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Enhancement of performance through sports medicine

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Abstract

Sports medicine is specially advocated when an injury occurs during playing some sports or during exercise schedule. There are different types of medicines needed for any sportsperson. In recent times, our society has recognized the dangers of physical inactivity among the people as they are more obsessed with digital gadgets like laptops, mobiles, etc. Especially, in western countries, concrete efforts have been made to encourage people to become more physically active as it has been a real concern for public health. In India, the concept of the green gym has been made popularized by implementing some fitness instruments in the gardens. It has been made compulsory for Municipal corporations to allot funds in their budget for physical exercise instruments.

Keywords: Injuries, sportsperson, athlete, medicine, doctor

Introduction

Injuries are part and parcel of a sportsperson. There are multiple internal and outer injuries that may be arising for any athlete. The quantum of injuries may be minor in many cases, but it can be transformed into major injuries if not taken care properly. Nursing of the injury may lead to the fatal one. Many sports person sometimes not even know what could be consequences if he or she trying to hide or ignore their injury.

Sports medicine is a branch of medicine that deals with physical fitness and the treatment and prevention of injuries related to sports and exercise. Although most sports teams have employed team physicians for many years, it is only since the late 20th century that sports medicine has emerged as a distinct field of health care. (Wikipedia)

There is a need for a specialist doctor to look after the injury and have a proper schedule of recovery and medicine. He must have knowledge of the banned medicines that shouldn't be entered in the body of an athlete; otherwise, if there is an element of doping in the blood samples when a medical check-up is done, he or she might be fined and/or banned under the doping charge. These consequences may lead to the unfortunate and abrupt end of their career too.

For example, recently BCCI has decided to ban young talented cricketer, Prithvi Shaw for 8 months after failing a dope test. He was found guilty of "inadvertently ingested a prohibited substance, which can be commonly found in cough syrups." (Delhi)

In many cases, sports injuries do not require surgery. General treatment for a sports injury is the use of pain relievers and having the injured area immobilized with a cast or sling. Surgical procedure required in case of torn tissue or realign bones of the sportsperson.

Sports injuries

Sports injuries are most commonly occurring during the playing of the sport or exercise schedule. There are other similar reasons like poor training practices, lack of proper equipment and insufficient warm-up or exercises before playing the sport.

If your child sustains a significant injury during exercise or sports, it's probably best to seek immediate treatment at an emergency room, rather than wait to see a sports medicine specialist. Signs of a significant injury include severe pain, swelling, numbness, and an inability to put any weight on the injured area. If none of these symptoms is present, have your child rest at home and call your child's health care provider for guidance and a possible referral to a sports medicine specialist. (Stanford children's health).

Sports injuries may be classified into 3 categories

Direct injuries

Direct injuries are characterized by the sudden appearance of symptoms usually associated with a single traumatic incident. In these injuries, pain or loss of function is immediate.

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(Ytterstad) Generally, these types of injuries are caused by an external force as a collision between two players or player and equipment. The following are the sudden replications of the direct injuries.

- Bruises
- Fracture
- Cuts

Indirect Injuries

Indirect injuries are caused by internal force such as overstretching a ligament in a sudden change in direction. The following are the result of indirect injuries:

- **Strain:** It involves twisted, torn or over-stretched muscles in the calf, thigh or lower back.
- **Sprain:** An injury that involves the ligament and other soft tissues around a joint, such as ankle or wrist. It is a stretch or tears in the ligament.

There are some common symptoms of Strain, Sprain, and Bruises.

- **Severe pain at the site of injury:** You feel the severe pain at the site and/or around the injury.
- **Loss of power in an injured area:** You feel the loss of functionality in an injured area. The swift movement of the area is halted and the movement of the area doesn't function properly.
- **Swelling of an injured area:** You feel the swelling around the injured area. This swelling area becomes bigger as time progresses.
- **Nausea:** Sometimes, a sportsperson instantly feels nausea.
- **Feeling Fainted:** Feeling fainted is the common reflection of any injury. Sportsperson also may feel pale, cold and clammy skin due to the shock.

Chronic Injuries

Chronic injuries are caused by the gradual onset of repetitive light trauma to soft tissue or bone. As a result injured person may always/consistently feel the weakness of the injured site. Gradually, this feeling becomes a part of nuisance in the body. This can be caused due to insufficient rehabilitation after injury. (A. Natri)

Another aspect of the chronic injuries is that they are caused due to the excessive and repeated use of the same muscle, joint or bone. These injuries might be caused by the gradual increase in pain. There are some common chronic injuries.

- Shin Splint.
- Small Sport Injuries
- Ankle Sprains
- Groin Pull
- Hamstring Strain
- Tennis Elbow (Famous Cricket Player, Sachin Tendulkar was a recipient of Tennis Elbow injury).

Treatment for Sports Injuries

Treatment depends on the types and severity of the injury. The scientist suggested famous RICE therapy. Some mild sprain or strain can be easily treated at home using RICE therapy. (Van Den Bekerom)

Rice Method

- R- Rest (2-3 days with immobilization)
- Ice (Reduce pain and spasm)
- C- Compression (Decrease swelling by slowing the

flow of fluid to the area).

- E-Elevation (Decreases swelling by encouraging blood to return to the heart).

Rehabilitation

Another important aspect of treatment is the rehabilitation process, especially advocated for chronic injuries. This process usually takes longer duration and uttermost attention is required to accomplish the rehabilitation procedure. (Kwolek).

Any rehabilitation process generally follows the following steps:

1. **Alternative training:** Rehabilitation starts with alternative training.
2. **Circuit training:** It is the next step to overhaul the body shape
3. **Conditioning:** Conditioning is the next step where the athlete has been prepared both physically and mentally by the sports trainer.
4. **Endurance:** Step-by-step, the body of the athlete faces endurance challenges. The capacity of endurance has been gradually developed.
5. **Flexibility:** It is one of the most important steps for the regaining of the body structure and posture.
6. **Strength training:** Gradually, some training to regain the strength of the athlete has been provided.
7. **Stretching techniques:** Some stretching techniques are used to gain more flexibility and harmony of the body.
8. **Warm-up:** Body needs to be properly functioning mode. An athlete needs to do a proper warm-up before play.
9. **Weight Training:** Sometimes, an athlete needs weight loss/gain for his/her respective game. Weight training is the key to maintain the body.

Prevention from sports injuries

There is a famous proverb: "Prevention is better than Cure." A sportsperson is prone to injury. However, if he or she can maintain the proper schedule and handle him carefully, then he or she can effectively prevent themselves from sports injuries. (Van Mechelen).

Here is a sequence of the activities needs to be done by any athlete to prevent himself/herself from the injuries.

- Warm-up
- Cool Down
- Hydration
- Proper Technique
- Equipment
- Physical Conditioning
- Facilities Management
- Balanced Opponents
- Rules and Enforcement

Sports medicine is not a medical specialty in itself. Most sports medicine doctors are certified in internal medicine, emergency medicine, family medicine, or another specialty and then receive additional training. Others specialize in treating injuries in children and teens, whose growing bodies can be quite different from those of adults. They are generally board-certified in pediatrics, or family medicine, with additional training in sports medicine. Some, but not all, sports medicine doctors have surgical training, too, usually as orthopedic surgeons. (Barry Issenberg).

The list of some common examples of injuries that may be

treated by sports medicine doctors is given below:

- Ankle sprains
- Concussions
- Cartilage injuries
- Eating disorders
- Exercise-induced asthma
- Fractures
- Heat illness
- Knee and shoulder injuries
- Tendonitis

In addition, sports medicine doctors can provide timely advice on nutrition, supplements, exercise, and injury prevention.

Besides core doctors (medical professionals), there are various professionals who are not medical professional, but can work as a sports medicine doctor to provide special care to sports-related injuries and rehabilitation:

- Physical therapists. These therapists advocate proper movements and soft exercises to a patient if needed. They are one of the best people to deal with joint injuries.
- Certified athletic trainers. They are specialized professionals with lots of experiences under their bellies. These experts provide specialized rehabilitative exercise schedules and conditioning programs that help a patient in regaining their body and strength along with the schedule to prevent the patient from future injury.
- Nutritionists/ dietician. The demand for proper dietician is ever-increasing nowadays. They are specialized people who decide on the balanced diet of a sportsperson. They can suggest proper program schedule on weight loss or weight gain for the sportsperson. They may examine and suggest the proper food that will help sportsperson in their respective game.

Conclusion

There are special post-graduate courses designed for Sports medicine doctors. They have been given the special training to restore function to injured patients during their play or exercise so they can get moving again as quickly as possible. They are trained to acknowledge various therapies which are helpful in preventing illness and injury of inactive people. Sports medicine doctors are generally looking after the injuries of professional athletes. However, they can also be handy in treating children and teens involved in sports. Adults can also recruit them for their personal fitness. People involved in rigorous physical work can also take the help of these specialized sports medicine doctors. As the sports culture around the world is ever-increasing, career opportunities are also increasing in sports medicine branch.

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