

**INVESTIGATION OF THE EFFECTS OF MASSAGE ON ATHLETIC  
PERFORMANCE**

**Nurumova Dinara Maqsudova**

Asia International University  
Lecturer, Department of Physical Culture

**Abstract:** This study has been prepared to provide comprehensive information on massage and sports massage by utilizing studies available in the literature regarding the general framework of massage, massage manipulations, sports massage, pre-competition massage, massage during competition, massage known by other names, and post-competition massage, as well as the effects of massage on athlete performance. The research is structured as a compilation that can serve as a source for future studies in this field. The study primarily focuses on sports massage, performance-related changes observed in athletes due to sports massage, and the effectiveness of massage in terms of its psychological and physical effects.

**Keywords:** Massage, Performance, Athlete, Sports Massage

**Introduction**

Massage is thought to have a history of approximately 5,000 years. Although it has existed since the earliest human civilizations, its development into a professional and systematic practice has occurred through later scientific studies. Etymologically, the word “massage” originates from the Greek word *massein* and the Hebrew word *mashesh*, both of which mean “to touch,” “to stroke,” or “to knead.” Massage can be defined as a systematic practice that provides physical and psychological relaxation by mechanically stimulating muscle tissues. Massage fundamentally consists of five manipulations: *effleurage*, *petrissage*, *friction*, *tapotement*, and *vibration* [1].

Performance, in general terms, refers to a relatively short and limited segment of behavior. It is often characterized as an observable action directed toward accomplishing a specific task. Sport performance can be defined as the total efforts exhibited during the execution of a sport-specific task to achieve success. There are various factors influencing performance, including age, gender, kinanthropometric features, motivation, cultural structure, and genetics.

Age is an important factor affecting performance. Until adolescence, physical and psychological development is closely related to age and has a significant impact on performance. For this reason, competitions are organized by age groups to ensure fairness and prevent psychological distress in younger athletes [2].

Gender also plays a significant role in performance. All sports competitions are held separately for males and females due to differences in psychological and physiological characteristics. There are notable physiological differences between males and females in terms of body composition, muscle mass, hormonal balance, and oxygen consumption.

Anthropometric characteristics vary according to the nature of the sport. For example, a professional basketball player cannot be expected to have a body similar to that of a championship weightlifter. Each sport develops specific muscle groups according to its demands, resulting in different physical builds among athletes.

Motivation is defined as the set of internal and external drives that direct an individual toward a behavior and increase the desire to perform that behavior. Motivation is a critical factor in sports, as low motivation can reduce arousal levels and decrease performance.

Genetic factors are also crucial in sport performance. Many personal characteristics such as body type, muscle structure, hormonal functions, nervous system efficiency, and cardiovascular

capacity are largely influenced by genetic makeup and cannot be significantly altered externally [3].

Cultural structure influences the popularity and development of sports in a society. In countries where social integration and collective consciousness are strong, sports receive greater support and visibility, contributing to long-term athletic success.

Sports massage is the application of classical massage techniques in combination with anatomical and physiological knowledge to enhance athletic performance, improve warm-up efficiency, and support faster recovery. Sports massage is designed to help athletes prepare for competition, maintain psychological and physical strength during the event, and promote rapid recovery afterward by accelerating the removal of fatigue-related metabolites [4].

### Significance of the study

A review of the existing literature indicates that there is no sufficiently comprehensive quantitative source that collectively presents the effects of massage on athlete performance. Therefore, this study has been conducted to fill this gap and serve as a reference for future research.

### Purpose of the study

The purpose of this study is to provide general information about massage and sports massage, and by utilizing existing studies on the effects of massage on athletic performance, to create a comprehensive source of information that will serve as a foundation for future research in this field.

**Table 1. Benefits of massage on athletic performance**

Area of impact	Physiological benefits	Psychological benefits	Effects on performance
<b>Muscular System</b>	Relieves muscle tension, reduces lactic acid accumulation	Reduces stress related to muscle tightness	Increases muscle endurance and flexibility
<b>Circulatory System</b>	Enhances blood flow, improves oxygen transport	Promotes a sense of relaxation	Boosts energy levels and delays fatigue
<b>Nervous System</b>	Regulates nerve impulses	Decreases anxiety and promotes mental calmness	Enhances focus and reaction time
<b>Warm-Up &amp; Cool-Down</b>	Provides passive warming, prepares muscles for activity	Increases pre-competition confidence	Reduces risk of injury and enhances initial performance
<b>Recovery Process</b>	Accelerates muscle repair and regeneration	Promotes relaxation after competition	Improves readiness for the next training or competition
<b>Flexibility</b>	Increases muscle elasticity	Enhances body awareness	Improves range of motion and movement efficiency
<b>Pain Management</b>	Reduces muscle soreness and stiffness	Alleviates pain-induced stress	Allows continuity in training
<b>Motivation &amp; Morale</b>	-	Increases athlete motivation and mental resilience	Positively influences overall performance

### **Findings and discussion**

Scientific studies have consistently demonstrated that massage therapy produces multiple positive effects on athletes, both physiologically and psychologically. Massage is not limited to post-competition recovery; it also plays an important role in pre-competition preparation, preventing cooling during breaks, relieving muscle tension, and enabling athletes to return to performance with enhanced readiness. Research investigating the effects of massage on athletic performance indicates that massage positively influences various performance parameters, including flexibility, anxiety levels, muscle functionality, and motivation [5].

For instance, Arslan et al. conducted a study on football players and found that massage administered before competition significantly decreased state anxiety levels. This result aligns with previous studies and clearly shows that massage is an effective method for reducing pre-competition anxiety. Similarly, Koçak et al. examined the effects of massage on flexibility in 16–18-year-old football players and reported that the combination of training and massage improved flexibility more than training alone. These findings provide strong evidence that massage has a beneficial impact on motor skills such as flexibility.

In addition to its positive effects, it is important to acknowledge that massage should not be applied in certain conditions such as fractures, dislocations, acute inflammatory diseases, severe skin disorders, burns, and the early stages of muscle injuries. Furthermore, individuals who have recently undergone surgery should not receive massage due to the risk of causing adverse complications. Therefore, massage must be performed by a certified professional, preferably under medical supervision.

Recent studies further emphasize the importance of massage in enhancing both physical and psychological performance. Olmuş et al. reported that pre-competition massage may have a positive effect on athlete motivation. Elbir found that 90% of female volleyball players experienced psychological benefits after receiving massage. According to Koçak et al., massage combined with training was more effective in improving flexibility compared to massage or training alone. Arslan et al. also confirmed that pre-competition massage reduces anxiety and is therefore recommended as a preparatory strategy [6].

In international literature, Shen et al. revealed that massage significantly enhances exercise performance, while Chawala et al. demonstrated that vibration massage accelerates recovery in fatigued muscles. Boguszewski et al. compared classical sports massage and traditional Chinese massage and concluded that both techniques positively contribute to warm-up effectiveness, even though no significant difference was found between the two. Similarly, Bayer and Eken reported that massage positively affected squat performance, jumping ability, and flexibility among Muay Thai athletes [7].

In conclusion, the findings of various national and international studies confirm that massage plays a substantial role in enhancing athletic performance. Its benefits are evident across multiple parameters, including physiological recovery, flexibility, anxiety reduction, muscle readiness, and psychological well-being. Massage, when applied correctly and under professional supervision, should be considered an integral component of athletic preparation and performance enhancement programs.

### **Conclusion and recommendations**

In conclusion, the majority of studies have demonstrated that massage has a positive impact on multiple physiological and psychological factors that influence athletic performance. When massage is applied correctly before, during, and after sports activity, it positively affects a variety of performance parameters and supports the overall development of the athlete. The purpose of pre-competition massage is to provide passive warming and prepare the athlete for

optimal performance. Massage applied during competitions prevents cooling of the muscles and ensures that the athlete remains ready during breaks. Post-competition massage, on the other hand, facilitates rapid recovery and helps the athlete prepare for the next training session or competition

Despite its proven benefits, improper application of massage-whether performed on the wrong individual, at the wrong time, or with incorrect techniques-may lead to adverse outcomes. As mentioned in the introduction, massage should not be applied in certain medical conditions, as it may result in harmful consequences.

**Recommendations:** Massage applications should be performed under the supervision of qualified professionals who are specialized in massage therapy. It is essential that massage be administered using appropriate techniques, in suitable environments, and at appropriate times. When these conditions are met, massage can contribute significantly to athletic performance and recovery. However, if applied incorrectly, it may lead to irreversible injuries or health complications, negatively affecting an individual's quality of life.

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