SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

FUNCTIONAL REHABILITATION AFTER ANKLE INJURY USING TAPING

Ravshanova Maftuna Zokhidzhonovna
Samarkand State Medical University

Article DOI: https://doi.org/10.36713/epra20961
DOI No: 10.36713/epra20961

ABSTRACT
Ankle injuries are among the most common injuries, both in everyday life and in professional or amateur sports. The most common cause of ankle ligament damage is a sprain or tear when twisting the foot or a strong blow. As a rule, the victim feels a "pop" at this moment, followed by a sharp pain. When playing sports, such a traumatic scenario (an ankle twist, a sharp blow to the shin) most often has the character of an acute injury. Acute ankle injuries account for 15% to 20% of sports injuries. In addition, the ankle joint is easily re-injured.
KEYWORDS: *Injury, Ankle, Rehabilitation.*

INTRODUCTION

Ankle injuries are among the most common injuries, both in everyday life and in professional or amateur sports. The most common cause of ankle ligament damage is a sprain or tear when twisting the foot or a strong blow. As a rule, the victim feels a "pop" at this moment, followed by a sharp pain. When playing sports, such a traumatic scenario (an ankle twist, a sharp blow to the shin) most often has the character of an acute injury. Acute ankle injuries account for 15% to 20% of sports injuries. In addition, the ankle joint is easily re-injured. Among the most common injuries encountered in the modern population is damage to the ligaments of the ankle joint. n 12% of cases, this is due to the presence of ruptures, tears and sprains in the ankle area. Also, a violation of the integrity of the ligamentous apparatus can be provoked by dislocations or subluxations in the above-mentioned area. Most often, an injury to the ligaments of the ankle joint occurs in the cold period, when a person overcomes icy surfaces. Often, the cause of such damage can be moving on uneven terrain or jumping from a height. Sometimes, ankle sprains are compared to injuries that occur as a result of a twisted foot. However, in this case, it is a mistake to talk about a sprain, since there are bruises and swelling. At the moment of injury, ruptures occur in the ligamentous apparatus. In turn, when sprained, the integrity of some fibers is disrupted, but the functional characteristics remain unchanged. If signs of damage in the ankle area are detected, the person should be given urgent assistance. First of all, it is necessary to minimize the load on the ankle joint. This will prevent further deterioration of the ligaments and tendons. The following measures should also be taken with respect to the victim: apply a cold compress. This will help prevent increased swelling and the spread of bruises to nearby tissues. At the same time, the patient notes a loss of sensitivity in the affected area, which helps eliminate pain. Moreover, by using a cold compress immediately after the injury, it is possible to reduce the duration of the healing process. The bandage should be applied to the painful area for 20 minutes. Using an elastic bandage. To ensure the immobility of the damaged joint, it is recommended to resort to the help of a fixing bandage. Experts recommend avoiding tight bandaging, as it can cause loss of sensitivity in the fingers of the limb and increased swelling. However, such a bandage will help prevent future ruptures. Elevate the leg. The injured limb should be placed on pillows or a chair (in a sitting position). This will help relieve pain in the ankle joint and eliminate swelling in nearby tissues. The use of warming agents is strictly prohibited during first aid. It is not recommended to do alcohol rubs and take a hot shower. It should be remembered that fixing bandages are removed before a night's rest. Performing physiotherapy procedures for those interested in how to treat a sprained ankle is a mandatory step. When implementing such measures, you can get a more noticeable positive effect than after taking medications. In case of first and second degree injuries, physiotherapy should be used 72 hours after the start of treatment. They can also be performed after surgery, during the rehabilitation period.

MATERIALS AND METHODS

An experienced specialist will help you choose the most effective physiotherapy procedures. In doing so, he/she takes into account the individual nuances of each patient, as well as:
- Intensity of damage
- Tissue regeneration ability
- History of pathologies caused by failures in the cardiovascular system. Initially, the patient is recommended to undergo a procedure that involves exposure to direct electric current and special medications. For this purpose, a cotton swab soaked in a special medication is applied to the damaged area, and metal plates are placed on it. Thanks to the use of electrical impulses, the medication

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

can reach the deepest layers of tissue. As a rule, analgesic and anti-inflammatory agents are used during the procedure. In some situations, to speed up the process of fusion of ligaments that were previously torn from the base, it is recommended to use chondroprotectors. The following methods can also be used during the recovery period: ultrasound, paraffin applications, magnetic therapy and shock wave therapy. The best effect in restoring the ankle joint can be achieved using the shock wave method. It is based on the effect of acoustic waves, due to which fast regeneration processes are ensured:
- Hematomas disappear;
- Active crushing of calcium deposits and destruction of connective tissue strands (scars) is ensured;
- Blood flow improves;
- Metabolic processes are accelerated. However, to achieve a better result in the restoration of the deltoid ligament of the ankle joint, it is necessary to provide a comprehensive approach - combining the UVS method with the use of medications.

DISCUSSION

This will allow you to quickly cope with pain during movement, eliminate swelling and improve the motor activity of the joint. According to most patients, it is possible to achieve noticeable improvements after shock wave therapy after the first sessions. The lost lightness returns, the feeling of stiffness and discomfort goes away, and overall well-being improves. In our clinic, the ESWT procedure is performed by orthopedic doctors with solid experience, who have the skills to work with special equipment and provide a personal approach to each visitor. At the same time, the first visit to our medical center is carried out with a 20% discount. Sports taping of the ankle joint in the acute period is most often performed with open weaving. Basic materials: classic rigid sports tape (1.5 inches - 3.8 cm wide), easy-to-tear tape (2 inches - 5.1 cm). Taping as the application of fixing bandages or other materials was known even during the first major international competitions. However, active development in this area and the beginning of the production of professional sports tapes and related materials is associated with the work of the American doctor Virgil Gibney, who was the first to describe the basic schemes for applying applications for fixing the ankle joint using non-elastic adhesive tapes - tapes at the end of the 19th century. Sports tape is a specially designed non-elastic or elastic adhesive plaster made from 100% cotton fabric and sometimes elastic polymer, with an adhesive layer applied to it on one side. Sports hard taping is a method of applying sports tape that allows creating conditions for limiting mobility, stabilizing or reducing, eliminating the volume of pathological movements in the joints of the lower and upper extremities by fixing several layers of tape on the surface tissues. Currently, sports taping is used mainly in sports medicine to prevent injuries to the athlete's musculoskeletal system. Recently, the taping technique has begun to be introduced in other areas of medicine. The method of sports taping can be used as an additional method of treatment and medical rehabilitation, in the complex treatment of injuries and clinical nosologies. Functional rehabilitation after ankle injury using taping is an important component of recovery, aimed at minimizing pain, swelling and improving the motor function of the joint. Ankle injuries are common among athletes and active people alike. Taping helps provide the necessary support to the ligaments and muscles, limiting excessive movement and promoting healing. Rehabilitation takes place in several stages: acute period, subacute period, recovery period and final stage. Each of them requires an individual approach and includes a special set of exercises aimed at restoring mobility, strength and coordination. Taping is used at all stages, providing additional support and confidence when performing exercises.

Effective rehabilitation helps not only to restore joint function, but also to reduce the risk of re-injuries, which is especially important for athletes. It is important to conduct rehabilitation under the supervision of specialists to ensure optimal results and patient safety. Sports taping of the ankle joint in the acute period is most often performed with open weaving. Basic materials: classic rigid sports tape (1.5 inches - 3.8 cm wide), easy-to-tear tape (2 inches - 5.1 cm). Ankle injuries are a common problem, especially among athletes. Proper rehabilitation plays a key role in restoring joint function and preventing re-injuries. Taping is an effective method that can help in this process. Severe pain symptoms can disrupt the normal function of the limb. Hemorrhage into soft tissues leads to shortening of muscle fibers, tendons and ligaments, disrupting their elasticity. In terms of pain intensity, this condition can compete with fractures. After questioning the patient about the mechanism of injury, palpation of the foot, a thorough examination of the site of injury, checking for pathological mobility of joints and bones are performed, and as a control method, X-ray of the injured foot is performed.
Goals of rehabilitation
1. Reduction of pain and swelling.
2. Restoration of range of motion.
3. Strengthening of muscles and ligaments.
4. Restoration of functional activity.
Stages of rehabilitation
1. Acute period (1-3 days)
o Application of the R.I.C.E. method (rest, ice, compression, elevation).
o Taping to stabilize the joint and reduce swelling.
2. Subacute period (3-7 days)
o Continue taping to support the joint.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

o Light range of motion exercises (e.g. foot circles).
o Balance exercises (e.g. standing on one leg).
3. Recovery period (1-4 weeks)
o Increase the load on the joint.
o Add strength and endurance exercises (e.g. working with elastic bands).
o Continue taping if necessary.
4. Final stage (4 weeks and beyond)
o Return to sports activities.
o Taping to prevent re-injuries.
o Continued work on strength, flexibility and coordination.

Taping helps: limit joint movement, which promotes healing, reduce swelling and improve blood circulation, provide support and confidence when performing rehabilitation exercises. Taping can also be used to hold bandages and various dressings, for temporary or permanent wound closure. In the acute stage of injury, the sports taping technique can be used for temporary immobilization, when applying a tight hemostatic bandage, a compress with medications or a bandage to prevent skin chafing. The main contraindications for using materials for sports taping are: individual intolerance to these materials, such as tape glue, foam padding, certain types of tape, open wounds or abrasions of the skin, skin disease. To effectively use the sports taping technique, it is necessary not only to have deep knowledge of human anatomy and biomechanics, and the ability to determine the normal passive and active range of motion in a joint, but also to understand the basic mechanisms of various injuries and damage to the human musculoskeletal system.

CONCLUSION

Functional rehabilitation after ankle injury using taping is an effective approach for recovery. Correct application of tape in combination with targeted exercises will help to return the patient to activity and reduce the risk of re-injury. It is important to consult with a doctor or physical therapist before starting rehabilitation.

REFERENCE

1. *Avilova I. A., Kozlov O. I. Medical and physical rehabilitation of ankle joint injuries // Promising directions in the field of physical culture, sports and tourism. - 2019. - P. 12-14.*
2. *Bortnikova L.V., Yusupova D.R. Functional rehabilitation after injury to the ankle joint using a bandage // Scientific Notes of Lesgaft University. 2022. No. 10*
3. *Butaboev M. T., Mavlyanova Z. F., Soliev I. M. Physical rehabilitation of elderly patients with degenerative-dystrophic joint lesions among health workers // Science and Education. - 2024. - V. 5. - No. 9. - P. 112-118.*
4. *Gorbatov R. O. et al. Personalized rehabilitation of patients after ankle arthrodesis // Department of Traumatology and Orthopedics. - 2016. - No. 4. - P. 44-47.*
5. *Lutfilloevna B. G. Topical issues of health on the part of the locomotor apparatus of chess players //Journal of Modern Educational Achievements. – 2023. – T. 8. – №. 8. – C. 104-109.*
6. *Ma K., Makeeva V. S., Shirokova E. A. Functional rehabilitation of the foot and ankle joint of basketball players using proprioceptive exercises // Innovative transformations in the field of physical culture, sports and tourism. - 2021. - P. 94-99.*
7. *Ravshanova M. Z. Rehabilitation of athletes with ankle injuries using various methods // Science and Education. - 2023. - Vol. 4. - No. 2. - P. 408-414.*
8. *Ravshanova M. Z. Early rehabilitation of football players with ankle injuries using kinesiotaping and electrical myostimulation // Science and Education. - 2024. - V. 5. - No. 12. - P. 126-134.*
9. *Shvygina N.V. Restoration of motor ability of athletes with manifestations of ankle instability // Scientific notes of Lesgaft University. 2018. No. 12*
10. *Yatsun S. M. et al. New approaches to ankle joint rehabilitation using a mechanotherapeutic device // Medical equipment. - 2018. - No. 1. - P. 27.*
11. *Zoxidjonovna R. M. et al. Injuries of the ankle joint in athletes. a new view on the problem of rehabilitation //Art of medicine. international medical scientific journal. – 2022. – T. 2. – №. 1.*