



Category: sports injuries - Rehabilitation



## SPORTS INJURIES – REHABILITATION

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Sports injuries are injuries that occur in athletic activities. They can result from acute trauma, or from overuse of a particular body part.

Rehabilitation is the act of restoring something to its original state, like the rehabilitation of the forest that had once been cleared for use as an amusement park. The noun rehabilitation comes from the Latin prefix re-meaning “again” and habitare, meaning “make fit.”

### Classification of Injuries:

Traumatic injuries account for most injuries in contact sports such as ice hockey, association football, rugby league, rugby union, Australian rules football, Gaelic football and American football because of the dynamic and high collision nature of these sports. Collisions with the ground, objects, and other players are common, and unexpected dynamic forces on limbs and joints can cause injury.

Traumatic injuries can include:

- Contusion or bruise - damage to small blood vessels which causes bleeding within the tissues.
- Strain - trauma to a muscle due to overstretching and tearing of muscle fibers
- Sprain - an injury in a joint, caused by the ligament being stretched beyond its own capacity
- Wound - abrasion or puncture of the skin
- Bone fracture - break(s) in the bone
- Head injury - concussions or serious brain damage
- Spinal cord injury - damage to the central nervous system or spine
- Cramp - a strong muscle contraction that can be very painful lasting in few minutes but massaging the muscles can relieve the pain.

### Soft Tissue Injuries:

When soft tissue experiences trauma, the dead and damaged cells release chemicals, which initiate an inflammatory response. Inflammation is characterized by pain, localized swelling, heat, redness and a loss of function. Small blood vessels are damaged and opened up, producing bleeding within the tissue. In the body's normal reaction, a small blood clot is formed in order to stop this bleeding and from this clot special cells (called fibroblasts) begin the healing process by laying down scar tissue.

The inflammatory stage is therefore the first phase of healing. However, too much of an inflammatory response in the early stage can mean that the healing process takes longer and a return to activity is delayed. Sports injury treatments are intended to minimize the inflammatory phase of an injury, so that the overall healing process is accelerated. Intrinsic and extrinsic factors are determinant for the healing process.

### Treatment:

Sports injuries can be treated and managed by using the P.R.I.C.E.S., D.R. A.B.C., T.O.T.A.P.S and R.I.C.E.R regimes:

**P – Protect**



**R – Rest**  
**I – Ice**  
**C – Compression**  
**E – Elevation**  
**S – StabilizeD – Danger**  
**R – Response**  
**A – Airway**  
**B – Breathing**  
**C – Circulation**  
**T – Talk**  
**O – Observe**  
**T – Touch**  
**A – Active movement**  
**P – Passive movement**  
**S – Skills test**  
**R - Rest**  
**I - Ice**  
**C - Compression**  
**E - Elevation**  
**R - Referral**

The primary inflammatory stage typically lasts around 5 days and all treatment during this time is designed to address the cardinal signs of inflammation – pain, swelling, redness, heat and a loss of function.

Compression sportswear is becoming very popular with both professional and amateur athletes. These garments are thought to both reduce the risk of muscle injury and speed up muscle recovery.

Although not proven some professional athletes use hyperbaric chambers to speed healing. Hines Ward of the Steelers sent his personal hyperbaric chamber (similar to the one pictured) to his hotel to sleep in believing it would help heal his sprained medial collateral ligament he suffered in their playoff win against the Ravens. Hines went on to play in Super Bowl XLIII.

### **Different Types of Rehabilitation**

Rehabilitation is a process used to give a healing touch to the patients who are suffering from physical and mental disorders, addiction, etc. Rehabilitation program helps the patient to get back to his/her normal life and earn a livelihood. Rehabilitation plays an important role in the lives of addicts and persons who have suffered from diseases or accidents. Rehabilitation plays a key role in the lives of people who have suffered from a trauma. This program is a given to patients based on their needs. Every person's requirements vary so the program is subjective. Personal attention is given to each patient and his or her development is monitored on regular basis.

The rehabilitation programs are divided in various types.

- 1. Occupational Rehabilitation:** This particular type of Rehabilitation is for those victims who do have lost some important skills after they have met with a paralytic stroke or any unfortunate major accident. We have to perform these skills every day in our life, without which it is impossible to survive. Skills like writing, reading, cooking food etc. We lose this skill if our brain is injured; therefore victims lose interest in communicating with other people. For this type of patients, doctor advises to visit occupational therapist. This particular therapist helps you to do regular physical exercises, meditation to make your muscle strong. The patient is given special care by their counselor and.



2. **Physical Rehabilitation:** This sort of rehabilitation is used for patients who have suffered from bone and muscle injuries. The physiotherapist helps a lot in giving the right exercise regime to strengthen the muscles of back neck, shoulder, etc. This injury can happen due to accidents, sports, etc. A lot of treatment and technology is available in physical rehabilitation. The recovery time differs from person to person and so does the type of injury. The patients have to follow religiously the given exercise patterns.
3. **Aquatic Rehabilitation:** This is a new trend in rehabilitation yet it is a successful in treating problems in joints. The therapists treat the patients by giving various water exercises likeswimming, water aerobics, etc. This helps in giving strength, flexibility and mobility to themuscles of legs. Many patients with arthritis, joint pain, and paralytic stroke are treated with help of this rehabilitation. The program is customized according to an individual's needs and he or she is treated to recover from the injury so that he or she has a normal life.
4. **Cognitive Rehabilitation:** This type of rehabilitation is given to patients who have suffered from brain injury. To help them to get back to routine activities, they are treated with the help of neuropsychological approach. In this program, the patients are given counseling and mental exercises. This program looks at cognitive, social, moral and emotional aspects of the brain injury that has made the patient dependent. This rehabilitation helps to support a patient to get back to his normal life prior to injury. The person can go back to his or her studies or job after recovering fully.

**Physical medicine and rehabilitation (PM&R)**, also known as physiatrist **rehabilitation medicine**, is a branch of **medicine** that aims to enhance and restore functional ability and quality of life to those with physical impairments or disabilities.

#### Training:

The major concern that PM&R deals with as a medical field is the ability of a person to function optimally within the limitations placed upon them by a disabling impairment or disease process for which there is no known cure. The emphasis is not on the full restoration to the premorbid level of function, but rather the optimization of the quality of life for those not able to achieve full restoration. A team approach to chronic conditions is emphasized to coordinate care of patients. Comprehensive Rehabilitation is provided by specialists in this field, who act as facilitators, team leaders, and medical experts for rehabilitation.

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