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**Dr. Ravinder Sumal**  
Head & Asso Prof, Department  
of Physical Education, Guru  
Kashi University Talwandi Sabo  
Bathinda, Punjab, India

**Arun Kumar**  
Asso Prof, Department of  
Physical Education, Guru Kashi  
University Talwandi Sabo  
Bathinda, Punjab, India

## An analytical study of status of joint injuries in sports-persons

**Dr. Ravinder Sumal and Arun Kumar**

### Abstract

The purpose of the study is to analyze the status of joint injuries in sports persons of Maharashtra state. 300 sports persons (men) were selected for this study through the quota sampling method. The subjects were divided in two groups (N=150 from each age group) one of 150 sports persons of 18 to 39 year age group and another is 150 sports persons 40 to 50 year age group. The objective of this study is to find out those sports persons who have suffered from joint injuries and after the joint injuries the condition/status of their body joint. Those sports persons have been selected for data collection that have represented at university level in selected fifteen games. For the data collection the standardized questionnaire was used on both age groups. After the use of suitable statistical process, it may be concluded that the 77.66% sports persons were suffered from joint injuries during sports. The painful status of suffering joint is very high after the joint injuries in long time.

**Keywords:** joint injuries, joint status

### Introduction

The skeleton of human consists of 206 bones. Bones are too rigid to bend without damage. Fortunately, the skeletal system consists of many separate bones, which are held together at joints by flexible connective tissue. We can understand the importance of joint if you imagine how a cast over the knee joint prevents flexing the leg or how a splint on a finger limits the ability to manipulate small object.

The different types of bones are attached together at different parts of the skeleton by joint. The main structures which unite to form the joint are bone, cartilage, synovial membrane and ligaments. The human body joints are classified in following types;

**Immovable joints:** Fibrous joint & Cartilaginous joint

**Movable joint:** Synovial joint, Ball and socket joint, Hinge joint, Gliding joint, Pivot joint, Compound joint.

The human faces many types of injuries in whole life. We can't have idea related to injuries in different part of human body when we suffering all these types of thing the classification of injuries is must in this field. According to scientist, expert of related field and advisor there are mainly two types of injuries.

- **Acute occurring suddenly:** Acute Hard-Tissue Injuries & Acute Soft-Tissue Injuries
- **Chronic developing or lasting over a long period:** Chronic Hard Tissue Injuries & Chronic Soft-Tissue Injuries.

### Injury/Sports injuries

Many injuries occur suddenly to soft tissues like skin, muscle, ligaments, tendons, organs, blood vessels, and nerves. There are several different types of acute soft-tissue injuries. We've all seen a player get hit or land hard on the ground, and have perhaps even heard the snap of a bone. Although the skeleton is strong, there is a limit to how much punishment it can take. Let's now look at those types of injuries to bone that often occur before an athlete realizes what's happened. Chronic injuries to the muscles, tendons and bursa are caused by repeated blows, overstretching, or overuse.

**Correspondence**  
**Dr. Ravinder Sumal**  
Head & Asso Prof, Department  
of Physical Education, Guru  
Kashi University Talwandi Sabo  
Bathinda, Punjab, India

These injuries typically occur in athletes who are weak and inflexible or who exercise excessively. Subjected to repeated wear and tear over an extended period of time, bones can suffer chronic conditions that can lead to cracking and abnormal boney formations. Perhaps the most common types of chronic bone injury are stress fractures and arthritis. Arthritis is fairly uncommon in high school athletes, but stress fractures do occur, especially in basketball and track athletes. Different physicians are likely to describe the same injury with slightly different terms and standards: Fracture, Dislocation, contusion, Hemorrhage, Hematoma, Strain, Sprain, Stress fracture, Bursitis, Tendonitis, Abrasions, Punctures, Cuts, Cartilage tears.

### Methodology

The survey type study is designed to find out those sports persons who have suffered from joint injuries. For this study

**Table 1:** Showing the percentage of injuries and status of joints in sports persons (Age group of below 40 year (18 – 39 year)

S/N	Number of suffered persons	Number of disease	Total Sports Persons = 150			
			Normal	Pain	Acute pain	Immoveable condition
1	116 (76.66%)	235	125 (53.1%)	100 (42.5%)	10 (4.2%)	-

According to Table No. 1, 76.66% sports persons have suffered from joint injuries. On the basis of above table, after injuries present status of Joints in sports persons is as follows: 53.1% is in state of normal, 42.5% are in painful condition, 4.2 % are still in acute pain and no players found in

the 300 sports persons (men) of Maharashtra state were selected from quota sampling method (Non-probability sampling), who represented at university level in selected fifteen games (Cricket, Football, Hockey, Volley ball, Hand ball, Kho-Kho, Kabaddi, Basketball, Badminton, Boxing, Wrestling, Weight-Lifting, Gymnastics, Swimming, Judo). The age group of sports persons was divided in following two groups.

- 150 sports persons, 18 - 39 year.
- 150 sports persons, 40- 50 year.

The data was collected from sports persons through the self-developed questionnaire of joint disease. After the data collection suitable statistical process was used for finding

### Statistical Analysis

**Table 2:** Showing the percentage of injuries and status of joints in sports persons (Age group of 40- 50 year)

S/N	Number of suffered persons	Number of disease	Total Sports Persons = 150			
			Normal	Pain	Acute pain	Immoveable condition
1	118 (78.66%)	198	78 (39.3%)	119 (60.0%)	1 (0.50%)	-

According to Table No. 2, 78.66% sports persons have suffered from joint injuries. On the basis of above table, after injuries present status of Joints in sports persons is as follows: 39.3 % is in state of normal, 60% are in painful condition, 0.5% is still in acute pain and none players found in

immovable condition after suffered from joint injuries. On the basis of above table, it can be concluded that the percentage of painful status of joints in sports persons is very high in sports persons of 18 to 39 years age group.

**Table 3:** Showing the percentage of injuries and status of joints in sports persons (Age group of 18- 50 year)

S/N	Number of suffered persons	Number of disease	Total Sports Persons = 150			
			Normal	Pain	Acute pain	Immoveable condition
1	233 (77.66%)	433	203 (46.88%)	219 (50.5%)	11 (2.54%)	-

According to Table No. 3, 77.66% sports persons have suffered from joint injuries. On the basis of above table, after injuries present status of Joints in sports persons is as follows. 46.88 % is in state of normal, 50.5% are in painful condition, 2.54 % are still in acute pain and none players found in immovable condition after suffered from joint injuries. On the basis of above table, it can be concluded that the percentage of painful status of joints in sports persons is very high in sports persons of 18 to 50 years age group.

### Conclusion

From the analysis of data, it may be concluded that after joint injuries the painful status of joints is very high, normal status is less than to painful status and acute pain status is less than too normal in joint. There are no players found in immovable condition after the joint injuries.

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