International Research Journal of Education and Technology

Peer Reviewed Journal

ISSN 2581-7795

# Sports Injuries among Long Jumpers of Osmania University – A Review

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**Abstract:**

Games and sports can also result in injuries, some minor, some serious and still other in life long medical problem. Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue (ligaments, muscles, tendons). There are numerous sports injuries happened in the field of sports. The sample for the study consists 30 Male Long Jumpers of Osmania University between the age group of 18to 22 Years. The questionnaire were used in the study. It is concluded that Long Jumpers has secured the Foot injuries 30 %, Ankle joint injuries are 25 %, Knee joint 23 %, waist 18 %, Head and Neck Injuries are 4 %, .It was concluded that Long Jumpers are more prone to lower extremities Injuries due to the High Intensity jumping activity activity. The study also helps injured athletes and coaches to select recovery technique depending on type of injury.Key words: Long Jumpers,, Sports Injuries, jumping etc.

**Introduction:**

Every day, a lot of people all over the world participate in games and sports activities or competitions. Participation in sports improves physical fitness and overall health and wellness. Games and sports can also result in injuries, some minor, some serious and still other in life long medical problem. Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue (ligaments, muscles, tendons). There are numerous sports injuries happened in the field of sports. It is very important for all coaches, trainers and players to know the causes symptoms, prevention and treatment for all these common injuries in order to avoid most of these types of injuries, also to update the poor training methods.Sports training is a

ISSN 2581-7795

pedagogical process, based on scientific principles, aiming at preparing sportsmen for higher performances in sports competitions.

The **long jump** (historically called the **broad jump**) is a track and field event in which athletes combine speed, strength, and agility in an attempt to leap as far as possible from a take off point. This event has a history in the Ancient Olympic Games and has been a modern Olympic event for men since the first Olympics in 1896 and for women since 1948.

The long jump is a power event that comprises of the following four phases:

- Approach run up
- Take off
- Flight through the air
- Landing

To achieve maximum distance in the long jump the athlete will have to balance three components - speed, technique and strength


**Figure: Feet, Ankles, Plantarflexor, Dorsiflexors injuries for Long Jumpers**

ISSN 2581-7795

Long jump is featured with fast speed, high strength and strong explosiveness, especially at the moment of taking off on board and landing when lower limbs of a sportsman have to stand the impact force 4-11 times of his own weight. Any carelessness may easily lead to injuries of joint, muscle. Lower leg stiffness will enhance ground contact times, vertical impulses, activation and involvement from muscles up the chain, and elastic return. Ankle stiffness is also key for muscles up the chain to work optimally. For example, have instability in your ankle decreases the activity of the gluteus Maximus. So working on ankle stiffness will help your sprinting in a number of different ways. Now doing balance drills or band resisted ankle strengthening drills will NOT increase your ankle stiffness. Long Jumpers put extreme pressure on the body that has been a risk especially on lower leg muscles in higher degree of overlapping. Ankle and foot injuries are the most prevalent in Long Jumping.

Rajesh Kumar, T. Vijaya Sagar (2024) studied to assess the sports injuries among male sprinters and male long jumpers in Hyderabad district. The sample for the study was confined to 20 sprinters and 20 long jumpers from Hyderabad district between the age group of 20–22 years. The questionnaire is used to assess the sports injuries among male sprinters and male long jumpers. It is concluded that sprinters have secured the injuries in hamstring, stress fractures, ankle sprains, and knee cartilage 75%, upper extremities injuries like rotator cuff elbow injury, fractures in hand 10%, head-and-neck injuries 5%, and spine injury in back due to training and high-intensity training 10%. It is concluded that long jumpers have secured the injuries in hamstring strains, groin strains, patella tendinitis, etc. 70%, upper extremities injuries like rotator curf, elbow injury, fractures in hand 10%, head-and-neck injuries 5%, and spine injury in back due to training and high-intensity training 15%. The present study will bring the true facts and importance of sports injuries among sprinters and long jumpers. The results of the study may help coaches and physical educators to adopt an attitude of scientific approach to training

methodology in achieving a high level of sports performance by reducing the injuries in the event of sprints and long jump.

**Shota Enoki etal (2021)** studied Injuries in Collegiate Track and Field Jumping: A 2-Year Prospective Surveillance Study Athletes participating in track and field jumping events (long jump, triple jump, high jump, and pole vault) are exposed to ground-reaction forces on the takeoff leg that are several times their body weight. This can cause injuries specific to such activities. A total of 51 jumpers between April 2016 and March 2017 and 54 jumpers between April 2017 and March 2018 participated in this study. All athletes were from a single college in Japan. Baseline information on athletes participating in the long jump, triple jump, high jump, and pole vault was collected at study enrollment. Practice and competition exposures were reported by the team trainer. Injury incidence was calculated as the number of injuries per 1000 athlete-exposures . A total of 147 injuries were reported among 16,998 exposures (8.65 injuries per 1000 AEs). The most common injury locations were the posterior thigh and lateral ankle (17.0%), followed by the posterior foot or toe (12.9%); the most frequent type of injury was strain/muscle rupture/tear (21.1%). The most common injury for long jumpers was ankle sprain (23.3%); for high jumpers, flexor hallucis longus tendinosis (15.8%); and for pole vaulters, hamstring strain (13.2%).

**Methodology**

The sample for the study consists 30 Male Long Jumpers of Osmania University between the age group of 18to 22 Years.

**Table 1: Table Showing the Sample of the study**

| Sl. No. | Game | No of subjects |
|---|---|---|
| 1. | Long Jumpers Male | 30 |

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| | | |
|---|---|---|
| **3.** | **Total subjects** | **30** |

The questionnaire were used in the Study to know the injuries from the Long Jumpers.

**Results and Discussion.**

**Table 1: Percentage of Injuries among Long Jumpers**

| S.N0 | Name of the Injury | Percentage |
|---|---|---|
| **1** | **Foot Injuries** | **30 %** |
| **2** | **Ankle Joint Injuries** | **25%** |
| **3** | **Knee Joint Injuries** | **23 %** |
| **4** | **Waist Injuries** | **18 %** |
| **5** | **Head and Neck Injuries** | **4%** |

It is concluded that Long Jumpers has secured the Foot injuries 30 %, Ankle joint injuries are 25 %, Knee joint 23 %, waist 18 %, Head and Neck Injuries are 4 %, .It was concluded that Long Jumpers are more prone to lower extremities Injuries due to the High Intensity jumping activity activity

## Conclusions:

It was concluded that Long Jumpers are more prone to lower extremities Injuries due to the High Intensity jumping activity activity. The causes of sports injuries are insufficient warming Up, Physical fatigue, Over load training, Poor Psychological state etc.

**RECOMMENDATIONS**

ISSN 2581-7795

The following suggestions are made for the benefit of players, coach's academicians and sports scientists.

- The study also helps the injured athletes, physical educationist, sports scientists etc for their ongoing activities.
- The study helps the physical educationist and coaches for selecting the best recovery techniques for injured athletes.
- The study also helps the physical educationists and coaches compass the knowledge of performance and recovery among injured athletes.

**References:**

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