

CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY

Subject Description

The subject is designed to provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs, and to provide appropriate interventions to the patient.

Subject Title	: CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY
Duration	: 25 – 36 Months
Total Hours	: 150
Theory	: 90 Hours
Practical	: 60 Hours
Total Hours / Week	: 5 Hrs
Lecture	: 3 Hours / Week
Practicals	: 2 Hours / Week
Method of Assessment	: Written, Oral, Practical

Theory: 90 Hours

1. Anatomical and Physiological differences between the Adult and Pediatric lung [1 Hour]
2. Bedside assessment of the patient-Adult & Pediatric[5 Hours]
3. Investigations and tests – Exercise tolerance Testing – Cardiac & Pulmonary, Radiographs, PFT, ABG, ECG, Hematological and Biochemical Tests [6 Hours]
4. Physiotherapy techniques to increase lung volume – controlled mobilization, positioning, breathing exercises, Neurophysiological Facilitation of Respiration, Mechanical aids - Incentive Spirometry, CPAP,IPPB [3 Hours]
5. Physiotherapy techniques to decrease the work of breathing – Measures to optimize the balance between energy supply and demand, positioning, Breathing re-education – Breathing control techniques, mechanical aids – IPPB, CPAP, BiPAP [3 Hours]
6. Physiotherapy techniques to clear secretions – Hydration, Humidification & Nebulisation, Mobilisation and Breathing exercises, Postural Drainage, Manual techniques – Percussion, Vibration and Shaking, Rib Springing, ACBT, Autogenic Drainage, Mechanical Aids – PEP, Flutter, IPPB, Facilitation of Cough and Huff, Nasopharyngeal Suctioning [3 Hours]
7. Drug therapy – Drugs to prevent and treat inflammation, Drugs to treat Bronchospasm, Drugs to treat Breathlessness, Drugs to help sputum clearance, Drugs to inhibit coughing, Drugs to improve ventilation, Drugs to reduce pulmonary hypertension, Drug delivery doses, Inhalers and Nebulisers.[1 Hour]

8. Management of wound ulcers- Care of ulcers and wounds - Care of surgical scars-U.V.R and other electro therapeutics for healing of wounds, prevention of Hypergranulated Scars Keoloids, Electrotherapeutics measures for relief of pain during mobilization of scars tissues. [2 Hours]
9. Physiotherapy in dermatology -Documentation of assessment, treatment and follow up skin conditions. U.V.R therapy in various skin conditions; Vitiligo; Hair loss; Pigmentation; Infected wounds ulcers. Faradic foot bath for Hyperhydrosis. Massage maneuvers for cosmetic purpose of skin; use of specific oil as medium; Care of anesthetic hand and foot; Evaluation, planning and management of leprosy-prescription, fitting and training with prosthetic and orthotic devices [2 Hours]
10. Neonatal and Pediatric Physiotherapy – Chest physiotherapy for children, The neonatal unit, Modifications of chest physiotherapy for specific neonatal disorders, Emergencies in the neonatal unit [3 Hours]
11. Physiotherapy in Obstructive lung conditions [2 Hours]
12. Physiotherapy in Restrictive lung conditions [2 hours]
13. Management of breathlessness [2 hours]
14. Pulmonary Rehabilitation [4 Hours]
15. Physiotherapy following Lung surgeries [3 Hours]
16. Respiratory failure – Oxygen Therapy and Mechanical Ventilation [4 Hours]
17. Introduction to ICU : ICU monitoring –Apparatus, Airways and Tubes used in the ICU - Physiotherapy in the ICU – Common conditions in the ICU – Tetanus, Head Injury, Lung Disease, Pulmonary Oedema, Multiple Organ Failure, Neuromuscular Disease, Smoke Inhalation, Poisoning, Aspiration, Near Drowning, ARDS, Shock; Dealing with an Emergency Situation in the ICU[4 Hours]
18. Burns management - Role of physiotherapy in the management of burns, post grafted cases- Mobilization and Musculo-skeletal restorative exercises following burns [3 Hours]
19. Physiotherapy management following cardiac surgeries [3 Hours]
20. Cardiac Rehabilitation [4 Hours]
21. Physiotherapy management following PVD [3 Hours]
22. Abdominal Surgeries - Management of Pulmonary Restorative Dysfunction following Surgical procedures on Abdomen and Thorax [3 Hours]
23. Management of Amputations following Diabetes, PVD - Prosthesis in amputations of lower limbs following ulcers and gangrenes [3 Hours]
24. Physiotherapy intervention in the management of Medical, Surgical and Radiation Oncology Cases [3 Hours]

25. Home program and education of family members in patient care [2 Hours]
26. Physiotherapy in Obstetrics – Antenatal Care, Antenatal Education, Postnatal Care. Electrotherapy and Exercise Therapy measures for the re-education of Ano-Urethral sphincters. [3 Hours]
27. Treatment, Response to exercise and Implications of Physiotherapy in the following disease conditions: Hypertension, Diabetes, Renal Failure and Obesity. [5 Hours]
28. Health Fitness and Promotion : Fitness Evaluation, Analysis of Body composition, Evaluation and prescription of Exercise, Factors affecting exercise Performance, Exercise Prescription for Specific groups : Elderly, Women and Children. [5 Hours]
29. Applied Yoga in Cardio-respiratory conditions [3 Hours]

Practical: 60 Hours

Practical shall be conducted for all the relevant topics discussed in theory in the following forms:

1. Bedside case presentations and case discussions
2. Lab sessions consisting of evaluation and assessment methods on student models, treatment techniques and practice sessions.

Recommended books:

1. Tidy's physiotherapy.
2. Cash's Text Book of Chest, Heart, Vascular Disorders for Physiotherapists.
3. The Brompton Guide to chest physiotherapy DU Gasket [Completed]
4. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz
5. Elements in Pediatric Physiotherapy – Pamela M Eckersley
6. Essentials of Cardio Pulmonary Physical Therapy by Hillegass and Sadowsky
7. Cardio pulmonary Symptoms in physical Therapy practice Cohen and Michel
8. Chest Physiotherapy in Intensive Care Unit by Mackenzi
9. Cash's Text book of General Medicine and Surgical conditions for Physiotherapists.
10. Physiotherapy in Psychiatry
11. Physical Therapy for the Cancer patient by M.C Garvey
12. Physiotherapy in Obstetrics and Gynecology by Polden