SPECIAL SITUATIONS

Pregnancy should not disqualify women living with or without HIV who are eligible for receiving TPT. Isoniazid and rifampicin are considered safe for use in pregnancy.

1HP and 3HP should not be used in pregnancy until more safety data is available.

Rifampicin and rifapentine interact with oral and hormonal contraceptive medications with a potential risk of decreased contraceptive efficacy.

Isoniazid and rifampicin/rifapentine are associated with liver damage.

Rifampicin or rifapentine TPT regimens should not be coadministered with protease inhibitors or nevirapine. The Bacille Calmette-Guérin (BCG) vaccination should not be delayed even if TPT is administered.

Rifamycins can decrease the concentration of HCV drugs to subtherapeutic levels.

People taking rifamycin-based regimen with OST should be closely monitored for signs of opiate withdrawal and other adverse events.

Preventive treatment among HHC of MDR-TB with FQ sensitive or H resistant R sensitive bacteriologically confirmed pulmonary index patients using 6Lfx or 4R respectively to be introduced in a phased manner, and only after a drug susceptibility test for all age groups, to gain programmatic experience to guide future expansion while awaiting results of ongoing studies.

Guidelines for Programmatic Management of Tuberculosis in India - 2021; https://tbcindia.gov.in/showfile.php?lid=3625

Guidelines for Programmatic Management of Tuberculosis Preventive Treatment in India - 2021

Treat to Beat
In India's fight to eliminate TB

JEET representative: .....

Contact no. : .....

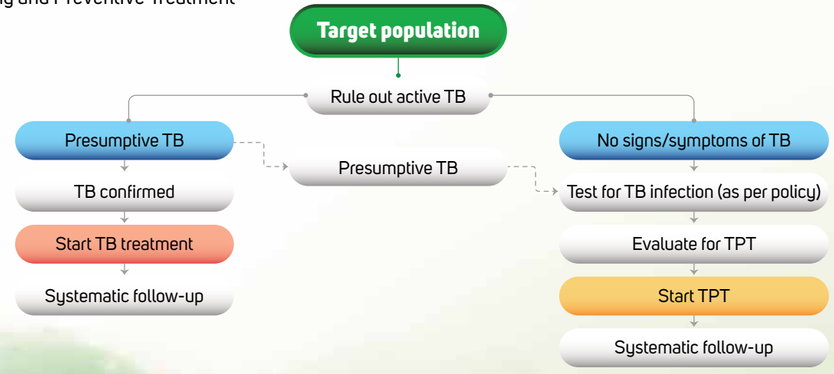
Joint Effort for Elimination of Tuberculosis

OVERVIEW

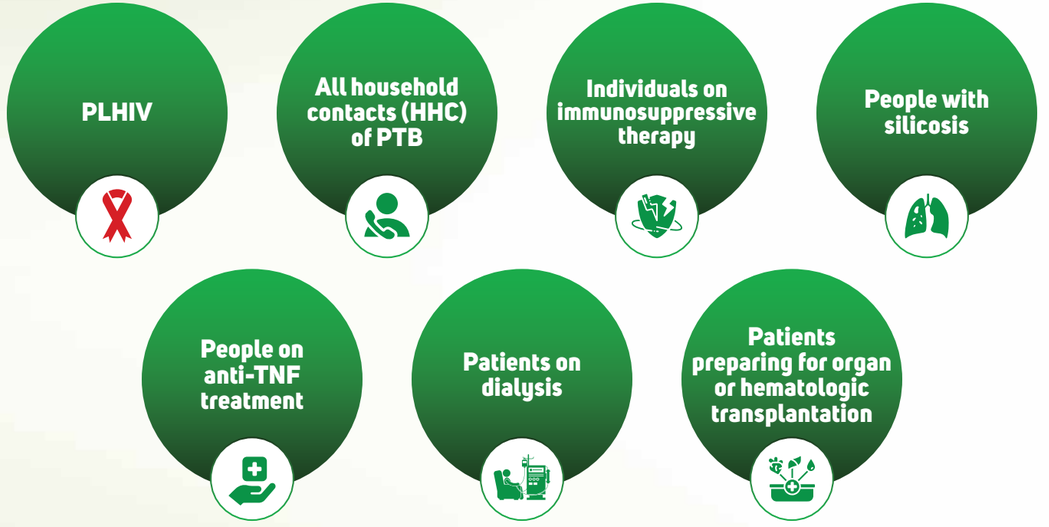
- India has the highest estimated burden of tuberculosis infection (TBI) globally, with nearly 35-40 crore Indians having TBI, of which 26 lakhs people on an average are estimated to develop tuberculosis disease annually.
- On average, 5–10% of those infected will develop TB disease. 75% of people who develop TB disease after contact with a patient of active TB are estimated to do so within one year of TB diagnosis of the index patient and 97% within two years.
- The eligibility for TB preventive treatment (TPT) relies on ruling out active TB, using the tests as an aid in decision-making.
- All diagnostics, drugs, treatment support, incentives and enablers, and public health action-linked provisions that are available to patients in the public sector should also be ensured for patients in the private sector.
- In view of the ambitious target to End TB in India by 2025, expanding the scope and management options under programmatic management of tuberculosis preventive treatment (PMTPT) as a priority intervention has become critical to accelerate the decline in TB incidence.
- Treating TBI even in healthy people is equally important to protect them from potential infection.

THE CASCADE OF CARE APPROACH

Case-finding and Preventive Treatment



TARGET POPULATION FOR TPT



- Ruling out active TB is mandatory before initiation of TPT.
- In children HHC under 5 years of age, TPT will be offered without testing for TBI.
- In children HHC ≥5 years and adults, chest X-ray and TBI testing would be offered wherever available. However, TPT must not be deferred in their absence.
- In individuals who are on immunosuppressive therapy, having silicosis, on anti-TNF treatment, on dialysis, preparing for organ or hematologic transplantation or other vulnerable risk groups, treatment would always be preceded by testing.

TB PREVENTIVE TREATMENT

Efficacy of TPT is greatest if at least 80% of the doses are taken within 133% of the duration of the regimen.

Treatment options recommended for TPT once active TB has been excluded under NTEP include 6H and 3HP with weight band-wise doses suggested with specific applicability to various target populations.

All CLHIV/PLHIV who had successfully completed treatment for TB disease earlier should receive a course of post-treatment TPT.

The standard dose of pyridoxine when used prophylactically for prevention of neuropathy among patients taking isoniazid is 10 mg/day in children and 25 mg/day in adults. In adult PLHIV, the dose would be 50 mg/day.

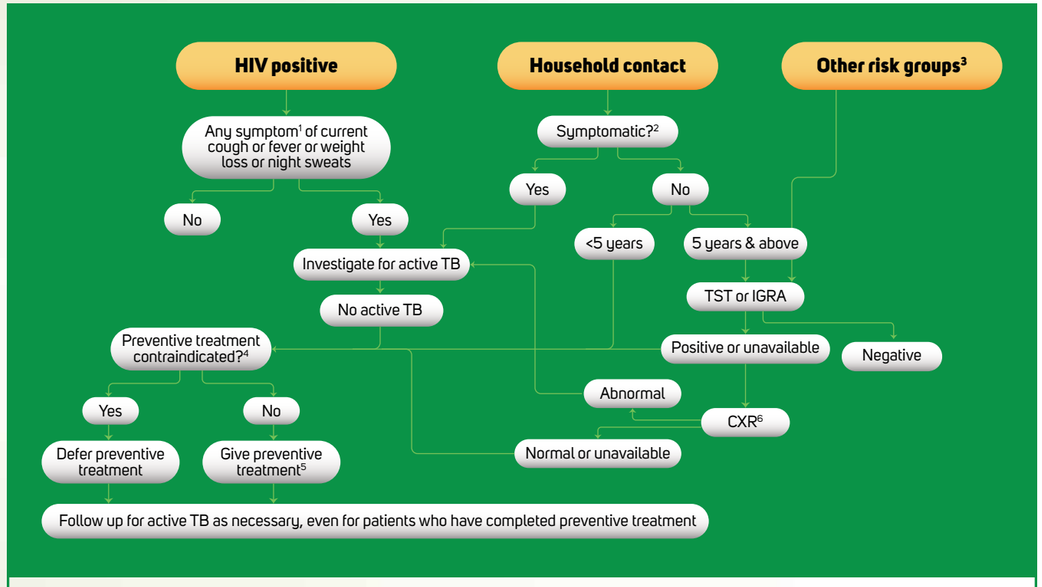
TPT should not be withheld if pyridoxine is not available. Alternatively, multivitamins/B-complex formulations with the requisite prophylactic dose of pyridoxin available within the general health system may be considered.

There is no evidence of significant association between development of bacterial resistance to TB drugs and use of isoniazid or rifamycin for TPT.

DIAGNOSIS OF TBI

- There is no gold standard test for TBI diagnosis. The currently recommended and available tests for TBI are TST and IGRA.
- Both TST & IGRA measure immune sensitization (type IV or delayed-type hypersensitivity) to mycobacterial protein antigens.
- Testing for TBI by TST or IGRA is not a requirement for initiating TPT in PLHIV or children aged <5 years in contact with PTB patients.
- In children HHC ≥5 years and adults, TST or IGRA testing would be offered wherever available.

ALGORITHM FOR TB SCREENING AND PROVIDING TPT IN INDIA



1. If < 10 years, any one of the current cough or fever or history of contact with TB or reported weight loss or confirmed weight loss >5% since last visit or growth curve flattening or weight for age <-2 Z-scores. Asymptomatic infants <1 year with HIV are only treated for TBI if they are household contacts of TB, TST or IGRA may identify PLHIV who will benefit most from preventive treatment. Chest radiography (CXR) may be used in PLHIV on ART, before starting TPT.
2. Any one of cough or fever or night sweats or haemoptysis or weight loss or chest pain or shortness of breath or fatigue. In children < years, they should also be free of anorexia, failure or thrive, not eating well, decreased activity or playfulness to be considered asymptomatic.
3. Including silicosis, dialysis, anti-TNF agent treatment, preparation for transplantation or other vulnerable risk groups where testing must precede before TPT.
4. Including acute or chronic hepatitis; peripheral neuropathy (if isoniazed is used); regular and heavy alcohol consumption. Pregnancy or a previous history of TB are not contraindications.
5. Regimen chosen based on considerations of age, strain (drug susceptible or otherwise), risk of toxicity. Availability and preferences.
6. CXR may have been carried out earlier as part of intensified case finding

ADVERSE EVENTS

Drug	Known adverse events	Rare adverse events
Isoniazid	• Asymptomatic elevation of serum liver enzyme concentrations • Hepatitis • Peripheral neuropathy (paraesthesis, numbness and limb pain) • Skin rash • Sleepiness and lethargy	• Convulsions • Pellagra • Arthralgia • Anaemia • Lupoid reactions
Rifampicin	• Gastrointestinal reactions (abdominal pain, nausea, vomiting) • Hepatitis • Generalized cutaneous ractions • Thrombocytopenic purpura • Discoloration of body fluids	• Osteomalacia • Pseudomembranous colitis • Pseudoadrenal crisis • Acute renal failure • Shock • Haemolytic anaemia • Flu-like syndrome
Rifapentine	• Gastrointestinal reactions (abdominal pain, nausea, vomiting) • Hypersensitivity reactions (flu-like symptoms) • Hepatitis • Discoloration of body fluids	• Hypotension/syncope • Decrease in white blood cell and red blood cell count • Decreased appetite • Hyperbilirubinemia

EMERGENCE OF DRUG RESISTANCE FOLLOWING TPT

There is no evidence of significant association between development of resistance to H or R with use of these drugs for TPT. However, TB disease must be ruled out before TPT is initiated, along with regular follow-up to rule out development of active TB disease. Rapid molecular DST must be offered to all patients if TB disease is detected before, during or any time post TPT.

1. Most adverse drug events associated with HP regimens are mild, self-resolving and without sequelae.
2. Coadministration of commonly used ARVs with TPT regimens 6H and 3HP is safe, and alternatives are available when low ARV exposure is suspected due to drug–drug interaction.
3. Caution is required when an individual receiving TPT is also on treatment for a comorbidity.
4. Women on hormonal contraceptives should use an additional barrier contraceptive to avoid pregnancy when using rifamycin-based TPT.
5. LFTs prior to initiating TPT are not routinely indicated. Baseline and follow-up LFTs are only needed when there is a defined risk, such as preexisting liver disease, regular use of alcohol, HIV infection and pregnancy or immediate postpartum period (within 3 months of delivery) or if a patient reports with signs and symptoms (e.g., yellowish discoloration) of hepatic dysfunction while on TPT

CONTRAINDICATIONS FOR TPT

TPT is contraindicated in the following situations:

- Active TB disease
- Acute or chronic hepatitis
- Concurrent use of other hepatotoxic medications (such as nevirapine)
- Regular and heavy alcohol consumption
- Signs and symptoms of peripheral neuropathy like persistent tingling, numbness and burning sensation in the limbs
- Allergy or known hypersensitivity to any drugs being considered for TPT

Note: **Pregnancy or a previous history of TB are not contraindications for TPT.**