

Fibromyalgia

(instruction and information for review by you and your health care professional)

This information is based on years of personal and clinical research and should be taken as a record of findings only for educational purposes.

Fibromyalgia patients generally require multi-disciplinary help. Depending on a practitioner's complimentary skills, the patient may require referral to nutritional counseling, massage therapy, Chiropractic, medical specialist, etc. to optimally address requirements for successful treatment.

The typical description of fibromyalgia usually goes something like this,

Fibromyalgia is marked by,

- Widespread pain in all four quadrants of the body*, lasting over 3 months
- Hypersensitivity in at least 11 of 18 specific areas

*Males tend to have fibromyalgia that is less systemic or widespread.

Symptoms of the condition include but are not limited to confusion, anxiety, panic attacks, sweating, loss of motivation, depression, digestive system complaints, hypersensitivities, neuralgias, fatigue, sleeplessness, weight gain, weight loss, bloating, postural abnormalities, headaches, nausea, cognitive problems, blurred vision, irritability, urinary tract problems, sinus congestion, loss of sexual interest, impotency, tinnitus, hair loss, memory loss, morning stiffness, etc. with the most significant complaint being pain and/or numerous physical symptoms.

It is obvious to most practitioners and many fibromyalgia patients that, for whatever reason, the current diagnostic criteria can lead to a false diagnosis and the generally accepted recommendations are not very successful in achieving sustainable or satisfactory relief for the patient.

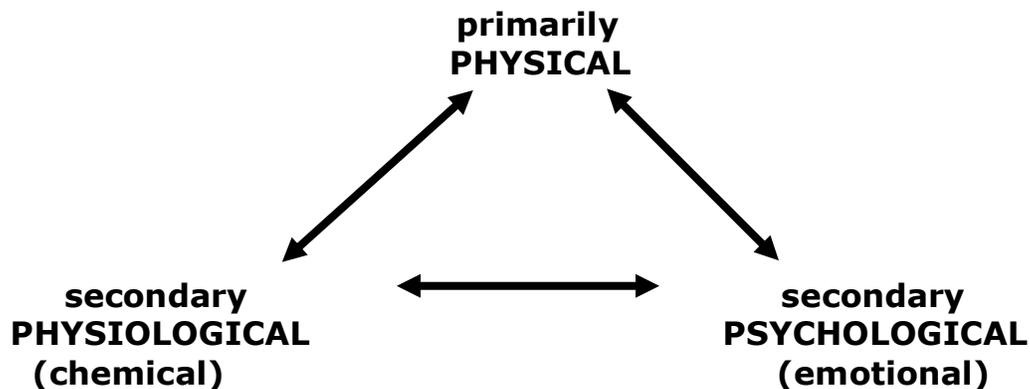
The most important information about treating fibromyalgia is conceptual in nature. Once fibromyalgia is understood conceptually, principles of treatment can be followed to produce a flexible and personalized treatment protocol. This personalization is important as each case of fibromyalgia has its unique features and subtleties. These

features and subtleties are due to the patient's genetics, prescription drug intake, secondary health problems, lifestyle, age, conscious and sub-conscious stress levels, workplace requirements, injury severity, quality of their rehabilitation program, etc.

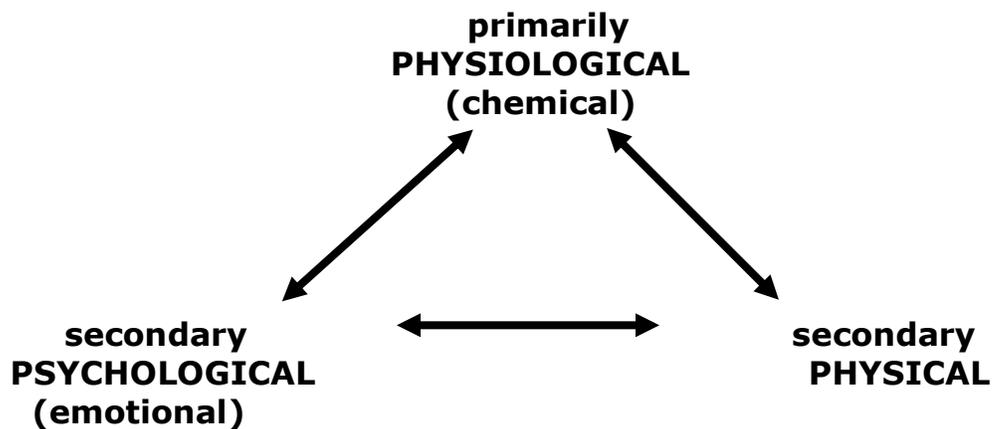
Fibromyalgia is a physical breakdown. It is a primarily physical dysfunction that usually starts in concert with secondary physiological and/or psychological factors. In some cases, the secondary factors develop solely as a result of the physical dysfunction.

For example, when a patient who is psychologically stressed becomes injured, their pre-existing stress may create exaggerated muscle tightness. This muscle tightness causes pain and this increases the patient's psychological stress. The patient may then start to feel nausea, have their sleep affected or start to experience other physiological effects. These physiological effects may then create heightened anxiety, more muscle pain or other symptoms. The situation becomes a big negative feedback cycle. Natural healing, even with traditional therapy is not adequate to resolve the patient's growing problem.

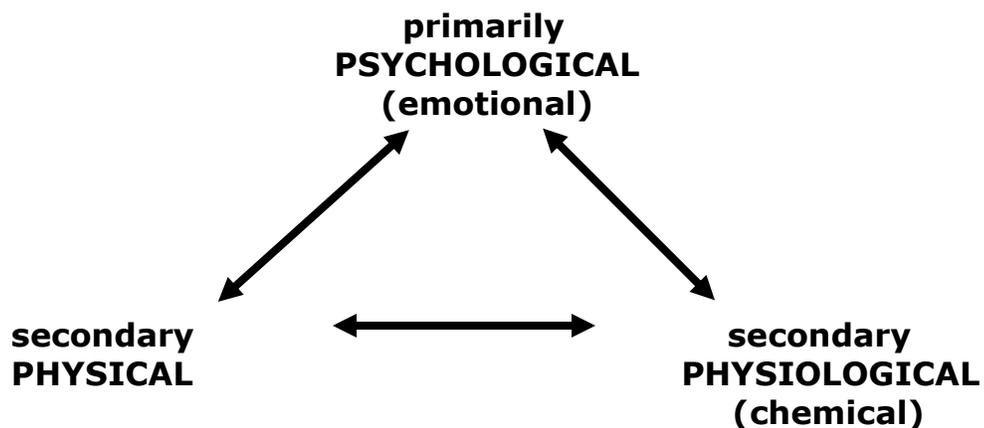
THE DIAGRAM BELOW, REPRESENTATIVE OF FIBROMYALGIA, SHOWS HOW PHYSICAL DYSFUNCTION CAN NEGATIVELY AFFECT PHYSIOLOGICAL OR PSYCHOLOGICAL HEALTH. IT ALSO SHOWS HOW PHYSIOLOGICAL OR PSYCHOLOGICAL DYSFUNCTION CAN NEGATIVELY AFFECT PHYSICAL HEALTH.



FOR THE SAKE OF COMPARISON, THE DIAGRAM BELOW IS REPRESENTATIVE OF CHRONIC FATIGUE SYNDROME, WHICH IS A PRIMARILY PHYSIOLOGICAL PROBLEM BUT HAS SECONDARY PHYSICAL AND PSYCHOLOGICAL SYMPTOMS.

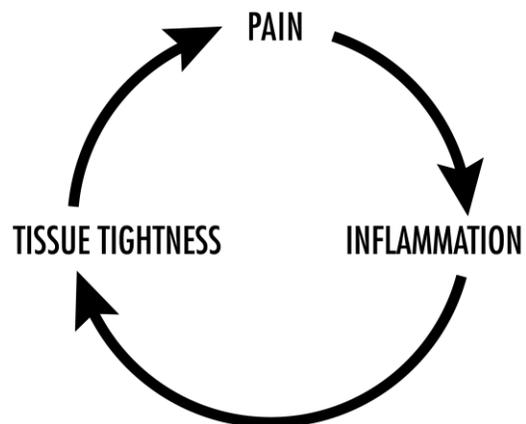


FOR FURTHER COMPARISON, THE DIAGRAM BELOW IS REPRESENTATIVE OF POST-TRAUMATIC STRESS DISORDER, WHICH IS A PRIMARILY PSYCHOLOGICAL PROBLEM BUT HAS SECONDARY PHYSICAL AND PHYSIOLOGICAL SYMPTOMS.

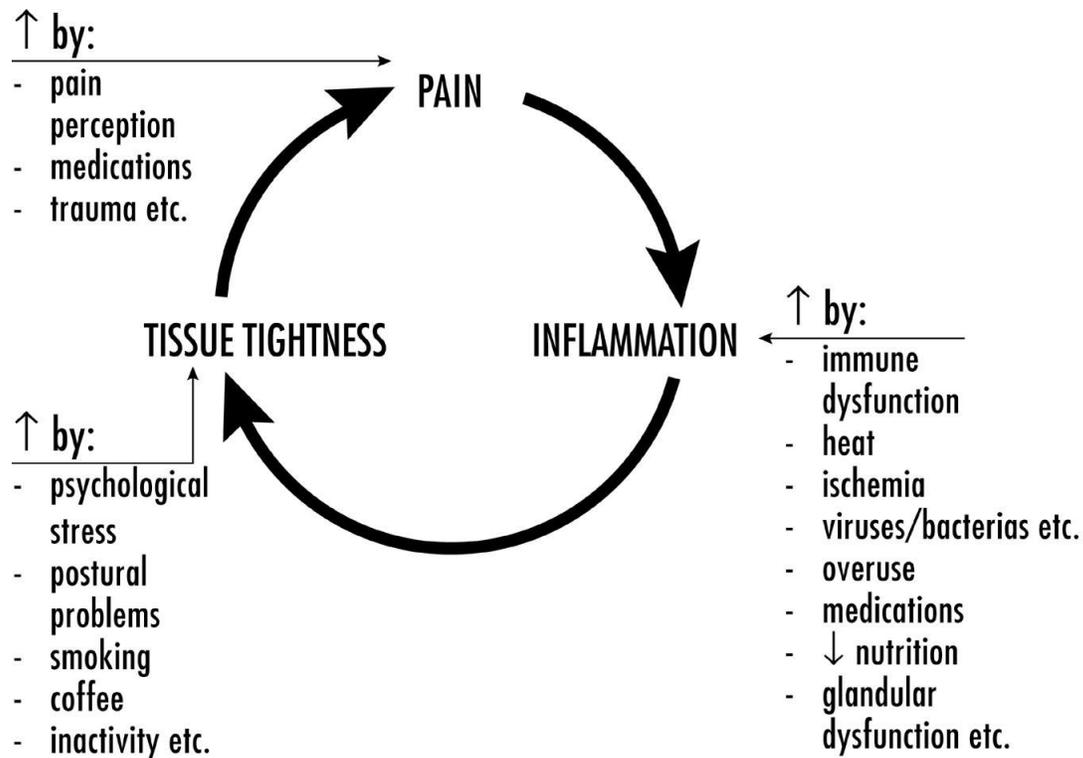


When anyone becomes injured, they initiate a pain cycle and thus develop physical symptoms. With a fibromyalgia patient, this pain cycle and their physical symptoms cannot self-resolve or the symptoms become more widespread and increase. Why? There are secondary health factors that are perpetuating or feeding their pain cycle.

FOR EXAMPLE PURPOSES, WE ONLY NEED TO LOOK AT A VERY BASIC MYOFASCIAL PAIN CYCLE, AS FOLLOWS,



THE DIAGRAM BELOW SHOWS HOW ANY NUMBER OF SECONDARY FACTORS CAN FEED A FIBROMYALGIA PATIENT'S PAIN CYCLE THUS PERPETUATING IT. A MORE COMPLETE LISTING OF POSSIBLE CONTRIBUTING FACTORS IS LISTED AFTER THE DIAGRAM BELOW.



Once the factors that are feeding the patients' pain cycle are addressed satisfactorily, the patient should respond to proper physical therapy.

FACTORS THAT CAN FEED A PATIENT'S PAIN CYCLE

Factors that can feed the "inflammation" aspect of the patients' pain cycle include,

- The use of heat
- Auto-immune dysfunctions
- Compromised immunity
- Allergies (even mild allergies are a sign of a hyper-inflammatory disposition)
- Chemical sensitivities, especially antimony and phthalates inpatient's with liver issues. (More information is required regarding chemical sensitivities and the release of nitric oxide)
- Exposure to pollutants
- Asthma
- Ph balance of urine and blood. Acidity causes heightened inflammation and slow healing
- Inflammatory conditions
- Trauma or surgery
- Overuse/over activity
- Osteoarthritis
- Medications, especially cholesterol-lowering drugs
- Smoking
- Ph levels
- RSD/RSI
- Invading organisms/low grade infection
- Glandular dysfunction, especially adrenal and thyroid
- Hypothalamic/pituitary axis dysfunction
- Excessive sugar intake
- Intake of nightshades. Nightshades are tomatoes, potatoes, eggplants, goji berries, peppers and tobacco and can be a source of inflammation.

Most fibromyalgia patient's have had it drilled into their heads that fibromyalgia is not an inflammatory condition. This is true, however, it does not mean that inflammation is not a part of the problem or that fibromyalgia patients do not develop high or low-grade inflammation. If a person is in pain, they are eliciting at least a low-grade inflammatory reaction. Always remember that pain in the absence of all other contributing factors will elicit an inflammatory response. An analogy between osteoarthritis and rheumatoid arthritis is often a good way to explain the difference between an inflammatory condition and a condition that causes inflammation. Rheumatoid arthritis is caused by inflammation and is thus considered an inflammatory condition. Osteo-arthritis is wear and tear of the cartilage surfaces. It

is NOT considered an inflammatory condition, even though people with it get do get inflamed joints.

Counter-intuitively, anti-inflammatory medications do not appear to be of benefit for most fibromyalgia patients.

Factors that can feed the “muscle tightness” aspect of the patients’ pain cycle include,

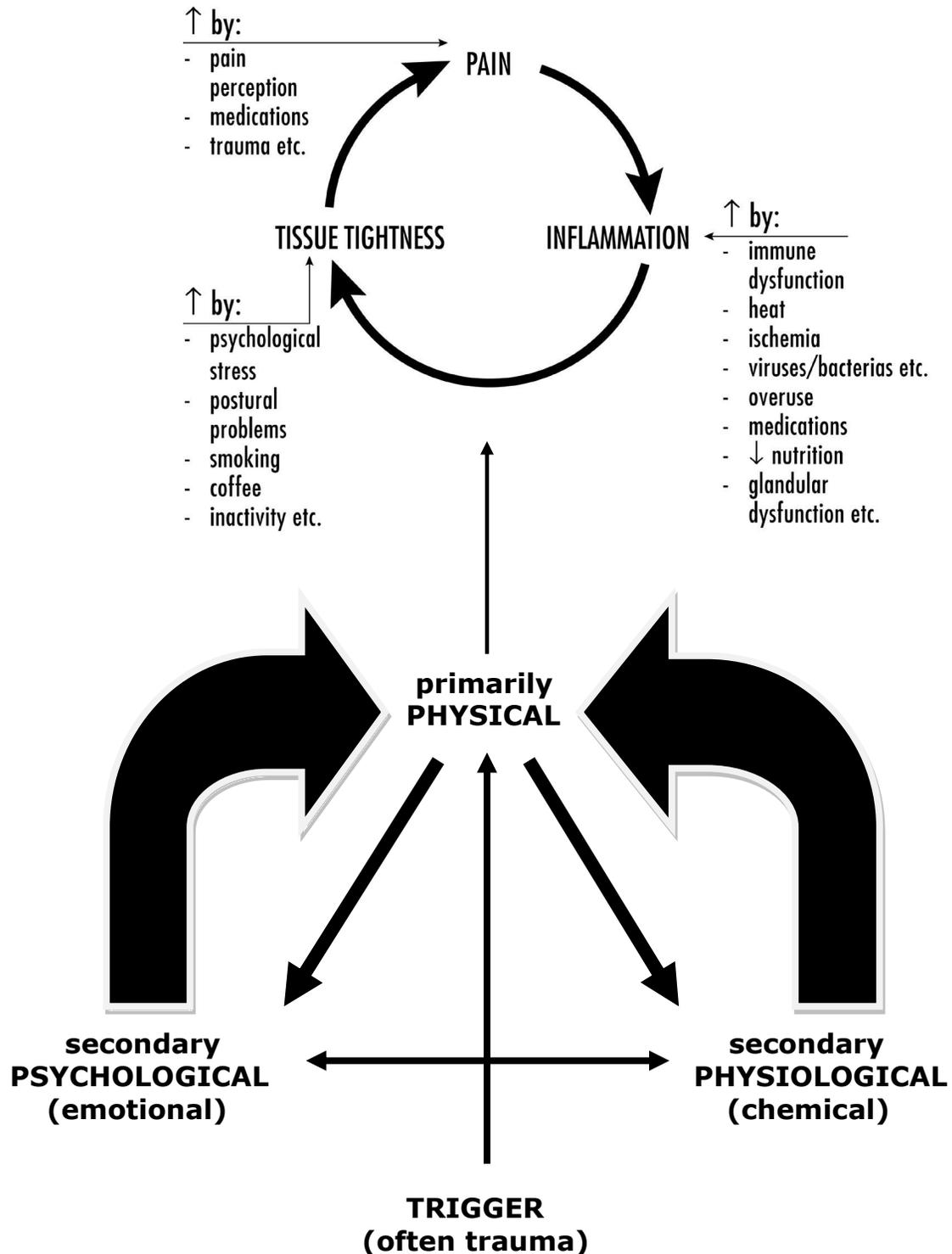
- Coffee
- Sedentary lifestyle
- Nutritional deficiencies, especially magnesium
- Intrinsic muscle dysfunction
- Emotional stress
- Osteoarthritis
- Obesity
- Subconscious stress issues, especially those from childhood
- Postural misalignment
- Smoking
- Overuse
- Hormonal factors, especially estrogen to progesterone ratios
- Ischemic conditions/hypoxia
- RSD/RSI
- Smoking
- Nutritional factors especially related to magnesium
- Circulatory conditions
- Medications
- Mind/body connection mechanisms
- Mechanical dysfunction (especially gait/walking)
- Lack of restorative sleep
- Dehydration

Factors that can feed the “pain” aspect of the patients’ pain cycle include,

- Medications
- Substance P levels
- Nervous system pathologies
- Hypersensitive, overactive or overstimulated sympathetics
- Genetic or congenital factors
- Trauma or surgery
- Joint degeneration
- Ligament strain

THE WAKEFIELD FIBROMYALGIA MODEL

This model represents any case of fibromyalgia and shows how it is basically multiple positive feedback cycles overlapping and playing off each other.



TREATMENT OF SECONDARY HEALTH FACTORS

HOPE AND MOTIVATION

One of the most overlooked symptoms of fibromyalgia is the patients' loss of motivation. This may be due as a natural reaction to being injured, decreasing serotonin levels as a result of pain or other factors. This loss of motivation decreases the ability of the patient to perform required homecare, stick to exercise programs and commit adequately to recovery. This is further accentuated when patients are told they cannot expect to ever recover. Too many fibromyalgia patients are despondent and demoralized to the point where they cannot be effective participants in their recovery; something they must be. There are many patients who eventually find significant relief, (at times from unlikely sources) and keeping a patient motivated and hopeful will improve their quality of life and the effectiveness of their treatments.

The following two diagrams highlight a problem that can sometimes arise in successfully treating a fibromyalgia patient. This should be explained to the patient and that they must understand they need to learn many new skills and will need to spend much time and possibly resources to achieve desired therapy goals.



What the patient
wants to do.

What the patient wants the practitioner to do for them.



What the practitioner
can do for a patient.

What the patient MUST do for themselves.

INTRINSIC FIBROMYALGIA

There is a type of fibromyalgia that is not very common and is unique in that the fibromyalgia is secondary to extreme muscle tightness and fibrosing caused specifically by an intrinsic muscle dysfunction, related to a magnesium deficiency.

Low magnesium levels interfere with energy production within the muscle and thus the ability of the muscle to relax. A unique and distinguishing feature with this type of fibromyalgia is that the patient may receive a deep tissue massage therapy treatment or deep tissue myofascial treatment and will often be delighted by the benefits they receive, and not suffer from a flare up due to the harsh treatment. Most fibromyalgia patients would suffer terribly, if they received this type of aggressive treatment.

Another differentiating factor with this type of fibromyalgia is that the muscle feels and responds to palpation or massage about the same as a rubber car tire. The muscle uniquely rebounds back to its original tonicity and does not relax under the palpation point unless sustained, significant pressure is maintained, mechanically forcing the muscle to relax.

Slow muscle stripping may be effective in forcing this type of muscle to relax but benefits are temporary. It may also be difficult to find a therapist who is skilled or experienced at performing this type of treatment. If the muscle is forced too aggressively the treatment may break muscle fibers instead of forcing them apart, causing significant micro-damage. This is the only type of fibromyalgia patient where hot baths may be indicated and beneficial. This type of fibromyalgia does not appear to be sensitive to low grade inflammation in any way.

Some individuals may suffer from a deficient magnesium intake or inability to absorb it. High zinc and vitamin D levels increase the body's need for magnesium. Protein, oxalic acid, vitamins A, D, E, K or exaggerated calcium intake (especially with exaggerated vitamin D levels) may all decrease Magnesium absorption. Some prescription drugs and many other factors may also decrease absorption.

Magnesium absorption may be increased by vitamins B6, C, boron, phosphorus, potassium and normal intake levels of calcium and vitamin D.

Patients with low magnesium levels may be helped by intravenous magnesium injections, supplementation or introducing magnesium rich

foods into their diet. Some fibromyalgia patients have an inability to retain magnesium in their cells, regardless of how much is introduced into their body. These individuals may receive some but limited benefit from magnesium transfusions. Clinically observed, one patient with this type of fibromyalgia found complete relief when she moved from Toronto back to her native Guiana. Why this was effective is subject to great speculation but does indicate that there is hope, even for the more difficult cases.

Individuals who cannot normalize their magnesium levels usually find they do best with heat applications, vascular flushes, muscle fatiguing exercises and deep tissue therapies.

IN THEIR NEUROLOGY, NOT IN THEIR HEAD

Sometimes practitioners of different health disciplines will theorize about what affects what. Is it the muscle that keeps the joints out of alignment or subluxed, or is it the joint that keeps the muscle tight. The answer is neither. They are both pawns of the nervous system. Fibromyalgia patients need to understand this so they can understand their condition better and have confidence in therapy approaches.

Fibromyalgia patients are sensitive to a suggestion that their condition is partly "in their head." Anyone who suffers from chronic physical pain or injury must address the neurological components of their condition. It should be explained to the patient that there is a difference between psychogenic pain, which is a psychological problem, and pain or dysfunction that has a neurological component, which is not a psychological problem. They should also be informed that anyone with injuries, not just fibromyalgia patients, have a neurological component to their condition.

It should be noted that there are some cases of fibromyalgia that do have a psychogenic component.

SLEEP

A lack of proper sleep can make almost anyone feel achy. It is one of the most common non-physical fibromyalgia patient complaints.

Sleep is usually one of the last things to normalize with effective treatment. Attempts to force normal sleep patterns in fibromyalgia patients are almost always a folly. Prescription drugs may create non-restorative sleep but this non-therapeutic effect usually wears off after

approximately 6 weeks. However, often when the patient attempts to discontinue their prescription that is no longer providing benefit, they find that their sleep becomes worse than it was before they started taking the prescription. They then find themselves stuck taking a prescription or having to deal with even poorer sleep. It is usually best to promote relaxation, meditation, vascular flushes before bed and let proper therapy take effect. Don't make sleep normalization a priority, even though it is for the patient. Restorative sleep cannot be forced.

Sleep positions and mattress quality are a common source of irritation. Patients must be informed of the ways such things as sleeping on their stomach, using multiple pillows or sleeping on a poor quality mattress can aggravate their fibromyalgia. Ask the patient if they tend to find an improvement of physical symptoms when staying at a hotel or with friends and relatives. This may be a clue their mattress should be changed.

Sleep apnea is common with fibromyalgia and has strong negative effects. Referral to a sleep clinic can be beneficial for diagnosis and treatment.

SPECIAL NAUSEA

There is a "special" type of nausea that is commonly experienced by fibromyalgia and chronic pain sufferers. It is a nausea that is often described by the patient as a feeling of mild carsickness in combination with a feeling they have taken too long to eat. However, when they do eat something, they feel no better or feel worse.

This nausea is due to a conflict in proprioceptive input to the brain from irritated facet joints. Ice to the spine, as homecare, is often effective for this. Erector spinae stretches may cause an increase in this nausea or provide relief. Either outcome provides important information. If nausea is increased by these stretches, it confirms a required area to focus therapy. When the patient is informed of this mechanism, it will often decrease their anxiety considerably, as this symptom tends to cause considerable concern.

LIFESTYLE CHANGES

One of the most difficult things a fibromyalgia patient can do is make lifestyle changes. However, it is usually wildly beneficial and an absolute necessity. A fibromyalgia patient who drinks 3 cups of coffee per day, smokes, sleeps on their stomach, has a certain piece of furniture that is not good for them (usually a couch or computer chair), has never exercised regularly, lugs around oversized briefcases or bags, has a high stress job with long hours and slouches must make some fundamental personal changes. Unfortunately, the operative word is MUST. Although some changes may help to some degree, the patient must change ALL of their negative habits and actions to maximize their ability to respond to their therapy. Sometimes very dramatic lifestyle changes are required including moving, ending bad relationships and/or changing jobs. A practitioner cannot alter the laws of physics and too often negative lifestyle habits are too strong to allow for therapies to be beneficial, especially in the initial stages of treatment.

SEDENTARY LIFESTYLE

Decreasing proprioceptive input to joints and allowing muscles to react with hypertonicity and atrophy are easily avoidable contributors to fibromyalgia.

Gentle range of motion exercises and maintaining general movements and activity is excellent against this.

POSTURAL MISALIGNMENT

Postural misalignment can be caused by a loss of muscle synergy, splinting/guarding reactions, lifestyle, genetic/congenital factors, work ergonomics, age, joint dysfunction, neurological disorders, etc. Fibromyalgia patients almost always suffer from postural problems and postural correction is usually an excellent initial focus of therapy.

CHRONIC OVER-STIMULATION OF THE SYMPATHETIC NERVOUS SYSTEM

Many symptoms of fibromyalgia are related to prolonged increased sympathetic stimulation, which is a normal reaction to pain or injury. However, it can be pathological when chronically overstimulated.

The effects can also be far reaching (e.g. Chronic over-stimulation of the sympathetic nervous system = exaggerated cortisol levels =

toxicity to the hippocampus = hippocampus shrinkage = decreased memory + abnormal endocrine and immune function).

In most cases, over-stimulated sympathetics are responsible for nervousness, irritability and other symptoms of this nature.

NeuroDirectional Meditation (an introduction to NeuroDirectional Meditation is included further on) is excellent in helping with this. Sympathetic stimulation also normalizes when the patient is out of pain and has lower stress levels.

THE USE OF HEAT

The traditional rule of thumb for using heat or cold applications dictates that cold is used when the condition is acute, vascular flush when the condition is sub-acute and heat when it is chronic. This approach is out of date, can become a significant contributor to a condition and can be dangerous, especially when heat is overused or is used too often.

Many fibromyalgia patients reach for a heating pad when they get aches and/or pains but the tissue relaxation that heat causes and the associated relief is a short-term effect only. Long-term, heat causes an increase in tissue tightness. This is because heat causes a delayed increase in high or low-grade inflammation (see chart). Muscles respond to increase high or low-grade inflammation by becoming tighter. An increase in inflammation also causes other numerous problems such as the development of adhesions and increased congestion, swelling or edema.

In most cases it is advised to trade heat for cold or vascular flush applications, proper therapeutic stretching and muscle relaxing therapies such as Massage Therapy and NeuroDirectional Meditation.

RECOMMENDED VASCULAR FLUSH –

1 minute hot, 3 minutes cold
repeat 3-10 times, end with cold
local or systemic application

Because this vascular flush uses predominately cold, the net result will **not** be an increase in inflammation. Also, a vascular flush has **significantly** more tissue relaxing ability than heat alone could ever produce, especially when combined with therapeutic stretching and muscle relaxing therapies.

Also, increasing the patient's circulation can be beneficial in clearing metabolic wastes, and increasing oxygen and nutrients to tissues. A vascular flush increases circulation, whereas, heat causes congestion.

THE BODY'S RESPONSE TO HEAT AND COLD, AS RELATED TO INFLAMMATION

SIGNS OR SYMPTOMS	HEAT	INFLAMMATION	COLD
- cellular enzyme activity.....	increases	increases	decreases
- cellular membrane diffusion	increases	increases	decreases
- cellular oxygen consumption.....	increases	increases	decreases
- cellular metabolism.....	increases	increases	decreases
- nerve conduction velocity	increases	increases	decreases
- blood vessel dilation	increases	increases	decreases
- blood flow	increases	increases	decreases
- ability to produce edema	increases	increases	decreases
- release of further pro-inflammatory chemicals	increases		decreases
-inflammatory response	increases		decreases

WHY PEOPLE OFTEN CHOOSE HEAT

-short term effect on tissue structures	relaxes	tightens
-placebo effect/general feeling	positive	negative

INFLAMMATORY CONDITIONS (e.g. ASTHMA, CROHN'S, ALLERGIES, ETC.)

For fibromyalgia patients, the primary problem with inflammation is that it causes muscle tightness and interferes with normal physiological function. Inflammatory conditions increase inflammatory chemicals, systemically and make the patient hyper-reactive to other irritations.

Asthma has an added negative effect of causing overuse of cervical muscles due to prolonged shallow chest breathing and creating anxiety and mental stress during episodes.

Allergies are a sign of a hyper-inflammatory disposition, even if allergies are mild or seasonal.

With conditions such as asthma, allergies, Crohn's, etc. the patient can often achieve considerable control of their condition through lifestyle, avoidance, etc. Patients should be instructed to do what they can to avoid a flaring of these types of conditions, as it will also cause an immediate or delayed flaring of their fibromyalgia symptoms.

Excessive sugar intake can increase pro-inflammatory E2 prostaglandin production and decrease anti-inflammatory E1 prostaglandin production from omega 6 gammalinoleic acid (GLA). E2 prostaglandin goes on to be converted into stronger pro-inflammatory chemicals such as leukotrienes, etc. Sugar may also cause other secondary problems such as yeast overgrowth, insulin resistance, etc.

An omega 3 essential fatty acid deficiency can also increase E2 prostaglandin and decrease E1 prostaglandin conversion from gammalinoleic acid. Too much arachidonic acid also leads to exaggerated E2 prostaglandin production.

Further recommendations regarding inflammatory conditions is also listed in the next segment.

AUTO-IMMUNE DYSFUNCTIONS/COMPROMISED IMMUNITY

Many cases of fibromyalgia are secondary to auto-immune or compromised immunity.

Rheumatoid arthritis, colitis, auto-immune alopecia and most cases of allergies and asthma, etc. respond very effectively to,

- Raw thymus extract in combination with 50mg zinc chelate and 100mcg selenium (this combination is effective in boosting the effects of the raw thymus extract and is the "trick" to treating these conditions).
- Raw adrenal gland extract.

Rheumatoid arthritis patients on immune suppressors should not follow this supplement protocol due to the unknown effects of suppressing and boosting the immune system at the same time.

It is unknown whether Lupus, positive ANA, MS and some other auto-immune conditions will respond to this formula. Some auto-immune problems are B cell related. Lupus patients with fibromyalgia should not start their fibromyalgia therapy until their lupus is in remission or they will risk failure.

INVADING ORGANISMS

Chronic low-grade infection (teeth/gums, bladder, GI system, CNS, hepatitis, Epstein-Barr, Candida, etc.) can cause the body to become hypersensitive and create low-grade systemic inflammation.

Medical and dental referral is often required.

Boasting the immune system may help with fighting this type of chronic problem. The following combination may be considered,

- Raw thymus extract in combination with 50mg zinc chelate and 100mcg selenium (this combination is effective in boasting the effects of the raw thymus extract and is the "trick" to treating these conditions).
- Colloidal silver
- Oregano oil

If a patient is diagnosed with, for example, Candida, it must be made clear as to why this has occurred. Is the Candida an organism of opportunity due to a weakened immune system? If so, why is the immune system weak? Is the Candida present due to a high sugar diet causing an abundance of Candida food? Is it due to cortisone use? Is it due to high cortisone levels due to elevated testosterone? Is it due to a lifestyle habit? Is it secondary to antibiotic use? Is the patient's natural gut flora adequate? Once specifics are known, proper and optimally effective strategies may be employed.

Once the reason for the problem is properly addressed, there should be no reason for it to return.

Recurring infections are often secondary to inflammation. Long-term it is often best to treat the inflammation as a protective measure. Cystitis is a good example of inflammation commonly advancing to an infection state. When the bladder is irritated by allergies, acidic fluids, chemicals, etc. it can become inflamed and feel like a bacterial infection. Testing sometimes reveals there is no infection but then as time passes it does materialize. This can be due to inflammation leading to infection. Sometimes people will take antibiotics and feel relief with the misunderstanding there must have been a hidden infection because the antibiotics worked. Antibiotics also commonly have an anti-inflammatory affect making the antibiotics a possible poor choice in managing these issues long-term.

GLANDULAR OR HYPOTHALAMIC/PITUITARY AXIS DYSFUNCTION

As an example, almost all fibromyalgia patients can benefit from taking raw adrenal gland, even in cases where a clear adrenal deficiency is not apparent. Coffee, smoking, cocaine use, allergies, chemical exposure, chronically overstimulated sympathetics can all effectively burn out the adrenal glands.

Other glandular insufficiencies may also be addressed with the use of raw glandular supplementation, especially with those who have a hypothalamic/pituitary axis dysfunction.

Ecological Formulas in Concord, California has a quality hypothalamus formula.

HYPOGLYCEMIA

Hypoglycemia is common among fibromyalgia patients. It can be a significant contributor to fatigue, lost motivation, etc. A combination of chromium GTF 300-500mcg with raw adrenal gland extract is excellent for hypoglycemics. They may also benefit from consuming a dime size pinch of fenugreek seed when they eat sugar or carbohydrates that may cause a hypoglycemic reaction. Fenugreek seed can be purchased in bulk quite cheaply and is highly effective in regulating blood sugar levels. Fenugreek seed is extremely safe, as it is a common ingredient in artificial maple syrup and the non-spicy part of curry.

Hypoglycemic patients should also be advised to follow a diet that is not too high in carbohydrates and is very low in sugars. The Zone Diet by Dr. Barry Sears is a good diet for these patients.

EXPOSURE TO POLLUTANTS/CHEMICAL SENSITIVITIES

These patients are often suffering from diminished liver function. They often benefit from nutritional liver support and/or cleansing.

These individuals may benefit also benefit from a nutritional formula for B-cell support. Commonly, these formulas will contain raw bone marrow, spleen and liver (Ecological Formulas in Concord, California is a good source for a B-cell formula).

These patients may also benefit from chelation therapy or avoiding the things they are sensitive too.

Some patients may have a hidden “addiction” to chemicals in their work or home environment. For example, these people may feel better when they get back to work on Monday, where they are exposed to the chemical they are unknowingly suffering withdrawal from when they are at home on the weekends. Watch out for this, as it is commonly overlooked.

Mercury from silver fillings is a common source of metal contamination. However, the cost of replacement can be prohibitive and replacement can lead to increased contamination.

OSTEOARTHRITIS

Osteoarthritis (OA) can maintain splinting and guarding signals to area muscles. However, it is manageable and is reversible in many cases. If the cause of the OA is due to overuse or abnormal joint wear secondary to misalignment then these issues need to be corrected and cartilage be given time to reform enough to limit or eliminate symptoms, This can take years for optimal benefits to be achieved but may be helped with the intake of glucosamine sulfate, which helps cartilage build faster.

RSD/OVERUSE/OVER-ACTIVITY

The number one rule of any physical therapy is stop doing what is causing the problem. Ergonomic correction, altering an activity or breaking up the activity over the day or week may minimize RSD and overuse syndromes.

Top-heavy women may experience considerable postural misalignment and muscle irritation, especially in the upper back and neck areas. Breast reduction surgery may be indicated and often is a source of considerable relief. Less severe cases may benefit from a shoulder brace or weight loss.

MEDICATIONS, ESPECIALLY CHOLESTEROL-LOWERING DRUGS

Some cholesterol drugs crystallize in muscle tissue and can cause extreme hypersensitivity to touch. Although uncomfortable, these patients usually benefit greatly from gentle massage designed to clear this from their muscle but will report temporary relief.

Possible side effects of prescription drugs should be assessed for the patient. This is a common source of some reported fibromyalgia symptoms, especially photophobia, gastric distress, dry mouth, etc.

COFFEE

Coffee is excellent at,

- Keeping muscles tight (due to caffeine).
- Causing sleep disturbances
- Maintaining sympathetic nervous system over-stimulation.
- Contributing to digestive problems (caffeine combines with hydrochloric acid to produce caffeine hydrochloride, a potent toxin).
- Burning the adrenal glands out.
- Blocking nutrient absorption.
- Releasing minerals from the body.
- Contributing to osteoarthritis.
- Stressing the liver and gall bladder.
- Contributing to dehydration (it's a diuretic).
- Decreasing the patient's metabolism (due to the roasted oils).
- Elevating cholesterol (due to caffanol, especially re-heated coffee)
- Contributing to hypoglycemia

Coffee can also interfere with pregnancy, contains carcinogens, can cause prostate enlargement, etc. Chronic pain or fibromyalgia sufferers should NEVER consume coffee. This is of extreme importance.

COLD

Cold, especially ambient cold is effective at increasing muscle tension, which fibromyalgia patients are especially sensitive to. Most fibromyalgia patients report that the winter months are their worst. This can be due to their muscles response to the cold, increased inactivity and rapid temperature and barometric changes.

DEHYDRATION

Dehydration can cause muscle pains and fatigue. Patients should be encouraged to drink at least 6 glasses of water a day and much more in summer months. When a fibromyalgia patient indicates their condition is worse in the summer, you may suspect dehydration caused by sweating.

OBESITY

This can be a major hurdle to being able to perform effective therapy and can also limit the effectiveness of physical therapies. Weight loss for fibromyalgia patients can be especially difficult. A structured weight loss plan is usually a requirement to achieve weight loss goals.

SUBCONSCIOUS STRESS ISSUES, ESPECIALLY THOSE FROM CHILDHOOD EMOTIONAL STRESS

The brain distraction mechanism a.k.a. the mind-body connection – the brain can cause physical pain or other health problems for the purpose of distracting a person from their unresolved or resolved emotional issues. The brain will not accept being subjected to chronic emotional stress, even at the expense of physical health.

The more common issues that trigger this mechanism include perfectionism, repressed anger, childhood baggage, depression, anxiety, unresolved or resolved abuse issues, low self-esteem, guilt, etc.

The brain causes a physical problem by decreasing blood flow and altering neural stimulation to an area of the body thus causing physical dysfunction that keeps an individual distracted from their emotional issue(s).

The most common effect of this mechanism is upper or lower back pain or other musculoskeletal problems but it may also manifest itself into a variety of other serious health problems including Crohn's, colitis, asthma, cancer, auto-immune conditions, etc. For additional information you may refer to a number of books written by Dr. John Sarno, which are available at most bookstores.

HORMONAL FACTORS, ESPECIALLY ESTROGEN TO PROGESTERONE RATIOS

The hormonal system of fibromyalgia patients may be unbalanced in any number of various ways and it is often ideal for the patient to seek assessment by an endocrinologist.

As an example, a patient was taking progesterone with 1.25mg/day estrogen and developed pain and other symptoms that eventually was diagnosed as fibromyalgia. After assessment she was referred back to her medical doctor who changed to the estrogen to .25mg/day. Within 10 days the patient reported feeling considerably better and soon after reported no muscle pain, a decreased desire for sugar, elevated mood, decreased depression and increased energy and motivation. The patient did not require any physical therapy or maintenance.

ISCHEMIC CONDITIONS/ HYPOXIA/ CIRCULATORY CONDITIONS

These patients may benefit from,

- Medical treatment.
- Co-enzyme Q-10.
- Hyperbaric oxygen chamber treatments.
- Oxygen intake from a tank to oxygenate the body.
- Clearing the reason for the ischemia (e.g. tissue adhesions, trauma, etc.).

SMOKING

Tobacco is terrible for fibromyalgia patients. It is a nightshade, causes multiple chemical contamination of the body, reduces almost all nutrient levels, burns out the adrenal glands, causes vasoconstriction and this decreased circulation, causes accelerated disc and other tissue degeneration, alters brain chemistry, is addictive, is expensive and contaminates red blood cells with carbon monoxide. Enough said.

MECHANICAL DYSFUNCTION (ESPECIALLY GAIT/WALKING)

Orthotic assessment is almost always required. Quality orthotics can provide considerable benefits that can't be duplicated in any other way.

SUBSTANCE P LEVELS

This topic is poorly understood and there isn't much anyone can do about it. It is not even understood whether substance P levels are elevated leading to fibromyalgia or if the elevated levels are due to an effect of fibromyalgia.

GENETIC/CONGENITAL FACTORS

In some cases these issues are too strong or significant to overcome. Each case must be looked at individually and attempts should be made to overcome these issues, when possible.

LIGAMENT STRAIN

Surgery, time or reducing the stress on a ligament may be required to alleviate this.

MEDICAL MARIJUANA AND FIBROMYALGIA

It is not uncommon for sufferers to seek a marijuana prescription from their doctor or to smoke marijuana thinking that it helps with sleep, appetite, pain etc. Whatever the short term benefits are, marijuana can easily cause significant long term problems and actually increase the symptoms of fibromyalgia.

Re-check fact: Marijuana has very significant effects on the immune system. It increases any auto-immune condition due to increasing the ratio of killer T-cells to other T-cells. It also decreases the immune system overall with the most significant effect being the decrease in white blood cells. This decreases a person's ability to fight bacteria (especially staph) and fungus, which is often a devastating effect for a fibromyalgia patient. Studies indicate that smoking a joint every other day will decrease white blood cell count by 40%!

Marijuana is also an irritant that causes increased inflammation of the airways, causes dehydration and usually increases allergies, especially if the patient has multiple allergies.

It is also expensive and can cause a drain on resources that could be better spent. For fibromyalgia patients who do not have a diminished appetite, marijuana can also contribute to over-eating and cause a

problem with weight. Weight problems commonly can interfere with the ability to perform stretches and therapy. Marijuana is an excellent motivation killer and fibromyalgia patients usually have a severe motivation problem. One of the most overlooked symptoms of fibromyalgia is its ability to rob someone of their motivation. For clarity, motivation and a desire to overcome fibromyalgia are two completely different things.

I would like to mention that I have no bias against marijuana and believe that for society marijuana is, for example, safer and less damaging than alcohol. I mention this because I do not want anyone to think my position on medical marijuana for fibromyalgia is politically driven or due to an anti-drug mentality.

Type "A" personalities and FM

It is widely accepted that a disproportionate percentage of fibromyalgia patients have a Type "A" personality.

It would be more accurate to say that having a type "A" personality makes you more susceptible to developing fibromyalgia. When someone becomes injured, pain and immobility of an area are ways nature sends a message to discontinue what you are doing, for you to be more careful and take it easy or rest. This stops further damage and sets the stage for injury recovery.

Those with a type "A" personality, tend to respond to the pain and immobility differently than others. These people tend to "argue" against the pain. For example, a stiffening neck that is becoming sore from prolonged looking downward while reading tends to make a type "A" personality stop, more their neck in multiple directions to try to shake the stiffness off and then tighten and contract the muscles that are irritated. When the irritated muscles are tightened, their natural resting tension is increased. This is completely counter-productive and tends to lead to the problem worsening. Type "A" personalities also tend to continue their irritating activities and ignore what nature is trying to say. When the muscles are tightened and the problem becomes worse a type "A" personality then tends to argue more and increase the tension of the muscles being irritated more and starts to get annoyed by the pain, which causes the sympathetic nervous system to increase. The effect of increasing the sympathetic nervous system includes a tightening of the muscles and exaggerated splinting and/or guarding. Now the problem is becoming much worse and the whole thing continues in a positive feedback cycle. Injury or pain becomes artificially amplified by their counter-productive response.

NDM very effectively breaks this cycle and not only allows for a conscious response to an injury but also re-trains a person to naturally respond to injury in a maximally productive way.

OTHER SECONDARY HEALTH FACTORS

To treat fibromyalgia, the patient's secondary health concerns must also be addressed. If the patient is going through a fight with cancer, is having their gall bladder out, has healing broken bones, etc. then fibromyalgia therapy should wait until those issues have cleared, whenever possible.

If a fibromyalgia patient has performed weight lifting or other resisted exercises as fibromyalgia therapy, they may also be suffering from the development of numerous trigger points and associated referred pain(s).

If a fibromyalgia patient has overused heat, they may have developed adhesions, micro-adhesions, fibrosing and exaggerated general soreness and tissue hypersensitivity. This will also increase general fatigue levels.

STARTING THERAPY

Most fibromyalgia patients who try to address their physical symptoms fail. This is because the factors that are feeding their pain cycle have not first been adequately resolved.

Steps for health care providers,

- Explain to the patient what they are experiencing so that they understand their situation. This will increase treatment protocol compliance and decrease some of their anxiety.
- If indicated, start the patient on nutritional recommendations and allow them time to become effective before starting manual therapies or proper exercises. This may involve referral to different health disciplines (e.g. nutritional therapist, M.D., etc)
- Have the patient stop bad lifestyle habits such as coffee drinking, smoking, improper sleep positions, poor diet choices, etc.

- Have the patient ergonomically maximize their work area.
- Start the patient on cold or vascular flush applications. If the short-term muscle tightening effect of cold is irritating to the patient, start them with vascular flushes.
- Seemingly minor things can interfere with recovery. Make sure the patient appreciates the problems associated with reading while looking down, crossing their legs, standing on one leg, looking down while they walk, sitting on a wallet in their back pocket, wearing high heels, etc.
- If there are hurdles that don't allow the patient to perform stretches and proper exercises address them (e.g. knee replacement, weight loss, etc.).
- Have the patient discontinue irritating treatments such as resisted exercises and the use of heat.
- Decrease psychological stress levels with effective meditation or by eliminating the stressors from their life.
- Have the patient stop doing anything that aggravates their condition and avoid anything that triggers their secondary health problems (e.g. allergens, chemical exposures, stress issues, etc.).
- Have the patient assessed for orthotics.
- Have the patient maintain an optimal activity level- not too much or too little.

This sets the stage for physical therapy. The patient will be much more apt to respond beneficially to their proper therapy and will be less apt to flare up due to the irritation proper therapy can cause.

- Slowly introduce your patient to Chiropractic, Massage Therapy and a couple stretches (usually the best stretches to start with are for the pec's and hip flexors). Posture correction is a good first focus.

This "tests the water" to see how sensitive the patient is to a flare up. If all goes well add more. You can expect a bit of a rough start. Many fibromyalgia patients will be too aggressive with their stretches, when starting.

If all does not go well, the patient may be experiencing irritation by the therapy. This would indicate the secondary factors that feed their pain cycle have not been adequately addressed, they happen to be going through a flare up and it's coincidental, their general health is too poor to recover or the physical therapy is too aggressive.

Build the patient up to a full proper rehabilitation program (see freephysicalrehab.com). The patient may experience a short period of adjustment, may pull a muscle stretching, develop new pains, etc. Let these issues pass and return the patient to their therapy.

Proper therapy must be performed daily to be effective. Benefits must be cumulative. The patient will often report feeling considerable positive change with in 2 weeks, with many reporting to be symptom free within 1-2 months. Usually fibromyalgia patients who are not symptom free within 2 months will still report dramatic benefits.

Once the patient has received maximum benefits, decrease their therapy frequency to a maintenance level and tell them not to re-develop old bad habits and to continue following all recommendations (e.g. nutritional supplements, homecare, maintenance treatments, etc.).

Expect the patient's pain to return to a degree. Once a patient feels better, they almost always go back to old habits, start to over extend themselves or don't perform required homecare maintenance.

Encourage the patient to do the things they now know to be effective. Patients should be told to avoid resisted exercises that are too aggressive. Weight lifting is usually a very poor choice for fibromyalgia sufferers.

When fibromyalgia patients start therapies, they will often have a bit of a rocky start, as their therapies can be a new source of irritation. They usually pass through this phase in less than 7 days.

If your patient cannot respond in a positive manner to their therapy then,

- You must re-assess secondary factors that may perpetuating their pain cycle to make sure they have been addressed adequately.

- Is there anything in the patient's lifestyle or work place that is being a hurdle?
- Are they starting therapy when they happen to be feeling their worst? It is best for patients to start therapy when they are feeling especially well. This reduces the chances of the therapy being a source of irritation and being a hurdle. However, fibromyalgia patients normally go through repeated flare-ups and good periods. If you start a patient's therapy when they are feeling their best, they must be warned that they may normally cycle into a flare-up and unjustly blame the flare-up on therapy. This concept is also true for homecare maintenance. The most benefit a patient will receive from homecare and maintenance is when they are feeling their best. Sometimes patients will only perform maintenance when they feel an increase in symptoms. Limited or no relief is achieved when maintenance is being performed with the goal of providing immediate relief. They must be pro-active and not reactive.
- Is the patient not performing their entire treatment plan? Patients will often do some or most of their required therapies, instead of all of it to the letter. Similar to a cake recipe, you cannot delete any of the ingredients. If you don't put water in the cake mix, you are going to fail at making a cake. If you delete the flour or the egg, you are going to be wasting your time. This needs to be explained to the patient.

Sometimes fibromyalgia patients cannot commit to starting a comprehensive treatment protocol. At times a fibromyalgia patient wants to start therapy and does with all good intentions but loses motivation and cannot stick to a treatment plan, even when it is providing significant benefit. At this point, the patient knows what they need to do to feel better but won't do it. These issues are caused by a mental block. It is something that needs to be addressed with psychological counseling and/or guidance. They may require a referral to a counselor who can help them gain the motivation they require. Too often the patient does not seek help doing this and continues to live with pain.

TREATMENT OF THE PRIMARY PHYSICAL DYSFUNCTION ASSOCIATED WITH FIBROMYALGIA

Once secondary factors have been adequately addressed, it is time to start physical rehabilitation. The patient will find it boring, tedious,

time consuming, confusing and initially irritating. They need to be told this so they can be mentally prepared for it.

The following recommendations are to be performed daily, unless a reason develops to change this such as a flare up, re-injury, significant negative reaction to therapy, etc.

- 1) **REDUCE STRESS/PROMOTE RELAXATION** – The best technique for achieving this goal is NEURODIRECTIONAL MEDITATION, similar to NeuroDirectional breathing. This is especially beneficial, as it also alters dysfunctional neurological patterning and allows the patient to control some of their symptoms such as pain and muscle tightness. You may also consider referring the patient to a stress clinic, etc. These methods effectively decrease muscle tightness and interfere with some of the mechanisms that commonly perpetuate chronic pain. An “Introduction to NeuroDirectional Meditation”, including posture correction exercises are included at the end of this fibromyalgia protocol.
- 2) **COMPREHENSIVE RANGE OF MOTION/NO IMPACT EXERCISES** – General movement exercises should be recommended with the patient moving their various joints through their ranges. If the patient, at the end range of any movements, feels discomfort they should be instructed to completely limit this, even if the movement must be eliminated or severely limited. A good program should take about 20 minutes per day.
- 3) **COMPREHENSIVE THERAPEUTIC STRETCHING** – All stretches should be held for 30 seconds and should be performed on a daily basis (unless a flare up occurs) to achieve compounding benefits. Postural stretches for hip flexors, anterior neck and pectoralis muscles are usually a good focus to start with. This should be built on bringing the patient up to about 30 different head to toe stretches, which usually takes about an hour per day.
- 4) **COLD AND /OR VASCULAR FLUSH APPLICATIONS** – these applications are systemic but when required, may also be local.

Strengthening exercises may also be recommended, once tissues have first been returned to their optimum pain-free form and function. Strengthening exercises should be gentle and usually performed on a daily basis. Some patients will never respond beneficially to strengthening exercises, therefore, if required they may rely on cardiovascular exercises to maintain their strength levels.

Cardiovascular exercises are important to maintain heart and lung function, increase circulation and maintain optimal function. However, cardiovascular exercises can be irritating to muscles and should thus be recommended after muscles have been returned to optimal pain free function.

PROGNOSIS

The most difficult part of fibromyalgia therapy is getting the patient to initially respond beneficially to their program without flaring up. This may require multiple attempts. Once the patient is over the initial "hump" improvement tends to be quick, steady and significant. It should be noted that trying to force the therapy to work and not adequately addressing the secondary factors will result in repeated failure.

Most fibromyalgia patients who follow an effective treatment plan, report being symptom free or nearly symptom free (75%-100%) within 60 days and often within 30 days.

My best for any fibromyalgia sufferer is to become educated and gain some skills, aka tools, to help you achieve the final goal of maximum recovery. Become good at doing a full 1 hour comprehensive stretching program. Make real lifestyle changes. Follow a high quality, safe and gentle program to recovery. Once you have gained this information and are using it, modifications and improvements can be made, if they are required for some fine tuning or to overcome a recovery hurdle. You can then be taught better and more advanced therapies. Become your own personal rehab worker.

MAINTENANCE

Most fibromyalgia patients require ongoing maintenance to keep them symptom free. Maintenance usually consists of their treatment plan but performed less often. It is best the patient slowly decrease treatment frequency and rely mostly on homecare exercises (comprehensive stretching, meditation, range of motion exercises, continuing nutritional supplements or prescriptions, etc.) for their stability. Fibromyalgia patients are usually subject to more muscle pulls and pains than your average person. However, these pains, etc should now be of a temporary nature and mainly self-resolving or resolvable with homecare.

This is a work in progress...

To be added and expanded upon-

<Add entire section on Ph levels, cystitis and the use of raw mucosa>

<Add entire section on #1, 3, 6 and 7 plastics and phthalates/airborne phthalates- serious effects>

For the average healthy individual, these issues are generally not symptomatic but for many fibromyalgia patients these issues can be critical and are often contributing to the condition....

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