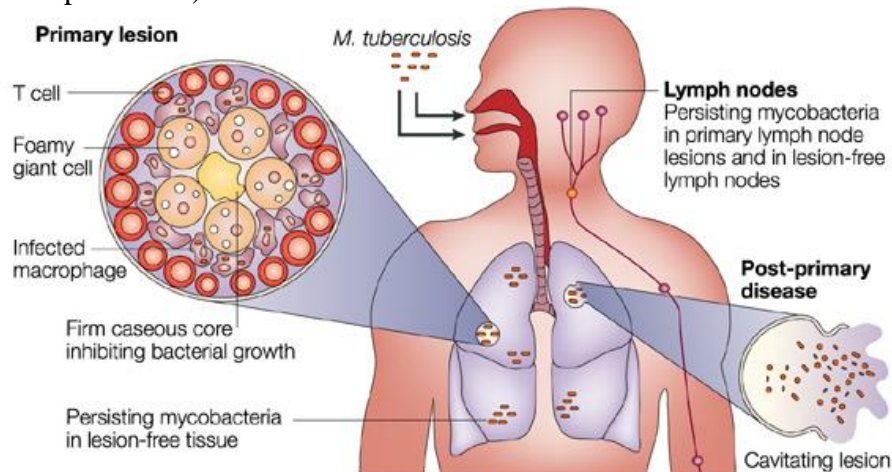




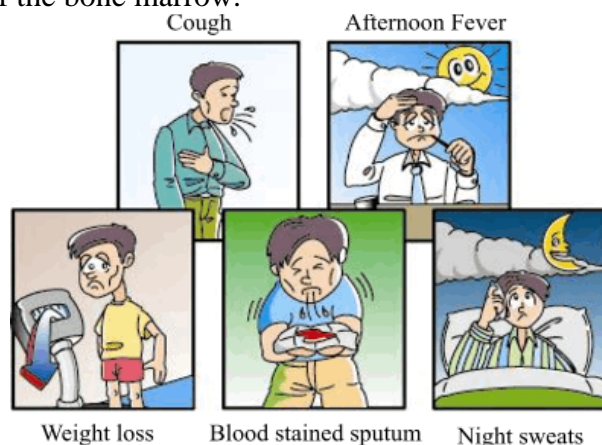
- Definition/ etiology:

- **Tuberculosis (TB) is caused by:** Mycobacterium tuberculosis.
- **Transmission:** respiratory droplets.
- **BCG vaccination is 50% effective in preventing the disease but not indicated as a routine vaccination.**
- **Those with high risk to get TB are:**
 - ✓ Alcoholics.
 - ✓ Health workers.
 - ✓ Prisoners.
 - ✓ Those who are immunocompromised with increased risk for re-activation of a latent infection (e.g. HIV, leukemia, lymphoma, steroid use or organ transplantation).



- Clinical manifestations:

- Fever, night sweats, weight loss, cough, sputum production and sometimes hemoptysis.
- **Extrapulmonary TB:** lymph node involvement (adenitis), Pott’s disease, meningitis and involvement of the bone marrow.



Cervical lymphadenitis



Meningitis

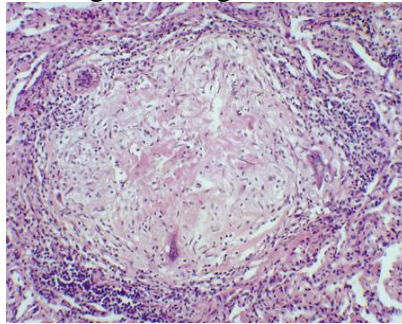


TB affecting spine



- **Diagnosis:**

- Best **INITIAL** diagnostic test is chest x-ray showing: apical involvement, infiltrates and cavitation. It might also show adenopathy or calcifications (Ghon complex).
- Sputum sample for Acid-Fast Bacilli AFB (3 samples must be obtained).
- Sputum culture is more **SPECIFIC** but not clinically practical because organism takes 4-6 weeks to grow.
- The single **MOST SENSITIVE** diagnostic test is pleural biopsy showing caseating necrosis.



- **Treatment:**

- **2 months with (isoniazid, rifampin, ethambutol and pyrazinamide) + 4 months with (isoniazid and rifampin).**
- **Side effects of drugs:**
 - ✓ Isoniazid: peripheral neuropathy due to vitamin B6 deficiency (give supplements).
 - ✓ Rifampin: benign discoloration of body fluids (orange-red).
 - ✓ Ethambutol: optic neuritis.
 - ✓ Pyrazinamide: benign hyperuricemia (do not treat unless there are symptoms of gout).

- **PPD:** it is a screening test used to screen asymptomatic population at increased risk for TB. A positive PPD test is determined by the measurement of skin induration 48-72 hours after intradermal injection of PPD:

- **≥ 5 mm:**
 - ✓ Close contacts to TB cases.
 - ✓ HIV-positive patients.
 - ✓ Those who use steroids or organ transplantation recipients.
- **≥ 10 mm:**
 - ✓ Healthcare workers.
 - ✓ Prisoners.
 - ✓ Immigrants from endemic areas.
 - ✓ Children < 4 years of age.
- **≥ 15 mm:**
 - ✓ Low-risk population (not mentioned above).
- **Positive PPD, abnormal CXR, 3 POSITIVE AFB smears** → start TB therapy with the usual regimen.
- **Positive PPD, normal/abnormal CXR, 3 NEGATIVE AFB smears** → isoniazid + vitamin B6 for 9 months.

