



Components of drug profile 1

By

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ILOS



- Recognize different components of drug profile.
- Outline drug profiles of different antibiotics
- Outline drug profiles of different analgesics

Drug profile

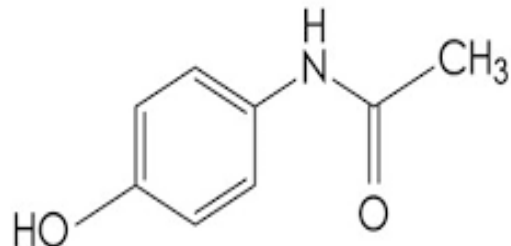
- A drug profile is a **comprehensive, standardized summary of a substance, detailing its chemical, pharmacological, and analytical characteristics.** It is used in **clinical, forensic, and regulatory contexts to understand a drug's effects, safety, and identification.**



Components of a Drug Profile

- Name
- Classification
- Mechanism of Action
- Indications
- Pharmacokinetics
- Side Effects/adverse reactions
- Routes of Administration
- Contraindications
- Dosage
- How Supplied
- Special Considerations

Drug Nomenclature



acetaminophen (C₈H₉NO₂)

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1] Chemical Name: -
= Description of chemical structure

N-acetyl- ρ -aminophen

2] Generic Name: -

- Paracetamol

3] Trade Name: -

= Name given by individual drug companies

- Paramol

- Panadol



- Most of drugs are restricted for sale by prescription only.
- Some drugs can be used by the public without a prescription e.g., nasal & oral decongestant (**Over The Counter = OTC**)

Aspirin

Name ????	Acetyl salicylic acid
Classification	Analgesic antipyretic anti inflammatory (Non –opioid analgesics)
Pharmacokinetics	????? Better absorbed from stomach Highly bound to plasma proteins Conjugation with glycine Alkalization of urine increases its excretion
Mechanism of action Pharmacological actions	?????
Indications	??????
Routes of administration	?????
SE /adverse reactions/DI	Peptic ulcer, bleeding tendency,..... **barbiturate (potentiation)
Contraindications	?????
Dosage regimen	?????
Special considerations	Should be taken after meals or better to be prescribed in an enteric coated form



Paracetamol

Name ?????	Acetaminophen
Classification	Analgesic antipyretic (Non –opioid analgesics)
Pharmacokinetics	????? Rapidly disintegrated and dissolved Mainly metabolized in liver Conjugation with glucuronic acid
Mechanism of action	?????
Pharmacological actions	
Indications	???????
Routes of administration	?????
SE /adverse reactions/DI	?????
Contraindications	?????
Dosage regimen	?????
Special considerations	



Phenytoin

Name	?????
Classification	Antiepileptic
Pharmacokinetics	Needs acidic media for absorption Distributed in all body compartments ?????
Mechanism of action Pharmacological actions	?????
Indications	?????? Epilepsy
Routes of administration	?????
SE /adverse reactions/DI Narrow therapeutic window???
Contraindications	?????
Dosage regimen	????? Drug monitoring
Special considerations	?????? HME inducer



Aminoglycosides

Name	????
Classification	Antibiotic
Pharmacokinetics	????? Distributed in water (pediatrics and geriatrics???) Renally excreted???
Mechanism of action Pharmacological actions	?????
Indications	??????
Routes of administration	?????
SE /adverse reactions/DI	Nephrotoxic , ototoxic , teratogenic.....???
Contraindications	?????
Dosage regimen	?????
Special considerations	Shouldn't be mixed with penicillin in the same vial (chemical antagonism)



Penicillin

Name	????
Classification	Antibiotic
Pharmacokinetics	<p>????? Destroyed by gastric acidity in case of benzyl penicillin</p> <p>Can cross BBB in case of meningitis</p> <p>Renally excreted</p> <p>Active tubular secretion</p> <p>Probenecid decreases its urinary excretion</p>
Mechanism of action Pharmacological actions	?????
Indications	??????
Routes of administration	?????
SE /adverse reaction/DI	Anaphylactic shock ,.....??? Probenecid
Contraindications	?????
Dosage regimen	?????
Special considerations	<p>Shouldn't be mixed with aminoglycosides in the same vial</p> <p>(chemical antagonism)</p> <p>Sensitivity test before use</p>



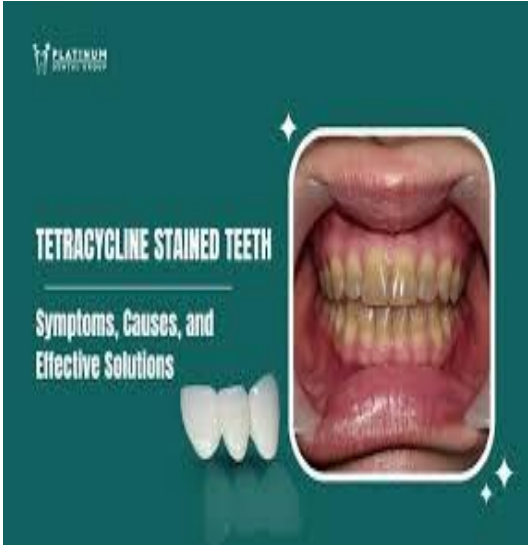


The skin is pricked or injected with **solutions containing penicillin** and observed for a **localized reaction**. The test is considered **positive** if an **itchy, red bump at the site of the skin test** appears in **15 to 20 minutes** and negative if nothing happens.



Tetracyclines


Name	????
Classification	Antibiotic
Pharmacokinetics	????? Selective distribution in bone and teeth
Mechanism of action Pharmacological actions	?????
Indications	??????
Routes of administration	?????
SE /adverse reactions/DI	Affects absorption of iron ,calcium ,teratogenic.....???
Contraindications	?????pregnancy as it produces permanent discoloration of teeth
Dosage regimen	?????
Special considerations	Should be separated from calcium ,iron ,..... Shouldn't be given in pregnancy



Sulfonamides

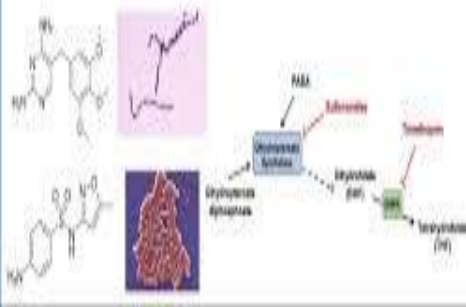
Name	????
Classification	Antibiotic
Pharmacokinetics	????? Highly bound to plasma proteins
Mechanism of action Pharmacological actions	????? Sequential block Inhibition of metabolic pathway
Indications	??????
Routes of administration	?????
SE /adverse reactions /DI	Allergy from sulfa , DI, teratogenic???
Contraindications	????? Allergy from sulfa , pregnancy causing jaundice and kernicterus
Dosage regimen	?????
Special considerations	Should be taken with sufficient amount of water to avoid crystalluria

JJ Medicine



Sulfonamide Antibiotics

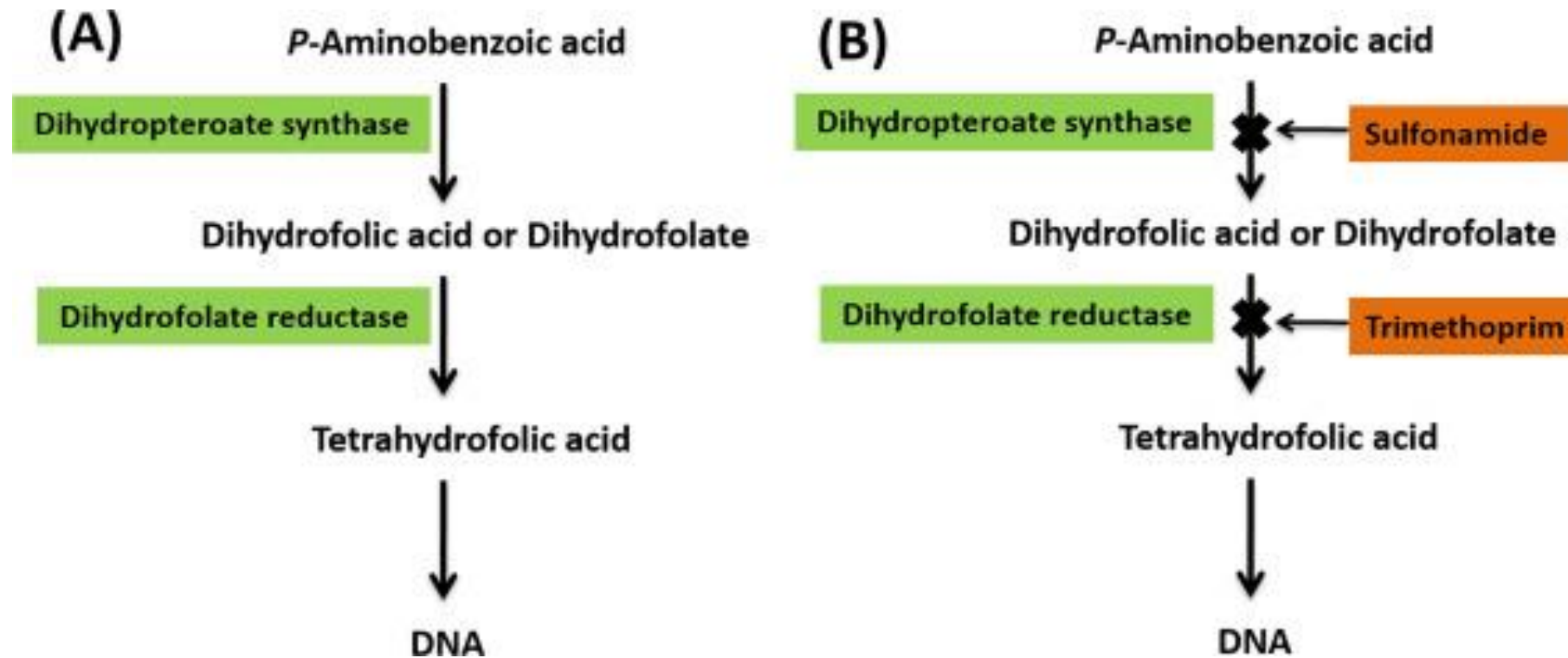
Trimethoprim-Sulfamethoxazole



Sulfonamides Mechanism of action

Interference with Metabolic Pathway:

Sulfonamides compete with PABA in bacteria leading to inhibition of synthesis of folic acid.



Digoxin

Name	????
Classification	Positive inotropic agent
Pharmacokinetics	????? Slowly disintegrated and dissolved ????????????? High vd
Mechanism of action Pharmacological actions	?????
Indications	?????? Heart failure
Routes of administration	?????
SE /adverse reactions/DI	Long half life , accumulation???
Contraindications	?????
Dosage regimen	????? Loading dose in emergency
Special considerations	Shouldn't be prescribed with ??? DI : Metoclopramide HME inhibitors



Diazepam

Name	?????
Classification	CNS depressant
Pharmacokinetics	<p>?????</p> <p>Distributed in fatty tissues (geriatrics??)</p> <p>Metabolized mainly in liver to active nor diazepam (Long duration of action)</p> <p>???</p>
Mechanism of action	?????
Indications	??????? insomnia
Routes of administration	?????
SE /adverse reactions/DI	Adjust dose in geriatrics???
Contraindications	?????
Dosage regimen	?????
Special considerations	???????





Mcqs Questions

1- Which of the following treatment option is utilized in salicylate poisoning?

- (A) Alkalinization of urine
- (B) Acidification of urine
- (C) Acidification of blood
- (D) Alkalinization of urine

2- Category A,B,C,D,X division of drugs is based on :

- (A) Safety in pregnancy
- (B) Dose adjustment in renal failure
- (C) Therapeutic index and safety
- (D) Over the counter use of drug



Mcqs Questions

3-Type of stimulatory G protein in PIP₂ phospholipase activation pathway is :

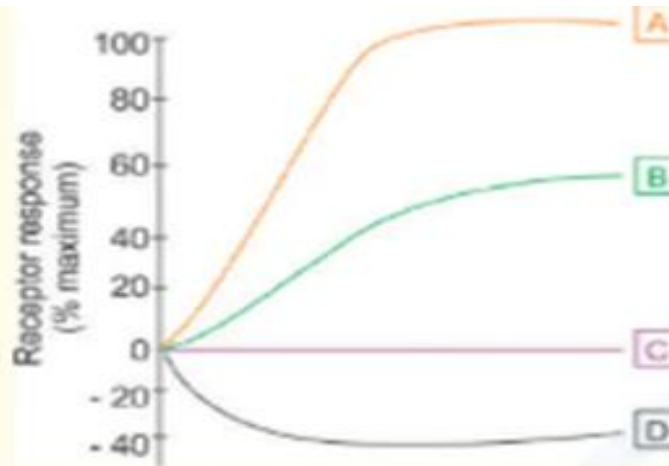
- (A) G_s
- (B) G_i
- (C) G_q
- (D) G_o

4- Which of the following factor in PC vs time graph is a measure of extent of drug absorption of a drug?

- (A) Area under the curve
- (B) $t_{1/2}$
- (C) C_{max}
- (D) T_{max}

Mcqs Questions

5-Which of the following statements is correct?



- A. Drug A is agonist and Drug B represents inverse agonist
- B. Drug C represents agonist and Drug D is inverse agonist
- C. Drug A is agonist and Drug D is inverse agonist
- D. Drug B is partial agonist and Drug C is inverse agonist

THANK YOU

