

Is it Fibromyalgia?

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The Case

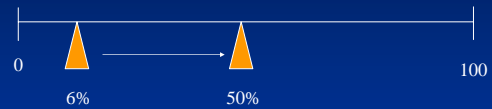
A 47 y.o. woman presents complaining of generalized fatigue and diffuse body aches. She describes both muscular and joint pains involving the neck, shoulders, chest, arms and legs. She reports problems sleeping, waking feeling very tired. She also has problems with headaches and abdominal pain and has spells of diarrhea and constipation without blood or weight loss. She also reports spells of feeling lightheadedness and dizzy, though denies syncope.

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Is it Fibromyalgia?

Probably!

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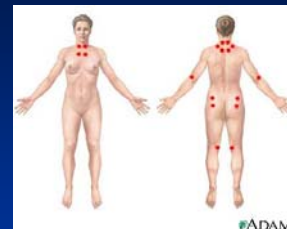
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The Physical Examination

- Vitals stable and WNL's
- WDN AAOx4
- HEENT: Unremarkable
- Lungs, CV, Abd, Neuro: Nonfocal
- MS: Normal Strength, tone. No joint effusions, erythema.

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Trigger Point Examination



Pain at 12 trigger points

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Is it Fibromyalgia?

Probably!

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Diffuse Pain + 11/18 Trigger Points

Sensitivity: 88.4%, Specificity: 81.1%, LR+: 4.7
(n=558)



Arthritis and Rheumatism 1990;33:160-172.

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Laboratory Evaluation

- Normal CBC
- Normal Creatinine
- Normal electrolytes
- Normal LFT's
- Normal ESR
- Normal CPK
- Normal TSH

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Is it Fibromyalgia?

Yes it's fibromyalgia!

Probably...

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The Problem

- Fibromyalgia is a diagnosis of exclusion.
- Fibromyalgia's symptoms are vague and overlap with many other possible disease processes.
- Clinical uncertainty is inescapable.

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Goals

Discuss

- Symptom Syndromes
- Epidemiology/Pathophysiology
- Differential diagnosis
- Diagnostic Criteria
- Management

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Symptom Syndromes

- Irritable bowel syndrome
- Fibromyalgia
- Chronic fatigue syndrome
- Temporomandibular disorder
- Premenstrual syndrome
- Tension headache

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Specialties & Symptoms

GI	Irritable Bowel
Cardiology	Atypical Chest Pain
Orthopedics	Back Pain
Neurology	Headaches
ENT	Dizziness
Rheumatology	Fibromyalgia
Gynecology	Pelvic Pain
Dental	TMJ Syndrome

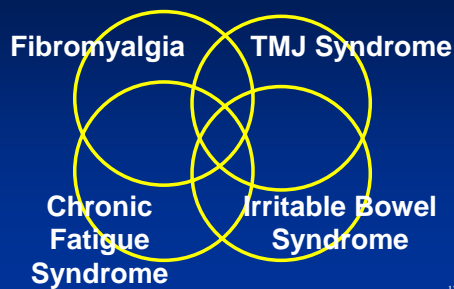
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Old or Controversial Syndromes

- Hypoglycemia
- Mitral valve prolapse
- Multiple chemical sensitivity
- Sick building syndrome
- Chronic candidiasis
- Silicone breast implant

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Syndrome Overlap



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Symptom Syndrome Overlap

	OVERLAP
Fibromyalgia & CFS	35-70%
Fibromyalgia & IBS	32-80%
CFS & IBS	58-92%
Fibromyalgia & MCS	33-55%
CFS & MCS	30-67%

Aaron LA, Buchwald D, A review of the evidence for overlap among unexplained clinical conditions. Ann Intern Med. 2001;134(9):868-881.

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Minimum Symptom Prevalence in Symptom Syndromes

	CFS	FMy	MCS	DEP
Fatigue	100	85	90	77
Arthralgias	80	94	63	78
Headache	35	45	63	55
Sleep	80	60	60	65
Depressed	50	35	67	90
Gastrointes	60	35	--	50

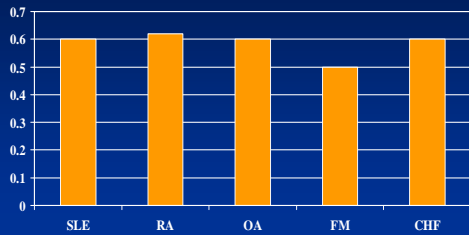
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Fibromyalgia

- Common
 - 2% age 20 → 8% by age 70
 - Most common cause of diffuse pain in US!
- Women: Men 10:1
- Antecedent event in >50%
 - Flu-like illness
 - Trauma
 - Lyme Disease

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Fibromyalgia Functioning



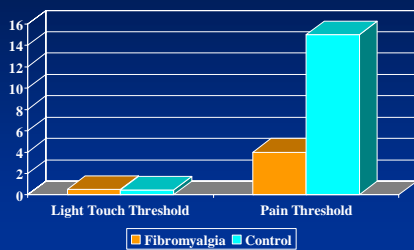
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Pathophysiology

~~Primary Muscle Diseases~~

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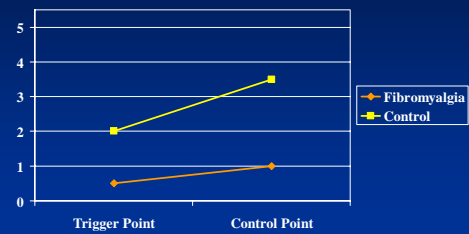
Pain Sensation



Pain 1996;68:375-383.

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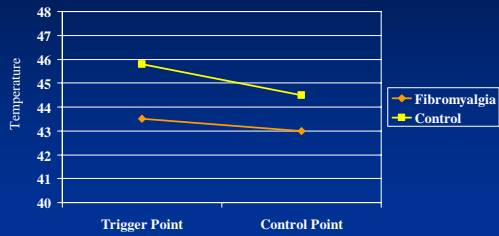
Pressure Pain Threshold



Pain 1994;59:45-53.

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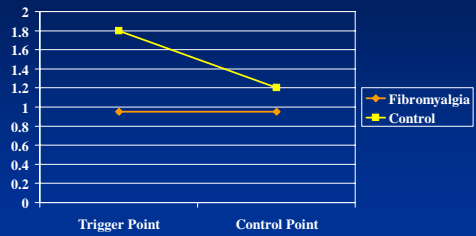
Heat Pain Threshold



Pain 1994;59:45-53.

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Electrical Pain Threshold



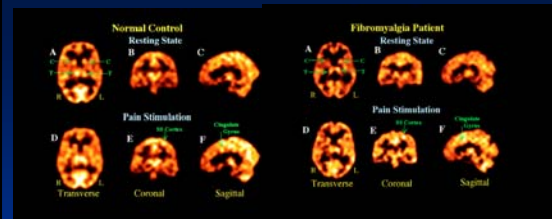
Pain 1994;59:45-53.

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Pathophysiology

- Lower Pain threshold
 - Increased activation of peripheral nociceptors
 - Brain activity
 - Increase response to painful stimuli
 - Decrease activity in suppressive centers

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Decreased resting Caudate/Thalamus Bloodflow
 Decrease in Thalamic response to pain
 Increase Somatosensory Cortex Response
 Increase Cingulate Gyrus Response

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Pathophysiology

- Lower Pain threshold
 - Increased activation of peripheral nociceptors
 - Brain activity
 - Increase response to painful stimuli
 - Decrease activity in suppressive centers
 - Upregulation of N-methyl-D Aspartate receptors at spinal cord
 - Dysregulation of Substance P production

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Pathophysiology

- “Learned” Behavior
- Subtle Hypothalamic-Endocrine Abnormalities
- Sleep Disturbances (Phasic Alpha Sleep)
- Dysfunction of Autonomic system
- Inherited deletions in the gene for the human serotonin transporter

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Pathophysiology

"there is as yet no generally agreed upon explanation for the pathogenesis of the disorder."

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Differential Diagnosis

- Depression
- Endocrine
 - Hypothyroidism
 - Hyperparathyroidism
 - Addison's disease
 - Cushing Syndrome
- Neurological
 - Multiple Sclerosis
 - Myasthenia Gravis
- Heme-Onc
 - Anemia
 - malignancy
- Rheumatologic
 - Rheumatoid Arthritis
 - Systemic Lupus Erythematosus
 - Osteoarthritis
 - Sjogren
 - Ankylosing Spondylitis
 - Polymyalgia Rheumatica
 - Myositis
- Hepatitis
- Renal Disease
- Sleep Disorders

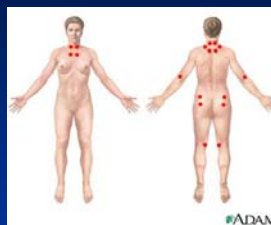
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Diagnostic Approach (Practical Tips)

- Screen for Depression
- Believe your Rheum history/exam
- Believe your Neuro history/exam
- Lab Tests
 - CBC, electrolytes, LFTs, Calcium
 - TSH, ESR, CPK, ?Lyme
- Do Routine Cancer Screening

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Trigger Points



- Check all 18
- Gradual increase in pressure
 - 4 kg
 - Hold for several seconds
- Check control points

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ACR Criteria

- Diffuse Pain
- 11/18 Trigger Points
- Test Characteristics (n=558)
 - Sensitivity: 88.4%
 - Specificity: 81.1%
 - LR+: 4.7

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No Benefit

- NSAIDs
- Multi-disciplinary Management
- Calcitonin
- S-adenosyl-L-methionine
- Botulinum toxin
- Corticosteroids
- Magnesium
- Sphenopalatine block
- Light Therapy
- Malic Acid

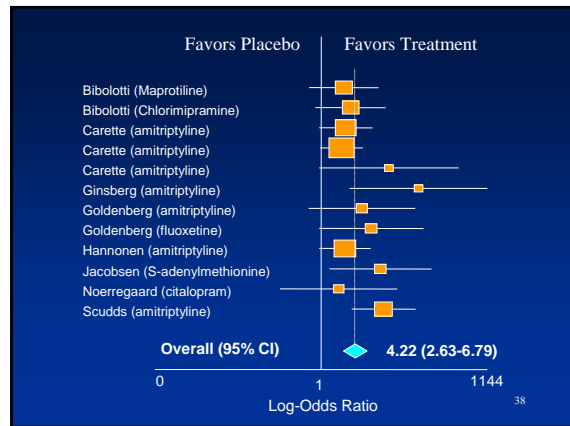
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Fibromyalgia and Antidepressants

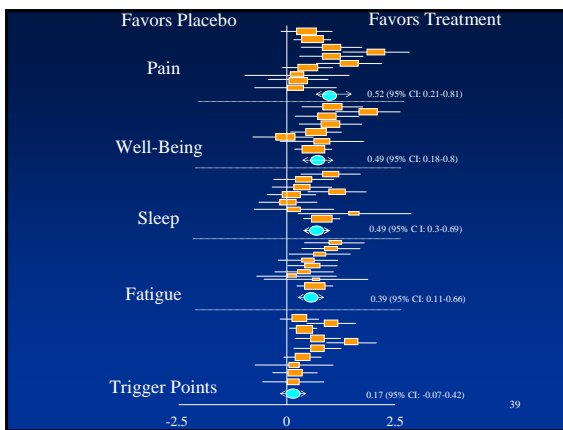
- Systematic review
- 16 randomized controlled trials
 - Most excluded or controlled for depression
 - Mean: 54 patients
 - Duration: 8.4 weeks
- Outcomes
 - 50% improvement
 - Vas
 - Pain
 - Sleep
 - Fatigue
 - trigger points
 - well being

J Gen Intern Med. 2000;15(9):659-666.

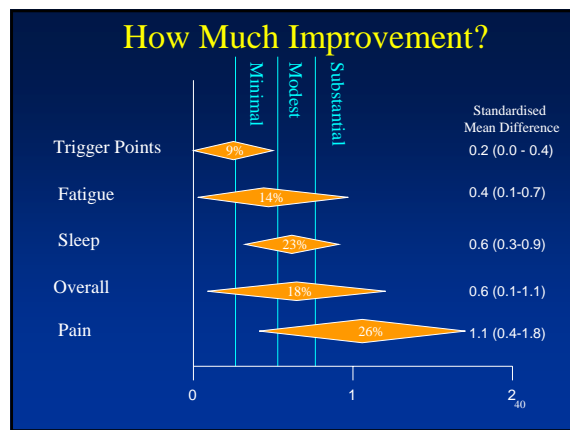
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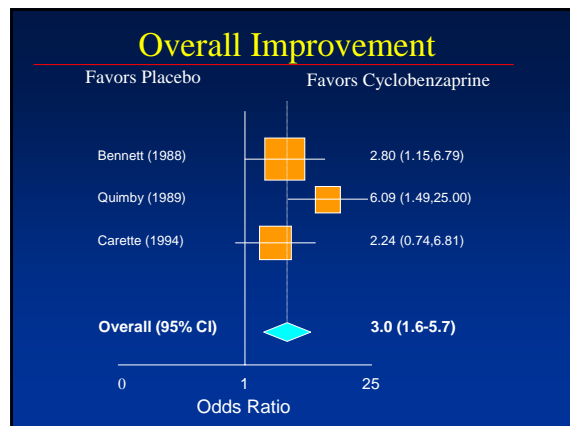
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Fibromyalgia and Cyclobenzaprine

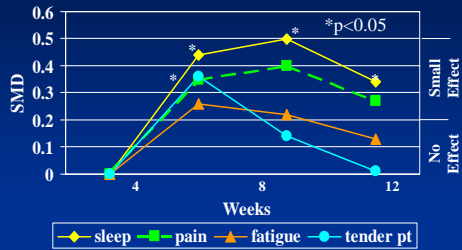
- Systematic review
- 5 randomized controlled trials
 - Most excluded or controlled for depression
 - Mean: 62 patients
 - Duration:
 - Treatment: 6 weeks
 - Symptoms: 39 weeks
- Outcomes
 - 50% improvement
 - Vas
 - Pain
 - Sleep
 - Trigger points
 - Fatigue

Arthritis Rheum. 2004 Feb 15;51(1):9-13

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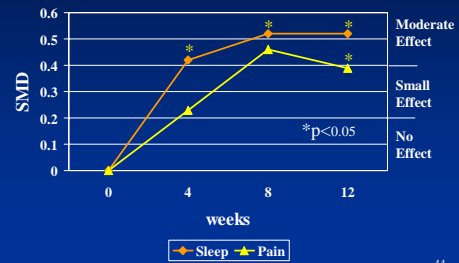


Cyclobenzaprine Effect



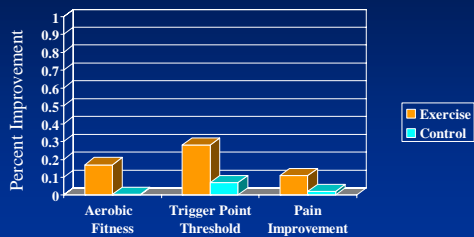
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Placebo Effect



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Exercise Therapy



Cochrane Database of Systematic Reviews, 1, 2004

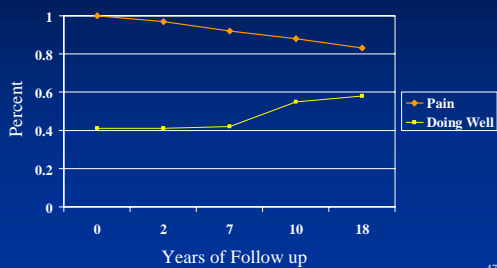
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Treatment Modalities (RCT Data)

Treatment	Pain (Effect Size)
Tricyclic Antidepressants	1.1
Exercise Therapy	0.3-0.6
Cyclobenzaprine	0.4
Mind-Body Interventions	1.2
Tramadol + Acetaminophen	0.4
Growth Hormone	0.6
Hypnosis	0.53
Acupuncture	2.5
Trigger Point injection	0.54

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Long Term Follow up



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Long Term Follow Up Indirect Indicators

- Lower health utilization
- Less medication use
- Less functional status impairment
- Less likely to be "bothered"

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Management of Fibromyalgia (Practical Tips)

- Address Patient's Worries

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How does the patient feel?



I'm very brave
generally
Only to-day I
happen to have a
headache.

Lewis Carroll
Through the Looking Glass

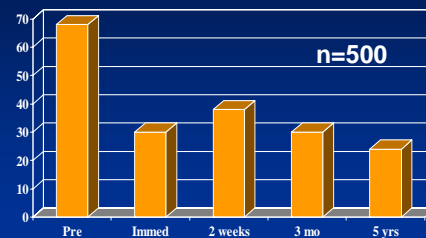
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Joseph Kirsner:

“Patients universally share
two features:
first, they have a problem
or else they would not be
consulting the physician
and, second,
they are anxious and afraid”

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Serious Illness Worry



Jackson et al. Ann Intern Med. 2001;134:889-897.

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Worry and Outcome

Symptom	2 weeks	3 months	5 years
Gone	7%	8%	4%
Better	37%	35%	22%
Same	53%	45%	35%
Worse	66%	66%	65%

n=500

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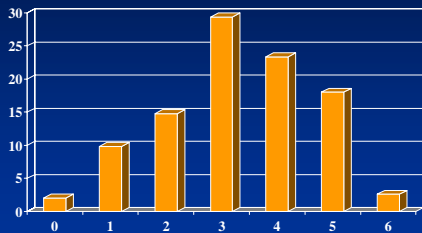
Management of Fibromyalgia (Practical Tips)

- Address Patient's Worries
- Address Patient Expectations

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Expectations

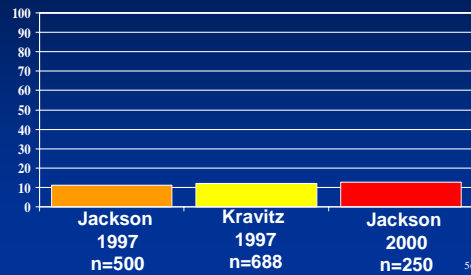
98% had at least one expectation



Jackson et al. Ann Intern Med. 2001;134:889-897.

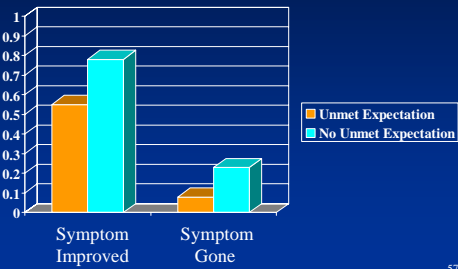
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Unmet Expectations



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Unmet Expectations and 2 week Outcomes



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Management of Fibromyalgia (Practical Tips)

- Address Patient's Worries
- Address Patient Expectations
- Focus on function rather than cure
- Engage patient in management
 - TCA at night
 - Exercise therapy
 - Cognitive Behavior Therapy
 - Consider adding SSRI in morning
 - Consider adding cyclobenzaprine

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Management of Fibromyalgia (Practical Tips)

- Address Patient's Worries
- Address Patient Expectations
- Focus on function rather than cure
- Engage patient in management
 - TCA at night
 - Exercise therapy
 - Cognitive Behavior Therapy
 - Consider adding SSRI in morning
 - Consider adding cyclobenzaprine
- Aggressively treat depression
- Accept your frustrations
- Provide regular follow up, a warm ear and a kind heart

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Dr. Jeffrey Jackson – Questions & Answers

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