

# Common Volleyball Injuries and Their Preventive Measures



**Neeraj Sharma**

PET,  
Deptt. of Youth Services and  
Sports,  
Govt. of J&K,  
J&K, India

## Abstract

Sports carry an element of risk in the form of injury. In fact there is no sport in the world whether amateur or professional where injury does not occur. In some games and sports, the chance of injury may be more due to nature of activity itself, in other it may be less. In the modern world, every person all over world wants to participate in games and sports activities or competitions. But due to lack of time every person in all over world can not participate in games and sports activities but most of the people all over world can participate games and sports. Participation in sports activities not only improves physical fitness but also improves overall health and wellness. Games and sports can also result in injuries and injuries result from active trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue (Ligament, Muscles, and Tendons). There are numerous sports injuries happened in the field of games and sports. But especially in the field of volleyball we can see most of the injuries occur because volleyball has one of the most popular and highest participation rates worldwide including both indoor and beach volleyball. It is one of the interesting and unique sports that have evolved into two distinct Olympic events indoor and beach.

The patterns of injuries are different in indoor volleyball and beach volleyball. But there are some common injuries can be seen between the sports. Overall, overuse injuries are very common then acute injuries in two sports, because of the maximum no. of repetition, lack of technique, and type of surface. Ankle sprain are the most common acute injuries occur in volleyball player, accounting for 40% of all volleyball related injuries and hand injuries is also extremely common especially during setting and blocking in volleyball and beach volleyball. Knee, shoulder and lower back pain are also common injuries in volleyball and beach volleyball. Spiking, Jumping, setting, diving for all explosive and excited actions that go along with a game of volleyball. All these actions are very excited for volleyball lover and players but these actions are leads full of risk for players if any player gets any little mistake. The chance of injury occurs while performing these actions. The injuries are the parts of volleyball along with their preventive measure are part and partial of the game. Preventive measures are very important for every games and sports. It is very essential for all coaches, trainer and players to know the causes, symptoms, prevention and treatment for all these volleyball common injuries in order to avoid most of these types of injuries, also to update the poor training methods.

**Keywords:** Injury, Prevention, Treatment, Volleyball, Players.

## Introduction

Volleyball is a very interesting game played between two teams, with six players on each team, where the players use mainly their hands to hit the ball over a net and try to make the ball land on the opposing teams' side of the court. Volleyball has become an extremely popular participation sports world wide.

The participation in volleyball has increased over the past two decades, along with the number of related injuries has also increased as well. While volleyball injuries rank lowest as compared to all major sports. Volleyball players are at risk for both traumatic and overuse injuries, because there are some injuries which occur to players that are very common. These include ankle injuries, shoulder injuries, finger and also knee injuries. These are all common injuries in volleyball but the knowledge of injury prevention is very essential for all coaches, trainer, physical education teacher and also player to know the causes, symptoms, prevention and treatment for all these injuries order to avoid most of these

types of injuries also update the poor training methods. It is an effort to prevent or reduce the severity of bodily injuries caused by external mechanisms, such as accidents before they occur.

Common injuries in volleyball and beach volleyball.

#### **Review of Literature**

1. Common injuries in volleyball. Mechanism of injury, prevention and rehabilitation. Briner WW jr, et al. sports Med. 1997.
2. Reeser (2007), strategies for the prevention of volleyball related injuries.
3. Vanderlie, Franciele (2013) characteristics and contributing factor related to sports injuries in young volleyball players.

#### **Aim of the Study**

The main aim of the study is the knowledge of the injuries in volleyball and their preventive measure is very essential for coach and players. The knowledge of injury and their preventive measures is very important in every game and sports. It is very essential for all the coaches, trainer and players to know the causes, symptoms, prevention and treatment for all volleyball common injuries in order to avoid most of these types of injuries, also to update the poor training methods.

#### **Ankle Sprain**

Ankle sprain is an injury to the tough bands of tissue (ligament) that surround and connect the bones of the leg to the foot. This can stretch or tear the ligaments that hold your ankle bones and joint together. All the ligaments in body have a specific range of motion and boundaries that allow them to keep the joint stabilized. When ligament cross the boundaries causes sprain. Ankle sprain most common in volleyball. Ankle sprains usually occur at the volleyball net when a player lands on the foot of an opponent or teammate after blocking or attacking.

Ankle injury depends on the severity of the sprain. Most of the sprain takes a few to full heal. A more severe sprain may take months.

#### **Symptoms**

Swelling, Tenderness, Bruising, pain, inability to put weight on affected ankle skin dislocation, stiffness. Doctor can determine whether the injury is a sprain or something more severe, through x rays and MRIs.

#### **Treatment**

1. Use elastic bandages to wrap your ankle not too tightly.
2. Wearing a brace to support your ankle.
3. Using crutches is needed.
4. Elevating your foot with pillow as necessary to reduce swelling.
5. Not putting weight on ankle.

#### **Surgery**

A very rare chance of surgery in ankle sprain. When the injury does not improve with non surgical treatment, surgical options include.

1. Arthroscopy
2. Re construction

After surgery rehabilitation is an important part of the recovery process. Physical therapy exercise to regain motion and strengthen the muscle

about the ankle. Rehabilitation can take weeks or months.

How can we prevent an ankle sprain?

1. Performing strengthening exercises
2. Avoid high heels.
3. Proper warming up before exercising
4. Wearing sturdy, quality footwear.
5. Stop the activity when feel fatigued.
6. Check the surface before performing the activity.
7. Wrapping the affected ankle in an elastic bandage.

#### **Shoulder Injuries in Volleyball**

Volleyball involves no. of repetitive and strenuous use of upper extremities and the shoulder joint is at risk for both acute and overuse injuries. The explosive actions such as serving, spiking and blocking can place sudden and heavy strain on a number of structures around the shoulder joint.

Internal impingement and labrum tear are most common injury of shoulder seen in volleyball players.

**Shoulder Internal impingement:** Internal impingement of the shoulder may result from improper technique use when the player doing serve, spike the ball or block the ball over the net. During these repetitively actions the arm into extreme positions. This motion may over time lead to excessive stretching in the front part of the shoulder resulting in partial tears of the rotator cuff and tears of Labrum (ring of cartilage that surround the shoulder socket)

The players with shoulder internal impingement feel pain, especially during performs during these actions. The condition is usually diagnosed by special imaging examination.

Special imaging tests such as an MRI or an ultrasound. The initial treatment is non-surgical unless the tears are significant.

Stretching and strengthening exercise the shoulder joint with proper way.

In severe condition surgical intervention to repair the rotator cuff tear and the labrum and possibly to tighten the front part of the shoulder.

Stretching and strengthening exercise with regular training programme help to prevent the shoulder injury and overuse condition for volleyball players.

#### **SLAP Tears**

Another shoulder injury mostly seen in volley player is a tear of the superior labrum called the SLAP tear. The labrum ring of cartilage attached to the rim of shoulder socket. It functions primarily to increase stability of the shoulder and serves as an attachment for the shoulder ligaments and biceps tendon.

These tears occur from repetitive motions where biceps pulls back on the arm as it is brought into rotation.

A SLAP tear may cause severe shoulder pain, weakness of the arm and sometime feel dead arm sensation as well as clicking and catching sensation in the joint.

In severe condition surgical treatment needed to repair the SLAP tear and remove the cyst is warranted. The repair is typically done arthroscopally and requires about six months of

recovery and rehabilitation prior to return normal position.

#### **Prevention**

1. Volleyball player should participate regular training programme.
2. Adequate time for rest and recovery.
3. Proper stretching and strengthening exercise of the shoulder which helps to prevent the injury.
4. Proper mechanics for serving, spiking and blocking also can reduce the risk of injury.
5. Proper warming up before the activity.

#### **Knee Injury**

Knee injury is also common in volleyball because the nature of volleyball requires repetitive explosive jumping which place a lot of stress on the patellar tendon resulting pain in the area. Maximum volleyball players develop patellar tendinitis, known to many as "Jumper Knee". The most common site of the pain is where the patellar tendon attach to the lower pole of the knee cap. The (ACL) anterior cruciate ligament tear also can be a more serious injury occurs in volleyball. ACL tears are a major knee injury that should be evaluated by an orthopedic surgeon. Players require surgical reconstruction of a ACL resulting from a volleyball knee injury. Duration of the time to recovery from this injury may be 6 months to 1 year. Depending on the severity of ACL injury.

#### **Symptoms of ACL Injury/ Jumper Knee**

1. Swell
2. Feel unstable and become too pain to bear weight.
3. Loss of range of motion.
4. Severe pain and inability to continue activity.
5. Popping sensation in the knee.

#### **Prevention**

1. Proper training and exercise can help to reduce the risk of knee injuries.
2. Exercises that strengthen leg muscles particular hamstring exercise to ensure an overall balance in leg muscles strength.
3. Exercises to strengthen the core, hips, pelvis and lower abdomen.
4. Use proper technique and knee position in jumping and landing.

#### **Finger Injuries**

Finger injuries also may occur during volleyball activities, such as blocking, setting and digging. Common fingers injuries include fracture, dislocations and tendon and ligament tear. Consult your sports medicine professional or trainer if you are unable to bend the finger. Treatment can vary depending on the severity of the injury.

#### **Symptoms**

1. Pain over the joint in the finger where the injury has occurred.
2. Pain when pending the finger.
3. Swelling over the joint.
4. Restricted mobility and movement in the finger.

#### **Treatment**

1. Rest the finger and apply ice.
2. Tape the finger to protect it while it is healing.
3. Advise on rehabilitation.
4. Operate if required on a compute rupture.

#### **Common Preventive Measures**

These steps can help prevent volleyball injuries:

1. Stretching and warming up exercises before playing.
2. Eat a balance diet and drink plenty of water.
3. Keep up your cardiovascular fitness and core strength.
4. Proper rest and recovery is essential to prevent injury.
5. Use proper techniques and check the surface before playing.
6. Treat injury as they occur and restart after complete recovery.

#### **Conclusion**

A volleyball match can be played for five sets which means a match can last about 90 minutes, during which a can perform many actions dominated by the explosive nature. Volleyball has one of the highest participation rates in worldwide, including volleyball and beach volleyball. Participation in volleyball has increased day by day along with number of related. Injuries have increased as well. To prevent these injuries in volleyball, it is very essential for coaches, physical education teachers, trainer and player to know the symptoms, causes, prevention, treatment for all these injuries in order to avoid most of these injuries, also update the poor training methods. 100% prevention is not possible but it can be minimized with the help of knowledge. Prevention in games and sports related injuri8es must be priority for everyone involved in games and sports activities prevention is better than cure.

#### **References**

[https:// www.childrenscolorado.org](https://www.childrenscolorado.org).

<https://share.upmc.com>

<https://www.stopsportsinjuries.org>.

*Common injuries in volleyball. Mechanism of injury, prevention and rehabilitation. Briner WW jr,et al. sports Med. 1997.*

*Reeser (2007), strategies for the prevention of volleyball related injuries.*

*Vanderlie, Franciele (2013) characteristics and contributing factor related to sports injuries in young volleyball players.*