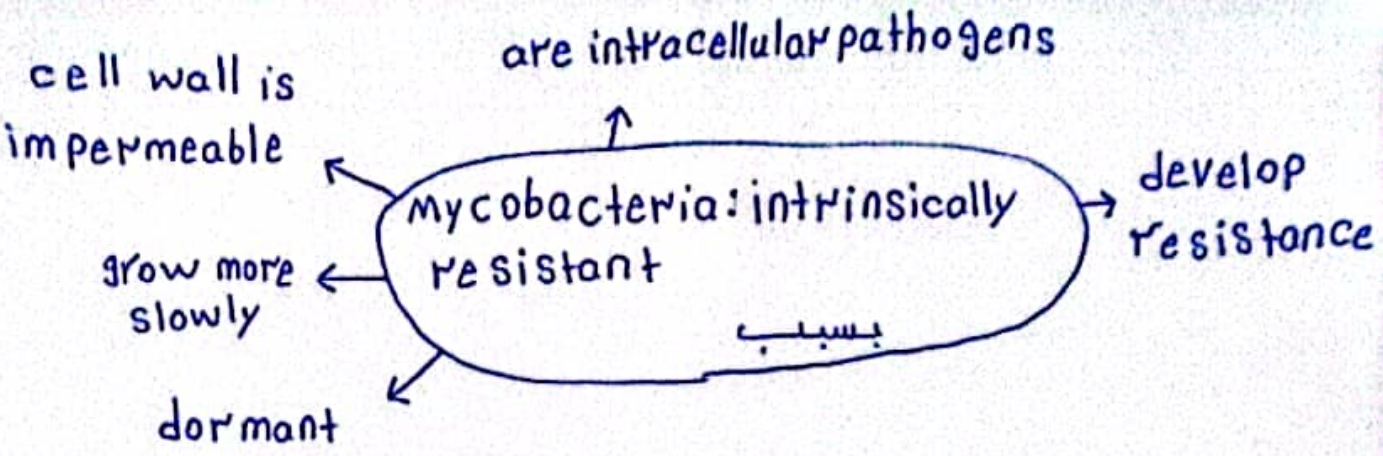
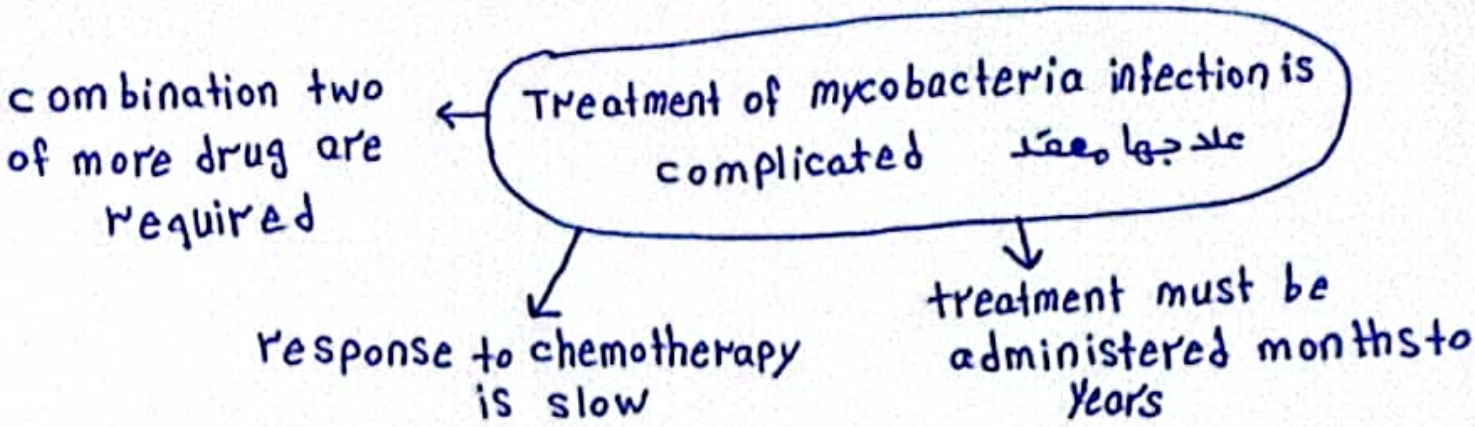
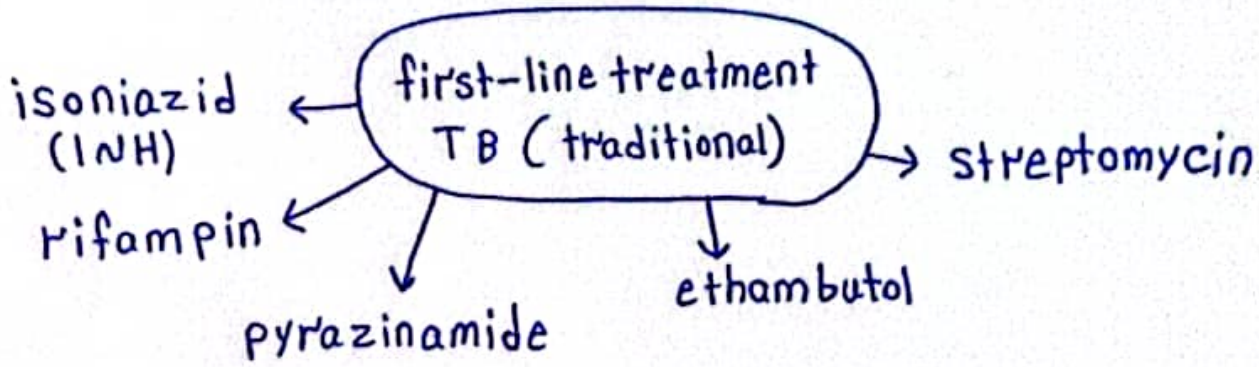




* Tuberculosis (TB): → Lungs في (90%) يحدث بنسبة
  - → Not everyone infected with TB bacteria becomes sick.
  - → A person with Latent TB may develop TB disease if it not receive treatment.



* isoniazid + rifampin = for 9 months
* isoniazid + rifampin + pyrazinamide = for 6 months - (without Loss of efficacy)

* The duration of treatment TB → can be reduced just with (isoniazid + rifampin + pyrazinamid)*

* when used compination of antituberculous drugs the resistance is reduce.

* Isoniazid (INH): → most active drug
→ used in combination
→ Bactericidal
→ Treatment and prophylaxis
→ MoA: isoniazid → KatG ⇝ ↓ inhA ⇝ ↓ FAS 2 ⇝ ↓ mycolic acid
└ inhibition mycolic acid

* carbohydrates + aluminum (antiacids) ← ما يصير أخذهم مع الـ isoniazid (INH)

* Acetylation → hydrolysis → excreation in urin

→ oral + parenteral

→ single isoniazid for → prophylaxis and Treatment Latent TB

rapidly acetylation → short half life

slow acetylation → Long half life

→ [redacted] CSF (distribution).

→ effective against bacilli.

→ S/E: → peripheral neuropathy.
└ hepatitis.

contraindication in patient with hepatitis

→ S/E: → peripheral neuropathy:
• ↓ vitamin B6 (pyridoxine) — تحدث بسبب
• vitamin B6 (pyridoxine) — بمالجها بأعطي المريض

* Rifampin:

- MoA: Rifampin —Binds→ β subunit bacteria DNA-dependent RNA polymerase → ↓ RNA synthesis
- effect on Bacteria RNA.
- not effect on Human RNA.
- oral.
- CSF.
- used for → meningeal inflammation.
- [redacted]
- single Rifampin → alternative isoniazid → Latent TB → Haemophilus influenzae Type b ← prophyloxis
- Rifampin Broad spectrum than isoniazid.
- not use Rifampin with drug that metabolism by cytochrome P450
- S/E: hepatitis, jaundice, nephritis, thrombocytopenia, orange color rashes

Rifamin + compination other drugs ↓ TB + Atypical mycobacterial infection (MAC) + Leprosy

* pyrazinamide:

- prodrugs
- pyrazinamid —pncA gene→ pyrazinoic acid (active form)
- used only for → TB
- S/E: → Hepatotoxicity; → ↓ urate excretion → ↑ gout (but no need to halt therapy وقف when it occurred)

* Ethambutol : MoA : ↓ arabinosyl transferases
≀
disrupts arabinogalacton synthesis

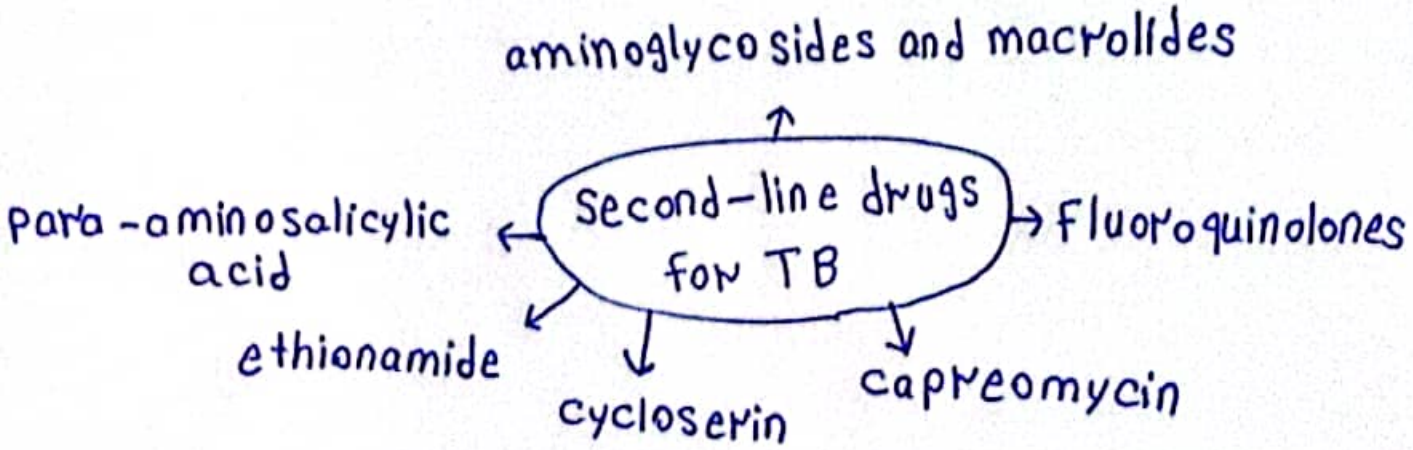
→ Resistance → mutation resulting in overexpression of (emb gene)

→ need dose adjustment in renal failure.

→ S/E : → optic neuritis → Dose-dependent
→ Reversible → drug discontinuation

→ contraindicated in children.

* Streptomycine : → aminoglycosides عبارة عن
→ penetrates into cell poorly.
→ active → extracellular tubercle bacilli.
→ injectable → (IV)



* Second-line drugs for TB : used for → TB .
→ Atypical mycobacteria (MAC)

* capreomycin : MoA → ↓ protein synthesis.
→ IM
→ for → treatment of multidrug-resistant tuberculosis
→ S/E : → nephrotoxicity.
→ ototoxicity .

* Ethionamid : → Similarly isoniazid → ↓ mycolic acids
→ oral
→ CSF
→ S/E : optic neuritis, peripheral neuropathies, hepatotoxicity, gastric irritation
→ can reduce side effect by given → vitamin B6 (Pyridoxin)

* para-aminosalicylic acid : → similarly (PAPA) → folate synthesis antagonist
→ active against → M. tuberculosis

* Fluoroquinolones : → ciprofloxacin
→ moxifloxacin
→ Levofloxacin

* Macrolides : → Azithromycin
→ clarithromycin
→ يعطية = HIV + TB
Azithromycin

* اذا شخص معاه

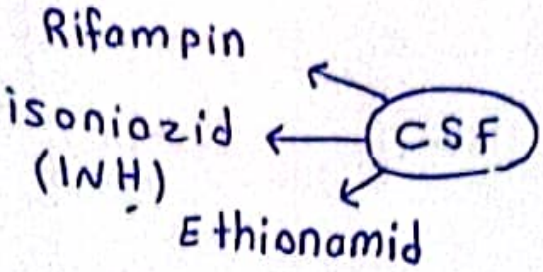
* Leprosy : → (Hansen's disease) يسمى
→ caused by → M. leprae
→ symptoms → granulomas → Lack feel pain and weakness and poor eyesight.
→ external sign → Skin Lesions.
→

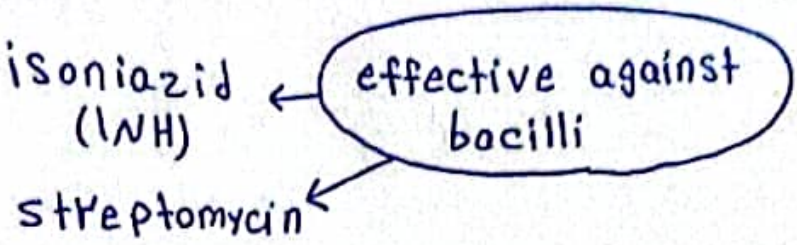
* يستخدم لعلاج ال Leprosy :
(dapsone + clofazimine + rifampin)

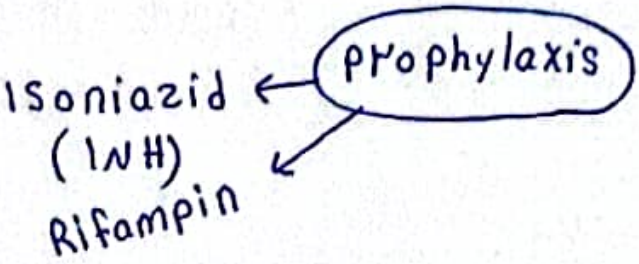
* Dapsone : → similar → sulfonamids → ↓ folat synthesis
→ used for treat → pneumonia + Leprosy.
→ high levels concentrated in the skin
→ Enter enterohepatic circulation

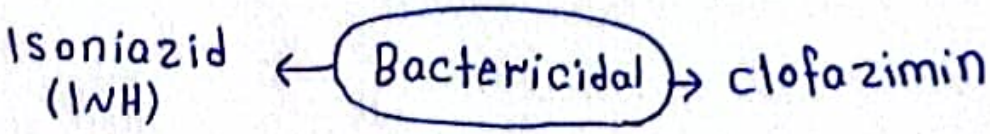
* clofazimin : → MoA → Bind DNA → prevent DNA replication.
→ Bactericidal.
→ For → M. leprea
→ MAC (M. Avium intracellulare complex)

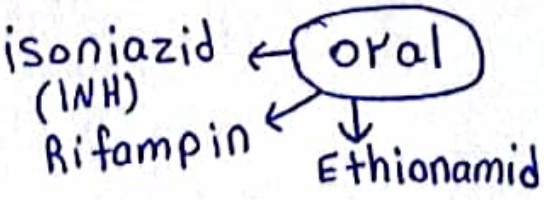
*MAC: Atypical











هديل الزعبي