

DIFFERENTIATING MUSCLE PAIN

	MYOFASCIAL PAIN SYNDROME <i>Focal irritable knots, or taut bands</i>	FIBROMYALGIA <i>Irritable everything</i>
KEY DIFFERENTIATOR	Local trigger points in one or more muscles with specific pain referral patterns.	Widespread hypersensitive tender points, affecting almost every palpable tissue.
DEFINITION	Regional pain characterized by the presence of one or more myofascial trigger points.	Chronic widespread pain with systemically reduced pain thresholds to palpation.
PREVALENCE	The most common cause of musculoskeletal pain, affecting between 30-93% of symptomatic musculoskeletal patients.	Between 0.2% and 8.0% of the population.
PREDILECTION	Fairly even distribution between genders and ages.	At least twice as common in women.
ETIOLOGY	Repetitive activity causes muscle overload, which leads to local capillary constriction, ischemia, and hypoxia. The resultant depletion of energy (ATP) inhibits the normal calcium pump. Calcium build-up propagates sustained local muscle contraction, i.e., palpable taut bands. The process generates a cytotoxic acidic environment filled with multiple biochemical inflammatory mediators that sensitize peripheral nociceptors, eliciting pain.	Poorly Defined. Fibromyalgia's origins are generally believed to be psychological and neurologic rather than muscular, as the disease shows no pathologic or biochemical abnormality involving the muscles.
CONTRIBUTING FACTORS	Trauma (falls, accidents, surgery), Ergonomics (poor posture, repetitive overuse, sustained pressure), Structure (osteoarthritis, scoliosis, kyphosis, spondylolisthesis), Systemic (vitamin D deficiency, iron deficiency, hypothyroidism, stress, insomnia)	Depression, stress, obesity, repetitive injury, trauma, PTSD, and systemic illness.
AFFECTED SITES	Typically, the postural muscles of the lower back, neck, shoulders, pelvic girdle, and jaw.	Entire body.
PRIMARY COMPLAINTS	Deep, dull, and achy regional muscular pain that is poorly localized.	Diffuse stiffness with exquisite tenderness to touch. Plus "fibro-fog" (lack of concentration, slower processing, memory lapses, fatigue, mood swings, and insomnia.)

MYOFASCIAL PAIN SYNDROME

Focal irritable knots, or taut bands

FIBROMYALGIA

Irritable everything

SECONDARY COMPLAINTS

Tightness, stiffness, or crepitus. Difficulty finding a comfortable sleep position. Occasional paresthesia, numbness, vague weakness, or autonomic phenomena.

Migraines, fatigue, mood changes, depression, anxiety, dizziness, gait imbalances, irritable bowel, TMD, and co-existent rheumatologic diseases.

PERPETUATING FACTORS

Primarily the aforementioned contributing factors, plus exposure to cold, infection, and the use of statin-class medications.

Psychological factors (stress, anxiety, catastrophizing), sedentary time, and mechanical overload.

SCREENING TOOLS

The numeric pain rating scale (NPRS) and the visual analog scale (VAS) are valid tools to measure pain intensity.

The combined Widespread Pain Index (WPI) and Fibromyalgia Symptom Severity (FSS) are the current American College of Rheumatology Diagnostic Criteria for fibromyalgia.

PALPATORY FINDINGS

Presence of a hypersensitive nodule in a taut band of muscle that refers pain. Possible local twitch response.

Multiple tender points that are not palpably distinguishable from the surrounding tissue. The outdated criteria of at least 11 of 18 predefined locations is no longer considered a valid means of diagnosis.

TREATMENT GOALS

Short-term pain relief plus correction of the precipitating factors.

Despite more than 400 treatment options, management of fibromyalgia is palliative with no known cure. Patient-centered active interventions are superior to passive strategies. Patients may be better served by therapies that provide less touch and more talk, i.e., education with exercise and lifestyle counseling.

TREATMENT TOOLS

Modalities, dry needling, manual therapy (i.e., ischemic compression, myofascial release, etc.). Restoration of flexibility, strength, and optimal body mechanics, including posture.

Overambitious manual techniques can delay recovery. Outcomes improve when patients clearly understand the disease and the importance of taking an active role in their own recovery. Patient education regarding hurt vs. harm is essential. Nutritional recommendations. Cognitive-behavioral therapy.

ADL'S

Home exercise recommendations, ergonomic advice, self-myofascial release tools (balls, foam rollers, rods, and massagers), general aerobic conditioning, proper hydration.

Low-impact aerobic training (i.e., walk, cycle, swim, water aerobics, etc.), resistance training, proactive patient-directed activity and mind-body interventions (tai chi, yoga, meditation, mindfulness, guided imagery, hypnosis, biofeedback, and balneotherapy.)

MEDICAL ALTERNATIVES

Trigger point injections, Botulinum toxin (Botox®), topical anesthetic patches.

The FDA has approved three drugs to treat fibromyalgia: the antidepressants Cymbalta® and Savella®, plus the anti-seizure medicine Lyrica®. However, "the majority of fibromyalgia patients do not achieve great benefit from any single medication."