CHAPTER – 1

Introduction to Sports Medicine

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Definitions

1. The field of sport medicine concerned with physical fitness, the prevention, diagnosis, and treatment of injuries sustained in sports or exercise-related activities.

2. Sports Medicine specializes in the prevention and treatment of injuries resulting from training and participation in athletic events. The most common sports injuries are shin splints, runner's knee, pulled hamstring muscles and ankle sprain.

3. Non-surgical treatment of an illness or injury which occurs as a result of a recreational activity is called Sports Medicine.

4. The knowledge of Sports Medicine awares us about the prevention, treatment and rehabilitation of injuries. The injury may be any type or any cause. It tells us about the social & psychological aspects and complications of the body's functions related to exercise or physical education.

5. The knowledge of Sports Medicine educates about physical education, games, and recreation for such people who weak mentally and physically.

Branches of Sports Medicine

Surgery

The branch of medicine that treats disease or injury by operative procedures. General surgeons are trained to manage a range of surgical conditions in almost every area of the body. They generally provide pre- and post-operative care of their patients and manage the care of trauma victims and critically ill surgical patients. There are many sub-specialties within surgery such as cardiovascular, gynecological, or orthopedic surgery.

Physical Medicine and Rehabilitation

This medical specialty concerned with the diagnosis, treatment, and care of physical disabilities resulting from a variety of medical conditions. These can include musculoskeletal disorders, neurological disease, cardiac-respiratory problems and chronic pain.

Public Health

Physicians in this branch of medicine help/guide a community, agency, health organization, medical office, or program to reach their group or community health goals.

Nuclear Medicine

This branch of medicine that uses small amounts of substances to image and examine a patient's organs, trace processes in the body, and destroy diseased cells.

Endocrinology and Metabolism

This medical specialty that treats disorders of the endocrine system, including the thyroid and adrenal glands which help to control the body's metabolic activity. Conditions include diabetes, nutritional and metabolic disorders and bone disorders.

Cardiology and Cardiovascular Disease

A sub-specialty of internal medicine focusing on diagnosis and treatment of diseases of the heart. These physicians also manage conditions such as abnormal heart rhythms and heart attacks.

Blood Banking and Transfusion Medicine

A branch of medicine that focuses on the collection of blood and its transfusion from one individual to another. The blood is stored in blood banks. Each unit of blood is separated into multiple components such as red blood cells, plasma, and platelets, among others and each of these components can be transfused, depending on an individual's medical needs.

Addiction Medicine

The diagnosis, treatment and prevention of substance abuse disorders including helping, treat of drug and alcohol withdrawal and its potential, medical or psychological complications.

Significance of Sports Medicine

The origin of sports medicine in the 19th and 20th century is listed. The same applies to the development in the course of performance diagnostics.

Sports Medicine concerned with the effects of exercise and sports on the human body, including treatment of injuries. Sports Medicine can be divided into three general areas:

i) Clinical Sports Medicine
ii) Sports Surgery
iii) Physiology of Exercise

i) Clinical Sports Medicine
Clinical sports medicine includes the prevention and treatment of athletic injuries and the design of exercise and nutrition programs for maintaining peak physical performance.

ii) Sports Surgery
Sports surgery is also concerned with all the surgical treatment of injuries from human sports.

iii) Physiology of Exercise
Exercise physiology, a growing field of sports medicine, involves the study of the body's response to physical stress. It comprises the science of fitness, the preservation of fitness and the role of fitness in the prevention and treatment of disease.

Sports Medicine dealing with the prevention, protection, and correction of sports injuries, and the preparation of an individual for physical activity in its full range of intensity. It includes the study of the effects of different levels of exercise, training and sport on healthy and ill people.

Originally, the main objective of sports medicine was the welfare of competitive athletes, but it now encompasses treatment of anyone engaged in sport and exercise.

Sports Medicine gives them a better understanding of the physical, physiological and psychological demands of exercise. This helps them to diagnose sports injuries more effectively and to prescribe the most suitable forms of exercise to improve the health of patients, for example those recovering from heart disease.

Sports Medicine is employed by sports teams to help athletes and improve their performance. Usually, this is by application of their special knowledge.

Sports medicine is a field involving physicians, physical therapists, athletic trainers and other health care professionals trained in diagnosis, treatment, research, education and prevention of athletic injuries. This team of professionals works together to enable an athlete to safely return to his or her sport as soon as possible after an injury or medical problem.

Important facets of sports medicine are the pre-participation physically and the education of athletes, coaches and parents in conditioning techniques in an attempt to prevent injuries and help athletes of all levels reach their full potential.

Medical and paramedical supervision and treatment of athletes: It has four aspects.

a) Preparation (Conditioning)
b) Prevention
c) Surgical Techniques
d) Rehabilitation

a) Preparation (Conditioning) uses diet, exercises and monitoring of practice sessions to improve performance.

b) Prevention identifies any pre-disposition to injury or illness and covers warm up, stretching and design and use of protective equipment.

c) Surgical Techniques developed in sports medicine, particularly for knee injuries, are now used for the general population.

d) Rehabilitation prepares an injured or ill athlete to return to activity after initial treatment.

Sports Medicine concerned with the welfare of athletes and deals with the science and medical treatment of those involved in sports and physical activities.

The objectives of sports medicine include the prevention, protection, correction of injuries, and the preparation of an individual for physical activity in its full range of intensity.

Sports medicine includes the study of the effects of different levels of exercise, training and sport on healthy and ill people in order to produce information useful in prevention, therapy and rehabilitation of injuries and illness in athletes.

Sports Medicine concerned with physical fitness and with the treatment and prevention of injuries and other disorders related to sports. Knee, leg, back, and shoulder injuries; stiffness and pain in joints; tendinitis; “tennis elbow”; and dehydration are some common conditions that may be involved. Treatment and prevention include exercise programs for increasing strength, flexibility, and endurance, fitness tests concerning nutrition and fluid replacement and use of protective equipment.

Surgery may be needed to treat some injuries. Sports medicine is also concerned with the abuse of performance-enhancing drugs, such as anabolic steroids.