

Update in Internal Medicine 2023

Approach to Musculoskeletal pain: Regional and Widespread musculoskeletal syndromes

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Approach to musculoskeletal complaints

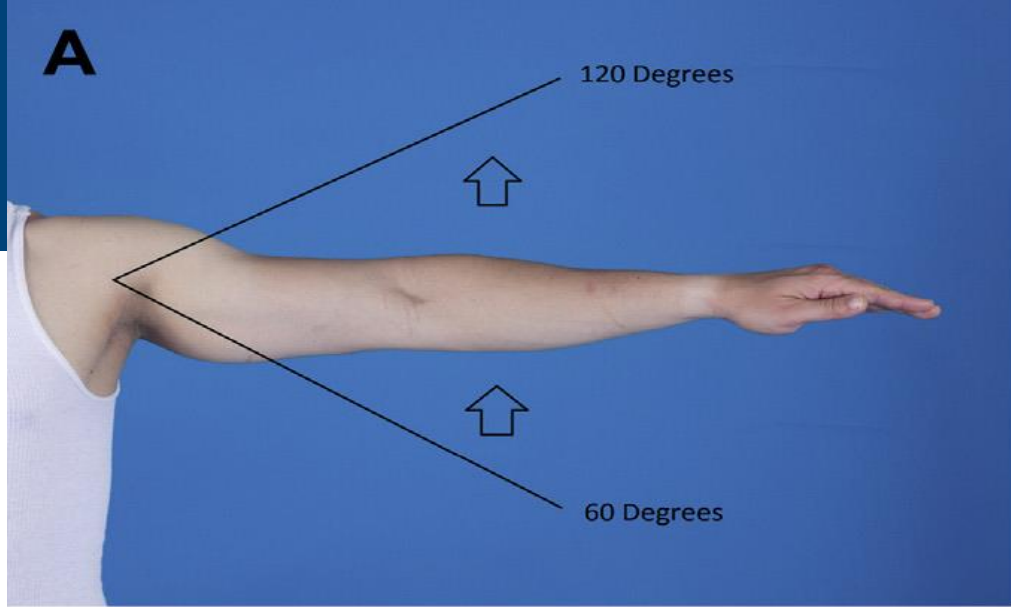
Feature	Inflammatory	Noninflammatory
Feature	Articular	Non-articular
Examination	Tenderness at the joint line	Pain is around the joint
	Painful with <u>passive</u> movements	Pain with <u>active resisted</u> range of motion

Soft Tissue Rheumatism and Common Regional Rheumatic Disorders

Learning Objectives

Painful medical conditions involving structures around the joints

- ✓ Rotator cuff tendonitis
- ✓ Subacromial bursitis
- ✓ Lateral and medial epicondylitis
- ✓ De Quervain's tenosynovitis
- ✓ Greater trochanteric pain syndrome
- ✓ Pes anserine bursitis and prepatellar bursitis
- ✓ Plantar Fasciitis
- ✓ Fibromyalgia



Subacromial bursitis

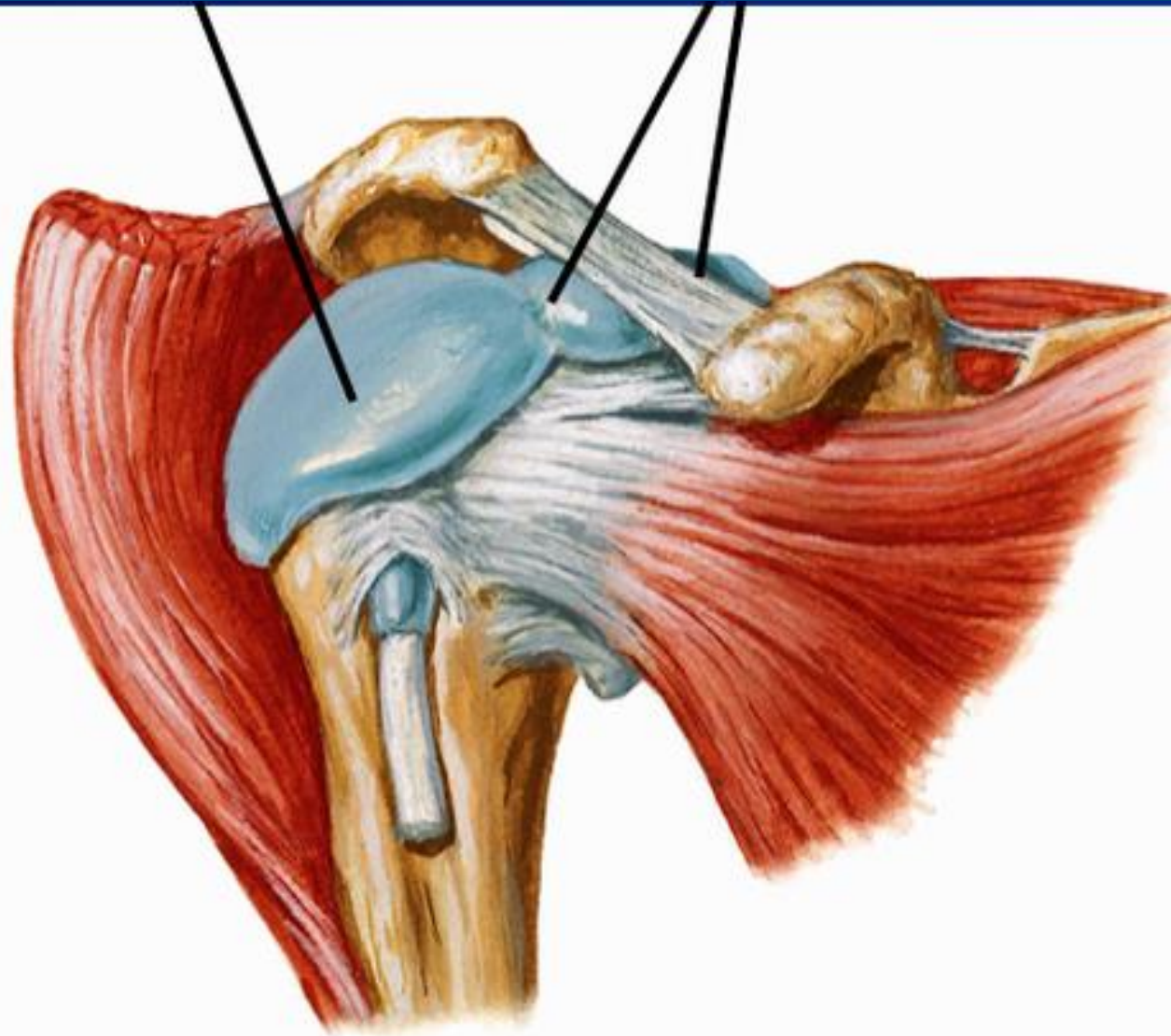
Clinical features

- Most common
- Pain at lateral
- Subdeltoid
- Differential diagnosis can be challenging

Physical examination

Increase pain with

- Active pain
- Positive impingement

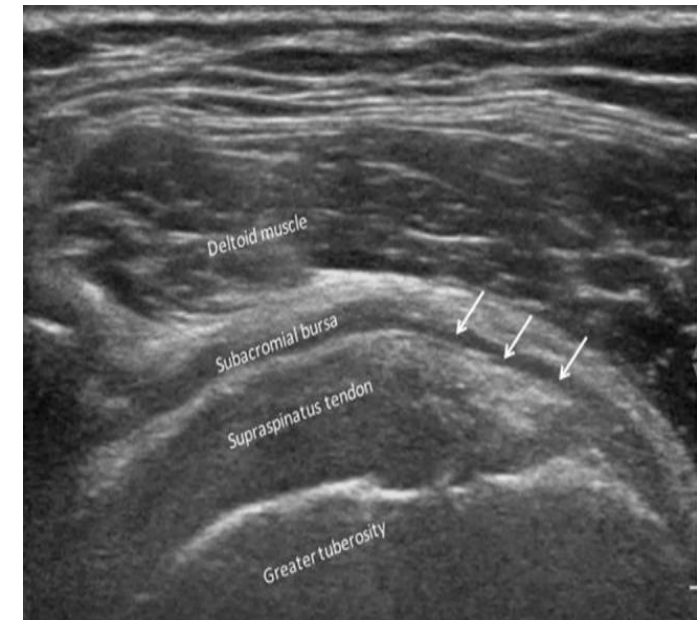
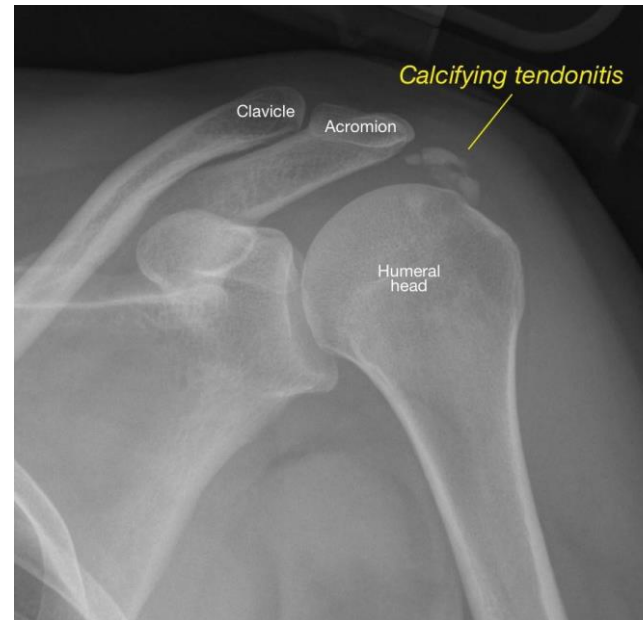


impingement syndrome.
subacromial bursitis.
.

decreased range of motion.
negative.

Diagnosing Rotator cuff disorders and subacromial bursitis

- Shoulder X ray as initial work up.
- - Superior migration of the humeral head .
- - Calcific tendonitis.
- MRI or MSK Ultrasound.



Management

Initial

- Lifestyle modification.
 - Avoid or limit overhead activity.
- Physical Therapy
- Oral Analgesics (e.g acetaminophen, NSAIDs).

If conservative therapy fails

- Injections
 - Subacromial corticosteroid injections (for rotator cuff tendonitis and bursitis).
- Referral to surgery

Lateral and medial epicondylitis



Clinical Features

- Presents as pain in lateral part of the elbow and medial part of the elbow.
- Tenderness on palpation of the respective epicondyles.
- Pain on resistive maneuvers.



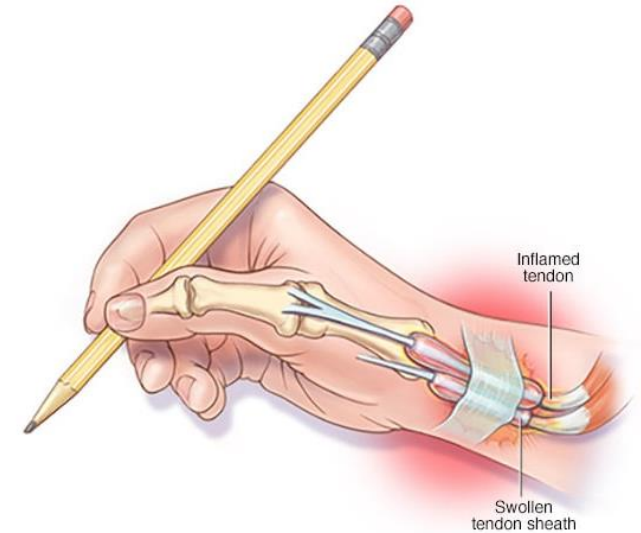
Management

- Rest (avoid repetitive activity).
 - Counterforce elbow brace.
 - Physical Therapy.
 - Oral Analgesics (e.g acetaminophen, NSAIDs).
-
- Corticosteroid injection.
 - Surgery, if conservative measures fail after ~ 6 months.



De Quervain's Tenosynovitis

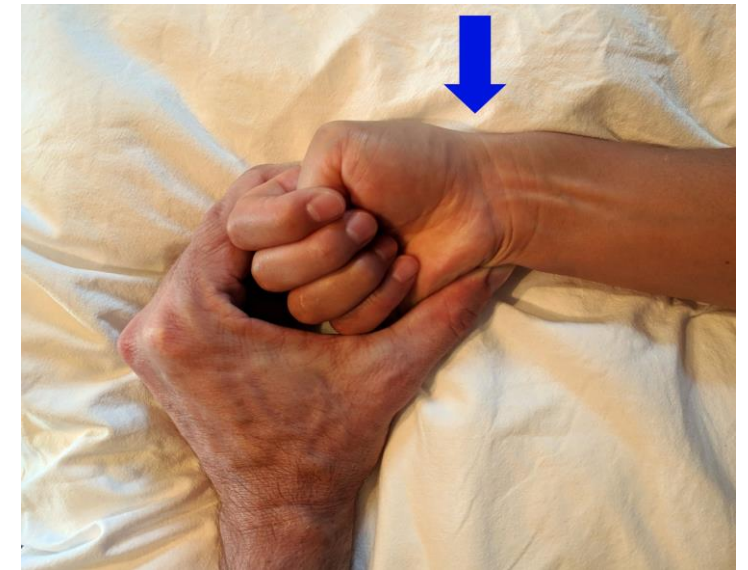
- Overuse condition exacerbated by certain wrist movements.
- Painful condition affecting the 1st compartment tendons of the wrist (Abductor pollicis longus and extensor pollicis brevis).
- Clinical diagnosis. X rays are not helpful
- Ultrasound or MRI can be used to confirm diagnosis but not necessary.



De Quervain Tenosynovitis

Clinical features:

- Tenderness and swelling at the lateral aspect of the wrist.
- Positive Finkelstein test.



Management

- Forearm-based thumb spica splint with the interphalangeal joint free.
- Acetaminophen or NSAIDs.
- Rest and application of ice to the affected area.
- A local glucocorticoid injection can be tried in those whose symptoms have not improved with splinting and NSAIDs.
- Surgical intervention



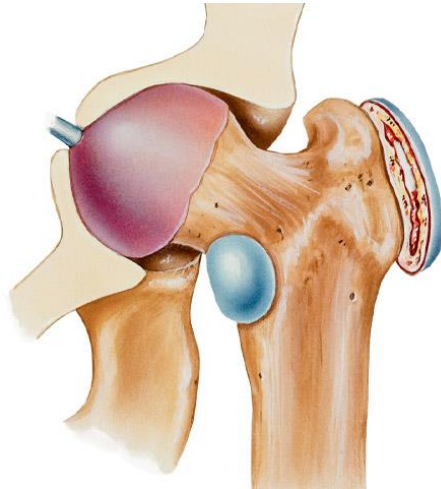
Greater Trochanteric pain syndrome

- Very common cause of lateral hip pain. It includes several various soft tissue pathologies (tendinopathies, bursitis etc.)
- ~ 20% of population.
- The term "trochanteric bursitis " is a misnomer as advanced imaging and histopathologic studies have shown that involvement of only the trochanteric bursae is uncommon.
- Lateral hip tenderness on examination. Rule out intra-articular Hip pathology.

Greater Trochanteric pain syndrome

Initial treatment

- Oral NSAIDs.
- Local glucocorticoid injection for more immediate pain relief.
- Referral to Physical therapy for isometric strengthening of gluteal medius and minimums.



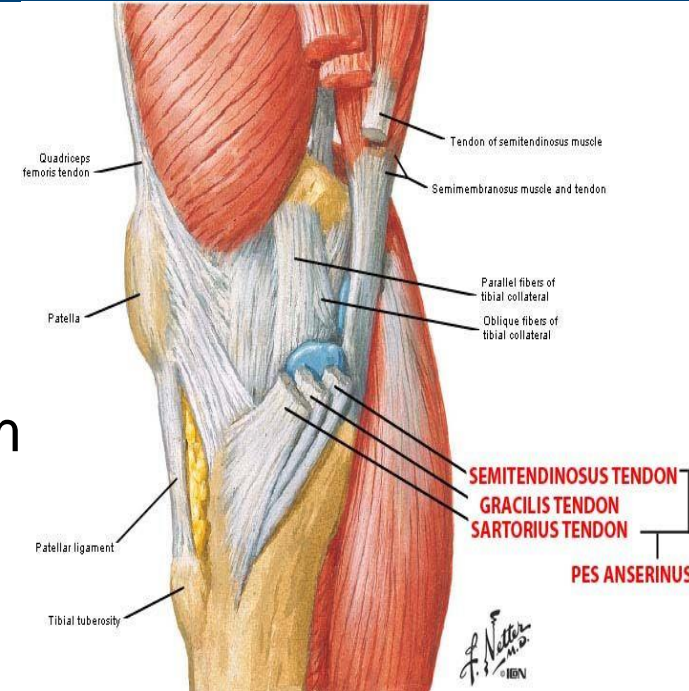
Prepatellar bursitis and Anserine bursitis

Prepatellar bursitis

- Anterior knee pain, swelling superficial to the knee cap.
- "Housemaid's knee".
- Warmth, swelling, tenderness often present.
- Treat with oral analgesics and protecting knee from irritating trauma

Anserine bursitis

- Medial knee pains
- Often associated with osteoarthritis of the knee. Aggravated with stairs.
- Tenderness ~ 2 " below the joint line.
- Rest, and stretching of knee adductors and quadriceps for ~ 4wks.
- Local glucocorticoid injection

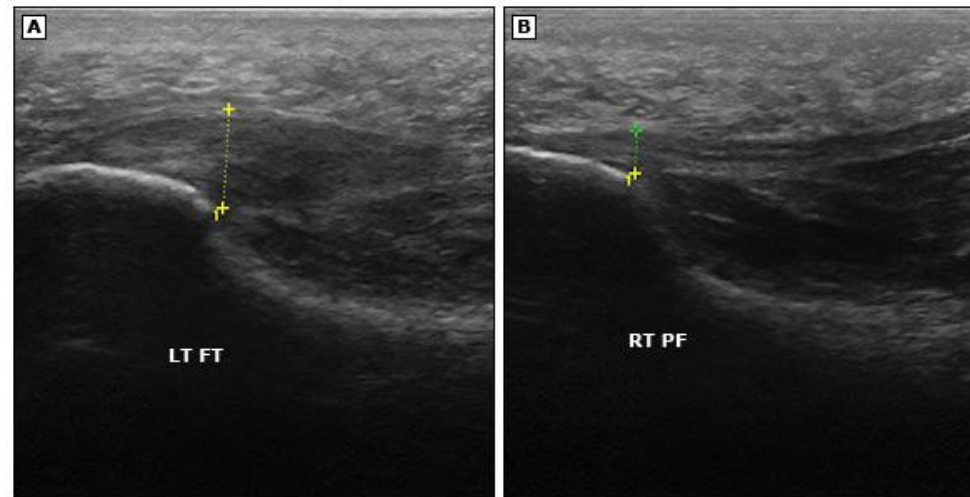


Plantar Fasciitis

- Most common causes of foot pain in adults.
- Peak incidence 40-60 yrs.
- Pes cavus (high-arched) foot, Prolonged walking or standing on hard surfaces, faulty shoes .
- Pain aggravated upon standing for some time after period of rest (e.g after waking up in morning). Thereafter pain can get better but worsens at end of the day.

Plantar Faciitis

- Tenderness elicited by dorsiflexing the toes and then palpating along the fascia from the heel to the forefoot for tenderness.
- Ultrasonography , MRI can support the diagnosis. X rays are not helpful.



Plantar Faciitis

Initial treatment



Non-Articular Treatments

Strong Evidence

- Rest
- Braces
- Strengthening exercises or Physical therapy
- NSAIDs or local glucocorticoid injections

Mixed Evidence

- Platelet rich plasma (PRP) injections
- Extracorporeal shockwave therapy (ESWT)

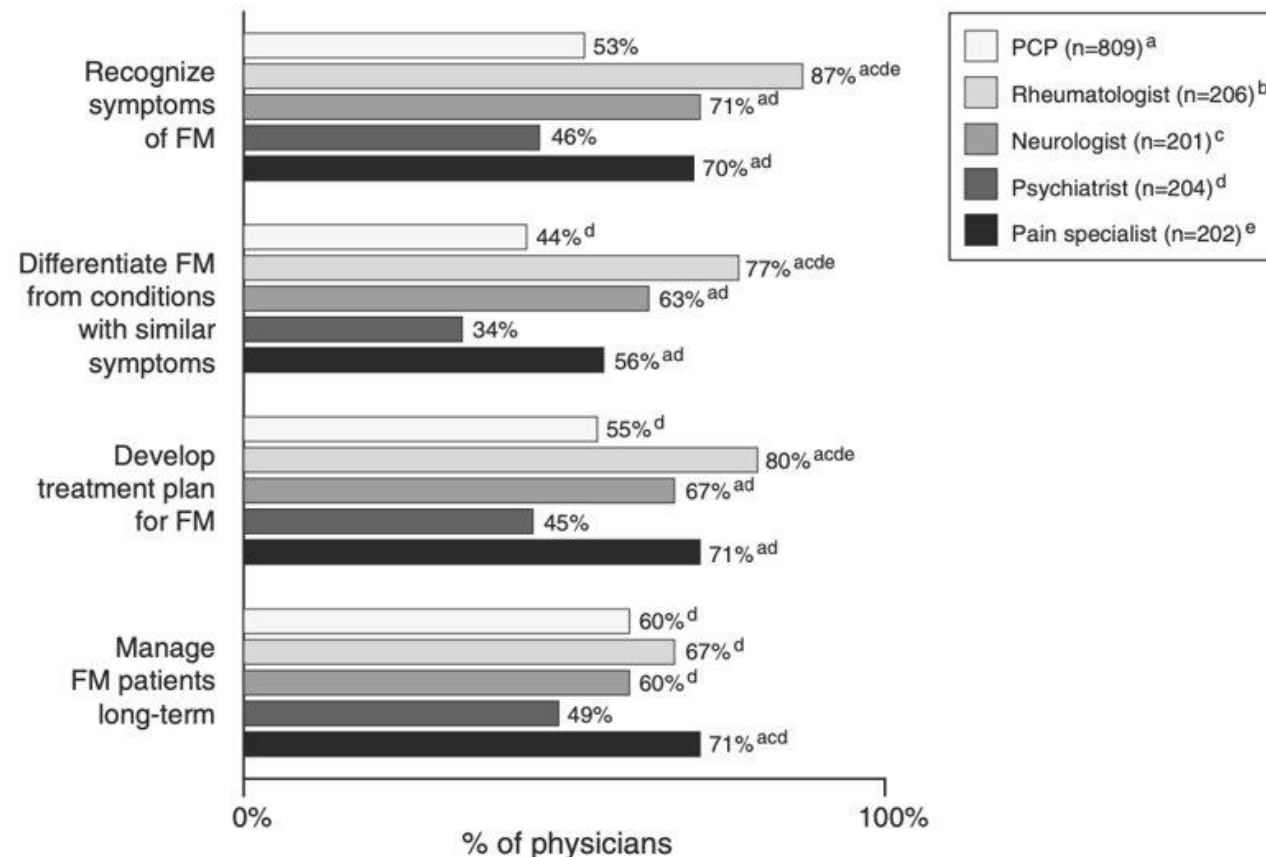
Weak Evidence

- Topical and oral cannabidiol products
- Topical heat, topical salicylates , topical menthol products, lidocaine patches, and topical NSAIDs

Fibromyalgia

- Most common chronic widespread musculoskeletal syndrome.
- Not autoimmune or inflammatory disorder. Hyperactive nerves (CNS/PNS).
- Fibromyalgia is a highly prevalent chronic pain syndrome that affects up to 4% population.
- ~ 2 years delay of diagnosis.
- Fibromyalgia is rarely a stand-alone diagnosis but is clinical diagnosis.
- Often associated with mood disorders, TMJ problems, IBS, Interstitial cystitis, sleep disturbances, Gulf war syndrome, post-911 pain syndrome/PTSD.

What other specialties think of Fibromyalgia



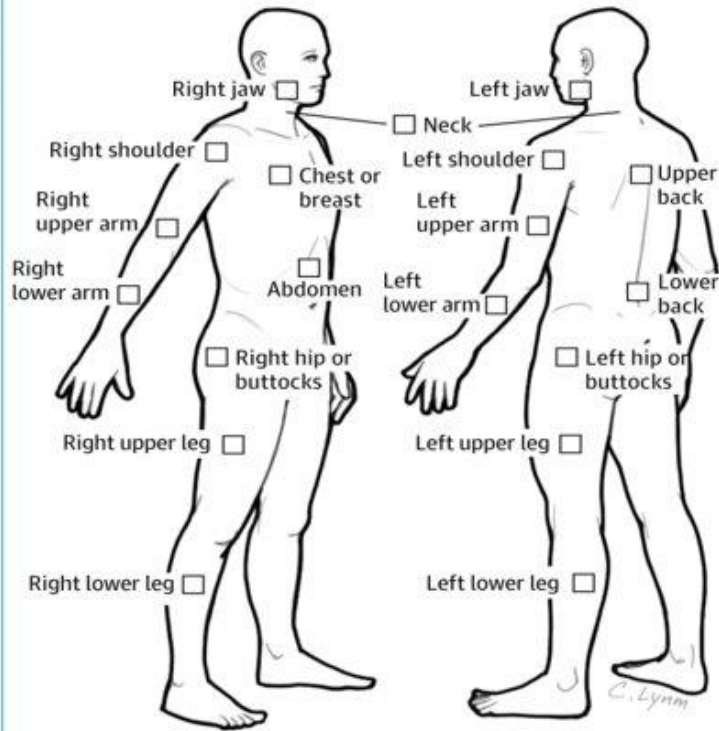
- 1622 experiences providers ~ 20yrs medical experience.
- Only 46% of PCP with no difficulty making FM diagnosis .
- Only 55% of those PCP feel confident to develop a therapy plan.

Figure 2 Physicians who reported being confident* in aspects of FM diagnosis and management. *Those who were very confident or confident. ^{a, b, c, d, and e} indicate statistically significant difference ($P<0.05$) among the subgroups (i.e., physician specialties) being analyzed.

Fibromyalgia Diagnosis

Widespread Pain Index (1 point per check box; score range: 0-19 points)

- ① Please indicate if you have had pain or tenderness during the past 7 days in the areas shown below.
Check the boxes in the diagram for each area in which you have had pain or tenderness.



Symptom Severity (score range: 0-12 points)

- ② For each symptom listed below, use the following scale to indicate the severity of the symptom during the past 7 days.
- No problem
 - Slight or mild problem: generally mild or intermittent
 - Moderate problem: considerable problems; often present and/or at a moderate level
 - Severe problem: continuous, life-disturbing problems

	No problem	Slight or mild problem	Moderate problem	Severe problem
Points	0	1	2	3
A. Fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Trouble thinking or remembering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Waking up tired (unrefreshed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- ③ During the past 6 months have you had any of the following symptoms?

Points	0	1
A. Pain or cramps in lower abdomen	<input type="checkbox"/> No	<input type="checkbox"/> Yes
B. Depression	<input type="checkbox"/> No	<input type="checkbox"/> Yes
C. Headache	<input type="checkbox"/> No	<input type="checkbox"/> Yes

Additional criteria (no score)

- ④ Have the symptoms in questions 2 and 3 and widespread pain been present at a similar level for at least 3 months?
☐ No ☐ Yes
- ⑤ Do you have a disorder that would otherwise explain the pain?
☐ No ☐ Yes

Rule out

- Endocrinopathies
- Rheumatological
- Osteomalacia (low Vit D)
- Neurologic
- Drugs

Fibromyalgia Treatments

Strong Evidence	<ul style="list-style-type: none">■ Dual reuptake inhibitors such as<ul style="list-style-type: none">• Tricyclic compounds (amitriptyline, Cyclobenzaprine)• SNRIs and NSRIs (milnacipran, duloxetine, venlafaxine?)■ Gabapentinoids (e.g., pregabalin, gabapentin)
Modest Evidence	<ul style="list-style-type: none">■ Tramadol■ Older less selective SSRIs■ Gamma hydroxybutyrate■ Low dose naltrexone■ Cannabinoids
Weak Evidence	<ul style="list-style-type: none">■ Growth hormone, 5-hydroxytryptamine, tropisetron, S-adenosyl-L-methionine (SAME)
No Evidence	<ul style="list-style-type: none">■ • Opioids, corticosteroids, nonsteroidal anti-inflammatory drugs, benzodiazepine and nonbenzodiazepine hypnotics, guaifenesin

Fibromyalgia Treatments

Strong Evidence

- Education
- Aerobic exercise
- Cognitive behavior therapy

Modest Evidence

- Strength training
- Hypnotherapy, biofeedback, balneotherapy, yoga, Tai Chi
- Neuromodulation
- Acupuncture, chiropractic, manual and massage therapy

Weak Evidence

- Trigger point injections

Summary Checklist

- More commonly encountered regional and widespread musculoskeletal disorders were discussed.
- Differentiate intra-articular from peri-articular disorders.
- Early recognition and diagnosis of these syndromes minimizes patient pain and disability
- Thank you.