

PHARMACOLOGY

Subject Title	: PHARMACOLOGY
Duration	: 13 – 24 Months
Total Hours	: 60
Theory	: 60 Hrs
Lecture	: 2 Hours / Week
Method of Assessment	: Written

Course Description

This course introduces the student to basic pharmacology of common drugs used, their importance in the overall treatment including Physiotherapy. The student after completing the course will be able to understand the general principles of drug action and the handling of drugs by the body. The student will be aware of the contribution of both drug and physiotherapy factors in the outcome of treatment.

1. General Pharmacology [5 Hours]

Introduction, Definitions, Classification of drugs, Sources of drugs, Routes of drug administration, Distribution of drugs, Metabolism and Excretion of drugs Pharmacokinetics, Pharmacodynamics, Factors modifying drug response, Adverse effects.

2. Autonomic Nervous system [5 hours]

General considerations – The Sympathetic and Parasympathetic Systems, Receptors, Somatic Nervous System
Cholinergic and Anti-Cholinergic drugs, Adrenergic and Adrenergic blocking drugs, Peripheral muscle relaxants.

3. Cardiovascular Pharmacology [10 Hours]

Drugs Used in the Treatment of Heart Failure: Digitalis, Diuretics, Vasodilators, ACE inhibitors
Antihypertensive Drugs: Diuretics, Beta Blockers, Calcium Channel Blockers, ACE Inhibitors,
Central Acting Alpha Agonists, Peripheral Alpha Antagonists, Direct acting Vasodilators
Antiarrhythmic Drugs
Drugs Used in the Treatment of Vascular Disease and Tissue Ischemia : Vascular Disease,
Hemostasis Lipid-Lowering agents, Antithrombotics, Anticoagulants and Thrombolytics
Ischemic Heart Disease – Nitrates, Beta-Blockers, Calcium Channel Blockers
Cerebral Ischemia
Peripheral Vascular Disease

4. Neuropharmacology [8 Hours]

Sedative-Hypnotic Drugs: Barbiturates, Benzodiazepines

Antianxiety Drugs: Benzodiazepines, Other Anxiolytics

Drugs Used in Treatment of Mood Disorders: Monoamine Oxidase Inhibitors, Tricyclic Antidepressants, Atypical Antidepressants, Lithium Antipsychotic drugs

5. Disorders of Movement [6 Hours]

Drugs used in Treatment of Parkinson's Disease

Antiepileptic Drugs

Spasticity and Skeletal Muscle Relaxants

6. Inflammatory/Immune Diseases [14 Hours]

Non-narcotic Analgesics and Nonsteroidal Anti-Inflammatory Drugs: Acetaminophen, NSAIDs, Aspirin, Nonaspirin NSAIDs, drug Interactions with NSAIDs

Glucocorticoids: Pharmacological Uses of Glucocorticoids, adverse effects, Physiologic Use of Glucocorticoids

Drugs Used in Treatment of Arthritic Diseases: Rheumatoid Arthritis, Osteoarthritis, Gout

Drugs Used in the Treatment of Neuromuscular Immune/Inflammatory Diseases: Myasthenia gravis, Idiopathic Inflammatory Myopathies, systemic lupus Erythematosus, Scleroderma, Demyelinating Disease

Respiratory Pharmacology: Obstructive Airway Diseases, Drugs used in Treatment of Obstructive airway Diseases, Allergic Rhinitis

7. Digestion and Metabolism [6 Hours]

Gastrointestinal Pharmacology: Peptic Ulcer Disease, Constipation, Diarrhea

Drugs Used in Treatment of Diabetes Mellitus: Insulin, Oral Hypoglycemics

8. Geriatrics [6 Hours]

Pharmacology and the geriatric Population: Adverse effects of special concern in the Elderly, Dementia, Postural hypotension

Recommended Textbooks

1. *Lippicott's Pharmacology.*
2. *Essential of Medical Pharmacology by Tripathi*
3. *Text book of Medical Pharmacology by Padmaja udaykumar*
4. *Pharmacology by N.Muruges*
5. *Pharmacology & Pharmacotherapeutics by Sadoskar.*