

(taken from Jodi Goldman's chapter in: *Local Therapy for Fibromyalgia and Non Neuropathic Pain*)

Please read how Massage Therapy can help with Fibromyalgia and other chronic pain syndromes:

Massage Therapy

In the early fifth century BC, Hippocrates wrote, "The physician must be experienced in many things, but assuredly in rubbing... For rubbing can bind a joint that is too loose, and loosen a joint that is too rigid." Massage is an ancient treatment for pain relief and is currently being utilized by 17-75% of fibromyalgia patients (79). The variability in the use of this intervention may be attributed to multiple factors including lack of awareness within the medical model, poor insurance reimbursement, and time constraints.

Massage may include both physiological and psychological components (56). The possible physiological benefits of massage include stimulation of non-nociceptive nerve endings, which contributes to the release of endorphins, increases serotonin levels (64), and the reflex responses can cause the reduction of blood pressure (55). Massage increases circulation and enhances venous return, which aids in the removal of metabolic waste products helping to maintain healthy tissues (80). In the "gate theory" the notion is that the pressure receptors stimulated by massage are longer and more myelinated than pain receptors. When pain is experienced and the painful area is rubbed, the pressure message travels to the brain faster than the pain message and the gate is shut, thus blocking the entry of the pain message (71). The 'language' of human touch may provide these patients with a feeling of relaxation, warmth, and renewed vitality, which can counteract the stresses and pressures one experiences in everyday life. Massage has been reported to increase mental clarity, reduce anxiety, increase general feelings of well being, and release unexpressed emotions (80).

Danneskoild-Samsoe et al (47) studied 26 patients with myofascial pain and found a significant increase in the plasma myoglobin concentration within two hours after the first massage. They found a positive correlation between the degree of muscle tension and pain, to an increase in plasma myoglobin concentration. After the patients had repeated massage sessions there was a gradual decline in the increase in plasma myoglobin concentration parallel to a reduction in the muscle tension and pain.

Patients with fibromyalgia have significantly elevated concentration of substance P in the cerebrospinal fluid compared to normal controls (74,87). Substance P is a neuropeptide stored in the secretory granules of sensory nerves and released on axonal stimulation (46). The significance of Substance P continues to be investigated. It has been theorized that it is derived from overactive peripheral nociceptive fibers or from central neurons (46). Field and colleagues (54) found a significant decrease in substance P with massage therapy performed for 30 minutes twice weekly for five weeks. This is a promising finding that will require further research.

Ironson et al (64) demonstrated direct effects of massage on chronic disease outcomes in a group of HIV positive men compared with HIV positive controls. The men that received massage showed a significant increase in the number of natural killer cells, natural killer cytotoxicity, soluble CD8, and cytotoxic subset of CD8 cells. Significant decreases in cortisol levels were observed before and after massage. Anxiety and relaxation significantly improved and were correlated with the increased number of natural killer cells (64).

There are many different forms of massage therapy including classical, cross-fiber friction, connective tissue, myofascial release, soft tissue mobilization, Shiatsu, Swedish, and trigger point. The practitioner's sense of touch is fundamental to the massage technique, as the tactile sensation is the means of communication between the patient and the clinician. Most forms of massage can be used for patients with fibromyalgia and other nonneuropathic pain syndromes. Although Pioro-Boisset's (79) interview-based study supports less aggressive forms of massage, reporting greater satisfaction in fibromyalgia patients when a "more toned down and less rigorous massage was used". This patient population tends to be more sensitive to pressure. Therefore clinicians need to consider patient positioning to promote comfort and prevent further tension or stress. The therapist may consider beginning the massage in a distal or proximal area of the body to help the patient relax and slowly work toward the problem areas (80). Realistic

individualized goals should be discussed and established with each patient at the initial evaluation. The therapist should gradually incorporate active treatment such as postural and therapeutic exercise as treatment advances. It is recommended that patients strive for independence with an exercise program and the ability to self manage their symptoms.

There have been numerous studies suggesting the effectiveness of massage in the reduction of pain, stiffness, fatigue and sleeping difficulties in patients' diagnosed with fibromyalgia (54, 53, 59, 79, 98). Brattberg (39) conducted a randomized controlled trial investigating the effect of 15 sessions of connective tissue massage in a 10-week period in the treatment of 48 fibromyalgia patients. The findings were positive in a self-reported reduction of pain in 85% of patients and a reduction in analgesic consumption in 30% of subjects. The massage group also showed a reduction in depression and a positive effect on quality of life. However, after a 6-month follow up 90% of the pain returned. The findings of this study would suggest the need for maintenance massage therapy as the results did not last long term.

Sunshine et al (98) found favorable results in 30 fibromyalgia patients randomly assigned to massage therapy (Swedish massage) or transcutaneous electrical nerve stimulation (TENS) or a no-current TENS group. Thirty treatment sessions were used twice weekly for 4 weeks. All three groups improved on the Rheumatologists' assessment of the subject's clinical condition. Which suggests that all these forms of tactile stimulation and attention are effective. However, only the massage therapy group improved on both the dolorimeter and subject's self reports of pain. The massage group had lower cortisol levels and reported significantly fewer symptoms at the end of the study, including less pain, stiffness, fatigue, and difficulty sleeping. Field et al (54) supported these results in a similar study when comparing massage therapy to relaxation therapy in 24 fibromyalgia patients. The authors found both groups demonstrated a decrease in anxiety and depressed mood. Only the massage group reported an increase in the number of sleep hours, decrease in their sleep movements, and the patients' physicians assigned lower disease and pain ratings and fewer tender point areas. Field (55) found similar results when investigating massage therapy against a sham TENS control group in patients diagnosed with chronic fatigue syndrome. Small samples sizes in most of the studies limits statistical power and makes it difficult to form conclusions on the effectiveness of the massage intervention.

Contrary to these studies Alnigenis et al (35) completed a randomized controlled study on the effect of Swedish massage in 37 patients with fibromyalgia and found no significant long term (28 weeks) benefits in pain reduction, functional status, or psychological distress. High attrition and small sample limit this study's findings.

Massage is a passive intervention in which the patient is dependent on the practitioner. New research by Field et al, (53) investigated Eutony, a combination treatment of massage and movement therapy. This includes self-administered massage using wooden dowels and tennis balls and stretching movements in lying, seated and standing. Early findings were positive showing this self-administered treatment effective in decreasing depression, anxiety and pain. These findings are encouraging because they promote patient independence and may be a progression from passive massage to active therapeutic exercise.

In a recent review of randomized and nonrandomized controlled trials, Holdcrat et al (62) concluded that there was 'moderate' evidence to recommend massage therapy as a therapeutic modality to fibromyalgia patients. This study used the CONSORT, a standardized evaluation of the quality of methodology.

Massage involves considerable one-to-one time, which is challenging in the current healthcare environment. Despite this massage clearly has some benefit and may be shown to be a cost effective tool in the treatment of fibromyalgia and other chronic pain syndromes.