Evaluating the Benefits of Equine Massage Therapy: A Review of the Evidence and Current Practices

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ABSTRACT

Following the lead of human athletic training, equine massage therapy is becoming a more common part of the management of equine athletes and pleasure horses alike. The basic science rationale for massage is supported by research indicating that massage may affect a number of physiologic systems as well as cellular and fascial components of the muscular system. Equine therapeutic massage, or sports massage, employs a number of techniques first developed in humans and has been reported to increase range of motion and stride length, reduce activity of nociceptive pain receptors, and reduce physiologic stress responses. Additional preliminary research indicates that massage therapy also may improve some aspects of exercise recovery. Although important evidence has begun to document the potential benefits of massage therapy for equine athletes, the current review may say less about the true clinical effects of massage therapy than it does about the current state of research in this field. Additional prospective study of massage therapy using sufficient scientific rigor will be necessary to provide veterinarians, trainers, and owners with definitive data and scientifically based confidence in the use of equine massage. In the meantime, the preliminary research, anecdotal positive effects, and case studies indicating potential benefit are not to be ignored; equine massage therapy already plays a valuable practical role in the care and training of many equine athletes.

Keywords: Equine Massage; Massage Therapy; Sports Massage; Stress Point Therapy

INTRODUCTION

Massage therapy is consistently applied to human athletes, and its use among the general public has also grown in recent years.[1,2] Similarly, massage therapy in the horse has caused a great deal of speculation and interest.[3,4] The growing use of massage therapy in humans is largely attributable to the perceptions and observations of athletes, coaches, and sports medicine experts who perceive that massage can provide benefits to the body and may enhance performance.[5-7] These reported benefits include reduced muscle tension and soreness, reduced muscle spasm, greater flexibility and range of motion, reduced neurologic excitability, and an increased sense of well-being.[2,7] It has also been suggested that therapeutic massage may enhance muscle blood flow and lactate clearance[8] while reducing creatinine kinase levels.[9]

However, while many sing accolades of the results, others question the validity of massage therapy, because the beneficial claims are often based on anecdotal observations and experiences.[10] Evidence to fully support or refute the effects of therapeutic massage on athletic performance in horses, or in humans for that matter, is insufficient and even contradictory at this time.[5-7] This review explores the available current evidence regarding the potential benefits of equine massage and discusses some common massage techniques used in equine massage practice today.

Today's equine massage practice most often focuses on techniques including various "point therapies" such as stress point therapy, trigger point therapy, and myofascial release techniques. The trigger point therapy system was initially developed in human patients and addresses a hyperirritable area by using direct pressure. This pressure can be applied in varying depths to the specific point with the thumb, finger, elbow, or heel of hand. The trigger point system has evolved into part of today's *sports massage,* a technique developed by Jack Meagher in the 1950s. Meagher coined the phrase "sportsmassage" as one word and is credited with formally bringing massage to animal subjects in the United States.[4,11] Sportsmassage involves the application of compression, direct pressure, and cross-fiber friction. This type of therapy is based on the theory that the most stress occurs at the musculotendinous junction of the origin of the muscle, or the "anchored" area. These points are referred to as *stress points*, and hence the term *stress point therapy.* Meagher's practical equine massage techniques used a system of evaluating and treating 25 common points in the horse that correspond to areas of tension, or areas that are most often subjected to stress, strain, or potential injury (Fig. 1).[11]

Mechanism of Action

Although much scientific information is still necessary on the topic of massage, research is ongoing to fully illuminate

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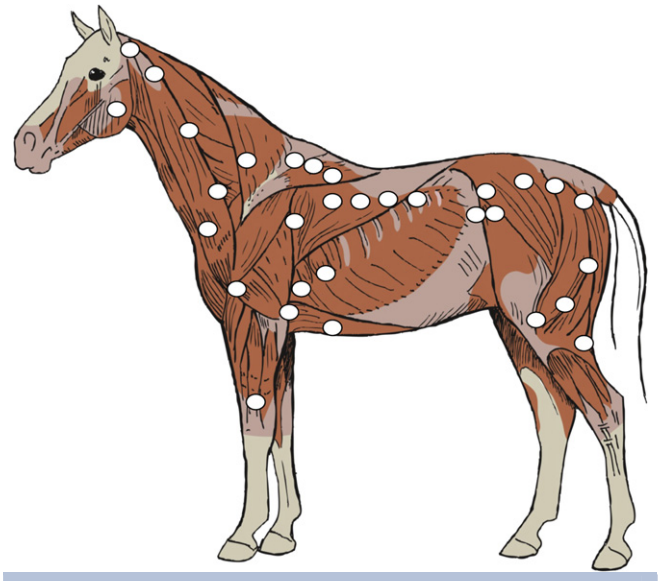

Figure 1. Common Areas of Equine Stress Points: For clinical practice, Mike Scott has expanded upon the 25 common areas of stress originally identified by Jack Meagher.

the mechanisms of action of this modality. Although many of these research efforts are in the human field, their findings are transferable to the small animal or horse. The National Board of Certification for Animal Acupressure and Massage (NBCAAM) notes physiologic effects of massage therapy that impact not only the muscular system but also numerous other body systems, including the skeletal system, digestive system, and nervous system.[4]

It has been suggested that therapeutic massage likely causes systemic effects via several different mechanisms of action, including biomechanical, physiologic, neurologic, and psychologic mechanisms.[7] As we consider muscle bellies, fibers, and myofibrils, it becomes apparent how various areas can be affected with different therapeutic massage applications. For example, although massage may not have a direct influence on a joint, the compensatory tightness that can occur in the muscle from splinting or bracing to protect a vulnerable area can reduce range of motion. After these tight areas are released, the range of motion can return to normal. In general, therapeutic massage involves mechanical pressure, which can increase muscle compliance, and thus results in increased joint motion and decreased stiffness.[7]

Furthermore, consideration of the fascial system clarifies how the various systems are physically interconnected. Mechanical pressure also may assist in increasing blood flow by increasing arteriolar pressure and increasing muscle temperature. Depending on the technique employed, this pressure can either increase or decrease neural excitability.[7] In addition, changes in parasympathetic parameters such as heart rate and blood pressure, as well as hormonal effects, can result in a relaxation response that may reduce stress and anxiety.[7] Ongoing and expanded research is necessary to confirm the full mechanisms of action of therapeutic massage, although the effects of these actions are regularly witnessed by practitioners in clinical cases.

Cellular and Fascial Mechanisms. Fascia is the complex connective tissue that forms an endless three-dimensional matrix of structural support throughout the body. Current research and new hypotheses focus on fascia and the important implications of the fascial system on the body's ability to perform. Both increased mechanical stress caused by overuse, repetitive movement, or hypermobility and decreased stress caused by immobilization or hypomobility can cause changes in connective tissue. Conversely, a consistent absence of tension can lead to connective tissue atrophy, architectural disorganization, increased fibrosis, adhesions, and contractures. For example, fibrosis can be a direct result of hypomobility or the indirect result of hypermobility caused by injury or inflammation.[12,13] In general, the body attempts to remain aligned for optimal support and function; at the tissue level, fascia shortens and thickens as the body compensates to remain aligned and balanced or to address a mechanical stress.[14]

Fascial relaxation as a result of therapeutic massage intervention is most often explained in terms of the mechanical properties of fascia and the reactions of that tissue to a mechanically induced force. By applying heat or pressure, the fascial substance changes from a denser, or *gel*, state to a more fluid, or *sol*, state.[12,13] This effect is called thixotropy. However, because this effect only occurs while the pressure or heat is applied, thixotropy may not fully explain the mechanism of action of myofascial release therapy.[12,13] The practical application of myofascial release massage therapy is often expressed by practitioners as applying pressure over a long duration of a few seconds to minutes, until they "feel a release." This sensation may inform the therapist of a change in the texture of superficial fascia or possibly a change in the tissue via a release from a trigger point, stress point, or adhesion in the underlying connective tissue.

A recent retrospective analysis of 31 human subjects who completed 10 sessions of the myofascial release massage therapy technique known as Rolfing documented improved range of motion and reduced pain levels.[14] Among the older group of patients, the active range of motion increased by 67% as a result of the myofascial release therapy, whereas the younger patients achieved a range of motion increase of 34%.

Demonstrating the ongoing evolution within the field of fascial research, the first Fascial Conference was held in Boston in 2007. This event covered topics such as stresses, remodeling, pain, restriction, and plasticity. In addition,

recent advances in imaging and ultrasound enable researchers to add new dimensions to their work. For example, it is now possible to view the inside of a trigger point, to detect connective tissue fibrosis and lesions, or to demonstrate the interconnectedness of the fascial system by viewing connective tissue with microbic cameras.

Evaluating the Benefits of Massage Therapy

Two literature reviews from 2001 and 2002 evaluated the body of evidence regarding massage therapy in humans and horses, respectively.[6,10] These publications conclude that although there are reports of therapeutic massage benefits, the field lacks consistent rigorous scientific data. The authors note the anecdotal nature of many of the available publications and present conflicting study outcomes. Furthermore, both of these reviews emphasize a need for further research to apply scientific principles to the study of therapeutic massage.[6,10]

More recently, in 2008, Best and colleagues performed a critical review of 17 case series reports and 10 randomized clinical trials of therapeutic massage.[5] Similar to the earlier reviews, this analysis found inconsistent and conflicting reports among case study series of various sizes and design. Based on 17 case series publications, the authors concluded that most of the studies evaluating postexercise function suggest little effect of massage on performance. However, among the publications that reported therapeutic outcomes, benefits in terms of reduction of delayed-onset muscle soreness were observed.[5] In addition, the data from the 10 randomized controlled studies provided moderate evidence for the efficacy of therapeutic massage. Among these reports, five trials reported positive outcomes, one reported mixed outcomes, and four reported no benefit.[5] The conclusions from these 10 randomized trials are presented in Table 1.

Flexibility, Range of Motion, and Equine Stride Length. Evaluations of human athletes have demonstrated that therapeutic massage can induce improvements in flexibility and range of motion.[15,16] For example, the effects of sports massage on the quadriceps muscle group were evaluated in a series of 17 volunteers.[15] In this trial, after a 5-minute warm-up period, sports massage improved range of motion, achieving a change from baseline of 2.2 ± 0.42 degrees. This was significantly greater than the change in the control subjects, who changed only 0.67 ± 0.72 degrees from baseline ($P = .008$). However, in this analysis, the therapeutic massage did not have an effect on peak torque production, and it did not accelerate the time to peak torque. Similarly, another series evaluated 11 individuals who received a 10-minute massage on the hamstring group on one leg three times per week for a total of 10 weeks, with the other leg acting as a no massage control group.[16] In this trial, sports massage produced significantly better flexibility and strength compared with the no-massage control limb ($P < .01$). This study demonstrated the strength and flexibility benefits of regular massage performed for at least 10 weeks, and the authors recommended that sports massage be used as a training tool to maximize an athlete's potential strength and flexibility.[16]

In terms of equine research, one of the pivotal studies on range of motion was performed by the Jack Meagher Institute, under a grant from the American Massage Therapy Association.[17] This grant itself is notable, because it was the first that this foundation provided for nonhuman subjects. The concept of such study in nonhuman subjects is the reverse of usual research progression, because treatments are most often first tested in animals for safety and preliminary efficacy. In this case, an advantage of performing nonhuman research provided an opportunity for an objective assessment of the effects of therapeutic massage without typical human preconceived biases or placebo effects. The primary objective of the study was to investigate the effects of massage on range of motion by assessing stride length, a practical measure of range of motion in the horse.

This controlled study included eight horses of the same breed, at a similar weight, size, and age.[17] The horses underwent treadmill locomotion evaluation to record stride lengths before and after massage. Before massage therapy, the stride length and frequency at the walk and trot were measured to determine a baseline range of motion. In this assessment, the horses were placed on a treadmill at a walk (8 miles per hour) and at a trot (12 miles per hour) for 100 strides, then cooled down for 75 minutes. In addition, ultrasound images recorded the targeted muscles to measure the cross-sectional diameter of the muscle bellies and muscle tendon junctions to assess physiologic effects of massage. The specific muscles targeted with massage therapy were major muscles involved in the planned work: the supraspinatus, triceps brachii (long, lateral and medial heads), biceps femoris, and superficial gluteal muscles.After baseline readings, the horses were massaged for 20 minutes using direct pressure, cross-fiber friction, and compression on the targeted muscles. The measurements were then repeated after massage to assess changes in range of motion.

Immediately after massage, the ultrasound was repeated on the marked muscles and muscle tendon junctions. The horses were put back on the treadmill, and stride lengths were remeasured. The results documented an increase in range of motion, demonstrated by increased stride length. After massage, the stride length at the walk increased by 3.6% (4.8 inches); the stride length at the trot increased by 1.2% (1.7 inches) after massage. This increased range of motion resulted in a decreased stride frequency documented at a constant velocity.[17] These findings imply a positive effect of sports massage on athletic performance in the horse, and further research should be performed to confirm and elaborate on these potential benefits.

Table 1. Summary of 10 Randomized Controlled Clinical Trials Evaluating Therapeutic Massage[5]

Author, Year	Subjects (N)	Type of Massage	Conclusions
Brooks et al, 2005[32]	52	Effleurage and circular friction	Massage IAE had a significantly ($p<0.05$) greater effect than nonmassage on immediate grip performance after fatigue
Rodenburg et al, 1994[22]	50	Muscles pressed and shaken, skin manipulated, effleurage, tapotement, petrissage	Warm-up, stretching, and massage significantly ($p<0.05$) enhanced FAE and lessened DOMS AE
Lane et al, 2004[33]	10	Deep effleurage, compressions, deep muscle stripping, jostling, cross fiber frictions	Massage, active recovery, and cold water immersion appeared to show significantly ($p<0.05$) less decline in work output compared to rest
Smith et al, 1994[9]	10	Effleurage, shaking, petrissage, wringing, cross-fiber massage	Sports massage significantly ($p<0.05$) reduced creatine kinase levels and symptoms of DOMS when used 2 hours AE
Mancinelli et al, 2006[34]	22	Effleurage, petrissage, and vibration	Massage in women collegiate athletic training significantly ($p<0.05$) improved vertical jump displacement and decreased DOMS
Hilbert et al, 2003[35]	18	Classical Swedish techniques; effleurage, tapotement, petrissage	Massage AE did not significantly improve hamstring function, but did reduce intensity of soreness 48 hours AE
Dawson et al, 2004[36]	12	Effleurage with flushing, petrissage (deep strokes) and stretching	Massage had no significant physiological or psychological benefits
Weber et al, 1994[37]	40	Effleurage leading to petrisage followed by quick effleurage	No significant difference between massage, electrical stimulation, upper body ergometry and control groups in peak torque or visual analog scale
Martin et al, 1998[38]	10	Sports massage consisting of effleurage, petrissage, tapotement, and compressions	No significant difference found between massage and rest for changes in blood lactate
Monedero et al, 2003[39]	18	Effleurage, stroking, tapotement	Massage was not significantly more effective than passive massage for blood lactate removal

IAE=immediately after exercise
FAE=flexion and extension
DOMS=delayed onset muscle soreness
AE=after exercise

Pain. Human patient evaluations report massage therapy resulting in reduced pain caused by postexercise early- or late-onset muscle soreness,[5,9,18-23] as well as reduced pain from surgery or injury.[24,25] However, pain is one of the areas that are more difficult to evaluate in equine subjects, because people can communicate what they experience after a session; a horse is obviously different in this respect.

One recent equine clinical study approached this issue by measuring spinal mechanical nociceptive thresholds

(MNTs) after massage therapy, chiropractic adjustment, and phenylbutazone antiinflammatory medication.[26] Previously, MNTs have been used to objectively measure the minimum amount of pressure that elicits a pain response. In other words, lower MNTs indicate increased pain, and raised MNTs indicate a reduction in pain. This series included 38 horses with no clinical signs of back pain and measured the MNTs at 1, 3, and 7 days in horses assigned to one of three therapies or to a control group. By the 7th day, the median MNT had significantly increased in horses that underwent one of the three therapies, whereas those in the control groups had MNT changes of less than 1%. The authors concluded that both therapeutic massage and chiropractic treatment produce positive nociceptive changes from baseline. The practical clinical value of MNT changes is yet to be determined; however, the pattern of the changes was deemed to be relevant. Specifically, therapeutic massage resulted in an immediate increase in MNTs at day 1, which gradually increased at days 3 and 7. This appears to suggest that mechanisms of action other than endorphin release are responsible for the MNT increase after therapeutic massage, as endogenous opiate system effects would be transient.[26]

Postexercise Recovery. Although the use of massage postexercise to assist with recovery has yet to be established, a recent study evaluated the use of whole body massage on a number of physiologic parameters after repeated high-intensity exercise.[27] In this trial, baseline measurements of heart rate variability and blood pressure were taken in 62 human subjects, who then performed standardized warmup exercises and completed a high-intensity cycling exercise protocol. The subjects were then treated during exercise recovery with either myofascial release massage therapy or a placebo sham therapy using disconnected ultrasound and magnetotherapy equipment. After the exercise protocol, all subjects experienced a significant decrease in heart rate variability index, diastolic blood pressure ($P < .001$), and low-frequency domain values ($P = .006$) compared with baseline. After the recovery period, the heart rate variability index and high-frequency values were similar to baseline levels in the massage group ($P = .42$ and $P = .94$, respectively). Conversely, in the placebo group, the heart rate variability index tended to be lower ($P = .05$), and the high-frequency value was significantly lower ($P < .01$) compared with baseline values. The placebo subjects also demonstrated a tendency for high-frequency domain values to be lower than after the exercise. Similarly, diastolic blood pressure returned to baseline levels in the massage group but remained lower in the placebo group. These findings suggest that myofascial release massage has a positive effect on heart rate variability and diastolic blood pressure after high-intensity exercise, assisting the return of these parameters to pre-exercise levels.[27]

To assess the biologic basis of therapeutic massage after exercise, investigators at Ohio State University created an animal model that mimicked the Swedish massage technique.[28] This research subjected muscle to 30 minutes of compressive massage immediately after exercise, and this exercise–massage cycle was repeated for 4 days, at which point the animals' muscle strength and tissue were examined. This analysis found that the massaged muscles achieved enhanced recovery and function, as well as attenuated leukocyte infiltration. Additionally, muscle fiber necrosis and wet weight of the tissue were also reduced by the compression massage. Overall, the massaged muscles recovered an estimated 60% of the strength after the 4-day trial, compared with restoration of approximately 14% of strength in muscle that were exercised and then simply rested. These findings indicate that subjecting muscle to massage therapy immediately after exercise may lead to improved recovery and may reduce damaging effects to the muscle. Although these observations from this rabbit model suggest that similar responses may be observed in clinical practice, further research is needed to translate these findings to animal or human therapeutic applications.[28]

Stress. Stress is interference in the normal physiologic state of the body and can be caused by a number of psychologic or physical factors. In everyday situations, the body addresses these stressors to maintain homeostasis through physiologic changes such as releasing epinephrine or cortisol.[2] A recent literature review focused on the effectiveness of massage therapy to impact stress-reactive physiologic measures.[2] Most of the 25 studies in this review administered 20 to 30 minutes of massage therapy two times per week for over 5 weeks, with evaluations conducted before and after the sessions. Within this body of literature, reductions in salivary cortisol and heart rate were consistently noted after the massage sessions. In addition, among studies that included blood pressure (BP) analysis, approximately half documented reduced BP after massage. One study that focused specifically on BP noted reductions in systolic and diastolic BP of 4% to 8% after 30-minute massage sessions.[29] Furthermore, the seven studies that reported changes in BP after multiple massage sessions indicate a positive effect of multiple massage sessions on diastolic BP.[2] Although a sustained reduction in most other measures was not apparent in the review, the single-treatment effects appear to be repeatable and consistent. Overall, the available literature does not appear to be robust enough to make a definitive conclusion regarding multiple treatment effects of massage therapy on cortisol or catecholamines, although there is evidence to suggest a positive effect of on diastolic blood pressure.[2]

Similarly, reduced heart rates and positive stress responses have also been reported within equine research.

Table 2. Contraindications for Equine Massage Therapy[4]

Contraindication	Comments
Shock	Shock lowers blood pressure and massage may cause further hypotension
Fever	Fever often indicates infection and massage may elevate fever
Cancer	Massage should be performed only under veterinary approval
Open wounds	Affected areas should not be massaged
Torn muscle, tendon, ligament	Massage should be performed only after veterinary approval
Skin conditions such as ringworm	Massage may spread dermatologic conditions
Acute stages of disease such as equine influenza or herpes	Systemic diseases involve a myriad of variables and requires veterinary guidance regarding application of massage in a specific situation

One such study evaluated the effects of massage to reduce stress in 10 mature injury-free horses and ponies, all of whom were familiarized with massage therapy and the monitoring equipment before the study.[30] Each horse was exercised for 1 hour at least 3 hours earlier in the day, and massage therapy was administered to six consistent specified sites. In this study, significant changes occurred when massage was applied, with the largest physiologic and behavioral effects to massage applied at allogrooming sites (mid-neck, wither, croup) compared with other areas. Notably, massage therapy significantly reduced heart rate, with an average reduction in HR of 4.3% during the session and of 2.6% after the session. In addition, massage was found to have a significant effect on the behavior of the horses ($P < .001$), and again massage at the allogrooming sites elicited the greatest effect on behavior scores. These results support the practical use of massage therapy to create a more relaxed, calm state in the horse, which may be quite useful in certain situations.[30]

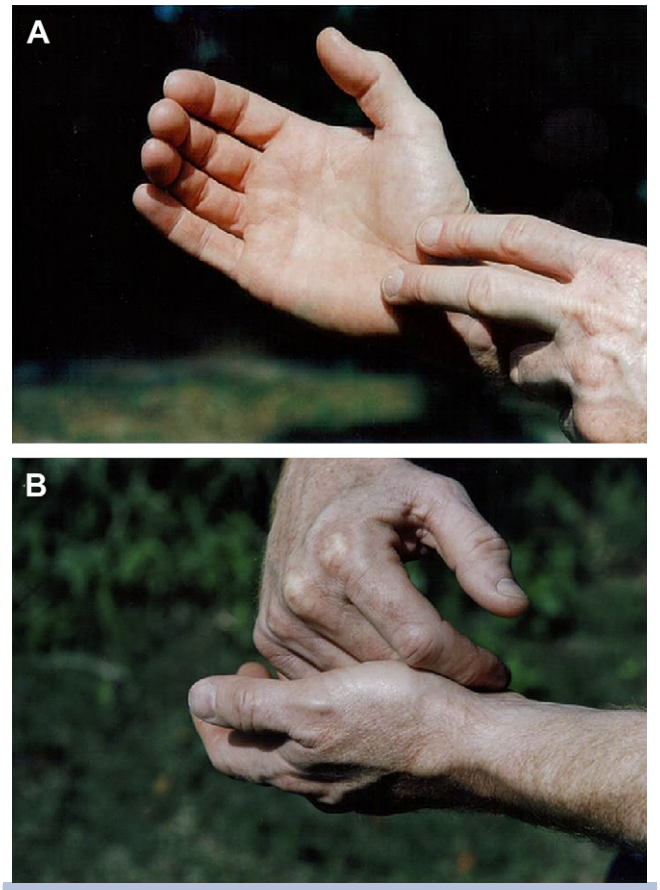

Figure 2. (A) – Compression technique using the heel of the hand. (B) – Compression technique using a loose fist. (**A and B**) – The Compression technique repeatedly compresses the muscle, thereby flattening the muscle fascicles.

Indications and Contraindications for Equine Massage

The practical therapeutic goals of many practitioners may be to make the animal feel good and relax, perform better, lessen the likelihood of injury, increase flexibility and range of motion, or aid in rehabilitation. Often massage therapy is performed after a veterinary referral when a horse has suffered a trauma or injury, undergone surgery, or after a layoff from work. It is also becoming more common to see veterinarians using massage as part of their diagnostics. For example, a horse with chronic osteoarthritis may compensate and guard itself from pain by using additional muscles to achieve more comfortable movement patterns. After receiving massage therapy, such a horse may temporarily be observed to move more obviously lame or in discomfort because of the surrounding muscles having become relaxed or in effect decompensated.

Massage should not be performed on horses in a variety of situations, and a qualified therapist will be aware of the inappropriateness of massage in these conditions. Some contraindications to equine massage include tumors, lacerations, unhealed scar tissue, heat, swelling, infectious conditions, fever, skin conditions, ruptures, or contusions (Table 2). A general caveat for massage is that "*If you think you shouldn't….you shouldn't.*"

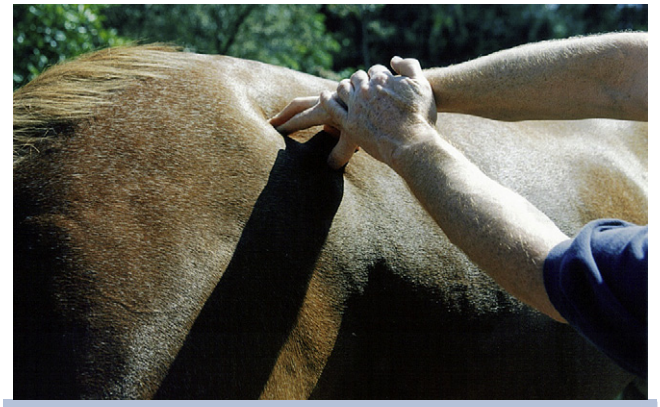

Figure 3. Direct pressure technique. In the direct pressure technique, the pressure is held for 5 seconds or more to create temporary ischemia and subsequent reperfusion of the tissue.

Figure 4. Friction technique. Friction is used to apply deeper pressure to the muscle tissue and is typically performed in a cross-fiber manner. In this example friction is being applied to the distal sesamoidean ligaments within the pastern region.

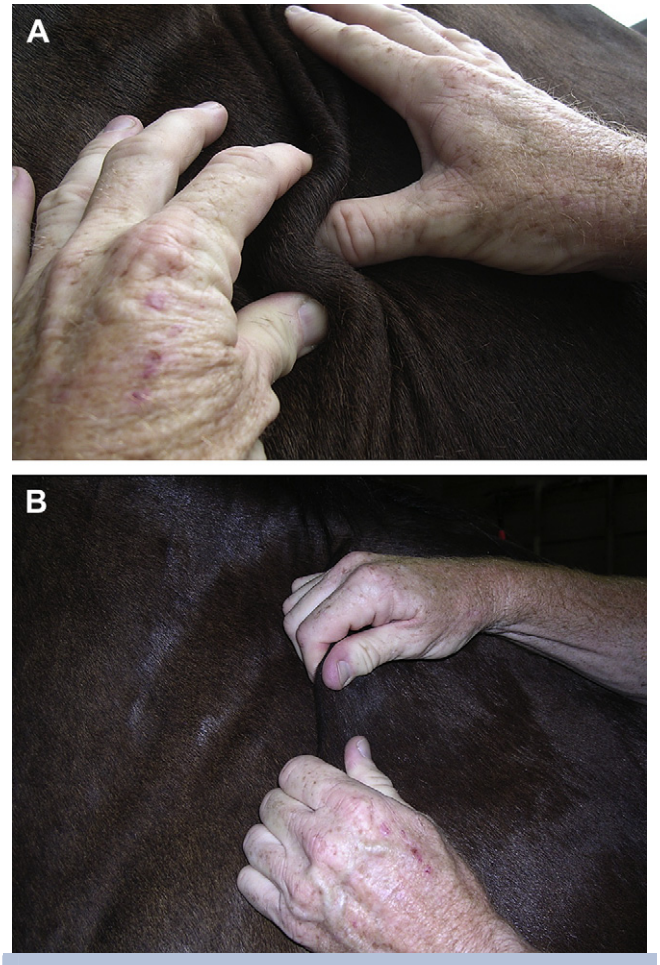

Figure 5. (A) C-stroke technique. The C-stroke applies a relatively superficial force on the cutaneous layer and connective tissue in opposing directions. (**B**)-**Skin rolling technique.** Skin rolling technique involves lifting the skin and rolling it to apply different directional forces on the cutaneous layer and connective tissue. (**A and B**): These two myofascial release techniques are utilized to increase the circulation in the superficial layers of muscle to elongate restricted fascia surrounding muscles, thereby allowing the underlying muscle greater freedom of movement.

Current Massage Practice Techniques

Some of the common therapeutic techniques used in equine massage therapy are compression, direct pressure, effleurage, friction, and myofascial release. Many of these methods are administered in conjunction with therapies performed by other practitioners such as chiropractic adjustments or acupuncture.

Compression—Compression is applied as rhythmic pressure, such as a pumping motion, performed with the heel of the hand, a loose fist, or the tips of the fingers (Fig. 2A, B). This pressure repeatedly compresses a muscle against the underlying bone, which has the effect of flattening and separating muscle fascicles.

Direct Pressure—Direct pressure is a form of compression that involves applying pressure with the thumb, fingers, or elbow (Fig. 3). This pressure is held for 5 seconds or more, as determined by feel by the practitioner. The objective of direct pressure is to alter fluid distribution and blood supply to an area. By creating a temporary ischemia and releasing the pressure slowly, extracellular fluid and blood are redistributed within the area. After this redistribution of fluids, the practitioner will often feel a previously tense area become more pliable when palpated.

Table 3. Selected Equine Massage Therapy Schools

School Location, Contact Information
Animal Dynamics 9791 NW 160th Street, Reddick, FL 32686 USA Phone (352) 591-6025 Toll Free (866) 845-3387 Email: admin@animaldynamics.com www.animaldynamics.com
Bancroft School of Massage Therapy 333 Shrewsbury St. Worcester, MA 01604 Phone: (508) 757-7923 or Toll Free (866) 352-9409
The Darcy Lane Institute of Massage Therapy Phone: (519) 673-4420 or (519) 673-3965 Email: info@darcylane.com www.darcylane.com
Equine Massage/Muscle Therapy 809 Kirkwood Cr Camden SC 29020 Phone: 803-422-5894 Email: saddleguy@gmail.com www.equinemmt.com
Equinolgy Inc. Main Office USA: PO Box 1192 , Gualala, CA, 95445 USA Phone: (707) 884-9963 Fax: (707) 884-9983 E-mail: office@equinology.com www.equinology.com
Massage Awareness Inc. Town Square at Wellington 11924 Forest Hill Blvd. Suite 22-102 Wellington, FL 33414
Meagher and Wilson Sportsmassage Jo-Ann Wilson P.O.Box 1155 Concord, MA 01742 Phone: (978) 772-9702 Email: wmst4@yahoo.com www.sportsmassageinc.com
Northwest School of Animal Massage PO Box 670 Fall City WA 98024 Phone: (425) 222-3703 or Toll Free: (877).836.3703 Fax: (425) 222-4573 Email: info@nwsam.com www.nwsam.com
Tallgrass Animal Acupressure Institute Phone: (303) 681-3033 Fax: (303) 681-2999 http://www.animalacupressure.com

Effleurage—Effleurage is a broad gliding stroke. The desired effects are to prepare tight muscles for deeper work and to relieve fatigue. When used as a finishing stroke on an area after deeper work, this technique is applied to soothe and sedate the patient. Effleurage is also used to release fascial restrictions and can be used as a palpation stroke to identify areas of myofascial tension.

Friction—Friction uses the thumb, finger, braced fingers, fist, or heel of the hand to apply deeper pressure to the muscle tissue (Fig. 4). This technique is typically performed in a cross-fiber manner perpendicular to the long axis of the muscle belly. A practitioner with an understanding of muscle fascicle orientation, tendinous attachments, and fascial planes can effectively flatten muscle fascicles and disrupt collagen cross-links using friction.

Myofascial Release Therapy—Myofascial release therapies affect the three-dimensional subcutaneous fascial web surrounding the muscles, tendons and ligaments (Fig. 5A, B). The objective of this technique is to address restricted fascia covering or passing between muscles in an effort to elongate and thereby allow the affected muscles greater freedom of movement. Equine massage practitioners can use their understanding of the reactions within the nociceptors, mechanoceptors, thermoceptors, and Golgi tendon complex with the cellular mechanics of fascia to effectively perform a variety of myofascial release massage techniques. To optimally influence the fascial tissue, the practitioner works slowly and directionally to apply pressure that can be superficial, deep, long, slow, percussive, or vibratory. This pressure is always applied intuitively toward the intended effect.

Practitioner Qualifications

The level of training and experience of the practitioner plays a role in the effectiveness of therapeutic massage.[21] A clinical evaluation of massage as a postexercise recovery tool randomly assigned 317 human subjects to therapists with 450, 700, or 950 hours of training.[21] In this trial, a significantly greater reduction in muscle soreness was achieved by therapists with 950 hours of training compared with that achieved by the therapists with less experience ($P < .01$).

A number of excellent equine massage training programs exist, which produce competent and professional equine massage therapists (Table 3). Characteristics of a good equine massage training program include a focus on equine anatomy and physiology, pathology, and the impacts of movement and exercise on these systems. Comprehensive programs not only teach basic massage techniques but also cover common injuries and disease states that a practitioner

Table 4. Further Reading on Equine and Human Massage.

Title	Author
Beating Muscle Injuries for Horses	Jack Meagher, Hamilton Horse Publications, 1985
The Basic Principles of Equine Massage and Muscle Therapy, 2nd Edition	Mike Scott Massage Muscle Therapy Productions, 2003
Equine Massage	Jean-Pierre Hourdebaigt, Howell Book House, Wiley Publishing Inc., 1997
Myofascial Pain and Dysfunction: The Trigger Point Manual (2 Volume Set)	David G. Simons, Janet Travell, Williams & Wilkins, 1992
Equine Structural Integration: Myofascial Release Manual	James Vincent Pascucci, Sane Systems, 2007
The Concise Book of Neuromuscular Therapy: A Trigger Point Manual	John Sharkey, North Atlantic Books, 2008
Equine Acupressure: A Working Manual, 4th Ed	Nancy A. Zidonis, Equine Acupressure, Inc., 1999

may run across. The best programs emphasize hands-on practical training as well as academic study, with many including 500 to 1,000 hours of study. Furthermore, all reputable programs emphasize that a massage therapist is only part of the overall horse care team, that a therapist is not a diagnostician, and that massage therapy is no substitute for veterinary intervention. One of the key roles of a professional equine massage therapist is to direct an owner or trainer to veterinary care when appropriate. Although not required in most equine massage programs, a thorough knowledge of human massage can be very helpful. This provides practitioners with a rigorous training program including verbal communication of pressure, results, and how techniques feel. This knowledge can carry over well when transferring the applications to another species.

Unfortunately, many programs that are available are relatively short and do not require practical intern/extern hours or case studies. Arguably, these are critical components of practical training that allow the student to be monitored and guided through the process of becoming an effective therapist. Furthermore, schools that teach equine massage, or any therapeutic intervention, should consider offering advanced continuing education or having a good working rapport with their peers for referrals to other competent practitioners for additional training. Obviously, an established minimum standard would be beneficial and give credibility to the equine massage profession as a whole and would assist in the identification of an appropriate therapist to meet a given horse's needs.

However, certification by a highly regarded equine massage therapy program is not the only quality to consider in selecting a suitable therapist to meet a horse's needs. Characteristics of a good equine massage therapist include a solid understanding not only of the massage therapy techniques but also of horse behavior and horsemanship. A competent therapist is comfortable around horses and understands normal and abnormal horse responses to pain and other situations. Many equine massage practitioners are also licensed human massage therapists, and many belong to professional associations and participate in ongoing continuing education programs and advanced certifications. Some of the professional equine and animal massage therapy associations include the International Association of Animal Massage and Bodywork (http://www.iaamb.org), the National Board of Certification for Animal Acupressure & Massage (NBCAAM) (www.nbcaam.org), the International Association of Equine Bodyworkers (www.iaebw.com), and the Equine Sportsmassage Association in the United Kingdom.

Equine Massage Therapy Books

Further information on human or equine massage therapy can be found in a number of available books (Table 4). Valuable resources in the field focus on the underlying anatomy and physiology of muscle and provide safe and effective practical techniques. In addition, some include sections on training exercises to address specific equine performance issues.

CONCLUSION

Following the lead of human athletes, therapeutic equine massage is being used more frequently, with the objective of achieving physical benefits to muscle such as relief of muscle tension and stiffness, reduced pain and spasm, improved joint flexibility and range of motion, and potentially enhanced athletic performance.

Although a common therapeutic intervention, the field of equine massage therapy lacks comprehensive rigorous scientific clinical data to undisputedly validate its benefits. Although many studies illuminate much about the anatomic, neurophysiologic, and cellular mechanisms of therapeutic massage on the equine body, it appears that there are significant gaps in the current body of literature. As

such, more research is needed to confirm the benefits that have been observed in preliminary evaluations. To best accomplish this, veterinarians, massage therapists, and unbiased participants or surrogates in the studies should work together and evaluate some of the broader perspectives involved in the efficacy of massage. For example, to further the understanding of the effects of therapeutic massage on pain, a study is planned to evaluate the effects of therapeutic massage on the thoracolumbar fascia. The intent of this project is to measure the effects of myofascial release and stress point therapy techniques, using pressure algometry and thermography as outcome parameters.

Having been a human and equine massage therapist for well over 20 years, it is personally disappointing to find the myriad of inconsistent results and negative comments throughout the massage literature. However, as a practicing therapist who has addressed thousands of cases including human, equine, and canine subjects, my personal experience allows me to sleep well at night knowing that I have helped them and have achieved clinical benefits. As Satoshi Kanazawa noted, "All scientific knowledge is tentative and provisional, and nothing is final. There is no such thing as final proven knowledge in science."[31] The next challenge in the evolution of equine therapeutic massage is moving forward to validate the observations of many such practitioners through prospective research.

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