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Fibromyalgia Syndrome Treatments

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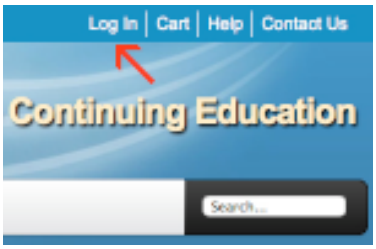

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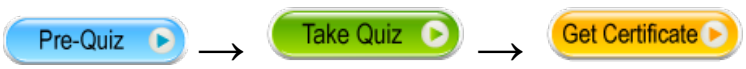

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Treatment of Fibromyalgia Syndrome

What is fibromyalgia? How is it diagnosed, and what methods are used to treat this condition? The answers to these questions—from both an allopathic, Western model and Traditional Chinese Medicine standpoint—are the focus of this course.

Fibromyalgia is an idiopathic pain syndrome affecting the soft tissues. This syndrome is characterized by sleep disturbances, tender points, muscle pain, weakness, and a host of other systemic symptoms. Idiopathic is a term that means not attributed to a specific cause. A syndrome is the occurrence of symptoms, signs, or phenomena that alert the healthcare practitioner of a certain condition. Sometimes, a condition may continue to be called a syndrome even after causes have been identified such is the case with Down's syndrome and Cushing's syndrome. Fibromyalgia literally means pain of the muscles and fibrous tissues. However, the condition involves more than musculoskeletal pain, which is why for many years it has been complicated to diagnose and treat.

Alleviation of chronic painful conditions has always been a major goal for the healthcare practitioners, so hopefully this course will provide you and your patients many resources for addressing fibromyalgia syndrome (FMS), in particular. The course is broken into a Western and TCM section. Both sections provide pathophysiology, assessment, and management information.

A Brief History

In the 19th century several advances were made in identifying tender points and eventually led to the concept of trigger point therapy in the early 20th century. During the 19th century, physicians and researchers primarily conceptualized the yet-to-be-named condition in terms of a connective and

muscle tissue dysfunction. In 1821, R.P. Player, a British physician observed that patients experienced pain and tenderness when certain vertebrae were pressed. In 1828, Thomas Brown, a Scottish physician, also observed painful, tender points along the spine of young women. Some years later in 1843, Robert Froreip a German physician described patients who had rheumatism accompanied by pain, stiffness, and occasional fever. These observations along with many others eventually led to an English neurologist, Sir William R. Gowers, to use the phrase "fibrositis" in a 1904 treatise.

In the 1930's scientists and physicians popularized the term trigger points. Around 1937, patients began receiving injections into these trigger points with the local, anesthetic procaine. In the 1940s Wallace Graham, a Canadian rheumatologist, was the first North American to use the term fibrositis. He also proposed the concept of "tension rheumatism, which was later challenged by a Harvard researcher. It wasn't until the 1970s that researchers at the University of Toronto were able to connect myofascial tender points with "systemic symptoms." The mid-1970's is also when a rheumatologist at the Scripps Clinic suggested renaming fibrositis since patients did not manifest soft tissue inflammation. The term fibromyalgia was adopted in the early 1980's and since has been used to describe the numerous complaints associated with this condition. In 1990 the American College of Rheumatology issued its criteria for diagnosing the syndrome.

At various points in the history of identifying FMS, emphasis has been placed on it being a muscle disorder. We now know that fibromyalgia syndrome is not truly a muscular pathology as evidenced by the lack of a nociceptive mechanism and the presence of systemic symptoms, which will be explained later in detail. A key problem in defining fibromyalgia over the years is that symptoms appear unrelated to any particular cause or trigger. Some have questioned as to whether the condition really exists (although the patients clearly manifest a pattern). It has been labeled as a non-disease by others. In recent years, research for this condition has continued and more randomized clinical trials and meta analyses are being conducted to better understand FMS.

Western Biomedicine Overview

Fibromyalgia is a rheumatic condition characterized by generalized pain in 11 of 18 myofascial tender points for over a period of 3 months. The pain is widespread, chronic, and usually accompanied by fatigue, memory problems, and sleep disturbances. Patients often experience depression, but the condition is not a psychiatric disorder. Multiple unexplained systemic symptoms may appear. Not all of the identified myofascial tender points are reactive in all patients. Other common FMS symptoms besides pain, memory problems, depression, and insomnia include irritable bowel symptoms, headaches or migraines, muscle weakness, and paresthesia. In summary, the clinical features of FMS include, but are not limited to:

- Hi levels of generalized pain
- Sleep disturbance
- Fatigue
- Memory problems
- Muscle weakness
- Paresthesia

The symptoms can be minor to debilitating and most patients experience periods of remission followed by periods of flare-ups. Since fatigue and pain frequently occur concomitantly with this condition, the limitations placed on the patient can sometimes be quite severe. In fact, some flare ups can be so severe that they even interfere with the patient's ability to work and perform routine daily functions.

Moreover, the cycle of fatigue and pain lend itself to both high levels of anxiety and depression in many cases. In one study by the National Bank for Rheumatic Disease, 64% of FMS patients reported experiencing depression while 8% reported mental illness. The most common pyscho-emotional symptoms are depression, dysthymia (mood disorder) and anxiety. Two big questions are whether the generalized pain and flare-ups

cause the pyscho-emotional issues OR if the pyscho-emotional issues contribute to the pain and flare-ups? Depending on various internal and external factors, patients can have flare ups that range from mild to severe. The average flare may last days to weeks.

Pathophysiology / Mechanism

There are various mechanisms used to explain chronic pain. A common mechanism for FMS describes the condition as a central sensitization disorder. This means the person experiences exaggerated responses to peripheral nervous stimulation. The exaggerated response can be to something that's normally painful, such as the case with hyperalgesia. Or it can be an exaggerated response to something that is not normally painful, as is the case in allodynia.

Researchers have identified fibromyalgia as a non-nociceptive condition. In other words, FMS does not occur as a result of activating a nociceptor. Nociceptors are afferent (peripheral) neurons located in the skin, muscles, joints, and other tissues. These neurons are depolarized (activated) by heat, pressure, or chemical stimuli. A nociceptive mechanism results in pain AND inflammation. Non-nociceptive mechanisms involve an increased "gain" in pain processing in the central nervous system due to heighten sensitivity in the absence of normal nociceptive input. Non-nociceptive mechanisms do not involve inflammation. This is the reason inflammation is not a characteristic feature of FMS.

MAIN FEATURES OF CENTRAL (NON-NOCICEPTOR) PAIN SYNDROMES	MAIN FEATURES OF PERIPHERAL (NOCICEPTOR) PAIN SYNDROMES
• Pain from a disruption in central processing (Note: abnormal pain processing) • Responds best to tricyclic, neuroactive compounds instead of NSAIDs • Psycho-emotional (behavioral) disturbance • Examples include: fibromyalgia, IBS syndrome, migraine headaches	• Pain primarily due to inflammation or peripheral nerve disturbance • Responds best to NSAIDs, opioids • No pyscho-emotional (behavioral) disturbance • Examples include: osteoarthritis, rheumatoid arthritis, pain from cancer

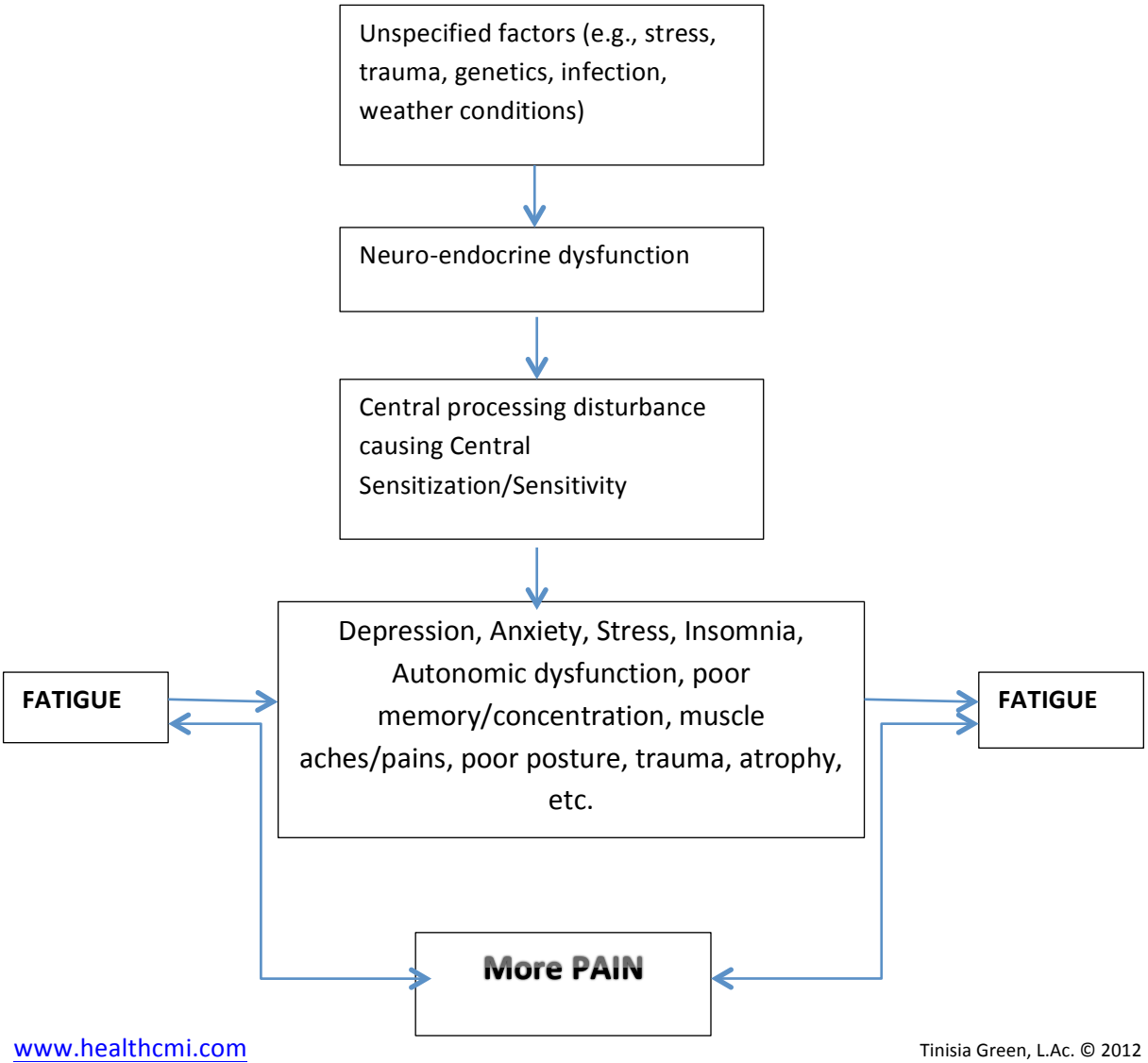
Central neurobiological mechanisms that can cause non-nociceptive pain include: de-afferentation (phantom limbs), central sensitization (wind-up), and decreased descending anti-nociceptive activity. The cerebrospinal fluid in FMS patients (like other pain patients researched) also showed increased levels of substance P, a neuromodulator. Because there is inappropriate processing in the central nervous system, both hyperalgesia and allodynia (pain in response to stimuli that is normally non-painful) are common in non-nociceptive pain syndromes. Functional magnetic resonance imaging (MRI) has been used to verify pain processing in cases of patients who experienced hyperanalgesia/allodynia.

Researchers have noted the following additional factors associated with FMS:

- A prevalence of smoking and obesity in FMS patients.
- Genetics may also play a role. FMS patients present low gene expression for pro-inflammatory cytokines interleukin 4 and interleukin 10. However, patients with other rheumatoid conditions also exhibited this trait.
- The sleep abnormalities may be due to disturbances caused during the delta wave stage (stage 4) of sleep. It's believed that stage 4 is intruded by more than normal repeated instances of alpha wave sleep, so that's why the patient awakens un-refreshed.

- The stress and depression may be related to a neuroendocrine disorder. It's believed the hypothalamus-pituitary-adrenal (HPA) axis function is disrupted.
- Autonomic sympathetic function can vary from low to high.
- FMS patients in one study demonstrated decreased pain inhibition and decreased regional blood flow in the thalamus and caudatum compared with the control patients.
- FMS patients demonstrate low levels of serotonin metabolites. However, lower back pain patients also showed low levels of serotonin metabolites.

If we could chart the pain pattern in fibromyalgia, it might look something like this:



Incidence

Approximately 2% – 4% percent of the US population suffers from FMS. The majority of those affected are women of European origin. However, other races are also affected by this syndrome. Additionally, the worldwide incidence is comparable to that found within the US. In terms of incidence in the clinical setting, 12% – 20% percent of patients in rheumatology clinics present with this condition, and about 2% - 6% of patients in the general non-rheumatology setting present with the condition.

Fibromyalgia commonly occurs between 40 – 60 years of age but can occur in older adults and teens. The majority of individuals affected are women. However, a small percentage of men also present with FMS. The syndrome appears to have a genetic aggregation.

Assessment

When a physician is diagnosing FMS, no diagnostic tool or imaging is used. The diagnosis is based on clinical evaluation. The diagnosis for FMS may be long and difficult. During an office visit, a patient may present with 10 instead of 11 tender points does this mean the patient does not have the condition? Factors like this make a definitive diagnosis challenging.

The visual analog scale (VAS) for fatigue and pain is typically used. The symptoms are also commonly measured by a Fibromyalgia Impact Questionnaire (FIQ). A Multidimensional Health Assessment Questionnaire (MDHAQ), which is more generalized, may also be used at baseline and then later during periods of flare-ups.

Usually, the diagnosis is based on what the patient tells the physician as well as what the physician observes by palpation. Physical examination of primary fibromyalgia may not show any joint swelling, muscle weakness, or severe neurologic abnormalities. There may, however, be some limited range of motion and tenderness in the peripheral joints. Tender points are the most significant indication of the syndrome. Interestingly, the tender points also correspond to body acupuncture points.

Laboratory testing may be performed. However, routine laboratory tests for complete blood count, erythrocyte sedimentation rate, chemistry panel including muscle enzymes, and rheumatoid factor may be normal. Only, about 10% of the patients will have elevated levels of anti-nuclear antibodies (ANA).

Differential diagnosis is difficult, but it should be thoroughly conducted. FMS may be differentiated from some other conditions through imaging and diagnostics. For instance, multiphase skeletal scintography used in confirming Paget's disease will be normal. An electromyography used in confirming many myopathies and neuropathies such as carpal tunnel, Guillain-Barre disease, Duchenne's muscular dystrophy, Friedrich's ataxia, amyotrophic lateral sclerosis (ALS), and myasthenia gravis will also produce normal results.

Sometimes, it isn't the question of whether the patient has FMS or another disease but whether the patient has FMS **AND** another disease. Fibromyalgia is frequently co-morbid other conditions, such as lupus erythematous, rheumatoid arthritis, and chronic fatigue syndrome. In these cases, the situation becomes even more complex.

The 2010 American College of Rheumatology criteria for confirming a fibromyalgia diagnosis is as follows:

Fibromyalgia Diagnosis Criteria

1. Widespread pain based on a total number of painful areas out of 18 points on the body. PLUS the patient will exhibit a severe level of:

- Fatigue
- Cognitive (memory or thought) difficulties
- Non-restorative sleep

2. The pain is persistent and lasting at least three months at the same level.

3. The patient will not have any other health problem explaining the pain and other general physical symptoms including urinary difficulties, IBS, swelling, etc.

Western Treatment

Western treatment for fibromyalgia may be provided by a rheumatologist or a general physician. Once a correct diagnosis has been confirmed (which may be a long process), both pharmacologic and non-pharmacologic methods may be used. The primary goals with treating or managing FMS are:

- Improve the mental and physical health of the patient.
- Improve the patient's quality of life.

Treatment for FMS typically may include medication, patient education, and exercise recommendation as well as counseling in some cases. Patient support groups provide advice and are helpful resources for new FMS patients. Research shows patients who receive education on how to manage the symptoms experience the best results overall. Research also shows that regular cardiovascular exercise provides significant benefit, but patient compliance is difficult to achieve because of the added initial pain FMS patients face when engaging in exercise.

Pharmacologic treatment may include:

- Tricyclic anti-depressants
- Hetero cyclic anti-depressants
- Selective serotonin re-uptake inhibitors (SSRI)
- Monoamine-oxidase A inhibitors (MAO-A)
- Pain relievers
- Sleep aids
- Supplements

Amitriptyline (a tricyclic anti-depressant) is commonly used. A series of studies showed a third of FMS participants benefitted from this drug. Other studies revealed similar results with cyclobenzaprine, another tricyclic anti-depressant.

Pain relievers such as analgesics and non-steroidal anti-inflammatory drugs (NSAIDs) are widely used over the counter by FMS patients. In one

survey, 91% of patients indicated they took NSAIDs (despite the lack of inflammation). It is believed the NSAIDs may take the "edge off the pain." An 8-week trial of pregabalin (Lyrica®) showed a 13% reduction in pain compared to a placebo for FMS patients. Trigger point injection of local anesthetics like lidocaine provide relief for some patients. SAM-e (S-adenosylmethionine) showed mixed results in studies. Recent research has shown Vitamin D supplementation to be helpful for FMS patients.

Non-pharmacological treatment may include:

- Exercise
- Hypnosis
- Biofeedback
- Cognitive behavioral therapy
- Chiropractic/manual therapy
- Physical therapy
- Massage therapy
- Acupuncture

Complementary and alternative medicine may offer FMS patients effective options for long-term management of the FMS. One study from the National Data Bank for Rheumatic Diseases indicated that 62% of FMS patients surveyed were dissatisfied with "contemporary" treatment. Healthcare practitioners can take several important steps to help patients manage this syndrome, such as:

- Encouraging patients to take an active self-help approach.
- Addressing aggravating factors (sleep disturbances, pain, depression, etc.).
- Having patients improve their physical conditioning (cardiovascular exercise may be more beneficial than flexibility training and help to normalize the H-P-A axis).
- Having patients minimize environmental factors (exposure to weather) that may cause flares.
- Treating co-morbid conditions

TCM Management of FMS

Research shows acupuncture is an effective treatment for fibromyalgia. An open 6-week study of patients treated with acupuncture reported a reduction in pain levels and tender point as well as increase of serum serotonin and substance P levels. A 2006 Mayo Clinic study "found that acupuncture significantly improved symptoms of fibromyalgia. Symptomatic improvement was not restricted to pain relief and was most significant for fatigue and anxiety." In the Mayo Clinic randomized clinical trial, fifty patients participated. Twenty-five patients were placed in the acupuncture group while the remaining twenty-five in the control group. "The total fibromyalgia symptoms, as measured by the FIQ, were significantly improved in the acupuncture group compared with the control group during the study period."

Studies in Brazil and Japan also reported improved Quality of Life (QoL) and FIQ findings. These and other studies continue to provide results showing traditional and electro-acupuncture to be effective in managing FMS pain. In 2003, the World Health Organization identified acupuncture as a condition "for which the therapeutic effect of acupuncture has been shown but for which further proof is needed." In this course, we will look closely at how to use acupuncture and herbs to treat fibromyalgia.

TCM Etiology

TCM identifies a number of patterns/mechanisms in patients who present with FMS. FMS is a complex condition, and the exact origin of FMS is unknown. Latent exterior pathogens are often seen as contributing factors. Beside exterior pathogens, precipitating factors may also include irregular diet and smoking as well as:

- Physical overexertion
- Mental stress
- Chronic insomnia

In the acupuncture clinic, fibromyalgia patients may present with *bi* syndrome, Liver qi stagnation, and Wei qi obstruction (with excess and deficient patterns). Furthermore, in the clinic, it is normal to see a combination of patterns. Let's now look at these three general patterns in more detail:

1. **Constrained Liver** – Liver qi stagnation exacerbates symptoms in many FMS cases. Patients who have difficult relationships, high demands, or stressful occupations tend to experience this pattern.

   Liver qi stagnation is evident when patients complain of depression and irritability. Liver qi stagnation may also contribute to the digestive disturbance FMS patients experience. Liver qi invades the Stomach and Spleen causing belching and IBS symptoms (diarrhea and alternating constipation). Further, stagnation of Liver qi may manifest as a feeling of something in the throat or tightness in the throat (called plum-pit qi).

   When Liver qi stagnation impairs the flow of blood in Chong and Ren, the uterus is affected. This is why some FMS patients experience severe gynecological problems such as dysmenorrhea and amenorrhea. FMS patients may also have pre-menstrual breast tenderness and distension because of the influence of the Liver channel on the breasts.

2. **Acute Bi syndrome** – Some FMS patients are affected by climatic factors such as dampness, cold, wind, and heat. These patients may suffer from bi (painful obstructive) syndrome. Bi syndrome manifests as pain, soreness, heaviness, limited range of motion, and swollen, painful joints. Inflammation is NOT a characteristic feature of FMS, however, co-morbid factors such as rheumatoid arthritis or Lupus are common with FMS. In these cases, patients may experience flares with swollen, red joints. A key symptom is difficulty moving.

Invasion of exterior pathogens such as wind, cold, dampness, and heat disturb qi and blood flow and creates pain in the joints and muscles accordingly:

- Exterior cold pathogens obstructs the channels and vessels blocking qi and blood flow causing pain and limited range of movement (motion)
- Exterior heat pathogen accumulates and obstructs the blood flow causing pain and swelling
- Dampness obstructs the blood and qi flow causing swelling, heaviness, and pain
- Wind invasion causes pain to migrate from joint to joint

3. **Wei qi obstruction** - Wei qi blockage occurs from latent pathogens. A weakness of Wei qi (or blockages in Wei qi) occurs in patients who have low immunity or defenses. Wei qi is also called our defensive qi.

   Wei qi warms and moistens the skin and muscles and helps to regulate the body temperature. Wei qi functions to protect the body from invasion of exterior pathogens.

   The Wei qi spreads throughout the middle and lower burner and affects the internal organs. Wei qi circulates 50 times in a 24 hour day (25 times with each 12-hour period). In the day, Wei qi circulates through the exterior of the body and at night it circulates in the five yin organs according to Maciocia. Therefore, proper flow of the Wei qi is important not just for the protecting the body but for the proper functioning of the different body systems. Wei qi blockage explains the systemic systems that manifest in FMS, such as digestive and respiratory complaints. FMS symptoms develop in three stages with the Wei qi pattern.

   <u>Early stages of Wei qi obstruction - excess</u>

   1) Exterior pathogens (wind, cold, heat, or damp—particular dampness) block the Wei qi in the 12 regular meridians and tendino-muscular regions causing pain. The patient may also

experience depression, gas, bloating, and poor appetite due to dampness invading the middle jiao. Insomnia is caused by the relationship between spleen, lung, and kidneys and the 12 meridian qi flow.

Later stages of Wei qi – deficiency

2) Qi deficiency of the Lung, Spleen, and Kidney systems results in fatigue and weakness. Qi deficiency may also cause spontaneous sweating, paleness, shortness of breath, and palpitations.
3) Chronic *qi xu* further leads to *yin xu* of Heart, Lung, and Kidney producing insomnia. Yin deficiency signs manifest at this stage.

TCM Diagnosis

Physical Examination

Patients present with trigger points in the following bi-lateral regions corresponding to common acupuncture points (18 trigger points total):

- Occipital/neck:
  - GB 20
  - GB 21
  - Antero-intertransverse space of C5 – C6 around bai lao points
- Supra-scapular medial border: SI 13
- Chest: Kd 26 (1st intercostal space)
- Elbow: LI 10
- Hip:
  - GB 30
  - UB 36
- Popliteal: Kd 10

Pattern Differentiation

1) **Liver Qi Stagnation** – Symptoms include: depression, moodiness, irritability, bloating, IBS symptoms, belching, poor appetite or excessive appetite, hiccups, premenstrual breast distension and tenderness, dysmenorrhea, and amenorrhea. *Depression and irritability are key symptoms*.

   T- normal or swollen with teethmarks or red, yellow coating (if there is heat stagnation as well)

   P- wiry

2) **Bi Syndrome** – Symptoms include: soreness, heaviness in joints or muscles, pains, and limited range of motion. *Pain and difficulty moving are key symptoms*.
   a. Cold bi – Severe, localized pain and stiffness

      T- Thin, white or moist coating

      P- Floating and tight

   b. Heat bi – Redness and swelling, body part feels warm (Note: Inflammation is not a characteristic feature of FMS, so this symptom may be a sign of a co-morbid condition).

      T- Red with yellow, dry coating

      P- Slippery, rapid or floating, rapid

   c. Damp bi – Swelling, heaviness, fatigue, and possibly even numbness.

      T- White greasy coating

      P- Soft and weak or slippery

   d. Wind bi – Pain migrates.

      T-Thin, white coating

      P- Floating

3) **Damp Retention – (Early stage Wei qi obstruction)** Obesity, gas, bloating, depression, poor appetite, and pain. *Pain is a key symptom at this stage*.

   T- White or yellow and greasy

   P- Deep, slippery w/o much strength

4) **Qi Deficiency – (Second stage Wei qi obstruction)** Poor immunity, catch colds easily, poor appetite, tiredness, shortness of breath, frequent urination, and loose stools. *Fatigue and weakness are key symptoms at this stage.*

   T- Pale, swollen with teeth marks AND thin or greasy coating

   P- Deep, weak, especially on right

5) **Yin Deficiency – (Third stage Wei qi obstruction)** The patient may have fatigue AND thirst, lower back pain, pain along the spine, tinnitus, swollen lymph nodes, hot flashes, insomnia, palpitations, and/or night sweats. This stage occurs over time and usually is seen in patients who have had chronic flares. Heat signs may not be always be present. If there are heat signs, the practitioner should address these without injuring the yang. *Insomnia is a key symptom at this stage.*

   T- Red, deep red, small or thin body AND mapped or no coating

   P- Thin, rapid AND thinner on the left

TCM Treatment

Patients often present with combination of patterns or Wei qi stages in the clinical setting. *Therefore, caution must be taken when tonifying the yin because it can create more dampness.* The goal is to strike a balance between treating the yin xu and dampness.

Acupuncture:

For patients who are in a weakened state, use as few points as possible. Add local points as needed.

1. **Liver qi stagnation –** Regulate and soothe qi
    - LI 4, Lv 3 – Regulate qi, soothes Liver qi
    - GB 34 – Unblocks channels, promotes smooth qi flow
    - Gb 41 – Promotes flow of Liver qi
    - GB 24 – Promotes qi flow
    - SJ 6 – Regulates qi

2. **Acute Bi syndrome –** Unblock the channels, expel pathogens
    - Cold bi – Unblock channels, release exterior, expel cold
        - UB 23 – Tonifies yang
        - Ren 4 – Tonifies qi and yang, expels cold
        - Moxa and reducing needling method apply
    - Heat bi – Unblock channels, release exterior, clear heat
        - Du 14 – Releases exterior, clears heat, expels wind, regulates the Ying (nutritive) and Wei (defensive) qi
        - LI 11 – Clears internal heat, cools blood, release external wind-heat
    - Damp bi – Unblock channels, release exterior, eliminate dampness
        - St 36 – Expels wind and dampness from channels
        - UB 20 – Resolves dampness
        - Sp 5 – Painful obstruction, particularly in the knees or ankles

    - Moxibustion may be used as long as there are no heat signs
- Wind bi – Unblock channels, release exterior, expel wind
    - UB 12 – Releases the exterior, expels wind
    - UB 17 – Moves and tonifies blood and qi
    - Sp 10 – Moves and tonifies blood
    - Reducing needling method applies

3. **Damp Retention – (Early stage Wei qi obstruction)** Strengthen Middle Jiao AND dispel dampness, soothe Liver and move qi
    - UB 20, 21 – Strengthen Stomach and Spleen
    - St 36 – Strengthens the Stomach and Spleen, benefits the muscles, tonifies Wei qi, dispels wind and damp from the channels
    - St 40 – Resolves phlegm and dampness, calms the mind
    - Sp 6, Sp 9– Resolves dampness, strengthen the Spleen and Stomach
    - Ren 12 – Strengthens the Spleen and Stomach, dries dampness
    - Pc 6 – Relieves nausea and vomiting
    - UB 62, SI 3 – Treats back pain
    - GB 34 – Regulates qi, unblocks channels, resolves damp-heat
    - SJ 5 – Unblocks channels, expels wind-heat, releases the exterior
    - LI 4, Lv 3 – Regulate qi, soothes Liver qi
    - Sp 10 – Moves and tonifies blood

4. **Qi Deficiency – (Second stage Wei qi obstruction)** Tonify Lung, Spleen, and Kidney Qi (strengthen the Wei Qi)
    - Ren 4, 6, 17 – Tonify and regulate qi
    - St 36, LI 10 – Fortify the immune system (Wei qi)
    - Sp 6 - Tonifies Spleen, resolves dampness, stops pain, moves blood

- Kd 3 – Benefits the essence, strengthens lower back and knees
- UB 13 – Tonifies Lungs
- UB 20, 21 – Tonify Stomach, Spleen, supports the digestion
- UB 23, 52 – Tonify the kidneys, strengthens the lower back
- Sp 21 – Stops pain all over the body
- Du 14 – Treats yang deficiency, expels wind, clears heat, releases the exterior, regulates the Ying (nutritive) and Wei (defensive) qi
- SJ 6 – Regulates qi, treats constipation and abdominal pain
- LI 4, Lv 3 – Regulate qi throughout the body

5. **Yin Deficiency – (Third stage Wei qi obstruction)** Tonify Heart, Liver, Kidney Yin and Strengthen the Essence
    - Kd 6 – Cools blood, nourishes the yin
    - Kd 3 – Benefits the essence, strengthens lower back and knees
    - Ht 6 – Nourishes Heart Yin
    - Lv 8 – Nourishes Liver blood, resolves dampness
    - GB 39 – Expels wind, nourishes essence
    - UB 23, 52 – Tonify the kidneys, strengthen the lower back
    - UB 15 – Calms the mind, treats heart yin deficiency
    - UB 17 – Nourishes and moves the blood, tonifies qi
    - UB 43 – Tonifies yin
    - GB 21 – Treats pain all over the body
    - LI 4, Lv 3 – Regulate the qi, soothe Liver qi
    - Anmian – Treats insomnia

Herbs:

These are only some formulas useful in treating FMS. Care should be taken when removing dampness not to create a more yin deficient condition.

a. **Xiao Yao San** – Treats Qi stagnation, regulates Liver Qi, strengthens Spleen, tonifies blood
b. **Chai Hu Shu Gan San** – Harmonizes Liver Qi, regulates blood
c. **Du Huo Ji Sheng Tang** – Dispels wind-damp, stops pain, tonifies Liver, Kidney, Qi and blood, wind-dampness with overall deficiency
d. **Shen Tong Zhu Yu Tang** – Moves blood and qi, treats back and joint pain
e. **Xue Fu Zhu Yu Tang** – Resolves blood stagnation, regulates qi, stops pain (particularly addresses head and chest pain)
f. **Xiao Huo Luo Dan** – Unblocks and warms the channels to relieve pain; promotes blood circulation; expels wind, damp and phlegm
g. **Tian Wang Bu Xin Dan** – Nourishes Heart and Kidney, tonifies yin and blood, calms mind
h. **Panax Ginseng Extractum (Ren Shen)** – Strongly tonifies qi, strengthens the Heart qi, and calms the spirit
i. **Da Yuan Yin** – This formula is traditionally used to treat malaria (Shao yang disorder). It can also be used to treat FMS patients suffering from damp retention. This formula moves the Wei qi, removes dampness, and enters the fascia. It is especially beneficial for patients who have headaches due to turbid qi preventing the ascension of clear yang or cases where the patient experiences stifling sensations in the chest and epigastrium.

   Common symptoms: headaches, irritability, body aches, heaviness especially in the chest and epigastrium, possibly IBS like symptoms, nausea, alternating chills and fever

   T – Deep red edges and thick, pasty, foul-smelling coating

   P – Wiry, rapid

Formula Analysis of Da Yuan Yin

The following is a breakdown of the herb amounts and the functions of the herbs in Da Yuan Yin:

- Cao guo, *Fructus Amomi Tsao-ko*, 1.5 g – Dries dampness, treats damp-cold, disperses stagnation.
    - Cao guo is one of the three chief herbs. It is an aromatic herb that vents exterior pathogens caught in the half-exterior, half-interior layer.
- Hou po, *Cortex Magnoliae Officinalis*, 3 g – Moves Qi, expels dampness, transforms turbidity.
    - Hou po is another one of the three chief herbs in this formula and like Cao Guo also is an aromatic herb. It especially helps to regulate the qi.
- Bing lang, *Semen Areca Catechu*, 6 g – Reduces edema by dispersing dampness, dispels stagnation, descends Qi.
    - Bing Lang is the third chief herb in this formula. In this formula, it speeds the elimination of pathogenic factors. It is a strong, acrid, and aromatic herb, which especially enables it to ascend and unblock the qi. It also strengthens the function of the Spleen.
- Huang qin, *Radix Sculletaria*, 3 g – Eliminates damp-heat.
    - Huang qin is a deputy herb in this formula. It treats damp-heat in the Stomach and Gall Bladder.
- Zhi mu, *Radix Anemarrhenae Asphodeloidis*, 3 g – Clears heat, enriches yin, treats low-grade fevers.
    - Zhi mu is a second deputy herb in Da Yuan Yin. It prevents heat from injuring the yin.
- Bai shao, *Radix Peoniae Lactiflorae*, 3 g – Tonifies the blood, benefits yin, harmonizes the Ying and Wei, stops pain, spasms, harmonizes the Liver and Spleen.
    - Bai shao is an important herb in relieving pain. It is the third deputy herb in this formula. Like Zhi Mu, it helps to

protect the yin and prevents the drying properties of the acrid and aromatic herbs in the formula from drying the body fluids too much.

- Gan cao, *Radix Glycyrrhiza Uralensis*, 1.5 g – Strengthens the Spleen, tonifies Qi and blood, stops pain and spasms, clears heat and resolves toxins.
    - Gan cao harmonizes the action of the other herbs in this formula. It is the envoy carrying the formula to the channels. Gan cao can also help to relieve muscle spasms and pain.

Modifications of Da Yuan Yin

- Qiang huo, *Radix Notopterygii*, may be added to this formula to treat neck and back pain.
- Chai hu, Radix Bupleuri, may be added to this formula to treat pain in the hypochondria and bitter taste in the mouth.

Enrichment Exercises

(Answers on following page.)

What percentage of the population suffers from FMS?

A. 2 -4 percent
B. 1-2 percent
C. 5-10 percent

What pharmacologic medications are used for FMS?

A. anti-depressants
B. pain relievers
C. Both anti-depressants and pain relievers

According to Chinese medicine principles, what are precipitating factors leading to FMS?

A. physical overexertion & mental stress
B. chronic insomnia & exterior pathogens
C. Both A and B

What patterns are common with FMS?

A. Qi deficiency
B. Yin deficiency
C. Dampness
D. All of the above

Answers to Exercises

What percentage of the population suffers from FMS?

D. 2 -4 percent
E. 1-2 percent
F. 5-10 percent
Answer: A

What pharmacologic medications are used for FMS?

D. anti-depressants
E. pain relievers
F. Both anti-depressants and pain relievers
Answer: C

According to Chinese medicine principles, what are precipitating factors leading to FMS?

D. physical overexertion & mental stress
E. chronic insomnia & exterior pathogens
F. Both A and B
Answer: C

What patterns are common with FMS?

E. Qi deficiency
F. Yin deficiency
G. Dampness
H. All of the above
Answer: D

Case Study One

A 55 year-old female was diagnosed with FMS about a year before seeking acupuncture. She primarily sought acupuncture for chronic lower back pain, which was her chief complaint. She also had depression, poor memory, and constipation. She was taking a number of medications for pain and anxiety as well as for IBS. She was overweight, and the medication she had been taking caused additional weight gain and fatigue. The patient was married and in a good relationship but recently had been caring for her 85 year-old mother who had Alzheimer's—causing her the patient stress and anxiety. She tended to cry when she talked about how Alzheimer's disease was affecting her mother. Her tongue and pulse were initially as follows:

Pulse – wiry

Tongue – thick, white coating

The patient did not wish to take herbs. Instead, the practitioner emphasized dietary changes: significantly reducing dairy, salads, and pastries in her diet. The patient began taking Vitamin D supplementation and incorporated recommendations for relaxation. She also began exercising by spending more time in her garden and walking. Once a week treatments for twelve weeks addressed her lower back and digestive complaints through massage and the following points at various times:

- UB 20, 21, 23, 52, 40,
- Ren 4, 6
- GB 34, 41
- Yintang, PC 6
- Sp 6, 9, 15
- SJ 6
- Lv 3, LI 4
- St 25, 36

After three months of treatment, her back pain was greatly reduced. Her digestion had improved. She also was able to reduce her intake of the depression medication with her doctor's permission.

Case Study Two

A 45 year-old female diagnosed with FMS sought acupuncture for a series of treatments over two months.

Session 1 - She presented with low energy and pain and swelling in her ankles. Her digestion was poor and sleep disturbed. She also had a cough with wheezing and some discharge from allergies. She experienced some burning from holding her urine too long and urinary frequency. Her stress level was high.

P- (l) wiry; (r) slippery, weak in Kd position

Acupuncture: Kd 3,6; St 36; Pc 6; Sp 6, 9; GB 14; Lu 5, 7; and yintang

Session 2 (two weeks later) – The swelling was less around the ankles, but she had fallen twice since the last treatment. So, she had some bruising. Her sleep and digestion had improved. Although, she still had some bloating and gas. Her allergies will still bothering her The focus of the treatment was on her ankles and allergies.

Acupuncture: St 36, LI 10; Kd 3,10; Sp 6, 9; GB 40 → Kd 6 (4" needle); GB 14; Ashi (e-stim), yintang, Pc 6

Session 2 (four weeks later) – The swelling was gone round the ankles, Her sleep and digestion had improved some. Her allergies will still bothering her.

Session 3 (seven weeks from initial visit) – The patient had generalized body pain. Her lower back was particularly painful as well as the heel and arch of her right foot. Her period was late, and she had abdominal cramping. She felt lethargic, bloated and heavy in the chest.

P – (l) wiry, (r) deep, slippery

T- pale, white coating

Acupuncture: Kd 3; Pc 6; Sp 4, 6, 9; UB 17, 23, 28, 52; TDP lamp on lower back

Herbs: Shen Tong Zhu Yu Tang *with* Mo Yao Jian

Case Study Three

A forty-six year old female who had been diagnosed with FMS for 10 years came to receive acupuncture for stress and chronic back pain. Her back pain ranged from 4 – 8 on the VAS scale depending on the area. The most painful area was her neck and shoulders, which was an 8 on VAS scale. She also was experiencing stress because her 18 year old son was moving away to go to college in another state. She was very close to her son and had left a successful career 8 years ago to stay home and raise him. Her husband traveled for work, so she was also anxious over the idea of being left alone.

T – normal body, sl. yellow coating

P – wiry

Acupuncture: LI 4, GB 34, GB 21, GB 12, GB 13, SI 3, UB 62

Herbs: Jia Wei Xiao Yao San

After once a week treatments for six weeks, the patient's back pain was negligible, and she was more relaxed. She continued monthly treatments following the initial six week period. After about 5 months of treatments, the patient reported that she had gone back to working part-time in her field.

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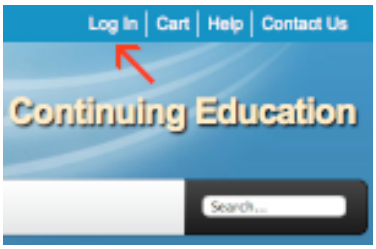

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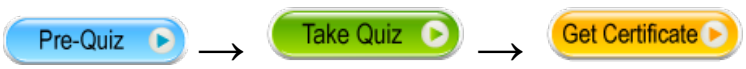

Fibromyalgia Support/Resources

National Fibromyalgia Association (NFA)
2200 N. Glassell Street, Suite A
Orange, CA 92865
www.FMaware.org

Fibromyalgia Network/American Fibromyalgia Syndrome Association
6380 E. Tangue Verde, Suite D
Tucson, AZ 85715
www.afsafund.org

National Fibromyalgia Research Association
P.O. Box 500
Salem, OR 97302
www.nfra.net/Reslist.htm

Arthritis Foundation
P.O. Box 7669
Atlanta, GA 30357-0669
www.arthritis.org

American Massage Therapy Association
820 Davis Street
Evanston, IL 60201
www.amtamassage.org

National Institute of Arthritis and Musculoskeletal and Skin Disease
National Institutes of Health
1 AMS Circle
Bethesda, MD 20892-3675
www.niams.nih.gov

National Center for Complementary and Alternative Medicine
www.nccam.nih.gov

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