

## Sports Injuries : The Team Approach

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Millions of people around the world participate in various types of sports and physical activities. Though developed countries participate and indulge more in sporting activities but the developing countries are not far behind. Ranging from cricket to wrestling, tennis to hockey, sports in any form is becoming highly competitive, aggressive and performance oriented.. The sheer energy and momentum of various outdoor sports exposes the sportspersons to the risk of injury and other medical problems. To cater to this population a highly specialized branch of healthcare known as “Sports Medicine” is becoming increasingly popular. Sports Medicine includes injury prevention, diagnosis, treatment and rehabilitation, performance enhancement through training, nutrition and psychology, management of medical problems, exercise prescription in health and chronic illness, specific needs of the children, females and older population, those with disabilities, medical care during sporting events, medical care during environmental changes such as altitude, heat, depth and ethical issues such as drug abuse and doping.

The Sports Medicine Team comprises of various members each playing an important role in fulfilling the healthcare needs of the sportspersons. (Table.1) But in the developing countries and specially in the less popular sports, the team may only have a Sports Physiotherapist who is generally considered vital along with other professionals available on referral basis. There may also be considerable overlap between the roles of various professionals. Hence it is desirable to have adequate knowledge about various aspects of sports healthcare for any professional entering the field.

Table .1 *The Ideal Sports Medicine Team*

Physiotherapist
Coach
Sports physician
Massage Therapist
Orthopedic surgeon
Radiologist
Podiatrist
Dietician
Psychologist
Sports Trainer
Exercise Physiologist
Orthotist

The athlete’s contact with healthcare professional depends on a lot of factors such as relationship with the healthcare practitioner and whether they are accustomed to meet the healthcare professional. So essentially the first contact of the sportsperson with a health related problem or injury could be the coach, the physiotherapist, the physician or any other healthcare practitioner depending on the need and accessibility of the personnel. Since soft tissue injuries form a major percentage of athletic injuries around the globe, the physiotherapist plays an important role in prevention, treatment and rehabilitation of the athlete in close co-ordination with the coach. The coach also has an important role to play at all levels of injury management since decision making in sports is based on many factors and the coach’s close association with the sportsperson plays a crucial role in the successful rehabilitation of the patient. The coach and the Sports Physiotherapist generally work in close co-ordination with each other to prevent injuries by focusing on technique, training, equipment and fitness issues like flexibility, muscle strength, endurance, power and finally balance.

### Types of Muscular skeletal injuries in Sports

Musculoskeletal sports injuries have been classified in various ways based on structure injured , mechanism and other factors (Table 2) . Various factors have been proposed for such injuries and it is essential that the treating clinician is aware of all these before planning a scientific rehabilitation program for such a patient. With an ever increasing incidence of sports injuries it is essential that members of the sports medicine team are aware of the various causative factors leading to Sports injuries, so that they are able to identify, refer to and manage these injuries in a scientific manner. Not only this the team members should also take care of various training issues, intensity of the game, pre-season and post season activities etc for a thorough understanding of the problem.

Diagnosis of an injury in sports not only requires the diagnosis of the injury , it also requires the diagnosis of the cause of the problem. Every attempt should be made to diagnose the precise anatomical and pathological diagnosis of the presenting problem. Instead of using terms like “shin pain” or “ankle sprain”, specific terms such as stress fracture or anterior talon- fibular ligament sprain are more scientific and clearly outline the type of injury. A good history, observation and examination have no

Table . 2 *Classification of Musculoskeletal Sports Injuries*

<i>According to the site</i>	<i>According to mechanism or cause</i>
Bony	Dynamic Overload
Cartilage	Structural Vulnerability
Joint	Inflexibility
Ligamentous/capsular	Growth
Muscular Injury	Muscular Imbalance
Tendonous Injury	Trauma
Bursa	Overuse
Skin	Hormonal Imbalance
nerve	

substitute in determining the clinical diagnosis with the investigations should always be considered as an adjunct to diagnosis. However, in certain cases if clinically impossible to differentiate between the potential sites of pathology such as in low back pain and well controlled treatment may have to be administered without a specific diagnosis.

Once diagnosed ,any sports musculoskeletal injury in sports is treated and rehabilitated in 3 phases. These phases can either be on the basis of pathological changes after injury or on the basis of clinical findings but essentially they are interrelated since staging of rehabilitation can only be based on the stage of tissue healing. Time can also be taken into account while staging an injury but in sports, a particular injury may continue to behave as if it were an acute injury because the stresses imposed on the injured tissues may continue to damage it. The following stages of injury are widely accepted for the purposes of rehabilitation: Acute Inflammatory Stage :is the time immediately after injury and is also called Pain and Inflammatory control stage. Actually the management during this stage starts on field during the medical time out allowed in each sporting event so that the player can continue playing . the emergency management could be in the form of ice, taping, bandaging, pain relieving sprays, soft tissue techniques, mobilization in the form of stretching and movement and medication if required. At the international level, the physiotherapist plays a vital role since the on field sports injury is to be attended by the sports physiotherapist who is the decision maker on field. On field injury management may include taping, bandaging, cry therapy (icing), Traditionally upto 72 hours has been considered to be acute stage but depending on the injury the pain and swelling may last upto 2 weeks.

▪ Proliferation phase / Strengthening and Mobilization phase: during this phase continuous increase in strength and range of motion is the goal and depending on the grade of injury may last from

3-6 weeks. Progressive resistance exercises, range of motion exercises, stretching and conditioning form a major part of this phase.

▪ Remodeling stage or Stage of Functional rehabilitation. : The stage of functional rehabilitation involves skill specific training, advanced exercise programs like polymeric, endurance activities and power training to prepare the athlete for participation in sports. This stage may take very long and should always be followed by fitness testing before a sportsperson can be

allowed to enter competitive sports.

During the injury period, the healthcare team including the coach and the sports physic plays an important role in motivating the athlete to come back in a systematic manner. A good healthcare practitioner –coach relationship is always a win – win situation for the sportsperson. Involving the coach in decision making process and explaining the rationale behind recommendations increases the athletes compliance. The coach is also valuable in supervising the recommended exercise program. The best way to understand the sport is to attend a training session and if possible indulgent in the sport itself. To be a good sports health practitioner, it is essential that you love the sport and understand the sentiments of the sportsperson. In the developing world, more and more healthcare practitioners need to come forward and be a part of the sports health fraternity.

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