

## POSITION STATEMENT PROPOSAL ON MASSAGE AND FIBROMYALGIA

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### BACKGROUND INFORMATION

“Fibromyalgia syndrome is a group of signs and symptoms that include chronic pain in muscles, tendons, ligaments and other soft tissues. It is one of a collection of chronic disorders that often go hand in hand. [sic] Fibromyalgia syndrome (FMS) is frequently seen with chronic fatigue syndrome, irritable bowel syndrome, migraine headaches, sleep disorders and several other chronic conditions.”<sup>1</sup>

According to the National Institutes of Health, “Scientists estimate that fibromyalgia affects 5 million Americans 18 or older. Between 80 and 90 percent of people diagnosed with fibromyalgia are women. However, men and children also can have the disorder.”<sup>2</sup> A survey conducted with those who have FMS indicates that 98% of those surveyed used some form of complementary and alternative medicine (CAM) to help manage their disorder.<sup>3</sup> In that study, the researchers found that 44% of those surveyed chose massage therapy.<sup>3</sup> In other evidence, the National Center for Complimentary and Alternative Medicine (NCCAM) states: “Fibromyalgia is another pain condition frequently seen by health care providers, and one in which there often is no universally effective treatment. Studies have found that up to 91 percent of people with fibromyalgia use some form of CAM, and up to 75 percent use massage therapy.”<sup>12</sup>

Although some sample sizes are small, research indicates that in respect to fibromyalgia syndrome massage can:

- reduce pain<sup>4, 5, 7, 8, 10</sup>
- improve health status<sup>4</sup>
- improve quality of life<sup>11</sup>
- decrease anxiety<sup>4, 7, 10</sup>
- decrease depression<sup>4, 5, 7, 8</sup>
- increase sleep hours<sup>4</sup>
- increase quality of sleep<sup>4, 8, 10</sup>

- improve quality of sleep over time<sup>10</sup>
- reduce tender points<sup>4</sup>
- decrease urinary CRF-LI (a biochemical marker of stress-related symptoms)<sup>5</sup>
- decrease use of analgesics<sup>7</sup>
- decrease cortisol levels<sup>8,9</sup>
- decrease stiffness<sup>8</sup>
- decrease fatigue<sup>8</sup>
- work well in an integrative treatment plan<sup>3, 11, 12, 13</sup>

## **RATIONALE**

Massage therapy is increasingly becoming a part of integrative care and those with fibromyalgia are seeking complementary and alternative medicine to support their treatment of the syndrome.<sup>3, 11, 12, 13, 14</sup> Those patients who seek relief from fibromyalgia syndrome can benefit from massage therapy given by professional massage therapists working within their scope of practice.

The position statement supports portions of the AMTA Core Values:

- We are a diverse and nurturing community working with integrity, respect and dignity.
- We endorse professional standards.
- We believe in the benefits of massage

The position statement supports portions of the Vision Statement of AMTA:

- AMTA members are devoted to professionalism and excellence in massage therapy practice.
- Quality research is the foundation for evidence-informed massage therapy education and practice.
- AMTA supports its members in expanding their knowledge through quality education.
- AMTA embodies the spirit of community in support of its members.
- Massage therapy is a vital component of health care and wellness.

The position statement supports portions of the Strategic Plan Objectives and Goals of AMTA:

### ***ADVOCACY AND INFLUENCE***

Goal: The health care and wellness industry accepts the value of massage therapy

Objective: Increase understanding of the benefits of massage therapy through education of the health care and wellness industry.

### ***INDUSTRY RELATIONSHIPS***

Goal: AMTA is a respected leader within the health care and wellness industry.

Objective: Increase collaboration between AMTA, its members and other health care and wellness industry leaders.

### ***RESEARCH***

Goal: AMTA members are aware of the importance of scientific research to the massage therapy

industry.

Objective: Increase the opportunities for members to access massage therapy scientific research through AMTA sources.

## **COMMUNITY**

Goal: AMTA members experience a sense of community.

Objective: Increase opportunities for members to feel connected to AMTA nationally and locally.

## **POSITION STATEMENT**

It is the position of the American Massage Therapy Association (AMTA) that massage therapy can be a beneficial part of an integrative treatment plan for those who suffer with fibromyalgia syndrome.

## **REFERENCES**

1. Werner, R. (2009). *Massage Therapist's Guide to Pathology: Fourth Edition*. Philadelphia, PA: Lippincott Williams & Wilkins.
2. What Is Fibromyalgia?: Fast Facts: An Easy-to-Read Series of Publications for the Public. (2009). Retrieved January 22, 2010 from National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) website:  
[http://www.niams.nih.gov/Health\\_Info/Fibromyalgia/fibromyalgia\\_ff.pdf](http://www.niams.nih.gov/Health_Info/Fibromyalgia/fibromyalgia_ff.pdf).
3. Wahner-Roedler, D.L., Elkin, P.L., Vincent, A., Thompson, J.M., Oh, T.H., Loehrer, L.L., Mandrekar, J.N., Bauer, B.A. (2005). Use of complementary and alternative medical therapies by patients referred to a fibromyalgia treatment program at a tertiary care center. *Mayo Clin Proc*, 80(1):55-60.

**OBJECTIVE:** To evaluate the frequency and pattern of complementary and alternative medicine (CAM) use in patients referred to a fibromyalgia treatment program at a tertiary care center.

**PATIENTS AND METHODS:** Patients referred to the Mayo Fibromyalgia Treatment Program between February 2003 and July 2003 were invited on their initial visit to participate in a survey regarding CAM use during the previous 6 months. An 85-question survey that addressed different CAM domains was used.

**RESULTS:** Of the 304 patients invited to participate, 289 (95%) completed the survey (263 women and 26 men). Ninety-eight percent of the patients had used some type of CAM therapy during the previous 6 months. The 10 most frequently used CAM treatments were exercise for a specific medical problem (48%), spiritual healing (prayers) (45%), massage therapy (44%), chiropractic treatments (37%), vitamin C (35%), vitamin

E (31%), magnesium (29%), vitamin B complex (25%), green tea (24%), and weight-loss programs (20%).

CONCLUSION: CAM use is common in patients referred to a fibromyalgia treatment program.

4. Field, T., Diego, M., Cullen, C., Hernandez-Reif, M., Sunshine, W., Douglas, S. (2002). Fibromyalgia pain and substance P decrease and sleep improves after massage therapy. *J Clin Rheumatol*, 8(2):72-6.

Massage therapy has been observed to be helpful in some patients with fibromyalgia. This study was designed to examine the effects of massage therapy versus relaxation therapy on sleep, substance P, and pain in fibromyalgia patients. Twenty-four adult fibromyalgia patients were assigned randomly to a massage therapy or relaxation therapy group. They received 30-minute treatments twice weekly for 5 weeks. Both groups showed a decrease in anxiety and depressed mood immediately after the first and last therapy sessions. However, across the course of the study, only the massage therapy group reported an increase in the number of sleep hours and a decrease in their sleep movements. In addition, substance P levels decreased, and the patients' physicians assigned lower disease and pain ratings and rated fewer tender points in the massage therapy group.

5. Lund, I., Lundeberg, T., Carleson, J., Sönnerrfors, H., Uhrlin, B., Svensson, E. (2006). Corticotropin releasing factor in urine--a possible biochemical marker of fibromyalgia. Responses to massage and guided relaxation. *Neurosci Lett*, 403(1-2):166-71.

The purpose of this preliminary study was to evaluate the relationship between a possible biochemical marker of stress, 24-h urinary concentrations of Corticotropin Releasing Factor-Like Immunoreactivity (CRF-LI), and ratings of stress-related symptoms like depression and anxiety, as well as to evaluate pain and emotional reactions in patients with fibromyalgia (FM). Another purpose was to study the effects of massage and guided relaxation, with respect to change in the same variables. Urine sampling and ratings were performed before treatments, after and 1 month after completed treatments. Concentrations of CRF-LI was analysed with radioimmunoassay technique. For the assessment of depression, anxiety and pain the CPRS-A questionnaire was used and for rated pain and emotional reactions the NHP questionnaire was used. The 24-h urinary concentration of the CRF-LI was found to be related to depression, mood and inability to take initiative. After treatment the urinary CRF-LI concentrations and the rated levels of pain and emotional reactions were found to have decreased. In conclusion, the 24-h urinary CRF-LI concentration may be used as a biochemical marker of stress-related symptoms such as depression in patients with FM and possibly also other conditions characterized by chronic pain. Therapies such as massage and guided relaxation may be tried for the amelioration of pain and stress but further studies are required.

6. Melillo, N., Corrado, A., Quarta, L., D'Onofrio, F., Trotta, A., Cantatore, F.P. (2005). [Fibromyalgic syndrome: new perspectives in rehabilitation and management. A review] *Minerva Med*, 96(6):417-23.

Fibromyalgia is a chronic syndrome, characterized by widespread body pain and pain at specific tender points, whose etiology and pathogenesis is still unknown. Patient can also

exhibit a range of other symptoms including irritable bowel syndrome, chest pain, anxiety, fatigue, sleep disturbance, headache. The prevalence of fibromyalgia ranges from 1-3% in the general population, and the condition is more common among female than males. Contrary to the situation a few years ago, the most widely accepted hypothesis now evoke central nervous system mechanisms, whose local functions could influence also peripheral microvascular activity at tender points. There are many findings supporting the hypothesis of different endogenic and exogenic factors that lead to chronic local hypoxia in muscle tissue. Currently, therapy is polipragmatic and is aimed at reducing the pain. A range of medical treatment had been used to treat fibromyalgia. Pharmacological therapy aims to enhance the pain threshold and to support sleep. Nonpharmaceutical treatment modalities, such as exercise, massage, idrotherapy can be helpful. Future studies should investigate the possible benefits of new strategies that may combine the effects of hot pool water, stretching exercises, massage and relaxation benefits of balneotherapy.

7. Brattberg, G. (1999). Connective tissue massage in the treatment of fibromyalgia. *Eur J Pain*, 3(3):235-244.

The aim of this study was to investigate the effect of connective tissue massage in the treatment of individuals with fibromyalgia. The results of this random study of 48 individuals diagnosed with fibromyalgia (23 in the treatment group and 25 in the reference group) show that a series of 15 treatments with connective tissue massage conveys a pain relieving effect of 37%, reduces depression and the use of analgesics, and positively effects quality of life. The treatment effects appeared gradually during the 10-week treatment period. Three months after the treatment period about 30% of the pain relieving effect was gone, and 6 months after the treatment period pain was back to about 90% of the basic value. As long as there is a lack of effective medical treatment for individuals with fibromyalgia, they ought to be offered treatments with connective tissue massage. However, further studies are needed in the mechanisms behind the treatment effects. Copyright 1999 European Federation of Chapters of the International Association for the Study of Pain.

8. Sunshine, W., Field, T.M., Quintino, O., Fierro, K., Kuhn, C., Burman, I., Schanberg, S. 1996). Fibromyalgia benefits from massage therapy and transcutaneous electrical stimulation. *J Clin Rheumatol*, 2(1):18-22.

Thirty adult fibromyalgia syndrome subjects were randomly assigned to a massage therapy, a transcutaneous electrical stimulation (TENS), or a transcutaneous electrical stimulation no-current group (Sham TENS) for 30-minute treatment sessions two times per week for 5 weeks. The massage therapy subjects reported lower anxiety and depression, and their cortisol levels were lower immediately after the therapy sessions on the first and last days of the study. The TENS group showed similar changes, but only after therapy on the last day of the study. The massage therapy group improved on the dolorimeter measure of pain. They also reported less pain the last week, less stiffness and fatigue, and fewer nights of difficult sleeping. Thus, massage therapy was the most effective therapy with these fibromyalgia patients.

9. Field, T., Hernandez-Reif, M., Diego, M., Schanberg, S., Kuhn, C. (2005). Cortisol decreases and serotonin and dopamine increase following massage therapy. *Int J Neurosci*. 115(10):1397-413.

In this article the positive effects of massage therapy on biochemistry are reviewed including decreased levels of cortisol and increased levels of serotonin and dopamine. The research reviewed includes studies on depression (including sex abuse and eating disorder studies), pain syndrome studies, research on auto-immune conditions (including asthma and chronic fatigue), immune studies (including HIV and breast cancer), and studies on the reduction of stress on the job, the stress of aging, and pregnancy stress. In studies in which cortisol was assayed either in saliva or in urine, significant decreases were noted in cortisol levels (averaging decreases 31%). In studies in which the activating neurotransmitters (serotonin and dopamine) were assayed in urine, an average increase of 28% was noted for serotonin and an average increase of 31% was noted for dopamine. These studies combined suggest the stress-alleviating effects (decreased cortisol) and the activating effects (increased serotonin and dopamine) of massage therapy on a variety of medical conditions and stressful experiences.

10. Castro-Sánchez, A.M., Matarán-Peñarrocha, G.A., Granero-Molina, J., Aguilera-Manrique, G., Quesada-Rubio, J.M., Moreno-Lorenzo, C. (2011). Benefits of massage-myofascial release therapy on pain, anxiety, quality of sleep, depression, and quality of life in patients with fibromyalgia. *Evid Based Complement Alternat Med.* 2011:561753.

Fibromyalgia is a chronic syndrome characterized by generalized pain, joint rigidity, intense fatigue, sleep alterations, headache, spastic colon, craniomandibular dysfunction, anxiety, and depression. The purpose of the present study was to determine whether massage-myofascial release therapy can improve pain, anxiety, quality of sleep, depression, and quality of life in patients with fibromyalgia. A randomized controlled clinical trial was performed. Seventy-four fibromyalgia patients were randomly assigned to experimental (massage-myofascial release therapy) and placebo (sham treatment with disconnected magnotherapy device) groups. The intervention period was 20 weeks. Pain, anxiety, quality of sleep, depression, and quality of life were determined at baseline, after the last treatment session, and at 1 month and 6 months. Immediately after treatment and at 1 month, anxiety levels, quality of sleep, pain, and quality of life were improved in the experimental group over the placebo group. However, at 6 months postintervention, there were only significant differences in the quality of sleep index. Myofascial release techniques improved pain and quality of life in patients with fibromyalgia.

11. Casanueva-Fernández, B., Llorca, J., Rubió, J.B., Rodero-Fernández, B., González-Gay, M.A. (2011). Efficacy of a multidisciplinary treatment program in patients with severe fibromyalgia. *Rheumatol Int.* [Epub ahead of print].

The purpose of this study was to evaluate the efficacy of a multidisciplinary treatment program in patients severely affected by fibromyalgia. Thirty-four fibromyalgia patients were randomly divided into two groups. The control group: 17 women who continued their medical treatment and participated in four educational sessions and the experimental group that included 17 patients who besides the former medical treatment also underwent a weekly 1-h session program for 8 weeks including massage therapy, ischemic pressure on the 18 tender points, aerobic exercise and thermal therapy. At the beginning of the program, there were no significant differences between the two groups in any of the parameters. At the end of treatment, there was a significant improvement in the experimental group in the following items: vitality, social functioning, grip strength and the 6-min walk test. At 1 month after the end of treatment, the experimental group showed significant differences in overall health perception, social functioning, grip strength and

the 6-min walk test. At that time, considering the threshold for clinical efficacy set at an improvement of 30% or above for the analyzed variables, 25% of the patients met the requirement for improvement of the following: number of symptoms: Visual Analogic Scale for fatigue, Fibromyalgia Impact Questionnaire and Beck Anxiety Inventory. In conclusion, patients with severe manifestations of fibromyalgia can obtain improvement with a short-term, low-cost and simple-delivery multidisciplinary program. However, additional studies including higher numbers of patients are needed to confirm the beneficial effect of this treatment program.

12. Barbour, C. (2000). Use of complementary and alternative treatments by individuals with fibromyalgia syndrome. *J Am Acad Nurse Pract.* 12(8):311-6.

Although muscle pain is the primary complaint of patients with fibromyalgia, there are myriad associated symptoms that cause them to seek healthcare. Some individuals try alternative treatments when conventional medicine does not provide symptom relief. A questionnaire was developed to collect information regarding complementary treatments and their effectiveness. Sixty individuals visited the researcher's web page and completed and submitted an online questionnaire on fibromyalgia. Literature, heat, walking, vitamins, and massage were the interventions tried most frequently. Literature, aromatherapy, support groups, heat, and massage were rated the most effective.

13. Lemstra, M., Olszynski, W.P. (2005). The effectiveness of multidisciplinary rehabilitation in the treatment of fibromyalgia: a randomized controlled trial. *Clin J Pain.* 21(2):166-74.

**OBJECTIVES:** To assess the effectiveness of multidisciplinary rehabilitation in the treatment of fibromyalgia in comparison to standard medical care.

**METHODS:** Seventy-nine men and women were randomly assigned to one of two groups. The intervention group consisted of a rheumatologist and physical therapist intake and discharge, 18 group supervised exercise therapy sessions, 2 group pain and stress management lectures, 1 group education lecture, 1 group dietary lecture, and 2 massage therapy sessions. The control group consisted of standard medical care with the patients' family physician. Outcome measures included self-perceived health status, pain-related disability, average pain intensity, depressed mood, days in pain, hours in pain, prescription and nonprescription medication usage, and work status. Outcomes were measured at the end of the 6-week intervention and at 15-month follow-up.

**RESULTS:** Thirty-five out of 43 patients from the intervention group and 36 out of 36 patients from the control group completed the study. There were no statistically significant differences between the 2 groups prior to intervention. Intention-to-treat analysis revealed that the intervention group, in comparison to the control group, experienced statistically significant changes at intervention completion in self-perceived health status, average pain intensity, pain related disability, depressed mood, days in pain, and hours in pain, but no significant differences in nonprescription drug use, prescription drug use, or work status. At 15 months, all health outcomes retained their significance except health status. Nonprescription and prescription drug use demonstrated significant reductions at 15 months. Binary logistic regression indicated that long-term changes in Pain Disability Index were influenced by long-term exercise adherence and income status.

306 CONCLUSIONS: Positive health-related outcomes in this mostly unresponsive condition  
307 can be obtained with a low-cost, group multidisciplinary intervention in a community-  
308 based, nonclinical setting