

SPORTS INJURIES AND ITS REHABILITATION

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REHABILITATION

Rehabilitation is the restoration of optimal form (anatomy) and function (physiology)

SPORTS THERAPY

Sports Physical Therapy utilized in rehabilitation, treatment, prevention, evaluation, performance and enhancement of the physically-active individual. Sports physical therapists are involved in evaluation of acute and chronic injuries.

For athletes facing injury, the ultimate goal is to return them to their individualized sport. With traditional physical therapy, there is often a large gap between rehabilitation after an injury or surgery and returning to sports.

Bridge this gap from rehabilitation to return to sport to reduce re-injury and complications after surgery, as well as to improve sports performance. We take a multi-disciplinary approach to treatment and will be in contact with all involved while getting you back to sport.

TREATING SPORTS INJURIES

A specially-trained physical therapist will complete a comprehensive evaluation looking not only at the injury at hand, but also taking into consideration the underlying cause of the injury and the given sports demands. Sports rehabilitation treats a variety of conditions including:

SPORTS REHABILITATION

Principles are the foundation upon which rehabilitation is based. Here are seven principles of rehabilitation, which can be remembered by the mnemonic: ATC IS IT. A: Avoid aggravation. It is important not to aggravate the injury during the rehabilitation process. Therapeutic exercise, if administered incorrectly or without good judgment, has the potential to exacerbate the injury. T: Timing.

The Sports Rehabilitation Association of India is the organisation which is doing pioneering work in taking care of various injury related worries and problems of the sports persons.

Sports persons are a trusted organization which gives a sense of assurance to the sports persons that they can go back to their arena and perform to their full potential. Sports Rehabilitation Treatments

Use the latest, most effective therapies to help you overcome any injury you're facing, including: Casting and splinting of fractures: Depending on your injury, a cast or a splint might be the best way to support and protect injured bones, ligaments, tendons and tissues.

STAGES OF SPORTS REHABILITATION

There are 3 recognized stages of rehabilitation and these are:

- **Early-stage** rehabilitation is gentle exercise allowing for the damaged tissue to heal. This stage is often rushed and will result in poor quality healing and will be prone to re-injury.
- **Mid-stage** rehabilitation involves progressively loading the muscles/tendons/bones or ligaments to develop tensile strength producing a healed tissue that will be able to withstand the stresses and strains of everyday life and exercise.
- **Late** – the final stage (late) of rehabilitation is where the tissue adapts and is stressed using functional exercises and drills to ensure the body is ready to return to play.

RESTORING MUSCLE STRENGTH

Restoring your muscles back to normal strength levels is an important principle of sports rehabilitation.

The first phase of rehabilitation is to progressively load the damaged (pathological) tissue (e.g. ligament, tendon or muscle) to restore its strength (often referred to as tensile strength).

There is plenty of evidence to support this theory and if the load is too great for the damaged tissue to withstand, it will fail and healing will be back to square 1. Loading tissue that is repairing is a delicate process and should be led by the pain felt during the exercise or the following day. Both of the latter usually indicates that the load during the exercise was too high and needs to be reduced. It is strongly advised to listen to your body and its reaction to exercise.

- Lower leg & ankle exercises
- Knee exercises & rehabilitation
- Hip & groin exercises
- Shoulder exercises
- Wrist & hand exercises
- Core strengthening

- Pilates exercises for sport

View taping videos for specific sports injuries:

- Plantar fasciitis taping
- Ankle sprain taping
- Achilles tendon taping
- Turf toe taping
- Shin splints taping
- Anterior shin taping
- ACL sprain taping
- Jumper's knee taping
- Patellofemoral pain taping

Stretching exercises are important in sport for optimum performance, preventing and recovering from injury. But are you doing the right stretches at the right time? Here we explain the different types of stretching, the benefits, and technique.

Flexibility is the range of movement at a joint. It means the same as mobility or suppleness and is important in sport. Stretching has a number of benefits including:

- Increasing range of motion
- Preventing injury
- Avoiding DOMS (delayed onset muscle soreness)
- Improving posture
- Stress relief
- Enhanced sports performance.

TYPES OF STRETCHING

There are a number of different types of stretching exercises which can be done to improve flexibility. The most appropriate technique will depend on your specific aims and include:

- Static stretching is where the muscle is stretched until a gentle 'pull' or stretch on the muscle is felt then held for a period of time.
- PNF (proprioceptive neuromuscular facilitation) type techniques involve contracting and relaxing muscles.
- Dynamic stretching is very much in fashion these days, particularly in sport for warming up.
- Ballistic stretching is where the end range of movement of the joint is forced.
- Neural stretching refers to stretching the structures of the nervous system, for example, sciatic nerve stretches.

SPORTS REHABILITATION TREATMENTS

The latest usage of most effective therapies to help overcome any injury facing, including:

- **Casting and splinting of fractures:** Depending on your injury, a cast or a splint might be the best way to support and protect injured bones, ligaments, tendons and tissues.
- **Dry needling:** A trained specialist will insert a thin needle into your muscle to stimulate muscle tissue, reduce pain and boost muscle function.
- **EMG/nerve conduction studies:** We use this test to find the cause of nerve pain such as pinched nerves or carpal tunnel syndrome. This helps us determine the best treatment.
- **Gait analysis:** Your pattern of running or walking is called your “gait” and is unique to you. Some injuries can affect your gait. Walking or running in a certain way can also cause injuries. We use video analysis to help identify what’s causing these problems and help you heal.
- **Knee osteoarthritis and cartilage preservation treatment:** If you’re experiencing cartilage problems, we can use hyaluronic acid to relieve pain and help strengthen cartilage. This is a way to treat knee osteoarthritis without steroids, which can make cartilage weaker over time.
- **Radiofrequency ablation:** This procedure can help eliminate back and neck pain by dulling nerve fibers that carry pain signals to the brain.

BENEFITS

- Specific physical therapy techniques vary dependent on the particular injury and level of activity the athlete is working towards. Some of the benefits include:
 - Functional baseline testing
 - Decreased soft tissue inflammation
 - Relief of spasms
 - Improved tissue healing
 - Increased balance and coordination
 - Personalize exercise prescription to improve mobility
 - Regaining lost strength
 - Targeted sport-specific exercise to return to pre-injury function
 - Preparation to avoid recurrent injuries

References

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