


**A HOLISTIC APPROACH FOR INCORPORATION OF MASSAGE THERAPY IN SPORTS**
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Article Received on 20/05/2019

Article Revised on 10/06/2019

Article Accepted on 30/06/2019

**ABSTRACT**

Sports performance is not simply product of physiological and biochemical but psychological factors also that play role in determining the performance. For a sports person the health and physical fitness are very important and for the physical fitness they are doing various physical exercises. Ayurveda the ancient school of alternative medicine points the importance of daily regime (both day and night) and seasonal routine for preventing the diseases and promoting the health of the individual. Planning the daily routine of exercises by reorganizing and scheduling based on the Ayurvedic principles might be a better option. In the ancient classical texts of Ayurveda there are different types of Massages mentioned according to the need. The same methodology can also be incorporated to the field of sports performance. So this article presents comprehensive view and throws a light on the importance of massage in the sports performance according to the ayurvedic classics as well as contemporary sports medicine.

**KEYWORDS:** Ayurvedic principles might be a better option.

**INTRODUCTION**

Sports performance is not simply product of physiological and biochemical but psychological factors also that play role in determining the performance. Sports medicine as separate medical speciality has fairly recent origin. The sports Medicine is one of such fields where it has to show its power of cure and power of preventing diseases. It can also show its significances of regime that to be followed for better healthy life even in this modern era of medicines. The Ayurveda is based on the ancient *Samhitas* and no were in those *Samhitas* such speciality is being explained. But the classical medicines explained in those basic texts can be used for treating Sports injuries also by understanding the disorders and injuries happened. For a sports person the health and physical fitness are very important and for the physical fitness they are doing various physical exercises. Ayurveda the ancient school of alternative medicine points the importance of daily regime (both day and night) and seasonal routine for preventing the diseases and promoting the health of the individual. Planning the daily routine of exercises by reorganizing and scheduling based on the Ayurvedic principles might be a better option. Many teachers of Ayurveda in their respective works explained the importance of *Vyayama* (exercises). The Ayurveda defines *vyayama* (exercises) as any physical activity which is desirable and capable of

bringing about bodily stability and increases the strength of body when done in proper measure. It should be always performed by considering the age, habitat and food, physique and strength and must be very much designed according to the climatic changes or season. By incorporating the field of Ayurveda in physical exercises it can not only benefit the physical body but also the mind, senses and spirit for better results. Similarly one such aspect of the daily regime of the *dinacharya* in Ayurveda is *Abhyanga* or massage. So this article presents comprehensive view and throws a light on the importance of massage in the sports performance according to the ayurvedic classics as well as contemporary sports medicine.

**Ayurvedic Aspect**

In the ancient classical texts of Ayurveda there are different types of Massages mentioned according to the need. The same methodology can also be incorporated to the field of sports performance. For example the Sanskrit term *Abhyanga* coined by two words *Abhi* (against or opposite) and *Anga* (body part or movement) is one of the main massage type thus indicating the movements in different directions. A person who wishes for positive health has to perform this massage every day for better results according to the classical texts. This *Abhyanga* massage not only promotes the health of the person but

also prevents and cures the diseases. By nourishing the body it promotes clear vision, shines the skin and gives the good desired physique. Another type of upward and downward massage with various medicated oils called *Udavartana* and with dry powders *Udgharshana* alleviates vitiated *Kapha* and dissolves fat and makes the body strong.

Fit. This method of massage is advisable to strengthen the calf and thigh muscles. The massage types *Mardana* downward movement of hands while squeezing the muscles after exercises and *Unmardana* (opposite to the former) are found helpful in alleviating *mamsagata vata*. Another type of massage called *Samvahanam* can increase strength by alleviating the vitiated *Vata* and *Kapha doshas* and thus takes away tiredness and fatigue. According to ancient teachers it helps in regaining the vitality in muscles. The massage with feet called *Padaghata* is helpful for making the muscles stronger and stress resistant. Apart from the mentioned there are many massage types for specific results. The medicated oils used for massaging have obviously potential therapeutic effects not only for improving fitness but also for curing injuries. By incorporating these massages used for centuries for therapeutic purposes wisely along with the modern massages can promote the health of the sports persons by healing damaged muscles, stimulating the blood circulation, releasing the stress and reducing pain and tension. It should be always performed only with the advice and supervision of qualified persons only.

### Modern Aspect

The word "massage" comes from 'mass' the arabic term denoting to 'press'. Basically Massage is the term used to express certain scientific manipulations which are performed by the hands of the operator upon the body of the patient and is a means used for creating energy, where such has become exhausted from whatsoever cause and is a natural method of restoring the part either locally or generally injured to its normal condition.

Massage has been used in sport from time immemorial. Sports massage can be divided into:

- Specific sports massage
- Non specific sports massage

### Basic Rules of Sports Massage

1. Many sports massages are classified as specific i.e. not only to treat a particular problem but also to help prepare prior to activity between bouts of activity or after activity. Non specific sports massage is also used to help keep the body in tune.
2. It is important to take full history either relevant to a particular problem or concerning previous experience of and reaction to massage.
3. Contraindications in massage are skin disorders, suppurating superficial infections, malignant Tumours, presence of unhealed scars or open wounds, recent fracture sites especially at the elbow

or mid thigh, acutely inflamed joints with tubercular infections, deep vein thrombosis, burns, advanced osteoporosis.

4. The aim of the treatment should be decided whether stimulative or sedative which depends on when is massage to be administered pre or post event.
5. It cannot be assured that there will always be a treatment couch available when using massage in sport so always ensure that the therapist is going to be able to perform all the necessary techniques with the greatest ease and that the recipient is at all times warm and comfortable.
6. Various oils may be used most commonly vegetable based, ice, non steroidal anti inflammatory gel, towels, ranging from small to very large and inflatable pillows
7. Many sports person shave their legs before competition and small nicks are not unusual. Aseptic conditions should apply with absolute cleanliness essential.
8. Always ask the participant if the massage is deep enough, too deep or as he or she wants.
9. Arrangement of wet wipes or an astringent lotion should be available for use because participants cannot enter the competition arena covered in oil. A basketball player with oil on his thighs can get this onto his hands with disastrous results. Soap and water are available in the treatment room but not necessarily at pitch side.
10. Always warn the participant about the result of massage manipulation.

### Specific Sports Massage

Specific sports massage is given for a particular reason and can be used in six different situations

- a) Massage in conditioning
- b) Massage as treatment
- c) Pre-competition massage
- d) Inter competition Massage
- e) Post competition massage
- f) Post travel massage

These six specific sports massages may have to be carried out at pitch or track side and it may not always be possible to follow to the letter the manipulations, routines and methods suggested. The therapists must be prepared to be adaptable and use the manipulations and skills at his/her command in the most advantageous way to aid the participant in his/her chosen event.

### Massage in Conditioning

The conditioning time of year for any for any sports person will depend entirely on what his or her goals are for that particular year. The actual time of year will vary from sport to sport, dependent on the competitive season and major events. The object involves the SAID principle: specific adaptation imposed demands. This principle puts the body through safe and intense development, to achieve peak condition at the time of major competition.

### Effects

1. To promote recovery from a hard training session because after a hard bout of exercise sports person will experience various aches, pains and a feeling of tired and heavy limbs.
2. To aid cool down and brings the body to its pre-exercise state as quickly and painlessly as possible.
3. To prevent delayed onset muscle soreness.
4. Psychological effect of touch has a very beneficial effect if massage is performed by a good knowledgeable practitioner and enhances the benefits of a conditioning period.

### Method

- Light effleurage to accustom the person to touch deep effleurage to promote venous and lymphatic drainage.
- Petrissage to mobilise the soft tissues
- Acupressure to address any specific tension or trigger spots identified
- Stroking to provide relaxation and aids venous return
- Tapotment/shaking/vibrations to stimulate and give a feeling of feeling
- Starting with the back, then the limbs ,concentrating on the muscles most used in the training session and finish with a foot massage.

### Duration

For whole body 1-1.5 hours and half body 30-45 minutes. This massage can be given on a daily basis throughout the conditioning period with the first massage being given the day before the first day of hard training.

### Massage as a Treatment

Massage as a treatment for sports injuries can be used after 48 hours if all bleeding and tissue swelling has ceased or in the case of haematoma after 4 days or depending upon patient's tolerance.

### Effects

1. To stimulate circulation
2. To promote recovery from injury
3. To break down adhesions. Adhesions and scar tissue are sources of trouble and can result in further trauma producing bigger and thicker areas of adherent tissue.
4. To promote flexibility. Massage can provide a useful adjunct to the essential stretch routines performed by the patient.
5. To improve the range of movements.
6. Oil, cream, heat rub, ice, anti inflammatory gel are used.
7. Stroking to accustom the sports person to touch and discover any areas of sensitivity.
8. Effleurage to promote venous and lymphatic return
9. Petrissage to mobilise soft tissue and induce light stretch on those tissues and also to reduce muscle spasm

10. Frictions to provide a counter irritant effect to mobilise and break down scar tissue.
11. Tapotment to produce an excitation effect
12. Shaking applied both locally and to a total limb to aid relaxation and relief of muscle tension and cramp
13. Acupressure by stimulating trigger points it is possible to gain muscle relaxation or an increase in muscle tone, dependent on depth and length of pressure applied.
14. Connective tissue massage to mobilise the deep reticular layers of the dermis.

### Method

Always massage proximal and then distal areas of the body before concentrating on the treatment area proper. Dependent on area and sensitivity of the area to be treated the duration of massage may be 10-30 minutes. The treatment can be used daily depending on the patient's level of discomfort and training. This is not advisable if the methods are used to treat scar tissue or adhesions and never if the patient cannot tolerate treatment.

### Pre Competition Massage

Massage prior to competition is to many sports people part of the ritual carried out before their sporting endeavour. The time of this massage as part of the adjunct to performance must be fully planned. Warm up is the preparation of the body for physical activity. Massage should be done prior to warm up. Warm up is divided into three components:

- Raising body temperature and increasing cardiovascular activity.
- Putting all joints through a full range of movements and all muscles into their greatest length of flexibility.
- Sports specific warm up by practising the activities to be carried out.

This massage cannot be used instead of the participant's own physical warm up but definitely can be used to enhance the preparation.

### Effects

- Preparing muscles for exertion because massage prior to activity will make it easier to carry out the specific stretches needed for any performance.
- Aids in warming up because of the vasodilatation caused due to massage.
- Psychological effect-The time spent on the massage couch is often used by participants to prepare mentally for the forthcoming action

### Methods

- Oils, creams and talcum powder are all appropriate but do not use any heating agent. All rubefacients will cause vasodilatation of the skin and this will prove to be detrimental to the warm up.
- First step is stroking to accustom the person to touch

- Effleurage to promote venous and lymphatic return check for the area which is particularly tense, tight or giving pain.
- Petrissage to increase mobility of the soft tissues and stimulate circulation.
- Tapotment /shaking/vibration should be given to promote a feeling of well being and give relief from muscle tension
- Effleurage to finish massage. Trigger point and acupressure may be needed if there are specific areas of muscle spasm or tension.
- Duration of the massage is dependent on the area to be covered and length of time to achieve the desired effect of stimulation and to decrease any spasm or increase tone. Usually 20-30 minutes to a maximum time of 1 hour is best
- There is only one contraindication that if the competitor has not used massage previously it should not be done in main sports.

### Inter Competition Massage

When there is prolonged competition it will be necessary to provide inter-competition massage. During a competition that has several rounds such as qualifying, quarter final, semi-final and perhaps even finals on the same day, there are periods of rest in between. This is when massage can be very useful to the participant. Massage is extremely useful to complement a shortened warm-up and cool-down but again cannot replace these essential activities. The only time massage can replace cool down is if the participant is too exhausted to perform an active cool-down or if injury precludes activity.

#### Effects

- After exercise period there will be waste products generation in the tissues. This massage stimulates venous and lymphatic return helping in the process of elimination of such products thus promoting recovery.
- Stimulating massage is advantageous to combat both muscle fatigue and general tiredness after a prolonged competition
- This massage is very useful in working on niggles after hard exercise
- Massage is also helpful in preventing muscle cramps and spasms especially if the competition is taking place in a situation where dehydration can occur.

#### Method

- If the area is sweaty or has sand or chalk on it it must be cleansed. The pores will be open and you do not want to clog these with any medium which will impede heat loss. A very light oil or soapy water is best.
- First step is to accustom the person by giving stroking.
- Effleurage to promote venous and lymphatic return.

- Petrissage to help remove the waste products and mobilise the soft tissues.
- Acupressure to the highly tensed area
- Whole limb vibration or shaking is highly beneficial towards the end of the massage to ensure that the limb is ready for the next bout of exercise and unlikely to go into cramp.
- Effleurage stroke at the end.
- Massage is done as per the needs of the competitor
- Duration can be from few minutes to an hour and is best to perform immediately after cool down or prior to the next warm up.

### Post Competition Massage

This is done at the end of the activity to enhance the effects when the competitor will do cool down.

#### Effects

- To carry away waste products
- At the end of any period of physical activity the cardiovascular system may be working excessively hard or as a result of the cessation of activity the blood pressure can suddenly drop. Centripetal effleurage is very useful in restoring normality
- To prevent post exercise pain
- To work out on niggles.
- The massage has a psychological effect if the competitor is either on a high after competing successfully or conversely down after a poor performance

#### Method

- Ice, soapy water or light oil but not any hot rubs or talcum powder should be used.
- Firstly accustom the person to touch by doing stroking
- Effleurage at first and centripetal then deeper if there is no tension or pain. It should be performed in all directions to increase circulation and remove waste products
- Petrissage should be fairly light and deepening to a level the participant can tolerate.
- Effleurage interspersed between all other strokes and for at least 5 minutes at the end of the massage to enhance tissue drainage.
- Massage should be done as requested by the competitor. It can be done to a specific area or to the whole body area.
- Duration is dependent on the area to be covered it can be 15-30 minutes or may take a full hour. This massage is best performed after the active cool-down and preceded by a tepid shower.

### Post Travel Massage

It is very common for all types of sports people to have to travel varying distances to participate in competition all over the world. Wherever possible sufficient time should be allowed to permit adequate acclimatisation both to time change and climatic conditions. In reality

the competitors may not be able to allow this time to adjust. The length of time spent travelling and the frequency of this travel can adversely affect performance. Travel problems highlighted in sport are:

- A general feeling of stiffness
- A feeling of lassitude
- Aches especially in the lower back, neck and shoulders
- Swelling of lower legs and feet

Solutions for these problems are light exercise, shower, Jacuzzi and massage.

### Effects

- To increase venous and lymphatic flow thus removing swelling and stiffness
- To remove aches and increase flexibility by gently and deeply stretching the soft tissues
- To remove any residual stiffness without tiring the competitor with exercise
- To restore normal balance of the body
- To create a feeling of wellbeing

### Method

- Use oil or creams. Do not use talcum powder or hot rubs as there may well be some dehydration present.
- Firstly as usual stroking is done to accustom the participant to touch
- Effleurage –First centripetal to aid and increase venous and lymphatic return, then multidirectional to promote tissue stretching. It should be interspersed regularly with all other strokes
- Petrissage especially kneading, wringing, picking up and rolling techniques to assist drainage and stretch the soft tissues.
- Tapotment, vibration and shaking to aid venous and lymphatic return and to promote a feeling of wellbeing.
- Start with the back and neck, then the legs and if necessary the arms as well. Finish with assisted stretches to the major muscle groups used in the participant's activity.
- Duration is dependent on the areas to be covered but should be a minimum of 30 minutes and may last over an hour. Best results are gained if the participant has already carried out some gentle activity such as a jog and gentle stretches and then had a tepid shower prior to massage.

### Non Specific Sports Massage

There are times in the competitor's year when there is no competition or conditioning taking place. At those times the athlete will still be maintaining his/her body in a state of preparedness for the activities of the future. Massage can play a very important and helpful part at those times and is referred to as non specific sports massage. This term also applies to massage given when the competitor has arrived at the competition site ahead of the event by at least 2 days or finished

competition and is still present at the competition site waiting for the rest of the team to complete competition and return home.

Non specific sports massage can be divided into two applications

1. General Body Massage
2. Specific areas of massage

### General Body Massage

Sports people spend a large part of their lives conditioning and preparing their particular sport.

### Effects

- To enhance a general feeling of wellbeing
- To promote relaxation
- To stimulate if required
- To monitor condition of the musculature and soft tissues
- To highlight and deal with any area that could develop into a problem

### Method

- Oils, creams, mild warming rub or talcum powder can be used
- Firstly accustom to touch then long slow manipulations of effleurage continuously
- Deep, slow and rhythmical kneading but not to tickle
- For ending the session Effleurage stroke
- The method is starting with the back and neck, then each limb in turnfoot massage as opposed to facial massage and if deemed necessary finish by returning with the back
- Duration of the massage should be as long as needed to gain the desired relaxation but usually 1-1.5 hours. It is important that the competitor can lie and relax for at least half an hour after completion of the massage.

### Specific Areas of Massage

Dependent on the muscle groups most used in a particular event, the competitor may request an area of body to receive massage rather than a full body massage like a sprinter hamstring's or soccer's player's calf muscles.

### Effects

- Its effects, medium and methods are except that concentrate on the area highlighted by the participant and also clear the surrounding area.
- Duration should be as long as needed for the desired relaxation

### CONCLUSION

The Ayurveda can be effectively incorporated in all the fields of sports beginning from training to the treatment. The curriculum of the sports training can be effectively modified by including the Ayurvedic concepts of healthy

living by following the regime. Sports massage may be sport specific and any therapist involved must know and understand the principles of that sport.

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