
UNIT - 9

SPORTS AND MEDICINE

Key Points :

- Concept & definition
- Aims & Scope of Sports Medicine
- Impact of Surfaces & Environment on Athletes
- Sports Injuries:-Classifications, Causes & Preventive Measures
- Management of Injuries

Soft Tissue Injuries

(Abrasion, Contusion, Laceration, Incision, Sprain & Strain)

Bone & Joint Injuries

(Dislocation, Fracture, Stress fracture, Green Stick, Communated, Transverse & Oblique & Impacted)

9.1 Concept of Sports Medicine

- Bio-mechanics related to sports
- Effect of attitude on endurance performance
- Psychological aspect performance
- Nutrition & metabolism in relation to competition & performance
- Recommendations of FISM(the International Federation of Sports Medicine at world level)
- Cardio-respiratory function in relation to performance
- Exercise in Cardio-Vascular disease prevention & rehabilitation

Definition of Sports Medicine:-

“Sports Medicine includes all games & sports & Physical activities, which contribute to the health & welfare of mankind, Sports medicine also includes all kinds of muscles activities & studies related to sports”

9.2 (a) Aims of Sports medicine:-

- A.** To aware the sports person & athlete about the different kinds of injury in respect of different games.
- B.** To concentrate on the causes of injury
- Lack of Warming up
 - Lack of Techniques/Skills
 - Environment
 - Psychological factors
 - Physical fitness components
- C.** To provide adequate medical help -Different methods & equipments of treatment - Rehabilitation centres
- 1.** Infra-red rays
-

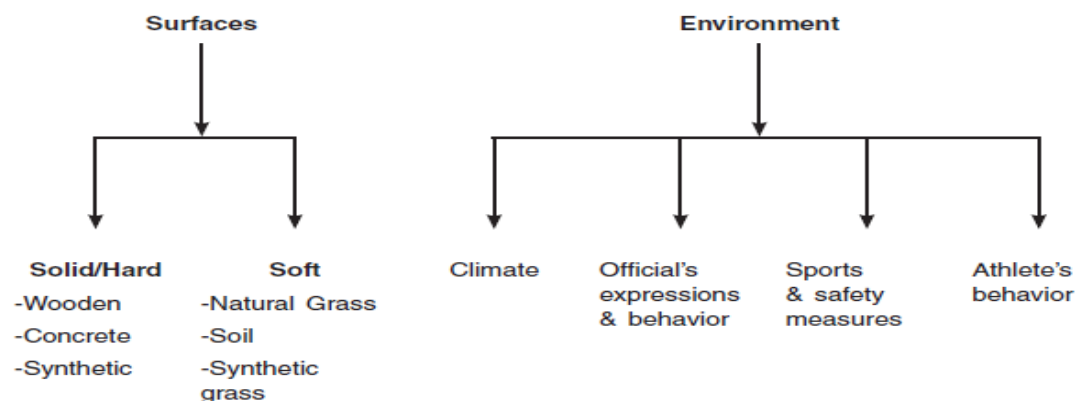
-
2. Physiotherapy
 3. thermal treatment
 4. Electro therapy

D. To knowledge of kinds of injury & their necessary precaution i.e. Protective Measures

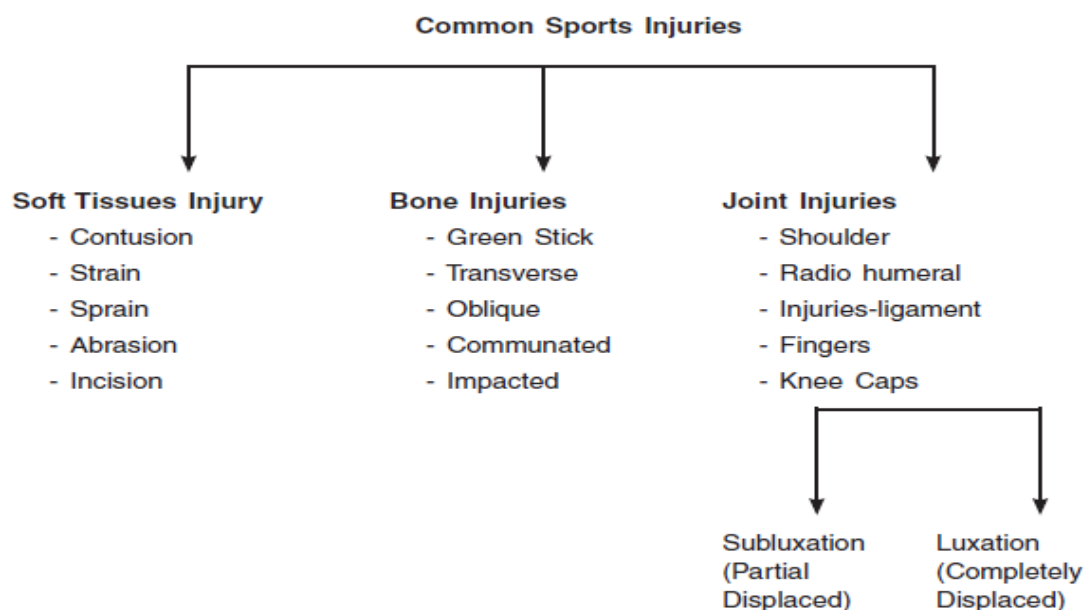
9.2 (b) Scope areas of Sports Medicine:-

- Athlete nutrition
- Prevention of accidents in sports
- New methods of detecting doping
- Methods of prediction of sports talent
- Sports & society
- Scientific promotion of sports & games
- Equipments & facilities
- Playgrounds
- Psychological aspects
- Specific fitness
- Human anatomy & physiology
- Sports & first aid
- Sports injury rehabilitation
- Female & sports
- Sports & hematology
- Study of optional load for different ages
- Swimming pool
- Research

9.3 Impact of Surfaces and Environment on Athletes



9.4A. Sports Injury



Intrinsic Risk Factor	Extrinsic Risk Factor	
<ul style="list-style-type: none">• Physical Preparation• Lack of proper training Fitness label• Improper warming up & cooling Down• Over use of muscles• Muscles imbalance• Individual variables:-<ul style="list-style-type: none">a. Gender and Ageb. Nutritionc. Fatigued. Posture deformities	<ul style="list-style-type: none">• Coaching<ul style="list-style-type: none">a. Poor techniquesb. Lack of knowledge<ul style="list-style-type: none">• Skill• Rules & Regulations• Surrounding Environment• Equipment• Facilities	Environmental Factors <ul style="list-style-type: none">a. Climateb. Playing Surfacec. Preventive surfacesd. Medical facilities

Prevention of Sports Injuries

- Pre-participation of medical check up
 - Proper conditioning
 - Avoid De-hydration
 - Protective Sports equipments & Gears
 - Adequate & effectively maintained facilities
 - Sports person's psychological conditions & environment
 - Adequate rehabilitation/Injury management
 - Proper use of right techniques
 - Balanced diet & adequate rest
-

- Use of proper skills
- Warming up & cooling down

9.5 Management of injuries:-

First aids:-treatment or assistance given to any injured person before the formal treatment is conducted.

F:-first step-observation of injured athlete

I:-impression

R:-rest & relaxation

S:-support-physical & psychological (support of patient)

T:-tie-no movement of injured part

Aid:-assistance in distress-accident investigation division

(A) Soft tissue injuries

PRICE TREATMENT

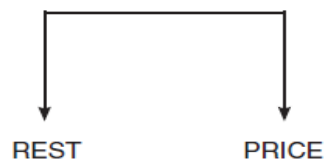
- P-Protect the wound
- R-Rest-No more movement
- I-Ice - To stop the bleeding
- C-Compression - To stop bleeding
- E-Elevation - Heart level

(B) Bone injuries

ICE
I-ICE
C-Compression
E-Elevation

REST
R-Rest
E-Elevate
S-Support
T-Tight

Joint injuries



9.6 Rehabilitation:-

- Normal movement
- Treatment
- Physiotherapy
- Massage
- Training & practice
- Strength
- Endurance
- Flexibility
- Speed
- Coordination & agility