fatigue, and insomnia, and improve overall health. In addition to helping the central nervous system, antidepressants can help GI symptoms. These drugs can either reduce or improve contractions and spasms in the intestines. This action can then regulate GI motility, the movement of food and liquids through the GI tract. The only drugs of this type that are approved by the FDA for FM are duloxetine, milnacipran, and pregabalin. None of these medications are currently approved for IBS.

The Food and Drug Administration (FDA) is one of the U.S. government's regulatory agencies. This agency oversees a broad range of topics that pertain to food, drugs and other products used daily.

The FDA works to protect public health by assuring that foods and drugs for humans and animals are safe and properly labeled. The FDA also ensures that vaccines, other biological products, and medical devices intended for human use are safe and effective.

Products approved by the FDA have been deemed safe, with benefits that are worth the possible risks. This is done after reviewing studies and tests that have been done on a product.

Opioids

Many people are prescribed opioid drugs for IBS and FM even though research does not support that. It has been found in some cases that opioids can increase pain sensitivity in people with FM. Opioid drugs are also known to cause constipation as a side effect. This can further impact people with IBS-C or chronic constipation. One mild opiate, Tramadol (Conzip®, Qdolo®) is an exception. It has been found to help reduce pain in some people with FM.

Probiotics

Probiotics are live microorganisms that can help repopulate and maintain healthy gut microbiota. Most probiotics include the bacteria Lactobacillus, Bifidobacterium, Escherichia, Enterococcus, Bacillus, and/or Streptococcus. Studies have shown that probiotics can help improve some GI symptoms when recommended by a healthcare provider. Any change in gut microbiota may change the intestine's ability to take in and absorb nutrients. This is suspected to cause some cases of IBS and FM. Probiotics may strengthen intestinal walls, and protect its mucus barrier from other organisms that can damage it. This can improve function while decreasing inflammation. Some people have success with these probiotics with limited side effects. For many others, probiotics are not a good treatment option. There is not enough research or evidence to show which probiotics work. It is not known how much probiotic is needed for it to work well. In some cases, probiotics can lead to brain fog which is a feeling of memory loss and confusion. As a result, your healthcare provider should be made aware if you are taking them.

> ***Microorganisms*** are living things that are too small to be seen by the naked eye. They include bacteria, viruses, and fungi.
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> ***Gut microbiota*** includes all the bacteria in the intestines. This is necessary for healthy digestion.

Conclusion

Fibromyalgia and irritable bowel syndrome commonly occur together with a strong overlap of symptoms. In addition to both occurring together, they can overlap with many other conditions. These conditions can have a significant impact on daily living and quality of life. It is important to discuss all symptoms and concerns with a healthcare provider. This thorough discussion can ensure each patient receives the best care available to them.

About IFFGD

The International Foundation for Gastrointestinal Disorders (IFFGD) is a 501(c)(3) nonprofit education and research organization. We work to promote awareness, scientific advancement, and improved care for people affected by chronic digestive conditions. Our mission is to inform, assist, and support people affected by gastrointestinal disorders. Founded in 1991, we rely on donors to carry out our mission. Visit our website at: www.iffgd.org. or *www.aboutIBS.org*

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