

# What Everyone on Your Health Care Team Should Know About FMS and CMP

by Devin Starlanyl

Updated from "The Fibromyalgia Advocate: Getting the Support You Need to Cope with Fibromyalgia and Myofascial Pain Syndrome", by Devin J. Starlanyl © 2002. This information may be freely copied and distributed only if unaltered, with complete original content including: © Devin Starlanyl, 1995-2002.

You have seen patients with fibromyalgia (FMS) and chronic myofascial pain (CMP), and you will see more, although many will be undiagnosed or misdiagnosed. It is important to understand that these are separate conditions, even though they may occur in the same patient, and that they must be treated in different ways. Fibromyalgia is a systemic, biochemical condition with tender points that hurt in specific areas (Russell 1996). It is basically a neurological condition (Bradley, McKendree-Smith et al 2002) characterized by hyperalgesia (amplified pain from painful stimuli) and allodynia (pain response from normally non-painful stimuli such as noise, touch or light). There is often fragmented and unrestorative sleep. **Fibromyalgia is NOT just widespread pain, and it is not a wastebasket diagnosis. There are NO trigger points in fibromyalgia.**

Chronic myofascial pain is a neuromuscular mechanical, physical condition with nodules and ropo bands that not only hurt but also cause muscular weakness, pain at the end of a decreased range of motion, and referred pain. In some cases there are autonomic concomitants (Simons, Travell and Simons 1999). The mechanisms behind the formation of a myofascial trigger point are now understood, and thus myofascial pain from trigger points (TrPs) is a true disease (Simons, Travell and Simons 1999). Chronic myofascial pain with multiple perpetuating factors can result in a condition with TrPs in many layers of many muscles, creating overlapping composite pain patterns and widespread pain.

Each of these illnesses is an authentic and well-documented medical condition. They are very different from each other, although they frequently occur together and are often confused. People with FMS and/or CMP may look healthy and are often discriminated against for having an "invisible" chronic pain condition. Understanding how these syndromes work may provide the answer to some of your more "challenging" patients. If you doubt the validity of FMS, CMP, perpetuating factors like reactive hypoglycemia and insulin resistance, or the cognitive deficits that can accompany FMS, see the extensive Reference section on my website. It is to your advantage to become as educated as possible on these topics. You can do a lot for these patients.

## Fibromyalgia

Fibromyalgia is a specific systemic dysregulation of the neuroendocrine system

(Adler, Manfredsdottir, et al 2002). It is the most common cause of widespread pain (Bennett 1995a). It is not just a term for achy muscles. It is not a diagnosis of exclusion. A patient can have FMS and other conditions as well. It has, among other things, a disrupted hypothalamus-pituitary-adrenal (HPA) axis. Often many hormones, neurotransmitters and other informational substances are out of balance, and each imbalance is a perpetuating factor. It is nonprogressive (although it may seem to be), nondegenerative, and noninflammatory. It is responsible for diffuse bodywide pain, tender points that hurt but don't refer pain elsewhere in the body, and sleep disturbances. In FMS, studies indicate that there are biochemical abnormalities requiring metabolic adjustment (Eisinger, Plantamura and Ayavou 1994; Samborski, Stratz, Schochat, et al 1996). The "eleven out of eighteen" tender points "test" for FMS was intended to be used to identify FMS patients who meet the criteria for inclusion in research studies. It was not intended for use in clinical settings (Scudds 1998). Patients with FMS must be treated systemically, targeting central nervous system symptoms, especially the ANS (Martinez-Lavin 2002). In FMS, there are neurohormonal changes that can significantly diminish the normal repair of muscle tissues (Neeck and Riedel 1994). This must be taken into account when prescribing exercise. Most FMS patients experience chronic sleep deprivation (Branco, Atalaia and Paiva 1994) and thus lose all of the benefits that restorative sleep brings to healthy individuals. Fibromyalgia symptoms can vary from hour to hour and day to day, and may be influenced by climate.

## **Chronic Myofascial Pain**

Chronic myofascial pain (CMP) is not the same as fibromyalgia, and the differences are fundamentally important (Gerwin 1999). Chronic myofascial pain is a neuromusculoskeletal condition. It is nonprogressive, nondegenerative, and noninflammatory. It is composed of myofascial trigger points (TrPs) which refer pain and other symptoms in very precise patterns in specific regions of the body. It seems progressive because each TrP can develop satellite and secondary TrPs, which can form secondaries and satellites of their own. With treatment of TrPs and the underlying perpetuating factors, however, the TrPs can be "reversed" and minimized or eliminated.

A small change in the myofascia can cause great stress to other parts of your body. Restriction of one major joint in a lower extremity can increase the energy expenditure of normal walking by as much as 40%, and, if two major joints are restricted in the same extremity, it can increase by as much as 300% (Greenman 1996). Multiple minor restrictions of movement, particularly in the maintenance of normal gait, can also have a detrimental effect upon total body function.

A myofascial TrP is always found in a taut band, which is structurally related to contraction knots caused by a thousand-fold increase in the release of acetylcholine, an important neurotransmitter. This action takes place in an area of the muscle where nerves end, which is called a motor endplate (Gerwin 1999). The cause of TrPs appears to involve serious disturbances of the nerve ending, as well

as dysfunction of the contractile mechanism at multiple dysfunctional endplates (Hong 1999). One of the most common perpetuating factors of myofascial trigger points is inappropriate therapy. You cannot strengthen a muscle with a TrP because it is already physiologically contracted. The TrP must be gone before the muscle can be strengthened. The patient usually presents with complaints from the most recently activated TrP. When this is eliminated, the pain pattern may shift to an earlier TrP, which also must be inactivated. Trigger points are directly activated by acute overload, overwork fatigue, direct trauma, and chilling. They are also activated indirectly by other TrPs, visceral disease, arthritic joints, and emotional distress. Active TrPs vary from hour to hour and day to day. The signs and symptoms of TrP activity long outlast the precipitating event.

Two excellent medical texts on myofascial pain are available: Travell and Simons' *Myofascial Pain and Dysfunction: The Trigger Point Manual, Volume I, edition 2, The Upper Body* (Simons, Travell and Simons 1999) and *Myofascial Pain and Dysfunction: The Trigger Point Manual, Volume II: The Lower Body* (Travell and Simons 1992). These texts locate and illustrate the referred pain patterns and tell what causes them and how to relieve them. They will teach you how to identify and remedy perpetuating factors, and this process is the key to both fibromyalgia and myofascial pain.

## **Patients**

Some physicians consider those who have FMS and CMP to be "difficult" patients. These patients usually have experienced extreme frustration trying to get doctors to listen to them and take their symptoms seriously. They are often in great pain, and past experiences with the medical establishment may have included ridicule and abuse. When dysregulated neurotransmitters (which control mood) and chronic sleep deprivation are added to this volatile mix, you cannot expect to find a cheerful, happy person. Be patient. If you listen well and take their symptoms seriously, you can give them hope. Under the pain, there is a thirst for knowledge and understanding. Counsel patience to them as well. It took a long time for their bodies to get to this shape and there are no "quick fixes." Explain that you will do your best to find a combination of medications that will help them get restorative sleep, pain relief, and other symptom help, but that it will also take a commitment from them for lifestyle changes, including such things as change of diet, addition of gentle exercise, development of healthy sleep habits, and cessation of smoking.

## **Inflammation**

It is important to keep in mind that neither FMS nor CMP is inflammatory, although secondary inflammation of the joints may sometimes occur in long-standing untreated TrPs. This occurs because contracted muscles harboring trigger points (TrPs) can pull bones slightly out of alignment. "Inactivating the related myofascial TrPs and the elimination of their perpetuating factors appear to be important parts

of early therapy to delay or abort the progression of some kinds of osteoarthritis (Simons, Travell and Simons 1999 p 792). NSAIDS may make convenient analgesics, but they contain components that are unnecessary for noninflammatory conditions. Furthermore, NSAIDS often disrupt the deepest stage of sleep and can contribute to permeable gastric mucosa. Your patient probably already suffers from severe sleep disruption and may also have multiple allergies and chemical sensitivities. Research shows that the use of opioid analgesics in the management of nonmalignant chronic pain is a reasonable and safe option (Ciccone, D. S., N. Just et al. 2000) and does not result in abuse (Joranson, Ryan et al 2000). Consider both medicinal and nonmedicinal pain control options. Massage, myotherapy, myofascial release, craniosacral release, electrotherapy, and cold and heat may help.

## **Pain**

Pain is a major perpetuating factor, and you need to work closely with your patient to find medications that will relieve pain without causing undue side effects. There are studies showing that people with FMS have aberrant central pain mechanisms (Staud, R., C. J. Vierck, et al. 2001) and abnormalities in regional blood flow to some areas of the brain which are associated with low pain thresholds (Mountz, Bradley, Modell, et al. 1995). The pain stimulus itself may contribute to long-lasting changes in central nervous system excitability (Staud, R. Smitherman M. L. 2001). Sleep deprivation is also a perpetuating factor and medication may be needed for this as well. Care must be taken to address all perpetuating factors with a combination of diet, physical therapy, exercise, mindwork, and medication. Your patient will need a lot of help while the perpetuating factors are brought under control. Don't expect results overnight. It took a long time for your patient to get in this position, and it will be a long, slow path to healing. The pain amplification and other biochemical changes of fibromyalgia must not be taken lightly. For example, research shows that patients who have a chronically activated HPA axis (as often occurs in FMS) have increased cardiovascular risk (Curtis BM, J. H. O'Keefe JR 2002).

## **The Patient's Credibility**

Believe what your patient tells you. Both fibromyalgia and myofascial pain are verified medical conditions (Wolfe, Smythe, Yunus, et al. 1990; Bennett 1987; Travell and Simons 1999, 1992). There are no acceptable reasons for disbelief, and there are many therapies and treatments. In specific cases, some therapies work better than others. Communicate with the others on your patient's medical team. You may be able to help unravel a veritable Gordian knot of symptoms.

## **Medication**

There is at present no cure for FMS. Once you find medications and therapies that successfully deal with the factors that are perpetuating your patient's symptoms, it

is appropriate to allow them to remain on those medications and therapies or the symptoms will reoccur (Andersen and Leikersfeldt 1996; Fishbain, Goldberg, Rosomoff, et al. 1991; Garcia and Altman 1997).

Proper medication can give your patient the “breathing space” needed for body and mind to return to healthier states. Only after the perpetuating factors have been brought under control, the body has been detoxed, and the autonomic nervous system has returned from its hyperirritable state should you begin decreasing the dosages of the medications — one at a time — as the patient begins to feel that s/he can make do with less support.

There are many interrelated imbalances in many neurotransmitter and hormone systems in FMS (Russell 1996; Crofford, Engleberg and Demitrack 1996; Bennett, Cook, Clark, et al. 1997). The doctor as well as the patient must be patient while the perpetuating factors are identified and methods (medicinal and nonmedicinal) are found that will treat them adequately.

## **FMS and CMP**

FMS and CMP are separate and unique conditions that can form a synergistic, mutually perpetuating pain condition that is more than the sum of the two. This is a condition of interconnected symptom spirals that become increasingly worse until the spiral is interrupted. Sometimes, due to myofascial splinting, the patient's muscles can feel like hardened cement. Each hard lump is a contraction knot. This consists of contracted sarcomeres. The ropy, taut band that forms is most probably created by compensating elongated sarcomeres. They produce a palpable tension to educated fingers (Simons 1997).

When a nerve passes through a muscle between taut bands of myofascia, or when a nerve lies between the taut band and bone, the unrelenting pressure exerted on the nerve can produce neuropraxia, loss of nerve conduction, but only in the region of compression. The patient often has two causes of pain: aching pain, which is referred from the TrPs in the muscle, and the painful effects of nerve compression — numbness, tingling hypoesthesia, and, sometimes, hyperesthesia. The combination of the severe pain from the TrP and the amplification of fibromyalgia can be life-destroying, unless adequate medical intervention occurs.

Begin therapies slowly. Due to the variations in FMS (many neurotransmitters are affected to different degrees) and CMP (there are many different trigger points with many possible perpetuating factors), your patient will need time and attention. Initially, the patient may be able to tolerate nothing more than moist heat and passive stretching, with many pain medications needed. Because bodywork promotes the release of trapped toxins and wastes, feelings of fatigue and nausea may arise. These are indications that the patient must go slowly and allow the liver and kidneys to help detoxify the body. At first, bodywork may not be tolerable more than once a week. The body must be given time to detox, with gentle,

brief, nonrepetitive stretching (when tolerated). Once restorative sleep has been regained, with adequate pain control and a proper diet, healing may proceed much faster (Moldofsky 1994).

A muscle with active trigger points cannot be strengthened. The TrPs must be deactivated first. This can be accomplished by careful galvanic electrical stimulation, spray and stretch techniques using Travell and Simons' methods (1992; 1983), trigger point acupressure, and other modalities. These therapies often work well in concert. Work hardening and weight training will do nothing but create more pain and disability.

## **Perpetuating Factors of Trigger Points**

Common TrP perpetuating factors are:

- skeletal asymmetry and disproportion
- nutritional inadequacies
- reactive hypoglycemia or insulin resistance
- paradoxical breathing
- pain
- impaired sleep
- conditions impairing muscle metabolism
- head-forward posture
- chronic infections
- bad habits such as chronic gum chewing
- other TrPs
- visceral disease
- arthritic joints
- FMS and other chronic illnesses
- vitamin and mineral insufficiency
- adhesions
- previous surgeries
- previous traumas
- allergies
- poor posture
- poor body mechanics
- poor coping behaviors
- lifestyle
- smoking
- alcohol consumption
- stress
- Morton's foot
- thyroid resistance
- short upper arms
- short lower legs
- unequal leg length

- hypothyroid
- psychological stress
- ill-fitting shoes
- ill-fitting furniture and car seats
- hypermobility
- repetitious exercise and work
- overwork
- immobility
- inappropriate physical therapy

## **Autonomic Reactions and TrPs**

Some trigger points may produce autonomic reactions, such as sweating, blanching, dizziness, and nausea. These autonomic responses may be relieved by treating the trigger point. To become adept at the diagnosis and treatment of TrPs, you must become familiar with referral patterns and autonomic concomitants, as well as the TrPs (Simons 1987). Keep in mind, however, that autonomic effect zones are not necessarily the same as pain referral zones. Trigger point sites can vary slightly from patient to patient. Many muscles have multiple TrP locations. The major factor in TrP pain is always mechanical, even if it was triggered by stress.

Each patient has a unique combination of neurotransmitter disruption and connective tissue disturbance. All patients need professionals who are willing to work with us until an acceptable symptom relief level is reached.

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