

**Impact  
Factor  
2.147**

**ISSN 2349-638x**

**Reviewed International Journal**



**AAYUSHI  
INTERNATIONAL  
INTERDISCIPLINARY  
RESEARCH JOURNAL  
(AIIRJ)**

**Monthly Publish Journal**

**VOL-III**

**ISSUE-  
IV**

**Apr.**

**2016**

**Address**

- Vikram Nagar, Boudhi Chouk, Latur.
- Tq. Latur, Dis. Latur 413512
- (+91) 9922455749, (+91) 9158387437

**Email**

- aiirjpramod@gmail.com

**Website**

- www.aiirjournal.com

**CHIEF EDITOR – PRAMOD PRAKASHRAO TANDALE**

## **Common Basketball Injuries & Prevention**

**Dr. M.P. Gaur**

Head, Department of Physical Education,  
D.A.V.P.G. College, Lucknow (U.P.), India.

### **Abstract**

*Sports injuries are one of the most common injuries in modern Western societies. The treatment of sports injuries is often difficult, expensive and time consuming, which is why preventive strategies and activities are justified for both medical and economic reasons. Successful injury surveillance and prevention requires valid pre- and post-intervention data on the extent of the problem. The etiology, risk factors and exact mechanisms of injury should be identified before initiating any sports injury prevention measure or program, and outcome (injury) measurement should include a standardized definition of the injury and its condition. severity, as well as a systematic way to collect the information. A valid and reliable measure of exposure includes accurate information about the population at risk and the duration of exposure. Basketball injuries are generally defined as acute / traumatic or overuse injuries. Acute or traumatic injuries occur as a result of sudden force or impact, such as a fall or trip, resulting in direct damage to ligament or bone structures. The most common basketball injuries involve various types of ankle sprains and patellofemoral pain or acute knee trauma (Drakos, M. et al, 2010). The trend clearly suggests that lower extremity injuries, which account for about 62%, are much more common than trunk or upper extremity injuries. Of these injuries, most are acute and occur at a rate of 6 to 14 injuries / 1000 hours played.*

*Keywords: Acute Injuries, Overuse Injuries, Stress Injuries, Tendonitis or Jumper's knee.*

### **Common Basketball Injuries**

Injury means physical harm to living things. Sports injuries are injuries that occur during sports activities. In many cases, these types of injuries are often due to overuse or acute trauma to any part of the body while participating in a particular activity. For example, a runner's knee is a painful condition often associated with running, while tennis elbow is a form of repetitive stress injury to the elbow. Other types of injuries can be caused by hard contact with something. This can often cause a rupture or tear of the ligament or tendon. Basketball is one of the most popular and exciting sports in the United States of America, it is also very popular all over the world. Because it is a dynamic and fast-paced sport with many sudden movements, injuries are common. Because of the grueling end-to-end action in a basketball, basketball players often tire and sustain injuries from overuse.

### **Common Injuries During Basket Ball**

Basketball is associated with a significant number of medically treated sports injury cases, such as cuts, twists and sudden changes of direction also cause many injuries. Most injuries affect the lower extremities, with ankle sprains, with knee injuries being the most common. Head, finger and tooth injuries have also occurred as a result of contact with other players or the ball. Basketball injuries can be divided into two general categories: overuse injuries and traumatic injuries.

### **Overuse Injuries**

Overuse injuries occur over time due to stress on muscles, joints, and soft tissues without the proper time for healing. They start as a minor ache or a persistent ache and can become a debilitating injury if left untreated at the onset of injuries and traumatic injuries. Injuries that fall into this category include:

Tendonitis or jumper's knee

Achilles tendonitis

Rotator cuff tendonitis (overload of the shoulder tendons)

#### **Traumatic Injury**

- Acute or traumatic injuries occur as a result of sudden force or impact and can be quite dramatic. Some of the most common traumatic injuries in basketball are snags, twitching, or tears. The most common traumatic injuries in basketball are:
- Anterior and Posterior Cruciate Ligament (ACL/PCL) Injuries
- Injuries to the Meniscus
- Wrist Sprains
- Finger Fractures
- Ankle Sprains
- Achilles tendon Rupture
- Hamstrings Pull or Tears
- Muscle Sprains and Strains
- There are various types of injuries in basketball but some common injuries are:

#### **Ankle Sprain**

The most common basketball injury is the ankle, which accounts for more than 50% of basketball injuries. The ankle is very tense. For example, when the player intervenes to evade an approaching opponent.

#### **Sprained Ankle**

A sprained ankle is a common cause of ankle pain. A sprain is the stretching or tearing of ligaments. The most common is an inversion sprain (or lateral ligament sprain) in which the ankle turns so that the sole of the foot is turned inward, damaging the ligaments on the outside of the ankle.

#### **Grades Of Severity For Sprained Ankles :**

Sprained ankles, as with all ligament's sprains, are divided into grades 1-3, depending on their severity:

- **Grade 1 sprain**  
Some stretching or perhaps minor tearing of the lateral ankle ligaments.  
Little or no joint instability.  
Mild pain.  
There may be mild swelling around the bone on the outside of the ankle.  
Some joint stiffness or difficulty walking or running.
- **Grade 2 sprain**  
Moderate tearing of the ligament fibers.  
Some instability of the joint.  
Moderate to severe pain and difficulty walking.  
Swelling and stiffness in the ankle joint.  
Minor bruising may be evident.
- **Grade 3 sprain**  
Total rupture of a ligament.  
Gross instability of the joint.  
Severe pain initially followed later by no pain.  
Severe swelling.  
Usually extensive bruising.



**Immediate First Aid For A Sprained Ankle**

- Aim to reduce the swelling by RICE (Rest, Ice, Compression, Elevation) as soon as possible:
- R is for rest. It is important to rest the injury to reduce pain and prevent further damage.
- I is for ICE or cold therapy. Applying ice for reduce swelling, reduce bleeding (initially) and encourage blood flow (when used later). Apply an ice pack or similar immediately following injury for 15 minutes. Repeat this every 2 hours.
- C is for compression - This reduces bleeding and helps reduce swelling. A wrap bandaging technique is excellent for providing support and compression to a recently injured ankle.
- E is for Elevation - Uses gravity to reduce bleeding and swelling by allowing fluids to flow away from the site of injury. So put your feet up and get someone else to wait on you!

**Causes Of Achilles Tendonitis**

- Achilles tendonitis is an overuse injury. Too much too soon is the basic cause of overuse injuries, however other factors can contribute to developing the condition.
- Increase in activity (either distance, speed or hills).
- Less recovery time between activities.
- Change of footwear or training surface.
- Weak calf muscles.
- Decreased range of motion at the ankle joint, usually cause by tight calf muscles.

**Treatment Of Achilles Tendonitis**

- Rest and apply cold therapy.
- Wear a heel pad to raise the heel and take some of the strain off the Achilles tendon. This should only be a temporary measure while the achilles tendon is healing.
- Make sure you have the right running shoes your foot type and the sport.
- See a sports injury professional who can advise on treatment and rehabilitation.

**Shin Splints**

- The term shin splints is a name often given to any pain at the front of the lower leg. However, true shin splints symptoms occur at the front inside of the shin bone and can arise from a number of causes.
- Shin splints symptoms
- Pain over the inside lower half of the shin.
- Pain at the start of exercise which often eases as the session continues.
- Pain often returns after activity and may be at its worse the next morning.
- Sometimes some swelling.
- Lumps and bumps may be felt when feeling the inside of the shin bone.
- Pain when the toes or foot are bent downwards.
- A redness over the inside of the shin (not always present).

**Causes Of Shin Splints**

- The most common cause is inflammation of the periosteum of the tibia (sheath surrounding the bone). Traction forces on the periosteum from the muscles of the lower leg cause shin pain and inflammation. This has lead to the use of terms such as Medial Tibial Traction Periostitis.
- Shin splints can be caused by a number of factors which are mainly biomechanical (abnormal movement patterns) and errors in training. Here are the most common cause
- Over pronation of the feet
- Over supination of the feet

- Inadequate footwear
- Increasing training too quickly
- Running on hard surfaces
- Decreased flexibility at the ankle joint

**Shin Splints Treatment**

- Treatment for shin splints is as simple as reducing pain and inflammation, identifying training and biomechanical problems which may have helped cause the injury initially, restoring muscles to their original condition and gradually returning to training.
- What can the athlete do about shin splints?
- Rest to allow the injury to heal.
- Apply ice or cold therapy in the early stages, particularly when it is very painful. Cold therapy reduces pain and inflammation.
- Wear shock absorbing insoles in shoes. This helps reduce the shock on the lower leg.
- Maintain fitness with other non-weight bearing exercises such as swimming, cycling or running in water.
- Shin splint strengthening exercises may help prevent the injury returning.

**Prevention**

- Have a pre-season physical examination and follow your doctor's recommendations for basketball injury prevention.
- Hydrate adequately - waiting until you are thirsty is often too late to hydrate properly.
- Pay attention to environmental recommendations, especially in relation to excessively hot and humid weather, to help avoid heat illness.
- Maintain proper fitness - injury rates are higher in athletes who have not adequately prepared physically.
- After a period of inactivity, progress gradually back to full-contact basketball through activities such as aerobic conditioning, strength training, and agility training.
- Avoid overuse injuries - more is not always better! Many sports medicine specialists believe that it is beneficial to take at least one season off each year. Try to avoid the pressure that is now exerted on many young athletes to over-train. Listen to your body and decrease training time and intensity if pain or discomfort develops. This will reduce the risk of injury and help avoid "burn-out."
- Talk with your coach and/or athletic trainer about an ACL injury prevention program and incorporating the training principles into team warm-ups.
- The athlete should return to play only when clearance is granted by a health care professional.

**Conclusion**

Injury is inevitable and will always be a part of basketball. With proper training and conditioning beforehand and following the necessary rehabilitation after injury, the time lost due to injuries can be reduced so that players have the best chance of achieving the goals they set for themselves.

**References:**

1. Dr. James Naismith, Inventor of Basketball, history, Kansas Heritage Group Miyasaka KC, DM Daniel, ML Stone. The incidence of knee ligament injuries in the general population. Am J Knee Surg. 4:43-48, 1991.
2. Griffin, Letha Y. MD, PhD. Prevention of Noncontact ACL Injuries, American Academy of Orthopaedic Surgeons.
3. www.seattlechildrens.org