

# 71a Sports Massage: Theory

## Understanding Sports Massage

### Applications of Massage in the Athletic Context

1. **Restorative** - helping athletes recovery from bouts of activity or injury
  - a. **Recovery Massage**
    - Uninjured athletes recovering from strenuous workout or competition
    - Aims to improve circulation and promote relaxation
  - b. **Remedial Massage**
    - Athletes with minor or moderate injuries
    - Aims to reduce or eliminate pain and dysfunction, restoring optimum level of physical, mental and emotional fitness
  - c. **Rehabilitation**
    - Athletes with severe injuries, or post-surgical (working as part of a team)
    - Aims to reduce pain, edema and spasm, increase circulation, form healthy scar tissue, break adhesions, promote early mobility, and reduce tension, general anxiety, and stress
2. **Maintenance** - massage on a regular basis to enhance recovery, and to maintain optimal health
3. **Event** - helping athletes prepare for or recover from a specific competitive event

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### Sports Massage and Athletic Performance

Applied skillfully, sports massage increases performance potential in three ways:

**1. Optimizes positive performance factors while minimizing negative ones**

- a. Positive - healthy muscle and connective tissue, normal range of motion, high energy, fluid and pain-free movement, mental calm, alertness and concentration
- b. Negative - dysfunctional muscle and connective tissue, restricted range of motion, low energy, staleness, pain and anxiety

**2. Decreases injury potential**

Uncovers injuries at sub-clinical level before they can progress to the clinical stage

**3. Supports soft tissue healing**

### Constellation of Effects

**Primary effects** lead to **Secondary effects** that optimize positive performance factors

**Primary Effects** - physiological and psychological changes in the athlete as a direct result of massage

**Secondary Effects** - performance-related outcomes resulting from the primary effects of massage

# 71a Sports Massage: Theory

## Understanding Sports Massage

### Constellation of Effects, continued

#### **Primary Effects**

1. **Improved fluid circulation** – circulatory massage delivers nutrients and carries away metabolic by products by increasing the local flow of cardiovascular and lymphatic fluids, thus restoring tissues to optimum condition
2. **Muscular relaxation** – both by decreasing pollution and by restoring the neuromuscular feedback loops to normal, massage enhances relaxation, reducing discomfort and further facilitating normal circulation
3. **Separation of muscle and connective tissue** – any sticking of tissues to one another will interfere with smooth motion and limit range of movement. Mechanical actions of lifting and broadening, as well as shearing forces applied across the parallel organization of muscle and tendon fibers (deep transverse friction) “unsticks” adhesions
4. **Formation of healthy scar tissue** – during the remodeling phase of soft tissue healing massage helps form a flexible scar
5. **Connective tissue normalization** – Connective tissue in poor condition can limit overall movement. Chronic stress and immobility can cause connective tissue to become rigid, inflexible. Injury can result in adhesions within the connective tissue. Adhesions are bindings of two anatomical surfaces (such as myofascia) that are normally separate. Adhesions limit movement. Kneading, deep friction, and stretching can prevent and/or break down adhesions, enhancing movement capability.

## 71a Sports Massage: Theory

### Understanding Sports Massage

#### Constellation of Effects, continued

##### **Primary Effects**

6. **Deactivation of trigger points** – defined as a focus of hyperirritability in tissue. Locally tender, often within a taut band of muscle fibers. Gives rise to referred pain and tenderness. May cause distorted proprioception. Signs include dull, aching, or referred pain. Stiffness and weakness in the involved muscle. Restricted range of motion, pain on contraction or stretching. Techniques used to deactivate trigger points include warming with effleurage, petrissage, and deep sliding movements. Ischemic compression like direct digital pressure on the point with enough force to cause blanching of tissue or elicit the referred sensation. Stretching should be applied after massage to reset the resting length.
7. **General relaxation** – when massage activates the parasympathetic nervous system a complex of physiological changes enhance the health and well-being of the individual, reducing stress
8. **Anxiety reduction** – this is one of the specific benefits of the relaxation response that is particularly valuable for the athlete

# 71a Sports Massage: Theory

## Understanding Sports Massage

### Constellation of Effects, continued

**Secondary Effects** - performance-related outcomes resulting from the primary effects of massage

1. **Greater energy** – by enhancing the return to normal physiology (reduction of waste product concentration, relaxation of overworked muscles), massage can help the athlete to be more energetic
2. **Freer movement at joints** – normalizing connective tissue, relaxing muscles and deactivating trigger points facilitate optimum range of movement with minimal drag
3. **Faster recovery** – enhancement of local circulation facilitates recovery from physical fatigue and injury, while the relaxation response speeds the return to positive attitude
4. **Pain reduction** – muscular relaxation, enhanced circulation, and the release of endorphins relieve pain, contributing to better rest and function
5. **Increased alertness and mental clarity** – applications of massage can be modified to help athletes achieve their optimal level of stimulation – neither sluggish nor over-amped
6. **More positive outlook and motivation** – by helping to alleviate pain, stress and anxiety, and facilitating release of endorphins, massage can be a major contributor to keeping the athlete mentally resilient and enthusiastic

# 71a Sports Massage: Theory

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### Event Sports Massage

Event sports massage is administered during sports events and can be divided into pre-event, post-event, and inter-event massage.

Event massage, especially post-event, avoids any use of deep tissue massage.

The closer to the event time the massage occurs, the shorter the duration of the massage.

**Pre-event** – focuses on increasing circulation to muscles, tendons and ligaments, and increasing flexibility

**Post-event** – focuses on enhancing circulation to reduce soreness and shorten recovery time

**Inter-event** – is essentially a combination of both of the above, clearing the effects of the previous effort and preparing for the one to come

The following short sample routine is suitable for any of the three event contexts, and can be customized to fit any sport by emphasizing different muscle groups as appropriate.

In the case that lubricant is used, beginning and ending each segment with centripetal effleurage at an upbeat tempo would be appropriate.

For pre-event massage, mobilization and stretching can be added at the end of each segment - for inter-event and post-event massage, risk of cramping of (passively) shortened antagonists may preclude use of stretching.

## 71b Sports Massage: Technique Demo and Practice – Event Massage

### Posterior Upper Body

BMT - spinal rotation & release with erector compressions (both sides)

Knead back of neck

BMT - Scapular mobilization with trapezius and deltoid compressions

Return arm to the table and squeeze down forearm and hand

Alternately, elevate the scapula, using fingers of outside hand against the lateral border, then depress the scapula by using thumb compressions from the inside hand to levator scapula insertion, belly of upper trapezius, and supraspinatus

Repeat arm and shoulder work on opposite side

### Posterior Lower Body

BMT - Gluteal and hamstring compressions with knee and hip mobilizations

Using both fists, apply specific compressions over the gluteal area

Knead the hamstrings and adductors

Knead the calf

BMT - Ankle mobilization with gastrocnemius compressions

Finish by squeezing the feet

Repeat on opposite side

## 71b Sports Massage: Technique Demo and Practice – Event Massage

### Anterior Lower Body

BMT - Supine hip rotation with leg compressions

Knead quadriceps and adductors

Apply compressions with loose fist to lateral lower leg

Squeeze the foot

Repeat on opposite side

### Anterior Upper Body

BMT - Unilateral ribcage compression and mobilization

BMT – Shoulder mobilization with pectoral compressions

With arm still above the head, knead deltoids, triceps, biceps, and coracobrachialis

Moving to the side, facing up the table, knead the forearm

Squeeze the hand

Repeat on other side

Kneeling or sitting at the head, use one hand to knead the back of the neck as the other cradles the head

Reverse the hand positions and repeat