



Study of Sports Medicine and Rehabilitation

Nadeem Ahmed, Masters In Physical Education

Abstract

The specialisation in physical medicine and rehabilitation (PM&R) is unique in its ability to address the diversity of issues arising from the musculoskeletal system with diagnostic and non-surgical treatment. This covers wounds and illnesses affecting the limb and spine muscles, bones, articulations and nerves. Athletes, from teenage athletes to weekend warriors and experienced pros, are evaluated, treated and taught by the Johns Hopkins Sports Rehabilitation Program. Our staff is qualified to assist you recover from an accident, to identify risk factors or to enhance your athletic performance, so your favourite activities can take place over the next several years.

Key words: Physical, Medicine, Rehabilitation, Rehabilitation etc

Introduction

Rehabilitation is the restoration of optimum shape and function (anatomy) (physiology). Musculoskeletal injuries may have substantial and immediate functional negative consequences. A number of treatments are required if a person has or is expected to have restrictions in the day-to-day operations owing to ageing or health problems, including chronic illnesses or disorders, injuries and traumatism. "Sustaining or returning to their everyday activities allows people of all ages to perform important life roles and enhance their well-being."

The rehabilitation of the substantive derives from the Latin prefix re, meaning "again" and "make fit." Rehabilitation should be identified as a procedure that reduces the losses of acute injury or chronic diseases, promotes recovery and maximises functional ability, fitness and performance.

There are a large number of injuries to recreational physical activity and competitive sports. Therefore, musculoskeletal problems are an unavoidable consequence of involvement in athletics. Football is the most seriously injured with gymnastics and ice hockey in the



background. Macro-traumatic and micro-traumatic tissue damage from sport may be categorised.

Conditions and Areas of Treatment

- Sports medicine - rehabilitation injuries, preventive and non-operative management
- Injuries to adolescent sports
- Injuries to musculoskeletal and conditions
- Chronic tendon diseases and lesions
- Injuries to the peripheral nerve
- Set of ankles, foot, hip, knee, elbows, wrists, and shoulder
- Low back, thoracic, and neck spine discomfort
- Arts injuries and conditions
- Athletics adaptive
- Arthritic circumstance
- Training in gait and prothesis
- Large and fine engine deficiencies

We assist everyone, from the "day walker" to elite and professional athletes, to return to their life's activities via a personalised strategy centred on the particular objectives of each patient.

Sports Medicine – Injury Rehabilitation Services

Our programme comprises doctors with a board of directors certification in many specialities and significant training in the treatment of sports-related injuries through non-surgical methods, pain management techniques and other therapies. Our PM&R doctors are top specialists in musculoskeletal ultrasonography and biomechanical assessment to properly identify and treat the most demanding situations.

In collaboration, we create a customised return-to-play plan for each patient with a team of orthopaedic surgeons, physical therapists, athletics trainer, sport nutritionists, rehabilitators and neuropsychologists, and other experts in sports medicine.

Treatment options offered by our physicians may include:

- Therapeutic exercise
- Movability analysis



- Osteopathic handling
- Custom bracing
- Ultrasound
- Advanced tendon therapies, TENEX or tendon scraping,
- Regenerative therapy Our doctors also offer sports medical services to college and university athletic teams and to competitive national and international teams.

Functional Rehabilitation

All rehabilitation programmes must take the activities and motions needed in the post-injury field into consideration and be reproduced. The aim of functional rehabilitation programmes is to restore the optimal athletic function of the athlete. Optimum athletic function is the outcome of physiological motor activations, which create certain biomechanical movements and postures that produce forces and actions utilising intact anatomical structures.

Initial Stage of Rehabilitation

This period takes around 4-6 days. Inflammation is the initial reaction of the body to an injury. Its primary purpose is to protect the body from toxic chemicals, remove dead or dying tissue and stimulate the renovation of normal tissue. The objectives for the first phase of rehabilitation are tissue damage reduction, pain alleviation, inflammatory response management and anatomical protection of the afflicted region. The pathological processes soon after the injury may lead to limitations such as atrophy of the muscles and weakening and restriction of the joint movement. These deficiencies lead to functional losses, such as the inability to leap or move an item. The amount and the timing of a therapeutic and rehabilitative procedure during the first injury period may affect the functional loss. If functional losses are significant or permanent, the disabled athlete may not take part in his/her sport.

The physiotherapist is typically the phase's professional, although a doctor may start the procedure.

Intermediate Stage of Rehabilitation

This period takes between 5 and 8-10 weeks. The body starts repairing the injured tissue with a comparable tissue after the inflammatory period, but the resilience of the new tissue is poor.



Reparation of the weakened damage site may take up to 8 weeks if the correct amount of stress is administered or longer if too much or too little stress is applied.

Advanced Stage of Rehabilitation

This period starts at about 21 days and may last 6-12 months. The result of the preceding step is the substitution of collagen fibres for damaged tissue. After those fibres have been set, the body may start restructuring and strengthening the new tissue, enabling the athlete to return to full activity gradually. This recovery phase marks the beginning of the conditioning procedure required to return to sport and competition. Understanding the requirements of the specific sport and communication with the coach are important. This phase also offers a chance to identify and address risk factors, which reduces the likelihood of re-injury.

Conclusion

Rehabilitation after sports injury in the contemporary age has become a specialist's domain and has necessary brought the sport physiotherapist, the sport physician and the orthopaedic surgeon together. There is a worry about a changing profile of sports-related injuries and inadequate availability of rehabilitation services in several regions of India. Elite athletes have some protection, but the ordinary athlete is frequently allowed to fight. The use of contemporary rehabilitation protocols under adequate supervision, adequate and timely operations, and the sensible and necessary use of pharmacological agents are key elements for effective sports-injury rehabilitation procedures. Modern rehabilitation protocols highlight collaboration and good rehabilitation planning. A qualified sports physiotherapist needs to lead the rehabilitation team, with a knowledge of protocols and interventions needed at different phases. Specific recovery procedures are used globally, but must be established based on the nature of the sport and the facilities available. Even in India sport doctors are joining specialist rehabilitation teams more and more and may assist them to enhance their knowledge of damage with medications, nutritional supplements and specialised testing. Surgeon inputs are required if surgical procedures have been done.

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