



# Fibro-Care™

# Takes the P out of P-A-I-N

by Margy Squires

**Have you ever thought of what happens between the time you stub your toe and say ouch?** A tiny neurochemical known as substance P is the instigator of what you perceive simply as pain. While it is a normal and protective phenomenon to prompt you to get out of harm's way, sometimes things go awry and substance P keeps signaling, so the pain never stops.



It's a fact. Substance P (SP) is involved in chronic pain and inflammatory conditions as both a perpetual instigator in symptomatology and disease pathology. With a few biochemical missteps, SP can get out of control. Researchers have found that when magnesium levels are low, the body cannot remove SP but actually makes more. This results in SP "overload". Nerve cells get even more irritated and a punitive cycle of stress-pain-stress-pain occurs.

SP overload has noticeable symptoms. A feeling of being "wound up". Anxiousness. Depression. Inflammation. Normal touch, heat or cold sensitivity (nociception). Some note a "creepy, crawly" skin sensation. Or allodynia, an overall pain on the skin that feels like a sunburn. And then there's the constant pain that does not get better or go away. In fibromyalgia (FM), the pain is "amplified", like someone turned up the volume. In normal circumstances, SP does resolve when a stress or trauma ends but in chronic conditions, it needs help – *magnesium help*.



Another fact. Your body has a process for controlling pain. The two nutrients that are first "responders" in the pain control gateway are magnesium (Mg) and the amino acid glycine. When combined as magnesium glycinate in supplement form, such as in Fibro-Care™, you have ammunition to take the P out of pain.\*

More facts. Magnesium is an essential co-enzyme nutrient for more than 300 chemical reactions. One very important enzyme for pain relief helps control SP. Without magnesium, that enzyme is not activated. Low magnesium means more SP and more pain. It seems magnesium and SP are a pair observed together frequently. Due to the enteric nature of the GI system, excess SP results in irritating the GI tract, such

as in Crohn's and FM. SP also interferes with sleep and is involved in restless leg syndrome. Again, magnesium helps reverse these SP provoked symptoms.

Another clue to elevated SP is inflammation. A 2015 study looked at 70 osteo and rheumatoid arthritis patients and found pain and symptoms correlated strongly with the level of SP. The more SP, the more pain. Since excess SP helps perpetuate the inflammatory cascade, controlling SP may mean less connective tissue destruction. Glaucoma, atrial fibrillation and post-traumatic stress disorder also have elevated SP. There is probably no disease that isn't low in magnesium so any condition you may have is worthy of magnesium testing for a deficiency, especially if you have pain.

Multiple research studies by William Weglicki, M.D., professor of Biochemistry and Molecular Medicine at Washington Medicine and Health Sciences University conclude one of the first signs of Mg deficiency is elevated SP. His research is also the first to show that replenishing Mg levels reduces SP. Although Weglicki's study involves cardiac and GI tissues in animal models, it clearly shows how hypomagnesia set the stage for increased pain and inflammation.

Additionally, I. Jon Russell, M.D. published studies in 1994 showing 3-4 times more SP in FM patients which could account for the amplified pain. Russell also found serotonin, another neurochemical pain modifier, to be low. Blocking SP and raising serotonin are two ways to help FM pain. You can help serotonin levels by taking 5-HTP, a building block that helps your body synthesize or "make more" serotonin. You'll need Mg, of course, to help in that process, too.



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TAKE  
FIBRO-CARE™

Although Mg is the primary force, two other nutrients team up to control SP, acetyl L-carnitine and quercetin.

Capsaicin creams, such as Pain Control Formula™, also deplete SP to lower pain signals. Try one or more in combination with Mg for pain relief.

Now you have a quick view of the Mg-SP link. So if you are “wound up” and have trouble with sleep, pain control or inflammation, you may have SP overload. Check your Mg level and try magnesium glycinate. TyH’s Fibro-Care™ has magnesium in the glycinate, organic mineral form. Remember, without magnesium, you cannot begin to get the P out of P-A-I-N!

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### TyH Health Library Reads Online

- ◆ Magnesium & its Relationship to Painful Conditions
- ◆ Magnesium, Can it Stop Migraines?
- ◆ Magnesium, Don't Stay Broken
- ◆ Magnesium Effects on Osteoarthritis
- ◆ Magnesium, Testing for Deficiency

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