

Basic Pharmacology

Objectives:

At the end of the Basic Pharmacology course, the students should be able to:

- Describe safe and effective prescription of drugs
- Identify /recognize and report the adverse drug reactions
- Mention the list of essential drugs allowed to prescribe by Medical Assistant
- State how to manage in case of emergency by providing emergency medication or administering injections per doctors' advice.

List of Competencies to Acquire:

1. Basic pharmacodynamics (Therapeutic dose) for safe & effective prescribing as per country's rule applicable for medical assistant.
2. Adverse drug reaction (toxic effects, side effects)- recognize them & referred to physician (Reporting)
3. Prescription writing (choosing safe & effective drugs & appropriate dosage formulations)
4. Preparation of ORS
5. Concept of essential drugs and selection of essential drug list for use in community based health care services
6. Ethics of prescribing: informed patient consent about disease, treatment given and alternative options available
7. Give patients injections or medications per doctors' orders

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Contents	Learning Objectives	Training /Learning experiences			Expected hours /days	Assessment	
		Class-room instruction	Practical /visit	Aids			
1. Basic Concept of Pharmacology	At the end of learning session the students will be able to :	Lecture Group Discussion	Practical	Chalk duster & Audio visual OHP Materials / Multimedia	Lec-8hrs	Post Session Written Test and Viva	
	1. define and give example Pharmacology Pharmacy Drugs Dose Therapeutic dose Toxic dose Tolerance Addiction Habituation Drug dependency Side effects Toxic effects Solution Mixture Syrup Ointments Capsules Tablets				Tutorial - 8hrs Practical- 2hrs Visit (hospital dispensary) -4hrs		
	2. Routes of Administration of drugs with their advantages and disadvantages.	Lecture			Chalk duster & OHP/White board with marker , duster		Lec-6 hrs Tuto-6 hrs
	3. Give the different naming of drugs with example	Lecture			Chalk duster & OHP /		Prac-2 hrs
	4. Outline some factors which influence the action of drugs	Lecture		Chalk duster & OHP			

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Basic Concept of Pharmacology	Students must be able to : <ul style="list-style-type: none"> - Give the Pharmacological names : - State the Types of dosages formulation - List their main actions - State their normal absorption and exertion of drugs - State their indications, contraindications and side effects - List of essential drugs for union and upazila level should be included in 13+33 drugs respectively 	Lecture Class Followed by Tutorial, group discussion Question-answers and feed back		Chalk duster & OHP/ Multi media		In Course Assessment Written Test (SAQ) Viva
2. Essential drugs in groups. <ol style="list-style-type: none"> i. Antiseptic /Disinfectant <ul style="list-style-type: none"> - Gention violet - Acriflavin - Potasium Permanganate - Chlorhexidine ii. Analgesic, Anti Pyretics and Non Steriodal Anti inflammatory drugs <ul style="list-style-type: none"> - Asprin - Paracetamol - Pethidine iii. Anti spasmodic <ul style="list-style-type: none"> - Atropine - Hyocine N-Butyl Bromide 				Lec-42hrs Tuto-44hrs Prac-4 Visit (hospital dispensary)-4hrs		

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iv. Antacid <ul style="list-style-type: none"> - Aluminium Hydroxide - Magnesium Hydroxide - Magnesium Trisilicate 						
v. Haematinics- <ul style="list-style-type: none"> ✓ Ferrous sulphate ✓ Folic Acid 						
vi. Anti-Helmintics <ul style="list-style-type: none"> - Mebendazole - Albendazole - Pyrental pamoate 						
vii. Anti-Malarial <ul style="list-style-type: none"> - Chlorqnine - Quinine - Sulphadoxine +Pyrimethamine 						
viii. Anti Amoebic <ul style="list-style-type: none"> - Metronidazole 						
ix. Electolyte and I/V fluids <ul style="list-style-type: none"> O.R.S I/V fluid of various strength Dextrose aqua/ Dextrose saline , cholera saline 						
x. Bronchodilators- salbutamol, aminophyline						
xi- diuretics <ul style="list-style-type: none"> - Frusemide - Thiazide 						
xii. Antipsychotic drug <ul style="list-style-type: none"> - Chlorpromazine 						
xiii. Hypnotic and Sedative <ul style="list-style-type: none"> - Phenobarbitone Diazepam 						

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xiv. Antimicrobial - Phenoxymethyl Penicillin - Procanie Penicillin - Ampicillin - Amoxicillin - Cloxacillin - Tetracycline - Co-Trimoxazole, - Ciprofloxacin xv. Anti-Histamines - Chlorpheniramine - Pro methazine HCl xvi. Anti-Scabics - Benzyl-benzoate - Tetmosol xvii. Anti-Fungal - Benzoic Acid+Salicylic Acid - Griseofulvin xviii. Local Anesthetics - Lignocane 2% with or with out adrenaline xix. Hypotensive - Methyldopa, amodipine - Propanolol, atenolol xx. Ecbolec - Ergometrin - oxitocin xxi. Contraceptives - Oral contraceptives - emergency pill						

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xxii. Vaccines <ul style="list-style-type: none"> - BCG - DPT - TT - Polio - Measles - Hepatitis B vaccine - Influenza vaccines xxiii. Vitamins and trace elements <ul style="list-style-type: none"> - Vit-A - Vit-B Complex - Vit-C - Vit-D - Vit-E - Zinc xxiv. Cortico-Steroid <ul style="list-style-type: none"> - Dexamethasone - Prednisolone 						
3. Prescription Writing 4. Preparation of ORS	At the end of the session the students will be able to : <ol style="list-style-type: none"> 1. Write and ideal prescription of diseases that includes under primary health care e.g. diarrhoea, ARI, Scabies, Ringworm, minor wound infection. 2. Student should know how to prepare O.R.S 	Lecture class and Tutorial class		Black Board Audiovisual aid & materials	Lec-2 Tut-2 hrs Pra-2hrs Visit (hospital dispensary)- 2hrs	Post session written and viva