

**ITEC LEVEL 5 CERTIFICATE  
SPORTS MASSAGE THERAPY**

**iUSP161**

***Review on Research  
Undertaken on Sports  
Massage/Soft Tissue Therapy***

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## **Appraisal of Research Undertaken on the use of Sports**

### **Massage**

Massage has been used in sport since ancient Rome but it wasn't until the 1996 Olympic Games in Atlanta that it was officially recognised and offered to athletes competing as a part of their core medical service. Demand has been growing since across all sports, leading to official governing bodies such as the Sports Massage Association being set up in the UK in 2002.

Even though its popularity has increased hugely in the last 20-30 years there is still limited evidence of its effectiveness on both physiological and psychological responses. A review by Callaghan (1993) cited a 'lack of comparable instrumentation and different research designs have led to little agreement amongst researchers over the type of massage to be employed or the length of time needed to be effective'. (1)

In the UK and Europe sports massage is based on Swedish massage, using the French terms, *effleurage*, *petrissage* and *tapotment*. The development of newer techniques such as connective tissue massage, myofascial release and trigger-point massage adds to the complexity and potential confusion. This is compounded by different terminology across countries for identical techniques. (2)

Earlier research by Goats (1994) into the therapeutic effects of massage on blood flow for improving performance and removal of metabolic wastes after intense training seemed to provide a strong case in favour of sports massage. However later evaluation of the effects on blood flow using more valid and reliable measurements such as the Doppler ultrasound seemed to refute this as they clearly demonstrate that neither muscle mass nor type of massage appear to affect arterial blood flow. (3) This was further investigated in 2004 by Hinds, who distinguished between arterial blood flow and skin blood flow. They observed that an increase in skin blood flow without an increase in arterial blood flow after 12 minutes of massage compared with the control group. Their conclusion was that the increase in skin blood flow might be diverting blood from muscle during recovery.(4)

Other studies have examined the lactate clearance during recovery from exercise and failed to demonstrate the difference between massage and passive rest. (5) (6) This is further supported by current understanding of key factors that affect lactate clearance, including optimal intensity of exercise recovery, skeletal muscle-fibre content and lactate transporter expression which are unlikely to be directly affected by massage therapy. However, other studies have shown that even though lactate recovery is unaffected, subsequent improvements in exercise capacity, performance and fatigue are observed when massage is added to an active recovery period. (7)

Research on DOMS (delayed-onset muscle soreness) has been more definitive in finding support for sports massage in relation to this pain sensation. A review in 2008 found that it is reasonable to speculate that treating DOMS with massage could return the muscle closer to its optimal length or maximal force production. (8)

The psychological benefits of sports massage are represented well in the 2000 study of 8 boxers who reported an increase in perceived recovery as opposed to those who just had passive rest after their boxing bout. (9) Taking this study together with clinical literature which report reduction in anxiety and depression following massage therapy (10) it's probably safe to assume that sports massage has positive psychological impact on future performances by athletes.

In summary, research in the field of sports massage has been hampered by the many methodological variations and by poor experimental control during the intervention phases of most trials. Clearly creating an 'international' terminology for massage therapists, standardised testing for different sports and optimal timing and duration of massage would greatly enhance any future research. The forming of an international body to oversee such change and optimise the research would be essential.

## **Conclusions on support for the use of Sports Massage**

Massage for athletes is growing in modern times as athletes, trainers and clinicians explore ways to promote recovery and performance. However, in contrast to this there is limited and often conflicting scientific research to support its use.

Whilst there is surprisingly a lack of evidence in the scientific literature to support the physiological, neurological, biomechanical and psychological benefits of sports massage, its use in clinical practice has consistently seen the beneficial effects and continues to play an important role in the sport preparation and recovery process.

Sports massage can be divided into specific categories:

- pre-training or pre-event
- post-training or post-event
- preventative or conditioning massage
- corrective massage

Although few studies support the efficacy of massage in these categories, there is clearly benefits to the athlete who partakes of sports massage, even though this evidence may be more anecdotal than scientific.

In pre-training/pre-event a brisk massage technique, stimulates the circulatory and nervous system to prepare the athlete for competition and invigorating the body, enable them to work at their optimal level.

Post-training/post-event a slower paced massage is used, relaxing, cleansing strokes help the body to recover and whilst the scientific research disputes the removal of toxins and lactic acid, there is a positive impact on the athletes physical and mental wellbeing. (12)

Preventative or conditioning massage is used as part of training programme to help prevent injury and improve general performance. Improved ROM is one component although care must be taken depending on the sport. Too much flexibility may indeed hamper performance when maximum force production is of primary importance, such as in powerlifting and sprinting. (11)

Corrective massage focuses on recovery from injury and is used as part of a rehabilitation programme to treat dysfunctions in soft tissue and the myo-skeletal system. This massage is usually applied in the sub-acute phase of injury where a thorough assessment of the client's active, passive and resisted range of motion can give specific information as to nature of injury and enabling therapist to accurately locate a strain.

Together with remedial exercise and client education, this aims to promote faster healing and recovery from injury. For the athlete who faces strict restrictions and ongoing testing regarding medication used, this natural road to recovery can be of huge importance.

There is limited scientific research in this field and it does call for more investigation. However, in clinical practise the results can be seen for themselves as clients have reduction in pain, alleviation of symptoms and return to sport in shorter period than if they didn't partake in manual therapy.

In conclusion, sports massage therapy is safe and effective for the treatment and prevention of sports injuries. It provides a non-pharmacological therapeutic intervention to help alleviate musculoskeletal disorders associated with everyday stress, physical manifestation of mental distress, muscular overuse and persistent pain syndromes.

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