

Is LDN a Magic Bullet in Fibromyalgia?

- Headline effects of LDN in Fibromyalgia
 - Enhanced opioid system function
 - Direct analgesic effect
 - Decreased inflammatory cytokines
- Fibromyalgia and functional systems biology
- LDN relevance to Fibromyalgia physiology
- Case studies in LDN in FMS

Fibromyalgia Syndrome

- Widespread pain
- Fatigue
- Unrestorative sleep
- GI
- Cognitive
- Affective
- Other--POTS, neuropathic pain, environmental sensitivity, pelvic pain, cystitis, etc.

Case Study: Naomi

- 42 y.o. mother of six
 - Exhausted. Widespread Pain. Insomnia. IBS.
 - Husband works and studies all day
 - She's alone at home with kids and can't keep up. Minimal social support.
 - Dx'd Fibromyalgia; ESR 35
 - Lyrica/cymbalta/TCA Rx failure
 - Overwhelmed
 - No knowledge/inclination toward self-care
- "Healthy eating....hmm, you mean whole-wheat bread?"

Naomi

- LDN: Titration 1.5mg, 3.0mg, 4.5mg
- 5-7 days between dose increase
- Recommendation for nighttime use
- Cautions about sleep disturbance, pain flare, GI symptoms
- 8 week script 1.5mg 100 caps; 4.5mg 30 caps

Naomi

She followed up at 3-4 months after starting LDN
 I'm in horrible pain.

Did you take the medication?

Yes

What Happened?

After two weeks on it, I felt normal again. I didn't have fibromyalgia.

Then What Happened?

I felt normal and good until I ran out of medication and had to wait to see you....

Is LDN a Magic Bullet for Fibromyalgia?

NO!

- Most people not cured with LDN alone
- LDN mechanisms
 - Opioid sensitivity and production
 - Immune shift, anti-inflammatory
- FMS as a model of Functional Systems Illness—typical of others
- LDN powerful influence on certain pathways
- Old Magic Bullet—Nope
- New Magic Bullet



Systems Biology

- Complexity and Relationship
- Reductionist Detail In Biological Context
- One System:
 - Personal: CV, Pulm, GI, Immune, Neuro, Structure, Hormonal, Mind, etc.
 - Environmental: relationships, society, nature, etc
- Understand the variables in relationship, over time
- Antecedents, Triggers, Mediators

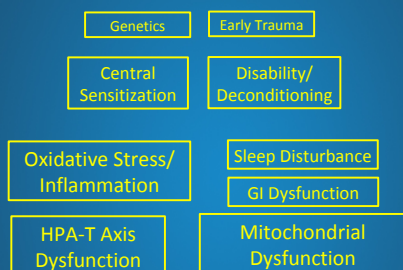
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Systems Biology in Clinical Practice

- Antecedents—foundational principles of the individuals life
- Triggers—*transient* events, or states, that shift the system.
 - Modify gene expression, metabolism, beliefs, emotion, behavior
- Mediators—*enduring* states, or traits, that perpetuate/feed the phenotype—the things that keep you sick
 - Metabolic
 - Mental/emotional
 - Social
 - Behavioral
- Studying Flow of Information in the System, Over Time

Fibromyalgia Syndrome

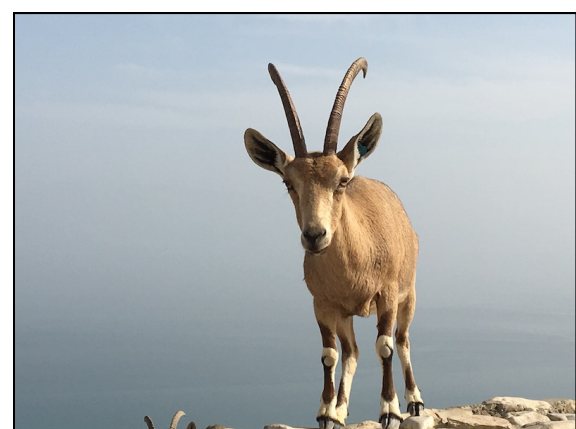
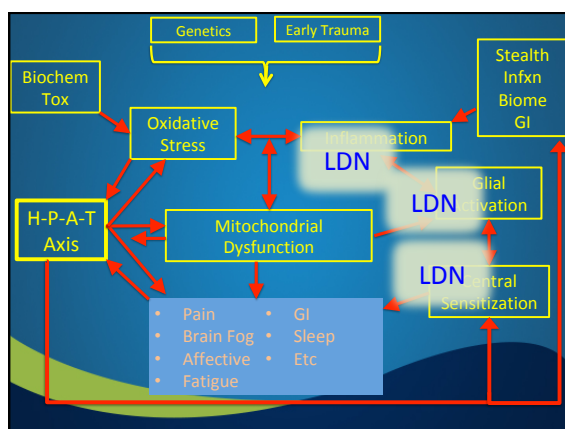
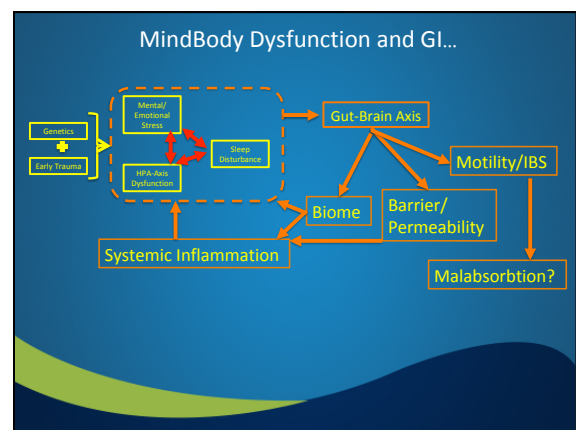
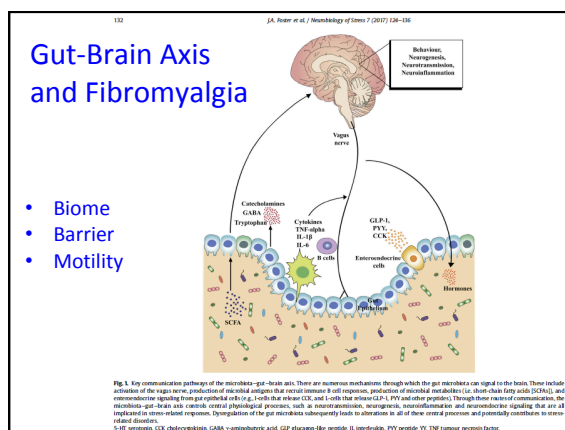
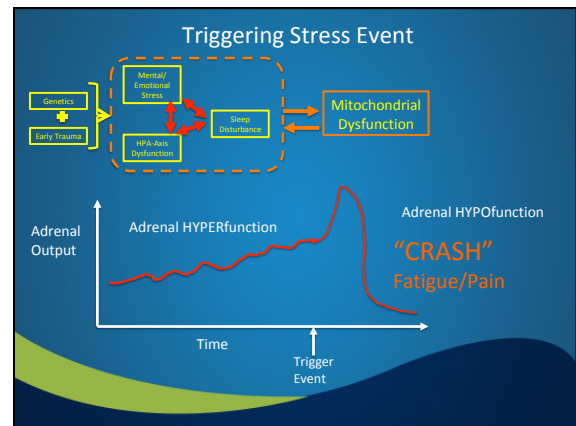
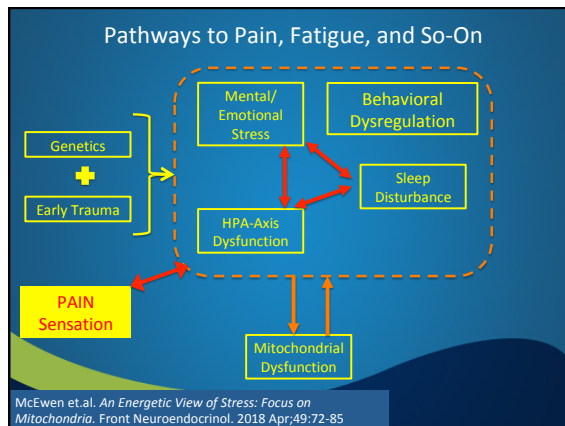


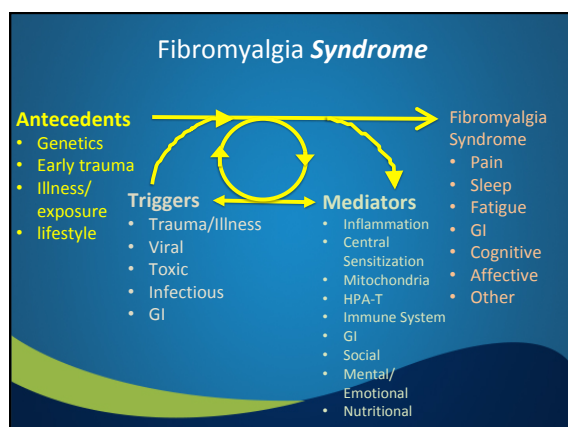
Fibromyalgia Syndrome

Oxidative Stress/

www.mayoclinic.org/diseases-conditions/fibromyalgia/symptoms-causes/syc-20354780

Fibromyalgia is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory and mood issues. Researchers believe that fibromyalgia amplifies painful sensations by affecting the way your brain processes pain signals





Case: Angela

Can I please have my brain back?

- 55 years old
- Severe fibromyalgia with high disability scores
- Widespread pain, sleep disturbance, IBS
- Has had chronic pain for years, but really flared up in the last four years after family tragedy
- Saw a naturopath and got a really complex diet and supplement regimen
- Didn't do any of it

Case: Angela

Exam:

- fibro tender point exam
- Tired, floaty, wandering attention
- Discussed FMS pathophys/Rx in context of her history
- Can you tell me what you understood from our discussion?
- She wasn't retaining **ANYTHING**

Case: Angela

- The patient's brain fog is part of the diagnosis, part of the issue in treatment.
- Need to relate to the person and their complexity
- Would you ask someone in a wheelchair to do elliptical training to lose weight and enhance fitness?

Case: Angela

- Online Mind Body Skills (Inner Healing Mastery)
- Relaxation
- Mindfulness
 - Emotional self-awareness and presence
- Torah-based mind retraining
- Group Support

Case: Angela

Fibromyalgia Impact Questionnaire (Revised)

1. specific function 0-10 no difficulty—very difficult

2. Inability to function/Overwhelm Never—Always

3. Subjective suffering (pain, energy, stiffness, fatigue, affective, sleep, memory, balance, sensitivity) None—very bad

Before/After Eight Week Mindbody Course

	2018 November	2019 May
Specific Difficulty Functioning (9)	72/90	
Overall Inability (2)	19/20	
Symptom Severity (10)	93/100	

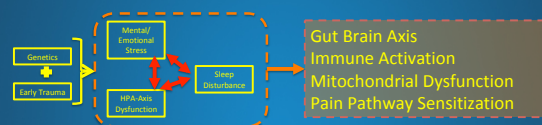
Case: Angela

I love my new brain! What now?

- LDN at Standard Dosing 1.5, 3.0, 4.5mg

	2018 September	2019 Jan	2019 March
Specific Difficulty Functioning (9)	72/90	6/90	
Overall Inability (2)	19/20	14/20	
Symptom Severity (10)	93/100	72/100	

Is the Mind-Body THE Primary Issue in FMS?



EMPOWERMENT
 Freedom of choice
 Self-efficacy
 Sense of coherence
 Transformation

Mind-Body Training Groups

Tools for Developing Consciousness

- Calm Clear Mind
- Compassionate, Discerning, Self-Awareness
- Map of Consciousness
- Responsive vs Reactive
- Spiritual Connection

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Healing Attitudes
 Joy
 Generosity
 Focused desire
 Trust
 Gratitude

Developing Life Skills

- Navigate Intrapersonal Suffering
- Transform Emotional Pain
- Access Embodied Energy/Consciousness
- Boundaries on Toxic Relationships
- Build Relationships that are Healing and Supportive

Case: Richard

Fatigue and LDN

- 57 years old
- Widespread pain, sleep disturbance, IBS
- Numerous Immune/biome issues: preemie, abx, asthma, eczema.
- Onset of FMS after “a bad flu”
- LDN standard dosing 1.5, 3.0, 4.5

Case: Richard

Fatigue and LDN

- Calls me 4 days into LDN
- I’m wiped out I can’t function and the pain is killing me.

Case: Richard

Fatigue and LDN

- **“Fatigue Dosing” LDN**
- 0.5mg, 1.0mg, 1.5mg, 2.0mg....4.5mg if tolerated
- Careful instructions about waiting at “your best dose”
- He stopped at 2.5mg, because 3.0 increased fatigue
- Had significant improvement
- After two months, increased to 4.0mg with continued benefit

Case: Faith

- 47 years old
- Severe fibromyalgia with FIQR 79
- Widespread pain, sleep disturbance, IBS
- Psoriatic Arthritis without active joints
- Obesity
- HTN on two medications
- Elevated CRP, ANA +ve
- DVT dx’d hypercoag with MHTFR heterozygous c677T
- Anxiety/depression
- Medication List

Case: Faith

- LDN at standard dose titration 1.5, 3.0, 4.5mg
- 30% more energy
- At 8 weeks had discontinued her antihypertensive medications and anti-depressants
- Continued severe pain and fatigue and disability

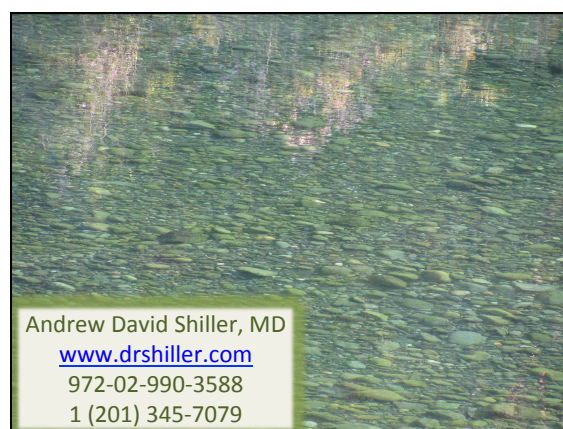
Case: Faith

what now?

- Dietary changes—elimination diet
- Mindbody Program
- Supplements for mitochondrial dysfunction, methyl donors
 - Mag, omega-3, CoQ10, Acetyl-L-Carnetine
- Health coach
 - Support practice
 - Workable chunks of lifestyle plan
 - Increasing physical activity

Case: Faith
what next?

- Movement in a mindful context
- Within threshold
- Mindful movement
 - Yoga
 - Tai chi
 - Feldenkreis
 - Pilates
- Start slow and build



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