**Fibromyalgia and the “Invisible” Diseases**

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**Fibromyalgia**

History:
- 1816: J. Balfour describes chronic pain with stiffness and fatigue
- 1904: Gowers calls it “fibrositis”
- 1979: Canadian researchers match pain, fatigue, and sleep disorders
- 1981: No inflammation is found in biopsied samples; “fibromyalgia” is coined
- 1987: AMA recognizes it
- 1990: American College of Rheumatology creates a diagnostic criterion
- 1993: The WHO recognizes fibromyalgia as a disease

Fibromyalgia components:
- Neuroendocrine disruption (HPA axis dysfunction)
- Sleep disorder
- Central sensitization
- Tender points

**HPA axis dysfunction**
(also a factor in anxiety, depression)
More on HPA axis with CFS discussion...

**Sleep disorder**
- Little or no Stage IV sleep
- Reduced GH, reduced capacity for healing
  (Moldofsky experiment)

  **Sleep Tangent**
  Who gets the most Stage IV sleep?

**Central sensitization**
- Structural changes in the brain: becomes harder to filter out pain—and all other sensations
- High substance P, nerve growth factor
- Low norepinephrine, serotonin (inhibitory NTs)
- Hyperalgesia, allodynia
- All senses are amplified, hard to filter
Tender points
    All 4 quadrants
    9 predictable pairs
    Hypotonic, locally painful

Signs and Symptoms
    Stiffness after rest
    Poor stamina
    Fatigue
    Memory problems, “fibro fog”
    Widespread pain
    11/18 tender points
    Sensitivity amplification
    GI pain

Complications:
    Overlap with CFS; IBS; migraines; MFPS...
    Depression, anxiety disorders

Treatment:
    Accurate diagnosis
    Education (this is not a life-threatening disease!)
    Diet, exercise, good-quality sleep, CBT
    Guaifenisin (?)
    Low-dose antidepressants (Amytriptaline, Duloxetine)
    Meds for restless leg syndrome...?
    Anti-seizure drugs (Lyrica)
    Massage: research shows it lowers perceived pain, anxiety, and depression

Medications:
    Analgesics
    Antidepressants
    Anti-seizure drugs (Lyrica)
    Antiparkinson drugs (for RLS)

Massage for fibromyalgia
    Risks: People with fibromyalgia live with chronic, invisible, widespread and unpredictable pain. It is important that their pain not be exacerbated by massage that is insensitive or too aggressive.

    Benefits: Massage has much to offer fibromyalgia patients in terms of pain relief, sleep quality, improved mood, and reduced anxiety. Massage as part of an emphasis on good self-care is frequently part of a successful treatment strategy.
**Options:** Research suggests that while many kinds of massage improve fibromyalgia symptoms, lighter and gentler work is more effective than deeper, more intrusive types of bodywork, especially for clients new to massage.

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**Myofascial Pain Syndrome (MFPS)**

**Etiology:**
- Multifactoral: microscopic injuries, problems with synapse at neuromuscular junction
- Trigger points (current theory, not universally accepted)
  - Microtrauma; microspasm (pain-spasm cycle)
  - Sustained, involuntary contraction of sarcomeres; local energy crisis
  - Local sensory neurons become nociceptors
  - Neuromuscular junction drowns in acetylcholine, reinforcing contraction
    - Ischemia inhibits reabsorption of acetylcholine
  - Satellite points form with chronic postural distortion

**Signs and symptoms:**
- Taut band or knot; melts with relief of ischemia
- Points occur in predictable pattern
- Points refer pain
- Points occur regionally

**Treatment:**
- Resolve trigger points:
  - Vapocoolant spray
  - Anesthetic injections/dry needling
  - Botox to block acetylcholine receptors
  - Static pressure/pulsing pressure with stretching
  - Postural and movement repatterning

**Medications:**
- NSAIDs
- Tricyclic antidepressants
- Injected anesthetic or botox

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Massage for MFPS

**Risks:** A person with many active trigger points not only experiences chronic pain, but may be easy to over-treat because of an abundance of pain-sensitizing chemicals in the tissues. Massage can help to resolve trigger points, but it must also address the residual “clean up” that must follow.

**Benefits:** Careful massage can be effective to resolve MPS, by addressing the pain-spasm cycle and the ATP energy crisis that occurs where trigger points develop. Various subspecialties of bodywork have been developed to address these issues, and evidence shows both efficacy and safety for their application.

FMS v. MFPS

- Tender points v. trigger points
- Systemic distribution v. regional distribution
- Local pain v. referred pain
- Multifactoral disorder v. pain-spasm cycle
- Treatment options vary **WIDELY!!**

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**Chronic Fatigue Syndrome (CFS)**

Named in 1988

AKA...

- CFIDS
- Myalgic encephalomyelitis (?)
- Neurasthenia
- “Yuppie Flu”
- “Epstein-Barr”

**Etiology**

- Multifactoral, may involve...
  - Infectious agent
  - Stressful event
  - Neuroendocrine dysfunction

- Possible pathogenic triggers:
  - EBV, candida, mycoplasma, Chlamydia, enteroviruses...

**Possible CFS components:**

- HPA Axis dysfunction
- Neuraly mediated hypertension
HPA Axis dysfunction
   hypothalamus-pituitary-adrenal axis: stress response system is sluggish, tenacious (“adrenal exhaustion”)

Neurally mediated hypotension
   Not triggered by change in position; signals an inappropriate response to adrenaline

Signs and Symptoms
   Severe fatigue, unrelieved by rest, 6 months or more, plus at least 4...
       Short term memory/concentration loss
       Changes in sleep quantity/quality
       Muscle, joint pain without inflammation
       Headache in a new pattern
       Sore throat, inflamed lymph nodes, low fever
       Post-exertional pain for 24 hours +
       Bloating, nausea, cramping, diarrhea...

Treatment
   Education
   Avoid stressors
       In relationships, environment
       In diet (stimulants and depressants)
   Gentle exercise
   Some supplements
       Magnesium, copper, zinc

CFS Medications
   NSAIDs
   Anti-anxiety meds
   Anti-allergy meds

Massage for CFS
   **Risks:** CFS patients tend to have low stamina, and may not welcome a rigorous, long, full body demanding massage that could leave them more fatigued than after their treatment than before.

   **Benefits:** Evidence shows that massage can help with pain, sleep, and perceived anxiety: all issues for CFS patients. Gentle massage is a safe and appropriate choice for clients with this condition.

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**Irritable Bowel Syndrome (IBS)**

Definition: Digestive system dysfunction *without* major structural problems ("biopsychosocial" disorder related to mood and stress management)

**AKA:**
- Spastic colon, irritable colon, mucus colitis, functional bowel syndrome

**Etiology**
- Normal colon activity: coordinated contractions for water reabsorption, trash compaction

**Factors**
- Hyperreactivity in colon
- Uncoordinated peristalsis
- Depression, anxiety
- “Brain-gut axis” dysfunction: feedback loop between sensation in the colon and motor response
- Other smooth muscle dysfunction (neurally mediated hypotension)
- Can occur after acute gut infection

*No structural changes in the colon*

**Things That Look Like IBS**

(Short list of what IBS is *NOT*)
- Celiac disease
- Crohn's disease
- Ulcerative colitis
- Diverticulitis
- Colorectal cancer

**Types of IBS**
- IBS-D
- IBS-C
- IBS-M (mixed)
- IBS-A (alternating)

**Signs and Symptoms**
- Range from mild to severe, debilitating
  - Recurrent pain (3+ days/month); pain with defecation, changes in stool frequency and appearance
  - Gas, bloating, diarrhea/constipation, pain, cramps (no fever, no blood in stool)
Treatment
Control life factors and stress
   Relationship/job changes
Dietary controls for triggering foods (these vary)
Add fiber for more bulk to press against
Acupuncture, peppermint, probiotics
Medications for symptomatic relief

Medications
   Antispasmodics to limit hyperreactivity
   Fecal binders for diarrhea
   Bulking agents
   Laxatives for constipation
   Anti-diarrheals as necessary
   Antacids
   Antidepressants, anti-anxiety meds
   Antibiotics for low-grade bacterial infection

Massage for IBS
   **Risks:** Some clients with IBS are extremely self-conscious about passing gas during a massage appointment. This, or nervousness about touch in general, may make it difficult for a person to enjoy the experience of massage. If these challenges can be addressed, massage has no particular risks for a client who has irritable bowel syndrome.

   **Benefits:** Because massage is an effective way to address anxiety and stress, clients with IBS welcome touch may find this a powerful tool to help manage their condition.

   **Options:** The key factor for someone who has IBS to derive benefit from massage is for them be able to relax and not worry about passing gas.

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What Does This Mean for us?
Clients with chronic pain can be exhausting!
   Chronic pain changes personality
   Loss of sense of perspective
   Changes expectations for improvement
   No “fixing” here!

   MTs must invest in excellent self care!
Who is the Healer?
The **client** is responsible for getting better; massage is one possible pathway in that direction

Massage feels like an indulgence, but results in positive change
What else can do that?
Recovery is not a smooth curve
Flares can’t be ignored
Improvement requires a sense of empowerment, self-investment

It can have a successful outcome; we can be a part of it!

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**Hypothyroidism**

Definition
Thyroid hormone levels are abnormally low
Usually for metabolism; can affect calcium
Person can’t generate energy from food

Etiology
Pituitary makes TSH
Thyroid produces T3 and T4 (as well as calcitonin)
T4 (thyroxine) is converted quickly to T3 (triiodothyronine)
These promote the metabolism of food into energy (not new cells or storage)

In early hypothyroidism,
TSH is high
T4 is low
T3 is normal

Types of hypothyroidism
- Hashimoto thyroiditis
- Secondary hypothyroidism
  - Complication of treatment for hyperthyroidism
- Iodine deficiency
- Idiopathic– most common, linked to FMS, CFS (surprise!)
Also...

Birth defect
Post partum
Brain tumor on pituitary
Lithium, other meds
Radiation exposure at neck

Symptoms

Weight gain, sluggish digestion, constipation, poor tolerance for cold, depression, fluid retention, heavy menstrual periods, brittle hair, dry skin, goiter...

Treatment

Accurate diagnosis (looks like fibro, depression, CFS, etc...)
Supplement thyroid hormones
  Synthroid is T4 only; successful for some
  Synthetic form of T3 now available
    – dessicated animal glands is the usual prescription

Massage for hypothyroidism

Risks: Persons with hypothyroidism are at increased risk for cardiovascular disease, and that informs some choices about massage. However, this situation is so prevalent in the American population, it is safe to assume that most mature clients live with it.

Benefits: Massage won’t necessarily improve thyroid activity, but it may help to ameliorate some of the fatigue and depression that often accompanies this condition.

Thank you so much!!