



# 100 GOLDEN POINTS OF PHARMACOLOGY

IMPORTANT FOR GPAT, NIPER,  
DRUG INSPECTOR AND  
OTHER PHARMACIST EXAMS



BY- ASHUTOSH SHUKLA



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- Acidic drugs bind **albumin**; basic drugs bind **alpha-1-acid glycoprotein**.
- Drugs like digoxin accumulate in heart, liver, and kidney tissues.
- Prodrugs become active in the body, e.g., Levodopa to Dopamine.
- Phase I metabolism includes oxidation, reduction, hydrolysis, cyclisation.



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- **G-Protein coupled receptors (heptahelical / serpentine receptors)** are largest family of cell membrane receptor.
- G-proteins help transduce signals from membrane-bound receptors.





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- Tests for Myasthenia gravis - **Ameliorative & Provocative test, (DOC- Neostigmine)**



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- SSRIs like fluoxetine inhibit 5-HT reuptake, treating depression.
- TCAs **block reuptake of NA and 5-HT** but cause anticholinergic side effects.
- Lithium inhibits Na<sup>+</sup> fluxes and is used in **bipolar disorder**





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- Digitalis **inhibits Na<sup>+</sup>/K<sup>+</sup> ATPase**, increasing myocardial Ca<sup>2+</sup>.

CHF and atrial fibrillation.





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- Diuretics like furosemide **act on Loop of Henle**.
- Thiazide diuretics like hydrochlorothiazide cause  $K^+$  loss.
- Spironolactone is a  **$K^+$  sparing diuretic and aldosterone antagonist**.
- Mannitol is an **osmotic diuretic** used in cerebral edema and also useful in **acute congestive glaucoma** and prevention of **cisplatin induced nephrotoxicity**.



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- Aspirin **irreversibly inhibits COX**, preventing platelet aggregation.
- Statins inhibit HMG-CoA reductase lowering cholesterol.





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- Acarbose **inhibits alpha-glucosidase**, delaying carb absorption.
- Insulin is the drug of choice for gestational diabetes.
- Levothyroxine is **synthetic T4** used in hypothyroidism.
- Propylthiouracil inhibits thyroid hormone synthesis and peripheral T4 to T3 conversion.
- Methimazole is preferred over PTU except in first trimester.



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- Vitamin D **increases calcium absorption from gut**.
- **Calcitonin** lowers blood calcium and inhibits bone resorption.
- Desmopressin is used in diabetes insipidus.
- Oxytocin is used to **induce labor and control PP**
- Penicillin **inhibits bacterial cell wall synthesis** by blocking transpeptidase.



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- Tetracyclines inhibit protein synthesis by **binding 30S ribosomal subunit**.
- Aminoglycosides are **bactericidal** in nature having the adverse effect of ototoxicity; e.g., gentamicin.
- Macrolides like **erythromycin inhibit 50S subunit** of bacterial ribosome



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- Doxorubicin intercalates DNA and generates **free radicals**.
- Cisplatin causes **DNA cross-linking** and has an adverse effect of nephrotoxicity.
- Bleomycin causes **DNA strand breaks** and it is also known for its pulmonary toxicity.