Fibromyalgia and Chronic Myofascial Pain
Patient Information
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If you are already diagnosed with either of these illnesses, you are luckier than all the people suffering without knowing what they have and without getting good advice about what they can do.

These pages are for people who may have one or more of these conditions and for their companions and health care providers. Many of these pages are referenced with medical texts and journal articles and are periodically updated. They may help you to discover and understand what's going on and what you can do about it.

Fibromyalgia syndrome (FMS) and chronic myofascial pain (CMP) are real conditions, and they are not the same. You may feel that FMS alone is too difficult to understand and control without adding another invisible illness that most care providers know little or nothing about. The understanding of myofascial TrPs will actually make things simpler. Myofascial trigger points (TrPs) are well documented and can cause the peripheral stimulation that is sustaining the central sensitization of FMS. You have what you have, and you need to deal with it. One of the reasons most people, care providers included, find FMS complicated is that CMP frequently co-exists and muddies diagnostic and treatment waters.

You need to understand both of these conditions to be able to separate the impact they are having in your life and to know how to deal with each symptom. Once you grasp the concepts behind these conditions and act on your knowledge, your health will improve and you will regain some control. Learning the separate pain patterns and symptoms associated with your TrPs may seem daunting, but it is no more difficult than learning the alphabet, and many of the TrP referral pain patterns may already be familiar. Once you know where they originate, you may be able to get at the sources of many of your symptoms. Identifying and controlling many of your perpetuating factors for both FMS and CMP is under your control. With a little direction, you can do a lot for yourself and your own well-being.

Fibromyalgia Syndrome

FMS is not a catchall, "wastebasket" diagnosis. FMS is a state of central sensitization. This means that your central nervous system may be unusually

sensitive to pain (hyperalgesia) and you also may find certain sounds, vibrations, light, and other sensations (even smells) to be translated by your body into discomfort or pain. Certain types of sound, such as staccato music or talk, or certain pitches, may be unendurable and promote increased sensitivity to other stimuli. The same may be true of the pattern of shadow and light by trees passing along in a car, or even being stuck in an elevator or car with a woman with heavy perfume. Diffuse, body-wide pain is part of FMS, but not all of it by any means.

Fibromyalgia is not yet considered a disease. Diseases have known causes and well-understood mechanisms for producing symptoms. FMS is a syndrome, which means it is a specific set of signs and symptoms that occur together. Syndromes are no less serious or potentially disabling than diseases. Rheumatoid arthritis and lupus are also classified as syndromes. Lab tests for FMS do not exist right now. Lab tests are valid only to check for co-existing conditions. You can have other conditions and also have FMS.

You have probably heard about the official FMS definition requiring 11 of 18 tender points to be present. This was part of the criteria originally to be used to define patients to be admitted into clinical studies of FMS, and the tender points had to be present in all four quadrants — that is, the upper right and left and lower right and left parts of your body. You must have had widespread, more-or-less continuous pain for at least three months. This was not originally intended to be diagnostic. Since most clinical studies fail to separate symptoms of FMS from co-existing CMP, the conclusions of many studies may be faulty.

Tender points occur in pairs on various parts of the body. In traumatic FMS, tender points may be clustered around an injury instead of, or in addition to, the 18 "official" points. These clusters can also occur around a repetitive strain or a degenerative and/or inflammatory problem, such as arthritis. Localized pain usually indicates a co-existing condition, such as chronic myofascial pain (CMP), but even with CMP this can be misleading, as you will read later.

Neither FMS nor CMP are inflammatory conditions. FMS can occur at any age. Most patients, when questioned carefully, reveal that their symptoms began at an early age. About 25 percent of the FMS patients I have come in contact with are men. This ratio differs from most sources in the literature. I think that FMS is under-diagnosed in males.

Flu-like achiness is frequently the most prominent symptom of FMS, but there are many others. For example, your eyes may be too dry, but at other times they will water. Your thermal regulatory system may be out of whack. You may notice this when you get out of bed (which may be often, due to bladder irritability) during the night. You may have to wait for your temperature to cool down after getting back in bed before you can pull the bedcover up. You may experience confusional states, memory dysfunction, and an inability to do more than one thing at once. You may be able to focus on a specific skill and function at a high level in you field, yet be unable to balance your checkbook or remember appointments. You may

experience skin mottling. Your finger and toe nails may have vertical ridges — a typical sign of endocrine imbalance. Fingernails may break off, often in crescent-shaped pieces. If nails do grow, some may start to curve under (beaking).

People with FMS can be sensitive to changes in barometric pressure and temperature. Rain beating on the windowpane may feel as if it were beating on the walls of your cells. The noise emitted by fluorescent lights can drive you crazy, and you may have to avoid overcrowded areas such as malls or cities. FMS sensitizes nerve endings as well as the rest of the autonomic nervous system. The actual ends of the nerve receptors may have changed shape, turning touch and other receptors into pain receptors. Pain signals then bombard your brain. Your brain knows pain is a danger signal — an indication that something is wrong and needs attention — so it mobilizes its defenses. Then, when those defenses aren't used, it becomes anxious. Overstimulation is a major perpetuating factor of FMS.

Restorative sleep plays a crucial role in FMS. Perhaps you aren't getting enough sleep, or the right kind of sleep. You may have insomnia or a host of other sleep-related problems. You may have sleep apnea, or your heightened sensitivity does not allow you to sleep deeply. Our body heals and many neurotransmitters are balanced during deep sleep, and without it we soon suffer from the effects of sleep deprivation. It isn't enough that you spend eight hours in bed. When you wake, you must feel refreshed and restored. Lack of restorative sleep is a major perpetuating factor of FMS, and you may need to work with your doctor to find medications that can help. You may also need to adjust your diet and life style to avoid stimulants such as sugar and caffeine. You may need help learning how to handle stress. You may also need to adjust your bedroom environment including the bed and pillows.

Myofascia

Myofascial pain is probably the most common cause of musculoskeletal pain in medical practice (Imamura, Fischer, Imamura et al.1997). It is a vital but often unrecognized factor in the practice of medicine. Pain from myofascial dysfunction is probably at the source of many of your symptoms. The white, translucent covering you sometimes see on a chicken breast under the skin is fascia, pronounced "fass-she-uh." That is only part of the fascia story, however. Fascial is not facial, although you do have fascia under your face. Fascia is almost everywhere in the body, and its boundaries are hard to define. There is no specific field of medicine dealing with fascia or myofascia, and yet it touches all specialties as well as general practice. **Fascial dysfunction can mimic many conditions and affect many body systems.**

A small change in the myofascia can cause stress to other parts of your body. Restriction of one major leg joint can increase the energy used in walking by as much as 40%. If two major joints are restricted in the same leg it can increase by as much as 300% (Greenman, 1996). Multiple minor restrictions of movement,

particularly those affecting the way you walk, can use up your energy and increase fatigue. Fascia is medically separated into three layers, but it is all continuous and three-dimensional. Superficial fascia is attached to the underside of your skin. Capillary channels and lymph vessels run through this layer and so do many nerves, so constriction in this fascia can constrict them. The subcutaneous fat is attached to it as well. If your superficial fascia is healthy, your skin can move fluidly over the surface of your muscles. In FMS and CMP, it is often stuck. The body can store excess fluid and metabolites in superficial fascia. The metabolites are the breakdown products of metabolism and other biochemical reactions in your body. This is the area of fascia that often is the easiest to palpate. Palpation is the art and skill of being able to touch meaningfully, interpreting what the skin and fascia are willing to tell about your state of health. It takes training and experience to palpate. It is more difficult if excess fluid has accumulated in this area due to dysfunction. This type of swelling is often noticed by the patient but frequently missed by the physician because it is diffuse and may be body-wide.

Deep fascia is tougher and denser material. Your body uses it to separate large areas such as the abdominal cavity. Deep fascia covers some portions like huge sheets, protecting them and giving them shape, and separating muscles and organs. The bag-like covering around your heart, the lining of your chest cavity, and the area between your external genital and your anus are specialized forms of deep fascia.

There is a third layer of fascia, called sub serous fascia. This loose tissue covers your internal organs and holds the rich network of blood and lymph vessels that keep them moist. Even your cells have a type of cytoskeleton connected to the fascia network, which is what gives your cells shape and allows them to function. Myofascia is fascia that is related to muscle tissue. Healthy myofascia allows for compression and tension, as well as relaxation. The dural tube is another fascial connection. This tube surrounds and protects your spinal cord and contains the cerebrospinal fluid. It is connected to the membranes surrounding your brain. Together, they hold and protect your craniosacral system. Once you understand the pervasive nature of fascia, you can see how fascial dysfunction can cause all sorts of problems.

In the myofascia there is a material called ground substance. The ground substance transfers nutrients from where they are broken down into usable materials to where they will be used and removes waste products from these areas of use. The ground substance can change from a loose gelatin consistency to gel-foam or even like stiff Styrofoam, hardening and losing elasticity if subjected to biochemical or mechanical trauma. The myofascia tightens with it.

Ground substance also maintains the distance between connective tissue fibers. This prevents microadhesions from forming and keeps your tissues supple and elastic. When the critical distance is not maintained, the fibers become cross-linked by newly synthesized collagen, which are also part of the fascia. Collagen crosslinks are arranged haphazardly, unlike healthy linkages, and are hard to break

up. Sheets of fibrous myofascial adhesion can form anywhere along nerves and block normal healthy function.

Myofascial Trigger Points

Trigger Points (TrPs) are extremely sore points occurring in ropy bands throughout the body. You can feel them as painful lumps of hardened fascia, like nodules or like hardened peas. ***TRIGGER POINTS ARE NOT PART OF FIBROMYALGIA!*** The bands are often easiest to feel along the arms and legs if you stretch your muscle about 2/3 of the way out. If your muscles are tight so that you can't feel the lumps, or even the tight bands, that doesn't mean that the TrPs aren't there. That's why it's important to know the pain patterns so you can find the TrPs and work on them. Many common TrPs have referred pain or other symptom patterns that are carefully documented. The first time I opened the Trigger Point Manuals ("Myofascial Pain and Dysfunction: The Trigger Point Manual Vol I & II" by Janet Travell, M.D., and David Simons M.D.) I was dumbfounded. After being told for so long by medical experts that the pain patterns I described did not and could not exist, seeing them illustrated in a medical text brought a flood of emotions. I felt so relieved I cried. Then, as the truth started to hit home, I started to get angry. Why didn't these "experts" have knowledge of Travell and Simons' work? Why hadn't I learned about these texts in medical school! Most localized pains commonly attributed to FMS are actually from myofascial TrPs. TrPs seem to form throughout life as a response to many things that happen to our bodies — overuse, repetitive motion trauma, bruises, strains, joint problems, etc. Pain creates a neuromuscular response, and the muscle around the pain site tightens, "guarding" the hurt area.

When muscles are in a state of sustained tension, they are working, even if you're not. A working muscle needs more nutrition and oxygen, and produces more waste, than a muscle at rest. This creates an area in the myofascia starved for food and oxygen and loaded with toxic waste — a TrP. Dr. Janet Travell, in her autobiography, "Office Hours Day and Night" explains how dizziness, ringing of the ears, loss of balance and other symptoms can all be caused by TrPs in the side of the neck, in the muscle group called the sternocleidomastoid (SCM) complex. Receptors in the SCM complex transmit nerve impulses to inform the brain of the position of the head and body in the surrounding space. With TrPs, the receptors lie. What they tell the brain is not what the eyes tell the brain. When head movement changes the SCM message — when you turn or look up from changing kitty litter, you get dizzy. This, coupled with poor balance, can make it seem as if the walls are tilting.

Proprioceptors are receptors that tell your body and brain where parts of your body are in relation to the world around you and to each other. Proprioceptor dysfunction is associated with TrPs. When we take corners while driving, we get the impression that we're "banking" the turn at a steep angle, as if we're on a motorcycle. Cold drafts alone can bring on TrPs. Be careful how you move in bed.

When you turn, roll with your head flat and use your arms to help. Don't lift your head and "lead with it" as you roll. That puts a great strain on the neck area and electrically "loads" the SCM TrPs, just as climbing steps or walking uphill "loads" the muscles of the thighs. This means that the electrical potential of the muscles is changed. A common symptom of SCM TrPs is a "drunken" walk. Every TrP has perpetuating factors, and identifying these and controlling them will help you control the symptoms.

An active TrP not only hurts when it is pressed, like an FMS tender point, but it "triggers" a referred pain pattern locally or elsewhere in the body. This pain pattern is usually similar from patient to patient. These TrPs often produce other symptoms, also usually in the referred pain zone. Such a TrP hurts whenever you use the involved muscle. When the point becomes very active, symptoms occur even when the muscle is at rest. A "latent" TrP doesn't hurt at all, unless you press it. You might not even know it's there. It weakens and prevents full lengthening of the affected muscle. If you press on the TrP, it refers pain in its characteristic pattern. Latent TrPs may be activated by overstretching, overuse or chilling the muscle. **People who get little exercise have a greater chance of developing latent points. This is important, because some people feel that by restricting their range of motion, they are getting rid of their TrPs. Nothing can be further from the truth**. Physical stress isn't the only thing that can cause TrPs. Tension TrPs can occur. These are not psychological results of tension but are physiological biological affects of long-term emotional abuse or mental trauma. If you are constantly holding your muscles tight in a "fight-or-flight" stress response, this changes your body patterns. TrPs can be caused by a surgical incision, as is often the case with abdominal surgery. TrPs may form as a result of other medical conditions. A case of arthritis may be otherwise well managed, for example, but the accompanying TrPs are overlooked. The pain load of that patient could be substantially lessened if the secondary TrPs were treated successfully. Where muscles and tendons, bones and ligaments, come together, there are areas of attachment. Cellular membranes in these areas can become extremely convoluted, which increases the surface area and changes the angle of force. This increases the potential for adhesions and causes tissue there to become more easily torn (Simons, Travell and Simons, 1999). In these areas, Attachment TrPs (ATrPs) can develop.

When you have TrPs, muscle strength becomes unreliable. Your grip can fail. TrPs cause muscle weakness and dysfunction before they cause pain. You may have also noticed that if one part of your body rests over another, the compressed part goes numb. TrPs can cause restrictions to blood vessels, lymph vessels and nerves. Remember that these structures pass through the fascia. Other associated symptoms may include stiffness, muscle tightness, localized sweating, tearing, salivation, poor balance, irregular heart beat, dizziness, pelvic pain, diarrhea, impotence, nausea, tinnitus, goose bumps, runny nose, buckling knees, weak ankles, illegible handwriting, headaches and muscle cramps.

Chronic Myofascial Pain

If TrPs are treated immediately and vigorously, and perpetuating factors (conditions that aggravate and perpetuate the TrPs) are eliminated or controlled, TrPs can often be eliminated quickly. Unfortunately, if a TrP is left untreated or muscle action is restricted to avoid pain, the TrP usually becomes latent. If the muscle is pushed to work in spite of the pain, especially if perpetuating factors exist, active TrPs may develop secondary and satellite TrPs.

Secondary TrPs develop when a muscle is subject to stress because another muscle with a TrP isn't doing its job. Satellite TrPs develop when a muscle is in a referred pain zone of another TrP. Without proper intervention, and with perpetuating factors, the TrPs can lead to severe and widespread chronic myofascial pain (CMP). Developing secondary and satellite TrPs can give the false impression that CMP is a systemic condition that will steadily worsen with time — that it is progressive. CMP is not progressive. Body-wide TrPs, often in many layers of many muscles, can seem like FMS. With proper and timely intervention, these TrPs can be broken up and eliminated. If chronic myofascial pain has persisted for some time, you may have fibrotic muscles and/or calcified areas at the attachment points. This usually indicates multiple perpetuating factors, and it will take longer work and a lot of patience to regain function. Many people are living with incontinence, dizziness, muscle weakness, IBS, and avoiding activities (including sex) because they have TrPs that are unrecognized and untreated. So much misery and unnecessary health-care cost could be prevented by adequate training of medical care professionals.

FMS and CMP Together

FMS and CMP are different conditions. However, the vast majority of physicians lump them together because they see so many patients who have both. They are treated differently, however, and the difference is important. Unless doctors have a thorough knowledge of and familiarity with individual TrPs, they can't sort out the symptoms easily. It is also difficult to treat the individual TrPs without knowing the pain patterns. They must also be identified because certain postures and body movements, or mechanical inequalities, may be the perpetuating factors. Certain TrPs may develop if you fail to change your gaze enough (especially if you work at a computer screen), and you may simply need to do eye exercises every day to stop those killing headaches. Or you may need the focal length changed on your glasses or the glare removed from your computer screen. Your work station may be ergonomic, but you may be lying on a sofa watching TV at night and your posture may be causing TrPs along the spine.

One interesting difference between the two conditions is that more women than men have FMS, but CMP affects men and women in equal numbers. Another difference is that muscles in locations that are some distance from the TrPs of CMP

have normal sensitivity. In FMS, there is a generalized sensitivity. With FMS, you and your care providers need to reduce unnecessary and confusing stimuli. With CMP, you need to identify the specific TrPs and treat them with specific TrP therapy. With both conditions, **the key to successful treatment is identifying and controlling or eliminating perpetuating factors**. This may involve changing to a healthy diet and avoiding excess carbohydrates, adding vitamin and mineral supplements, regaining restorative sleep (which may need no more than adding Benadryl at night, or may be much more complex), and adding some gentle exercise and stress-removing activities. Deleting unhealthy habits such as smoking can make a world of difference.

People with both FMS and CMP face more than just the two sets of symptoms of both conditions. Today, more researchers are realizing that FMS and CMP not only occur together, they reinforce each other. FMS and CMP can interact. The many different autonomic symptoms and proprioceptor dysfunctions associated with TrPs can be amplified by FMS. The research by Dr. Roland Staud and others indicates that pain from localized TrPs can perpetuate the central sensitization of FMS. **Physical therapy and all other forms of treatment must proceed very carefully when both of these conditions are involved, because any excess pain caused by the therapy can further sensitize the central nervous system.** Any treatment regimen will be both more complicated and less successful than if the patient had only one of the two conditions.

Furthermore, some of the treatments normally prescribed for FMS patients can cause damage to CMP patients, and the reverse is also true. **You cannot strengthen a muscle that has a TrP**, because the muscle is already physiologically contracted, for example. Too many physical therapists see a weakened muscle and immediately attempt to strengthen it without testing for the presence of TrPs. Attempts at strengthening a muscle with TrPs will only cause the TrPs to worsen and may develop satellites and secondaries. In the context of FMS, many different neurotransmitters are affected to different degrees and in different combinations in each patient. Other biochemicals in the body are also affected to different degrees. Various hormones may be involved. Histamine (a neurotransmitter), for example, is often an important factor when there are many allergic manifestations. The possible combinations are endless, so this is no place for a doctor who practices "cookbook" medicine, especially when you figure in the possible combinations of TrPs.

A lot can be done to relieve FMS and CMP, lighten the symptom load and return at least some of your function. Much of this is under your control. It's important for you to take on the responsibility of managing your own treatment. The resources are available for you. It isn't easy, and it takes concentrated focus to change the habits of a lifetime. Getting as well as possible — optimizing your quality of life — takes commitment and patience. You didn't get where you are overnight, and there are no quick fixes. One of your best hopes in the challenge to regain function and well-being is education, both yours and your medical care team. This website is dedicated to providing both.