

# YOGA THERAPY AND FIBROMYALGIA (FIBROMYALGIA SYNDROME [FMS])

## Medical View

### *a) Analysis of Fibromyalgia*

Fibromyalgia is a medical disorder characterized by widespread pain, stiffness and tenderness of muscles, tendons and joints. Although pain is present most of the time and may last for several years, the severity of pain oscillates. Unlike arthritis or other rheumatic conditions, fibromyalgia does not cause tissue inflammation, joint deformity or damage to internal organs. It is classified as soft tissue rheumatism.

Persons with fibromyalgia often experience symptoms that go beyond pain. Some of the most common are fatigue, difficulties sleeping, headaches, irritable bowel syndrome (IBS), and mood disorders such as anxiety and depression. As a result, the term "syndrome" is often attached to the condition to reflect the constellation of pain and non-pain symptoms that patients experience.

FMS can be a primary condition or can be a secondary condition linked to other physical ailments such as rheumatoid arthritis, lupus, severe back pain and endometriosis or to mood disorders or post-traumatic stress disorder (PTSD).

Although non-pain symptoms are usually present in persons with fibromyalgia, the medical diagnosis of fibromyalgia is based strictly on the painful aspects of the condition. As issued in the 2012 *Canadian Guidelines for the Diagnosis and Management of Fibromyalgia Syndrome*, there is now a consensus on a clinical definition of FMS in Canada:

At least 3 months of widespread pain or tenderness of at least 11 of 18 tender points or myofascial trigger points with no tissue inflammation and eliminating other medical conditions that mimic FMS.

While the cause of fibromyalgia is unknown, a number of theories exist including:

- Physical or emotional injury or trauma
- Viral infections, in particular Epstein-Barr
- The relationship between hormones such as serotonin, growth hormone, substance P, and hypothalamic-pituitary-adrenal hormone and the way an individual's central nervous system (CNS) processes pain
- Hormonal changes
- Sedentary lifestyle or overtraining
- Sleep disturbance as it lowers the productivity of growth hormone crucial to the repair of muscles

- (note that while sleep disturbance may cause fibromyalgia, FMS may also cause sleep disturbances so the link can be circular)
- Mood disorder such as anxiety or depression (but, similarly, it is not known if depression is the cause or the effect)
  - Genetics

FMS affects 2 to 3 percent of Canadians with females 6 to 9 times more likely to be affected than males. 80% of those affected are between the ages of 35 and 55.

### *b) Symptoms of Fibromyalgia*

As mentioned above, the strict medical definition of fibromyalgia includes only the symptom of widespread muscular and soft tissue pain across all four quadrants of the body and is clinically diagnosed by pain in at least 11 of 18 myofascial trigger points.

However, the non-pain symptoms of FMS are vast and unique to each individual patient and can include:

- Increased sensitivity to sensory stimuli
- An unusually low pain threshold
- Non-restoring sleep
- Fatigue
- Headaches
- Increased symptoms under stress

- Pain from too much or too little physical activity
- Tendency to depression, anxiety
- Post-traumatic stress disorder (PTSD)
- Jaw pain (temporomandibular joint dysfunction [TMJ])
- Fibro-fog (can include cognitive dysfunction, impaired concentration, memory problems, impaired speed of performance, inability to multi-task, cognitive overload, diminished attention span)
- Bladder irritability
- Gastrointestinal problems and/or IBS
- Pre-menstrual discomfort
- Restless leg syndrome
- Allergies and/or chemical sensitivities
- Unexplained weight gain or loss
- Non-cardiac chest pain
- Aggravated symptoms with changes in weather, seasonal affected disorder
- Elevated symptoms during hormonal fluctuations

### *c) Lifestyle Assessment/Contributing Factors*

Fibromyalgia was once considered to be a psychological disorder but it is now believed to be caused by an inter-play of biological, sociocultural and psychological variables.

Biological factors refer to the way that the central nervous system processes pain with FMS patients

tending to have a lower than average pain threshold. Lower levels of the brain neurotransmitters serotonin and norepinephrine and a faulty regulation of dopamine are common in FMS patients and can affect the way in which an individual feels and tolerates pain. Also, substance P, a neurotransmitter found in spinal fluid, may amplify pain signals to the brain. There is also thought to be a genetic tendency toward FMS.

Sociocultural factors refer to family and social experiences. Attitudes related to the expression of pain can affect a person's tendency to FMS.

Psychological factors resulting from emotional stress often appear to trigger the onset of FMS in a person who is already at biological risk. Fibromyalgia often appears following a traumatic event such as an accident, an emotional trauma, overworking, hormonal changes, sexual or physical abuse or a viral infection. Additionally, mood disorders such as depression and anxiety and eating disorders are often present in individuals diagnosed with fibromyalgia.

#### *d) Medical Treatments*

As traditional medicine does not have an explanation for fibromyalgia, the current medical treatment is designed to manage symptoms, primarily pain and sleep disorders, and is often a multi-component approach. As well as the use of pharmaceuticals,

traditional medicine also promotes psychological counseling, some “alternative” therapies, exercise and lifestyle as important in treating FMS.

### Pharmaceutical

While there is no one medication to treat fibromyalgia, a number have been shown to have positive effects in treating FMS including:

- Lyrica (an anti-convulsant);
- Tricyclic antidepressants in small dosages to improve sleep;
- Selective serotonin reuptake inhibitors (SSRIs);
- Benzodiazepines (anti-anxiety medication -- i.e., tranquilizers);
- Muscle relaxants;
- NSAIDs (nonsteroidal anti-inflammatory drugs) such as Naproxen and Celebrex;
- Topicals containing NSAIDs;
- Sleep medications;
- Over-the-counter analgesics such as ibuprofen and acetaminophen;
- Topical analgesics;
- Narcotics;
- Cortisone injections into trigger points;
- Botox injections (causes a disruption of the nerve-muscle junction)
- Nerve blocks or epidurals

As mentioned previously, substance P, a neurotransmitter found in the brain stem and spinal cord is also now suspected to be involved in the pathophysiology of FMS. New drugs may be developed that act to block substance P, which lowers an individual's pain threshold.

Note that this poly-pharmacy can pose a danger to those with FMS due to side effects and interactions between drugs.

### Psychological Counseling:

Cognitive-behavioural psychotherapy and support groups are recommended for those with fibromyalgia to assist in addressing their current condition as well as past issues that may have contributed to the condition.

### Alternative Therapies:

Non-traditional medical therapies recommended to those who suffer from FMS include:

- Acupuncture
- Biofeedback
- Chiropractic
- Homeopathy
- Hypnotherapy
- Mental imaging

- Naturopathy
- Osteopathy

### Exercise:

Many benefits of mild exercise for short intervals for those who suffer from FMS are advocated within traditional medicine:

- Increases the levels of serotonin, the feel-good hormone, and endorphins, the body's natural pain relievers
- Stimulates growth hormone secretion
- Decreases feelings of depression and anxiety
- Increases ability to do daily activities
- Improves sleep
- Provides an outlet for stress and tension
- Increases energy levels
- Conditions muscles which then diminish the pain of fibromyalgia by increasing blood flow to muscles
- Counteracts stiffness in the body (flexibility training)
- Improves self-esteem and provides a sense of well-being

Exercise programs for FMS patients need to include good warm ups and cool downs and avoid exercises that can cause joint pain. If exercise causes symptoms, the quantity and/or intensity need to be reduced.



## Lifestyle:

Although there is no known way to prevent fibromyalgia, the following lifestyle recommendations have been made by the medical community, in addition to exercise and psychological counseling, to decrease the likelihood of triggering fibromyalgia symptoms:

- Manage lifestyle by listening to you body and adjusting accordingly.
- Use heat and massage for muscular pain
- Rest
- Reduce stress through modifications at home or work
- Practice relaxation and breathing
- Eat a well balanced diet
- Avoid caffeine
- Practice good sleep routines
- Self-education

## The Yoga Therapy View

Essentially, the yoga therapy view is similar to the traditional medical view without the use of pharmaceuticals. Counseling, alternative therapies, exercise and lifestyle are all part of the yogic view, as well, but in a more specific way, particularly as it

relates to type of exercise (yoga-based) and diet (Ayurvedic and macrobiotic).

A 1999 study in the *Journal of Pain* (James Carson) showed that gentle yoga stretches and mindfulness meditation reduced the pain of fibromyalgia and improved patients' ability to cope with it.

Yoga stretches and strengthens the body and encourages relaxation. Yoga can help change a client's outlook on negative aspects of life and can help in developing behavioural coping skills, teaching relaxation, and offering dietary and lifestyle suggestions

As with the traditional medical approach, the yogic approach focuses on the many symptoms of FMS since its cause is unknown. Yoga therapy has much to offer for the symptoms of FMS, including insomnia, stress, depression, anxiety and PTSD.

In terms of the exercise component, yoga therapy would include a combination of gentle stretching, strength training and relaxation techniques. Given that the intensity of symptoms of fibromyalgia varies from day to day, it is very important that an individual with fibromyalgia honour their body on each particular day, doing only what is available to them at that time in order to avoid over-doing it. On those days when asana practice is not available, it is recommended to visualize doing the poses or to do restorative poses

only.

Pranayama, chanting, imagery, meditation, chakra therapy and yoga nidra are all recommended yoga therapy practices for individuals suffering from FMS.

### *Aspects FMS Relative to the Five Koshas*

Nurturing all five of the koshas is critical to those who suffer from FMS given the vast and varied symptoms of the condition, which affect all of the koshas.

#### *Annamaya*

The food body, or physical body, is not well in individuals who suffer from fibromyalgia. In fact, the majority of FMS symptoms are physical, ranging from widespread pain in the muscles and soft tissues to headaches to IBS to TMJ.

In order to nourish annamaya kosha, individuals need to increase their body awareness through asana, pranayama and relaxation. These practices also diminish stiffness and tension in the body.

#### *Pranamaya*

The energy or prana body suffers in individuals with FMS as they lack vitality. Although the pranamaya is the breath body, it is not considered to be primarily a physical body but a human energy field made up of

our emotional, psychological and spiritual currents. Nurturing pranamaya leads to a deeper connection with the body's capacity for healing and knowing, which is critical for individuals who suffer from fibromyalgia.

The key sustenance of this kosha is pranayama, which enhances the circulation of prana, or life force, through the body.

### *Manomaya*

The mental/emotional sheath encompasses the mind, subconscious, and the five sensory organs. This is the body where all that we have learned, felt and perceived is stored. All sensual perceptions -- sights, sounds, smells, tastes, touch – are stored in this body, as are memories, stressful thoughts and the scars of past wounds. Given the believed link between physical and emotional trauma and fibromyalgia, the manomaya kosha is critical to the healing process of those suffering from FMS. Studies have shown that emotional pain registers in our brains as real physical pain.

Asana, breathing, relaxation and visualization are key to healing the manomaya kosha.

### *Vijnanamaya*

The body of higher wisdom, judgment and

discernment feeds an individual's inner knowledge and intuition. Trauma and mood disorders associated with FMS impair the creation of this wisdom. Nourishment of the vijnanamaya kosha develops trust in inner judgment and decision-making.

Meditation to connect with the wisdom body and effective stress management are keys to feeding vijnanamaya kosha.

### *Anandamaya*

The bliss body is nurtured through the power of gratitude. The nature of FMS with its multitude of symptoms and lack of diagnostic precision and understanding by tradition medicine can make it difficult for those who suffer from it to be grateful. However, by converting negative thoughts and feelings into positive expressions of gratitude and appreciation through affirmations, journaling, meditation and breathing, anadamaya kosha is nourished.

### *Healing Program*

#### *Asana*

A gentle asana practice is recommended that would incorporate a long warm-up, proper structural alignment (applying the 7 loops, 5 principles of alignment, and 3 focal points of Anusara yoga), and a

long relaxation. Restorative poses are also recommended to supplement more active asana and, in fact, to replace active asana during flare-ups.

An example of an asana practice for a person with FMS on a non-flare-up day:

10 minute warm-up including sufi grinds, seated side and neck bends, cat/cow, thread the needle, low lunges with back knee on ground, wide leg child's pose. Warm-ups are to be done slowly in order to inform the participant of the condition of the body for the rest of the practice and to cultivate body awareness.

5 minutes of gentle asana using applied structural alignment therapy. Asanas could include tadasana, posture foundation optimizer, uttanasana, wall dog, supine tadasana, knee to chest pose, windshield wipers, cobra pose, virasana, wall fish pose.

2 or 3 restorative poses such as supported fish, reclined bound angle, legs up the wall, mountainbrook.

End with either a 15-20 minute savasana or a yoga nidra.

During a severe flare-up, do only restorative and relaxation portions.

## *Pranayama*

Pranayama for depression or anxiety, depending on the tendency of the individual is recommended.

Pranayama that incorporates Chakra therapy is also recommended for all clients with fibromyalgia, as it is likely that most of the 7 chakras will be imbalanced.

An example of a pranayama practice:

Include a pranayama such as the Breath of Arjuna for self-empowerment, breath of joy, or chakra pranayama (Kaoverii) with asana practice. Also, practice natural breath several times during the day.

## *Meditations*

Meditation for depression (energizing) or anxiety (calming) is recommended depending on the tendency of the client. Yoga Nidra is also recommended as are meditations that incorporate chakra therapy, imagery and mantra. Affirmations that replace negative messaging and journaling are further recommended.

An example of a meditation, affirmation and journaling practice:

LifeForce Yoga Chakra Clearing Meditation, either energizing or calming depending on the tendencies of the client.

Yoga Nidra for anxiety or depression depending on tendency of client. Include imagery.

Atma Hrdaye mantra.

Positive affirmations that appeal to the client's specific situation to replace negative messages that undermine good health.

Gratitude journaling, that is, writing down at least 5 things a day that the client is thankful for to help focus on the things that are going right in life.

### *Diet*

A macrobiotic cleansing diet is recommended for individuals with FMS. An alkalizing diet is important for many of the symptoms of FMS, particularly digestive issues and fatigue.

Following an Ayurvedic diet according to the client's dosha is also important.

### *Lifestyle*

Lifestyle modifications include all of the above yoga therapy prescriptions, as well as those alluded to in the medical view such as massage, self-education and practicing good sleep routines. The development of a "positive thinking" perspective or "seeing the



glass as half-full” is another important lifestyle practice for individuals who suffer from FMS.