

POST GRADUATE Diploma in Physical Medicine and Rehabilitation

POST GRADUATE DEGREE STANDARD

1. Applied Anatomy, Physiology and Pathology in Physical Medicine and Rehabilitation

Skeletal System:

Vertebral column

Skeleton of upper and lower limbs,

Biomechanics,

Pathological changes

Arthrology:

Joints and their movements,

Clinical conditions,

Pathology

Muscular system:

Structure of muscle,

Physiology of muscle contraction,

Types of muscle fibres,

Pathology of muscle weakness

Neurology:

Anatomy of Brain and Meninges,

Blood supply of Spinal cord,

Plexuses

Peripheral nervous system,

Anatomy, Physiology and Pathology of Bowel and Bladder

Cardio-pulmonary system:

Basic Anatomy and Physiology

Cardiac dysfunction,

Pulmonary dysfunction

Immuno-deficiency syndromes:

AIDS, HIV - pathology

Cancer:

Structure of Cell, and pathological modifications in Cancer.

2. Rehabilitation team / Disability evaluation\PWD ACT 1995\
National trust ACT 1999

Definition of Rehabilitation,
Rehabilitation team members,
Methods of team approach,
Concepts of Impairment, Disability and Handicap,
Disability evaluation,
ADL – methods of evaluation,
Architectural barriers,
Benefits to the disabled by G.O. and N.G.O.,
Types of disability, Visual, Speech and Hearing, Locomotor, Mental retardation, and
Multiple disabilities
Evaluation and certification of disabilities.

THE PERSONS WITH DISABILITIES ACT 1995(Equal Opportunities,Protection Of Rights and Full Participation) (1 Of 1996)

Objectives
Central Co-ordination Committee
Central Executive Committee
State Co-ordination committee
State Executive Committee
Prevention and Early Detection Of Disability
Education
Employment
Non-Discrimination
Research And Manpower Development

National trust for welfare of persons with autism, cerebral palsy, mental retardation and multiple disabilities act 1997

Objectives

Constitution Of The Trust

Local level Committees

Finance Accounts and Auditing
3.Electro diagnosis

a) Nerve Conduction Studies
Electro diagnostic evaluation of peripheral nervous system
Sensory Nerve Conduction Studies
Motor Nerve Conduction Studies
Evaluation of Neuro-muscular junction

b) Electro-myography
Insertional activity
Abnormal potentials
Motor Unit Action Potentials
Compound Motor Action Potentials C-MAP,
Single Fibre EMG

c) Interpretation of electro-diagnostic studies in
CNS conditions
Peripheral nervous system
Myoneural junction diseases
Muscular diseases

d) Diagnostic Electrical Stimulation
Chronaxie, Rheobase
FG Test and SD curve – clinical applications

4. Physical Therapeutic Modalities

a) Electrotherapy
Electrical stimulation
Effects of Heat
Effects of Cold
Superficial Heat Therapy
Deep Heat Therapy
TENS / IFT
UV irradiation
LASER therapy
Cryotherapy

b) Therapeutic Exercises
Balance and Co-ordination exercises
Strengthening exercises
Mobilisation exercises
Stretching exercises

c) Traction
Methods of Traction,
Traction at different levels,
Indications and Contra-indications

d) Massage and Manipulation
Methods and techniques in different clinical conditions

e) Clinical applications
Therapeutic modalities in different clinical conditions,
Indications
Complications
Contra-indications

5. Prosthetics & Orthotics

a) Prosthetics
Incidence and epidemiology and Rehabilitation of amputees
Congenital Limb Deficiencies
IPOP

Prosthesis for Foot, ankle and Trans-tibial amputations
Prosthesis for Knee disarticulation, Trans-femoral amputation and Hip disarticulation
Prosthesis for Hand, Wrist disarticulations and Trans-radial amputation
Prosthesis for Trans-humeral amputation, Elbow and Shoulder disarticulations
Recent advances in Prosthetics.

b) Orthotics

Principle and prescription of orthosis
Cervical and Thoraco-lumbar orthoses
Orthoses for Spinal deformities
Upper limb orthoses
Lower limb weight bearing orthoses
Orthosis for weakness and deformities
Foot wear modifications
Orthosis in Polio, Spinal cord injury, Stroke, Nerve injury, Cerebral Palsy,
Rheumatology & Sports
Ambulatory aids
Wheel chairs and Tricycles
Assistive devices

6. Community Based Rehabilitation & Psycho, Socio, Vocational Rehabilitation

CBR – Community Based Rehabilitation

Principles
Team members
Methods of reaching community
Implementation of CBR

Psychological Rehabilitation

Psychological assessment- projective and objective
Mental Retardation assessment, grading, planning for special education
Acquired disabilities – assessment,
Depression, suicidal tendency,
Psychological counselling and motivation,
Acceptance of disability

Social Rehabilitation

Family status
Role of the patient in the family
Income and Finance support
Facilities by the Government and Non-Government Organizations

Vocational Rehabilitation

Assessment of educational qualification and nature of work done
Modifications
Vocational evaluation and counselling
Job placement
Re-integration into the community

7. Rehabilitation of Neuromuscular conditions

Neuro-muscular Conditions

a) CNS- Stroke

Traumatic Brain Injury

Multiple sclerosis

Parkinsonism

Spinal cord injury and diseases

b) Anterior horn cell diseases

c) Plexopathies

d) Nerve injuries and diseases

e) Muscular diseases – myopathies and dystrophies

8. Cancer , Geriatrics and Sports Rehabilitation

Cancer

a) Management of cancer pain

b) Rehabilitation

Geriatrics

a) Physiology and pathology of ageing

b) Senior citizens

c) Clinical applications

Immunodeficiency Syndromes

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SPORTS REHABILITATION

Scope of sports medicine

Athlete and normal person

Type of muscle fibers in different sports activities

Methods of improving performance

Sports injuries

First-aid and rehabilitation management

Long-term disability in sports injuries

Stress fractures

9. CARDIO - PULMONARY REHABILITATION

CARDIAC REHABILITATION

Congenital heart diseases,

Acquired heart diseases,

Myocardial infarction,

Surgical interventions in cardiac conditions

Rehabilitation management in post-surgical conditions

VASCULAR DISEASES REHABILITATION

Arterial diseases

TAO

Diabetes Mellitus

Vasculitis

Occupational disorders

Rehabilitation management

Venous diseases

DVT

Varicose veins

Venous ulcers

Lymphatic diseases

Lymphoedema

Filiariasis

Rehabilitation management

PULMONARY REHABILITATION

Pulmonary Function Test – method and clinical interpretation

Obstructive lung diseases

Restrictive lung diseases

Post-surgical rehabilitation

Breathing exercises

10. Rehabilitation of Orthopaedic and Rheumatologic conditions

Orthopaedics

Structure and development of bone

Osteoporosis, Scurvy, Rickets

Genu valgum and varum

Chondro-dystrophies

Gigantism, dwarfism

Osteomyelitis

Cervical rib,

Congenital Dislocation of Hip,

Arthrogyphosis,

Congenital limb deficiencies,

Spinal dysraphism,

Osteogenesis imperfecta

Trauma- Fractures and complications,

Volkman's ischemic contracture,

Delayed union, mal-union, non-union,

Post-operative management,

Post-traumatic management,

Post-burns management

Soft tissue conditions – Ganglion,

Bursitis,

Dupuytren's contracture,

Muscle and tendon injuries,

Trigger finger,

Dequervain's disease,

Plantar Fascitis,

Tennis elbow.

RHEUMATOLOGY

Study of Rheumatic diseases

Rheumatoid Arthritis & Juvenile Rheumatoid Arthritis

Ankylosing spondylitis

Psoriatic Arthritis

Rheumatic fever and others

Collagen diseases – SLE, Polyarteritis Nodosa, Scleroderma, Dermatomyositis

Degenerative diseases - Osteo arthritis

Metabolic bone & joint disorders – Gout, Pseudo gout, Alkaptonuria

Infections – Septic, Syphilitic, T.B., Gonorrhoeal, HIV

Affections of different joints