

## Information about Medications by Devin J. Starlanyl

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Medications are one way you can gain some control over your symptoms. They may enable you to handle a greater amount of bodywork and exercise and can be used to restore greater levels of function. Medications developed for other conditions may often prove helpful. Antidepressants have pain-relieving effects independent of changes of mood, for example, and in lower doses than used to treat depression (Fasmer, 1990) and may be effective in reducing pain associated with FM (Fishbain, 2000). Medication should never be considered as the only form of pain control. It must be part of a global strategy, with sound nutrition, bodywork, mindwork, lifestyle adjustments, and other non-medicinal options of pain control.

Before adding any new medication, review your current meds with your doctor. Discuss your options. Address all perpetuating factors. For example, you may have been put on Tagamet, Zantac or Prilosec for heartburn and esophageal reflux. These can decrease your ability to digest foods and add to your symptoms in the long run. If you have reflux, look into the possibility that you may have insulin resistance/reactive hypoglycemia. If you crave carbohydrates and have other symptoms of these conditions, try diet modification. Eliminate excess carbohydrates. Check for possible TrPs in the area around the base of your breastbone. With a change of diet and some myotherapy, you may be able to avoid these expensive medications.

Medications that affect the central nervous system are appropriate for FM. These meds target insomnia, pain and fatigue. Pain sensations are amplified by FM, so if you have TrPs or other instigators, your total pain level may be severe. FM patients may react in an unusual manner to medications. Keep careful records of your medicines using a medical use form such as the one in "The Fibromyalgia Advocate". There is no cookbook recipe for prescribing medications for FM and CMP. A medication that works well for one person can be completely ineffective for another. It is important that you don't mix nonprescription medications, such as herbal remedies, with your prescription medications without discussing it with your health team first.

### **Over the Counter (OTC) Medications and Supplements**

Benadryl (diphenhydramine): This sleep aid/antihistamine is safe to take even during pregnancy. The starting dose is 50 mg, taken 1 hour before bed. About 20 percent of patients are stimulated rather than sedated by Benadryl. Patients have reported urinary hesitancy on this medication. Serious side-effects have been reported in older people, including decreased mental status, disorganized speech and increased risk of falls. This medication is NOT recommended for senior citizens.

Calms Forte: This mix of herbs and minerals may be effective to promote sleep.

Chromium Picolinate: This may decrease carbocaving. It seems to improve the efficiency of insulin (Striffler, Law, Polansky et al. 1995).

Coenzyme Q10 is a vitamin-like substance. Some people have found it helps reduce fibrofog. It's an important part of the mitochondrial membrane, but we don't understand its functions.

DHEA (dehydroepiandrosterone) turns into estrogen and testosterone in your body. High doses (25-50 mg/daily) can trigger heart irregularities, or even a heart attack (Sahelian and Borcken, 1998). Some FM patients report it helps them feel better.

Digestant Enzymes: If you have problems digesting foods, try taking papain or a natural enzyme combination to help your gastrointestinal system break down foods. Avoid those combinations containing hydrochloric acid.

Glucosamine and chondroitin: These may be beneficial in cases of inflammation, bone or cartilage degradation, or problems with ground substance. Glucosamine may cause worsening of symptoms for FM patients with high levels of hyaluronic acid. Hyaluronic acid is also called hyaluronan and is currently being incorporated in many anti-aging creams and "wrinkle" creams. These may not be good for some people with FM. (For more on hyaluronidase, see New Research in the 2nd edition Fibromyalgia and Chronic Myofascial Pain: A Survival Manual Chapter.)

Malic acid and magnesium: Malic acid plays a key part in the metabolism of carbohydrates, as well as in the formation of ATP. Magnesium and B6 are needed for malate to work in energy production (Lowe, 2000). One study showed that this combination is safe and may be beneficial in the treatment of FM (Russell, Michalek, Fletchas et al. Abraham, 1995).

Melatonin: Melatonin is a neurotransmitter that the body changes into serotonin. It may help reduce tender point count and severity of pain as well as improve sleep significantly in FM patients (Citera, Arias, Maldonado-Cocco et al. 2000). Patients with FM may have low melatonin secretion during the hours of darkness. This may contribute to poor sleep, fatigue, and enhanced pain (Wikner, Hirsch, Wetterberg et al. 1998). Melatonin in sufficient dosage may inhibit ovulation. Up to one-third of those who try melatonin become depressed. If depression occurs, stop taking it immediately and alert your doctor. Melatonin should not be taken by people with autoimmune conditions (Lapin, Mirzaev, Ryzov et al. 1998). Melatonin may help reduce seizure-like symptoms.

NSAIDs: Nonsteroidal anti-inflammatory agents (NSAIDs) can be effective in cases of inflammatory pain, but neither FM nor CMP are inflammatory. NSAIDs include medications such as aspirin, ibuprofen and naproxen. NSAIDs have serious side effects including: asthma, cell toxicity, and chromosome abnormalities (Leach, Frank, Berardi et al. 1999). A large majority of the patients who develop serious GI complications on NSAIDs have never had previous mild side effects. Treatment with antacids and H2 receptor antagonists may increase the risk for subsequent serious GI complications (Singh, Ramey, Morfeld et al. 1996).

Simethicone: This anti-gas medication can be very effective to reduce bloating and some IBS symptoms.

## **Prescription Medications**

### **Pharmacies and Pharmacists**

Have all your prescriptions filled at one pharmacy so your pharmacist can warn you of any possible drug interactions, no matter how many doctors you have. Your pharmacist can be a great ally and teacher. Learn about your medications. Develop a working relationship based on mutual respect and trust. Educate your pharmacist about FM and CMP. The handout "What Your Pharmacist Should Know" from The Fibromyalgia Advocate may be helpful. If your pharmacist treats you like a drug addict or malingerer, let him/her know that this is inappropriate, and that you do not allow inappropriate behavior from health care providers.

### **Compounding Pharmacists**

Compounding pharmacists are different than standard pharmacists. They are like the ancient apothecaries, only with all the present day knowledge and technology available. All pharmacists learn something about compounding prescriptions, but compounding pharmacists are specialists in the formulation of pharmaceutical compounds from basic ingredients, in the exact dosage form, strength and combination you require. You may need a dye-free, sugar-free, alcohol-free or preservative-free formulation, for example.

When you take a medication orally, you dose the whole body. Often this is not necessary for localized symptoms. It isn't sufficient for any pharmacist to put a drug into topical form. This drug must be bioavailable in this form, and a true compounding pharmacist knows how to do this. Standard topical preparations compounded include NMDA- and Calcium Channel Blockers, medications such as Neurontin, NSAIDs and opioids. Your doctor may not be utilizing this option, and you may be able to provide him/her with an important contact. To find a compounding pharmacist near you, see International Association of Compounding Pharmacists website [www.iacprx.org](http://www.iacprx.org).

## Generic Medicines

Generic and brand name drugs are not always exact equivalents. Some FM and CMP patients may be sensitive to the differences. The generic company must prove to the FDA that when someone takes the drug, the amount of the active substance released by the generic is the same as would be obtained with the brand- name drug (that it is bioequivalent). Doctors and patients are led to believe that this means the generics are the same as the brand names. This is not always true. The FDA considers two formulations as bioequivalent when the rate of adsorption varies no more than -20% or +25% (Banahan, Kolassa 1997). This means that there can be 20 percent less usable medication in a dose, or 25 percent more!

## Prescription Medications List

This list of medications is only a partial listing of those used in FM and CMP and doesn't even include all that we have in our book. Medications are now available for FM and more are in the pipeline. Medications may be helpful and necessary to control pain and other symptoms, but one must always identify the perpetuating factors and bring them under control to prevent recurrence of symptoms.

**Ambien (zolpidem):** This is a hypnotic for insomnia. It can be a tremendously effective sleep aid, but you may have to get in bed right after you take it. As with any hypnotic, you may not remember anything you watch or read after you take it, but you are still responsible for your actions. In other words, if you eat a pint of ice cream, you won't remember the wonderful taste experience, but you will have those extra calories. One study showed that short-term treatment with Ambien (5 to 15 mg) doesn't affect FM pain, but is useful for sleep and subsequent daytime energy (Moldofsky, Lue, Mously et al. 1996). William Dement, the father of the field of sleep medicine, writes that Ambien is the safest and most useful sleep medication for long-term use as well (Dement and Vaughan, 1999). There have been some reports of serious depression from Ambien.

**Atarax (hydroxyzine HCl):** This antihistamine and anxiety-reliever may be useful if itch, rashes or hives is a problem.

**Atrovent (ipratropium Bromide Nasal Solution 0.06%)** is a prescription nasal spray that is anticholinergic. Trigger points can cause congestion and runny nose, and they are associated with excess acetylcholine at the motor end plate. This spray comes in a 15 ml spray bottle, and may be very helpful for these symptoms when TrPs are involved. Start carefully, with one spray one day, and check for any side effects.

**BuSpar (buspirone HCl):** This drug may improve memory, reduce anxiety, and help regulate body temperature. It is not as sedating as many other antianxiety drugs.

Carisoprodol Topical: This medication can be compounded for you by a compounding pharmacist (see Compounding Pharmacist section of this handout). This formulation is more expensive than oral carisoprodol, but a small amount can go a long way and can target specific tight areas of tissue. I have observed that it is helpful for myofascial TrPs and also may be helpful in wider areas of tightened myofascial tissue. It may relieve pain caused by this tightness, but one must still look for perpetuating factors to prevent recurrence of symptoms.

Catapres (clonidine): This drug may help Restless Leg Syndrome (RLS) (Wagner, Walters, Coleman et al. 1996).

Clarinx (desloratidine): This is an active metabolite of the antihistamine loratidine and significantly more potent. It also inhibits the expression of cell adhesion molecules and inhibits formation and release of inflammatory cytokines and other inflammatory mediators (Agrawal DK 2001). These inflammatory mediators seem to play a significant role in central sensitization such as occurs in fibromyalgia. If you need to take an antihistamine anyway, it may be worth a trial of Clarinx to see if the fibromyalgia pain lessens.

Cymbalta (duloxetine): This serotonin and norepinephrine reuptake inhibitor, originally used for major depressive disorders, may be effective for FM patients who are lacking sufficient amounts of both of these neurotransmitters. Research has shown it to be especially effective for women with FM (Arnold, Lu, Crofford et al 2004). The enzyme CYP2D6 is involved in metabolism of this medication, so it may not be effective in some patients. You can be tested for this metabolic problem. There can be serious side effects that could be mistaken for worsening of FM symptoms, so talk to your doctor and your pharmacist in depth about possible concerns with this medication, and talk to your family and companions about looking for possible changes that you may not notice.

Desyrel (trazodone): This antidepressant may help with sleep problems. It must be taken with food. It should not be used in women who may be or may become pregnant.

Effexor (venlafaxine HCl): This is an antidepressant and serotonin and norepinephrine reuptake inhibitor. Food has no effect on its absorption. When discontinuing this, taper off slowly.

Elavil (amitriptyline): This antidepressant is inexpensive, but it can cause photosensitivity, morning grogginess, weight gain, dry mouth, and slow intestinal movements. It may cause RLS.

Flexeril (cyclobenzaprine): This may sometimes stop spasms, twitches, and some tightness of the muscles. It generates stage-four sleep, but it may cause gastric upset and a feeling of detachment.

Guaifenesin: Guaifenesin is the active ingredient in many expectorants and is used experimentally for FM. Most OTC guaifenesin preparations contain sugar, alcohol, and/or pseudoephedrine. These should be avoided.

Inderal (propranolol HCl): This may help reduce the pain load, although your blood pressure may drop with its use. Antacids will block its effect.

Klonopin (clonazepam): This is an anti-anxiety, anti-convulsive and anti-spasmodic medication. It may help with muscle twitching, RLS, and nighttime teeth grinding.

Lidocaine, intravenous: Studies in humans show that this can be a safe and effective treatment for some cases of FM (Schafranski, Malucelli, Machado et al. 2009).

Lidocaine patch 5% (Lidoderm): These patches may be helpful for adjunct therapy if there is a key TrP or key localized perpetuating factor such as a spinal problem or joint that is setting off a TrP cascade. They can only be used 12 hours every 24, and the upper limit of use by the manufacturer is 3 at once.

Lidocaine, topical: Research indicates that many of the symptoms of IBS can be reduced by the use of topical lidocaine rectally (Verne GN, Robinson ME, Vase L et al. 2003). Topical lidocaine is available in the USA and some other countries as a 5% ointment in 35.44 g (1.25 oz.) tubes.

Lunesta (eszopiclone): This medication has been approved for long-term use and can help some people who are not getting deep sleep. If it works on you, it may reduce other symptoms related to lack of sleep, including pain. For some, this medication may only be effective for a brief time.

Lyrica (pregabalin): Some patients treated with pregabalin at 450 mg a day showed significant improvement in fibromyalgia pain, sleep and fatigue. If you try this medication, talk with your doctor about starting with a lower dose and working up until you find the lowest effective dose with the least side effects for you. This gamma-aminobutyric acid (GABA) analogue has been approved for neuropathic pain and for use specifically for fibromyalgia. This may be a useful substitute for Neurontin. The research is positive, but there have been reports of dizziness, sleepiness, peripheral edema, weight gain and/or concentration/attention difficulty.

Mirapex (pramipexole): This dopamine receptor agonist has been helpful in some patients with fibromyalgia (Holman, Myers 2005). Dopamine is a neurotransmitter, and there is no easy way to know what neurotransmitters are lacking (or are in overabundance) in each FM patient. There have been many side effects reported with this medication, including serious depression and confusional states, so be careful. Research indicates that it may cause or worsen compulsive disorders in FM as well as Parkinson's patients (Holman AJ 2009).

Neurontin (gabapentin): This anticonvulsant is effective for hyperalgesia and allodynia (Attal, Brasseur, Parker et al. 1998). You may be able to lessen any side effects by drinking extra water. As dosage increases, bioavailability decreases. A 400 mg dose is about 25% less bioavailable than a 100 mg dose. This medication should not be discontinued abruptly.

Opioids: Due to the fact that some doctors consider the use of opioids to be controversial in the treatment of FM and CMP, these medications are covered in depth at the end of this list.

NMDA (N-methyl-D-aspartate) inhibitors: NMDA antagonists can moderate or eliminate some symptoms of central sensitization, such as secondary hyperalgesia (Oestreicher, Desmeules, Pigué et al. 1998). NMDA inhibitors include ketamine, dextromethorphan, memantine, amantadine, methadone, dextropropoxyphene, and ketobemidone. NMDA-receptor inhibitors may be effective in the treatment of some types of chronic pain (Sang, 2000). Ketamine reduces pain in a sub-group of FM patients (Graven-Nielsen, Aspegren, Henriksson et al. 2000). NMDA inhibitors also boost the effect of opioids.

Pamelor (nortriptyline HCl): This tricyclic antidepressant is used for insomnia. Some people find it stimulating, however, and must take it in the morning to allow restorative sleep that night.

Paxil (paroxetine HCl): This SSRI may also reduce pain and has been found helpful in menopausal hot flashes (Gender Issues). Some people find it stimulating and may need to take it in the morning to allow for sleep that night.

Procaine injection for TrPs: TrP Injection protocols can be found in Travell and Simons Trigger Point Manuals. TrP injections must be given in the proper manner, with the patient properly positioned for each specific muscle, and performed with spray and stretch, rewarming, and range of motion exercises. Perpetuating factors must be addressed for lasting effects. TrP injections are not to be done with steroids. Injection therapies are becoming an integral part of the multidisciplinary therapies required to improve and rehabilitate pain patients (Kim 2002). Trigger point injection therapy is a valuable procedure for pain relief in patients with just myofascial TrPs and for patients with both FM and myofascial TrPs (Hong, Hsueh 1996).

Relafen (nabumetone): This NSAID may be better tolerated because it is absorbed in the intestine, thus sparing the stomach.

Remeron (mirtazapine): This antidepressant is unrelated to SSRIs, tricyclics or MAO inhibitors. It seems to cause fewer occurrences of common side effects.

Restoril (temazepam): This hypnotic may be useful to improve sleep. There are few reports of "hangover" effect.

Serzone (nefazodone HCl): This antidepressant is unrelated to SSRIs, tricyclics, or MAO inhibitors. It inhibits serotonin and norepinephrine, but has a low bioavailability that varies.

Sinequan (doxepin HCl): This tricyclic antidepressant and antihistamine combination can cause sedation. It may enhance the effects of Klonopin and can reduce muscle twitching by itself.

Soma (carisoprodol): This central nervous system muffler works rapidly. Effects last from four to six hours. It helps patients to detach themselves from their pain, and can damp the sensory overload of FM. It should not be used as the only pain control. There are some reports of dependency. It can cause respiratory depression given in conjunction with propoxyphene. Treatment of FM with the combination of carisoprodol, acetaminophen and caffeine is effective (Vaeroy, Abrahamsen, Forre et al. 1989).

Sonata (zaleplon): This is a short-term-acting hypnotic. You don't have to take it every night if you don't always have insomnia, because you can take it at bedtime or even later on those nights you have difficulty. You do need four hours to sleep it off (Elie, Ruther, Farr et al 1999).

Statin drugs for high cholesterol, such as Crestor (rosuvastatin calcium) and Lipitor (atorvastatin calcium), can cause muscle pain and weakness. These are both symptoms of myofascial TrPs, and the muscle pain is a symptom of FM. Central sensitization of FM may amplify the extra muscle pain. Patients in multiple medications are at extra risk of myopathy as a statin side-effect, as are hypothyroid patients. There are also reports of enhanced post-exercise pain, and this may adversely affect physical therapy as well. Patients with acute illness or undergoing hospitalization have been advised to discontinue statin use (Tomlinson, Mangione 2005). Statins may interrupt or negatively affect processes that are already impaired in patients with myofascial TrPs. Statins affect biochemicals that are involved in mitochondrial respiration metabolism and may adversely affect cell stability. The risk of use of statins for patients with FM who already may have dysfunctional mitochondrial respiratory function, or for patients with TrPs who already have oxygen starved areas around the TrPs, must be weighed carefully. Some doctors have reported that they could not successfully treat TrP patients until the patients were taken off statin medication.

Ultram (tramadol HCl): This medication for moderate to severe pain acts on the central nervous system. It may cause constipation, nausea, dizziness, headaches, weariness, tightening of jaw and neck muscles, and vomiting. Some doctors have reported psychological addiction to Ultram that is even harder to break than narcotic addiction. This medication can lower the seizure threshold.

Vapocoolant Sprays: A variety of vapocoolant sprays are available from Gebauer Company ([www.Gebauerco.com](http://www.Gebauerco.com)). In experienced hands, these vapocoolant sprays can be very effective in the spray and stretch form of bodywork, instantly providing increased range of motion and pain relief. You can also learn to use some of them at home. They may be very useful for temporary relief of TrPs that are difficult to self-treat, such as those causing angina-type pain.

Wellbutrin (bupropion HCl): This antidepressant is sometimes used in FM in place of Elavil, but it can promote seizures.

Xanax (alprazolam): This anti-anxiety medication may be enhanced by ibuprofen. It aids the formation of blood platelets, which store serotonin, and it raises the seizure threshold. It must not be used during pregnancy. When you stop taking it, taper off gradually.

Xyrem (sodium oxybate): This medication has been shown to provide deep level sleep and may be effective for both FM and chronic myofascial pain. For more on Xyrem see "Medical Handouts".

Zanaflex (tizantidine hydrochloride): This muscle relaxant may help with RLS. It may help to reduce muscle tightness and may have sedative effects. This is another medication you may have to take just before bed, as there have been reports of loss of muscle control. Some patients also mention hallucinatory effects.

Zofran (ondansetron): This medication helps about 50% primary FM patients, according to one study (Hrycaj, Stratz, Mennet et al. 1996). The response was not the same in post-traumatic FM.

Zoloft (sertraline HCl): This is commonly used to help with sleep problems. There have been several reports of night sweats with strong ammonia odor. It may be useful for PMS (Yonkers, Halbreich, Freeman, et al 1997.)

Zyprexa (olanzapine): This neuroleptic medication may be helpful to relieve fibromyalgia pain and increase function, even if other medications have not helped (Kiser, Cohen, Freedendfelt et al 2001). [Note: This med has properties that have improved my sleep efficiency, as demonstrated by my last two sleep studies -from 64% to 91% -- although I still didn't get any Stage 3 or 4 sleep. Overall it has improved my energy and reduced my pain, probably as a result of better sleep. It should be noted that Zyprexa is known to cause diabetes. I've gained weight by 15%, making me more at risk, so it's important to monitor blood sugar. NA Solo]

Most people who find Benadryl stimulating rather than sedating seem to have the same response to Pamelor, Paxil, and Ultram. I don't know why, but I suspect it may be a clue to the parameters of a subset of FM.

## Medications, Pain and Opioids

Too often readers have told me, "My doctor would not prescribe this medication because it is too hard to get someone off it". It's hard to stop taking a medication that will relieve your pain. It's nearly as hard as trying to figure out why any doctor in his/her right mind would want you to do so. In the best of all worlds, early FM and single TrPs would be promptly diagnosed and treated. In our present reality, central sensitization and allodynia of FM coupled with the pain generated by TrPs can make this world a living hell for patients who haven't been promptly diagnosed and treated. We must deal with reality as it is today, unhampered by outmoded belief systems. Pain control is imperative to reduce any further sensitization of the nervous system, as well as to allow appropriate bodywork without additional shock to the pain sensing system. I am not advocating opioids as the first method of pain control or as the singular method of pain control. When other options have failed, medical literature documents that opioids, in conjunction with a thorough pain control program including bodywork, mindwork and life style adjustment, are a logical and humane option in the treatment of severe FM and CMP. The rest of this section will be from medical journal articles. For more information on this subject, see "The Fibromyalgia Advocate".

The treatment of non-cancer pain with opioids may work for patients who don't gain sufficient reduction of pain by other therapies (Dertwinkel, Wiebalck, Zenz et al. 1996).

Opioids may be the only hope of relief to many people with chronic pain (Shannon and Baranowski. 1997). Higher levels of opioid use are not associated with higher levels of disability or depression (Ciccone, Just, Bandilla, et al. 2000).

Chronic opioid use at the proper dosage, tailored to patients' need and tolerance, did not significantly impair perception, cognition, coordination, and behavior (Galski, Williams and Ehle, 2000).

From a purely pharmacological point of view, opioids have perhaps the best side effect profile of any drugs we have available for pain (Horning, 1997).

Unlike the chemically dependent patient whose function is impaired by medications, the chronic pain patient's level of function may improve with proper use of medications, including opioids (Seas and Clark, 1993).

Addictive behaviors aren't common in chronic pain patients (Fishbain, Rosomoff and Rosomoff, 1992).

There are possible side effects with opioids, and some people do have a tendency towards addiction, but, according to these and many other references, this is not common in chronic pain patients. Opioids often slow intestinal motility. Measures should be taken to prevent constipation. Temporary sleepiness and confusion is common after initial opioid therapy and after dose increases. Nausea may occur for the first 3 or 4 days.

Some opioids are available in suppository form if nausea and vomiting is present. Transdermal patches are also available. The liquid form may be very useful because of the ease with which you can vary the dose. Opioid effectiveness can be improved with the use of administration with medications such as gabapentinoids and dextromethorphan (Kalso E. 2005).

Vitamins and minerals are addressed in the Nutrition chapter in the 2nd edition of *Fibromyalgia and Chronic Myofascial Pain: A Survival Manual*.