FACTS ABOUT
LATENT TB INFECTIONS

REPUBLIC OF KENYA

MINISTRY OF HEALTH

Introduction to Management of Latent TB infections (LTBI)

Latent TB is a state of persistent immune response to stimulation by *M. tuberculosis* antigens with no evidence of clinically manifested active TB, meaning, signs and symptoms of TB are not present.

TB preventive treatment is the treatment offered to individuals who are considered at risk of TB disease in order to reduce that high risk.

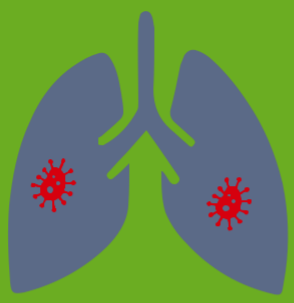
Provision of preventive treatment has proven to be an effective intervention to avert the development of active TB disease, with efficacy ranging from 60% to 90%, hence it is a principle strategy in achieving the global agenda of Ending TB by 2035.

1/4

of the global population is infected with latent tuberculosis

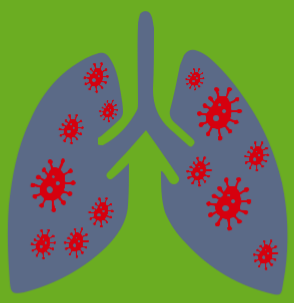
10-15%

will go on to develop TB disease



Latent TB Infection

Latent TB Infection means TB germs are in the body, but not enough to cause sickness or spread germs to others.



TB Disease

If TB germs become active and multiply, latent TB infection can turn into TB disease.

1 in 10

Without treatment, 1 in 10 people with latent TB infection will develop TB disease.

To End TB, we need to stop Latent TB!

Pathophysiology of Latent TB infections

When a person inhales air droplets with *M. tuberculosis* bacilli, most of the larger droplets become lodged in the upper respiratory tract (the nose and throat).

However, the smaller droplet nuclei may reach the small air sacs of the lung (the alveoli), where infection may begin.

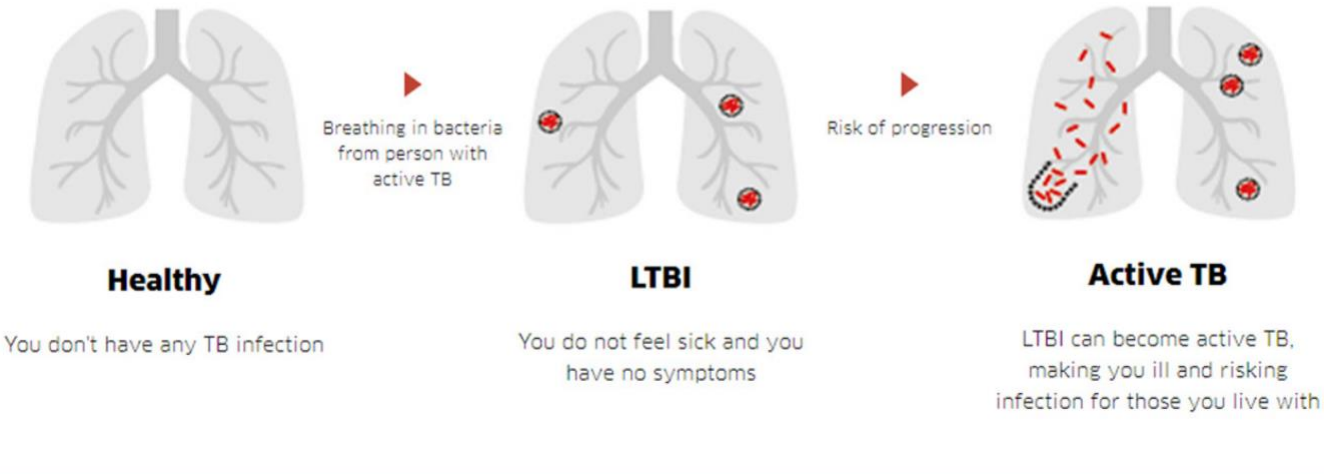
In the alveoli, some of the tubercle bacilli are killed, but a few multiply in the alveoli and enter the bloodstream and spread throughout the body. Bacilli may reach any part of the body.

Within 2 to 8 weeks, however, the body's immune system usually intervenes, halting multiplication and preventing further spread.

The immune system is the system of cells and tissues in the body that protect the body from foreign substances.

At this point, the person does not manifest any signs or symptoms of TB hence said to have latent TB infection (LTBI).

Most people with LTBI are unaware of the danger that may have already quietly settled in them



Populations to be offered Tuberculosis Preventive Therapy (TPT)

The most at-risk populations for whom systematic LTBI testing and treatment is recommended for the country include;

People Living With HIV

1. People Living with HIV

1. Aged more than 12 months regardless of TB exposure history
2. Aged less than 12 months exposed to bacteriologically confirmed TB.

CONTACTS 5 Years old and older

2. Household contacts of bacteriologically confirmed TB (children and adults).

CHILD CONTACTS Under 5 Years old

HEALTHCARE WORKERS

3. Health care workers and support staff working in health care settings.

IN PRISON

4. Prisons (Inmates and prison staff).

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5. Others population at risk.

1. Patients initiating chemotherapy or those who are taking certain immunosuppressive drugs.
2. Patients receiving dialysis
3. Patients preparing for an organ or haematological transplant
4. Patients who have silicosis.

RECEIVING ORGAN OR HAEMATOLOGICAL TRANSPLATATION

RECEIVING TNF TREATMENT

HAVE SILICOSIS

How to rule out active TB

Before initiating TB preventive therapy, the health care workers should rule out active TB using the symptoms screening questions:

- Cough of any duration
- Weight loss
- Night sweats
- Fever.

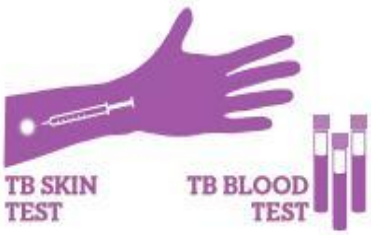
For children, screen for;

- Cough of any duration
- Reduced playfulness/ lethargy
- Failure to thrive/ poor weight gain
- Fever/ night sweats
- History of contact with a person with TB

Diagnosis of Latent TB infections

The goal of testing for LTBI is to identify persons who are at increased risk for developing TB and who would benefit from treatment of the infection.

Either a tuberculin skin test (TST) or Interferon-Gamma Release Assay (IGRA) can be used to test LTBI.



A skin test or blood test can find TB infection.

NOTE

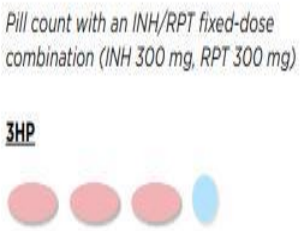
LTBI testing using TST, IGRA and Chest radiography is not mandatory and should not be a hindrance for initiating TPT.

Any client found to have any of the symptoms suggestive of TB should not be offered TPT instead they should be evaluated further for active TB disease.

Treatment options for Latent TB Infections

3RH: Given once daily for 3 months

- Availability of child-friendly formulation (75/50mg)
- Offered as preventive treatment for children and adolescents aged <15 years
- Better adherence (shorter regimen)
- Do not give to patients on PI or NVP based ART
- Less costly
- Available in fixed dose combination



3HP: Given once a week for 12 weeks

- Very promising regimen
- 1-month daily treatment option (1HP) being evaluated in
- PLHIV Better adherence (shorter regimen)
- FDC now available
- Child-friendly formulation not available yet
- No evidence for use in children <2 years
- Do not give to patients on PI or NVP based ART
- Safe to use in PLHIV on EFV and RAL
- Studies on use with DTG- so far no interactions

6 H: Given daily for 6 months

- Longer treatment duration
- Higher rates of hepatotoxity than other regimens
- Still regimen of choice for PLHIV on PI based ART regimen and on HIV exposed children on Nevirapine (NVP) prophylaxis.
- Lowest cost (uncoated tab), high cost dispersible tab
- A syrup formulation is available for children

NOTE

The treatment of Latent TB infection is given based on the patient's weight

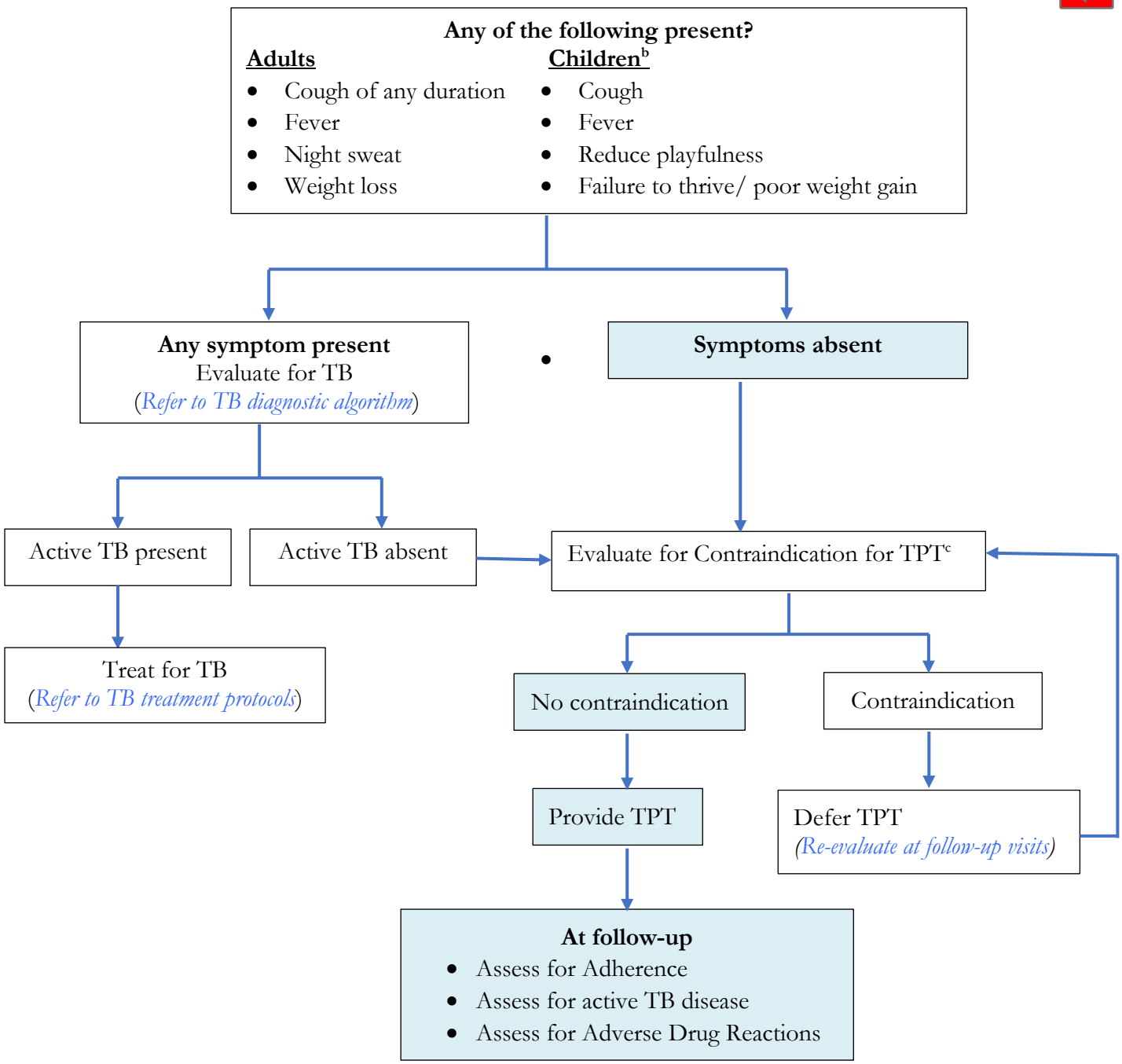
Full patient dose should be available for the entire treatment period before initiating treatment in patient.

Follow Up of Patients on TB Preventive Therapy (TPT)

Patients on TPT should be followed up on monthly basis and clinic appointments harmonized with any other routine clinic schedule. During each clinic visit, the health care worker will conduct the following;

- Conduct symptom based TB screening at every clinic visit for patients on TPT and update TB status
- Assess and reinforce adherence of the patients at every visit to ascertain compliance and completion of doses
- If a patient screens positive for TB while on TPT, stop TPT and manage according to National TB guidelines
- Assess for any adverse drug reactions at each visit and intervene appropriately.

Algorithm for Tuberculosis Preventive Therapy (TPT) in individuals at risk



TPT Treatment Options

Age category	HIV status	Treatment Options	Frequency[d]
<15 years	HIV negative	3RH (Rifampicin/Isoniazid)	Daily for 3 months
	HIV positive	6H (Isoniazid)	Daily for 6 months
≥15 years	Regardless of HIV status	3HP (Isoniazid/Rifapentine)	Once weekly for 3 months
If 3HP or 3RH is contraindicated or In Pregnancy		6H	Daily for 6 months
Pyridoxine is given with all of the above options			

Note:

a. Individuals at risk are: PLHIV, household contacts of bacteriologically confirmed pulmonary TB, healthcare workers, prisoners, patients on dialysis, on cancer treatment, undergoing organ or haematological transplant and those with silicosis
b. Child – a person under the age of 10 years
c. Contra-indications for TPT include active hepatitis (*acute or chronic*), symptoms of peripheral neuropathy and chronic alcohol abuse
d. Refer to dosing charts for appropriate dose

LTBI testing by TST or IGRA is not a requirement for initiating TPT in PLHIV and child household contacts aged <5 years. However, it *may* be provided prior to TPT to the rest of the at-risk population if available and does not delay or hinder access to TPT.

A. Daily INH for 6 months (6H)			
Weight (kg)	**Dose (mg)**	**Number of 100mg INH tablets**	**Number of 300mg (Adult) tablet**
<5	50	½ tablet	-
5.1-9.9	100	1 tablet	-
10-13.9	150	1 ½ tablet or	½ tablet
14-19.9	200	2 tablets	-
20-24.9	250	2 ½ tablet	-
≥25	300	3 tablets or	1 tablet
Adult	300	3 tablets or	1 tablet
Note: Syrup INH (50mg/5ml) is available for younger children			

B1. Daily RH for 3 months (3RH) for children <25kgs		
Weight (kg)	**Number of tablets (RH 75/50mg)**	**How to reconstitute the medicine**
Less than 2	¼	Dissolve one (1) tablet of RH in 20 ml of safe drinking water. Once fully dissolved, give 5ml (1/4) of this solution measured with a syringe.
2 – 2.9	½	Dissolve one (1) tablet of RH in 20 ml of safe drinking water. Once fully dissolved, give 10ml (1/2) of this solution measured with a syringe.
3 – 3.9	¾	Dissolve one (1) tablet of RH in 20 ml of safe drinking water. Once fully dissolved, give 15ml (3/4) of this solution measured with a syringe.
After giving the child their dose for that day, discard the rest of the solution. Prepare a fresh solution every day.		
4-7.9	1	Dissolve the tablet(s) of RH in 20mls of safe drinking water. Once fully dissolved, give ALL this solution to the child
8-11.9	2	
12-15.9	3	
16-24.9	4	

B2. Daily RH for 3 months (3RH) for children ≥25kgs (To use Adult formulation)	
Weight (kg)	**Number of tablets (RH 150/75 mg)**
25-39.9	2
40-54.9	3
55kg and above	4

C. Weekly 3HP (3HP) (For adults and adolescents ≥15 years)	
3HP products	**No of Tablets**
Rifapentine 150mg tabs	6
Isoniazid 300 mg tabs	3
Rifapentine 300mg+Isoniazid 300mg (FDC)	3

D. Dosage of Pyridoxine (Vitamin B6)			
Weight (kgs)	**Dosage in mg**	**Number of 25mg tablets**	**Number of 50mg tablets**
<5	6.25 mg	½ Tablet 3 times a week, alternate days	-
5.0-7.9	12.5 mg	Half a tablet	-
8.0-14.9	25 mg	One tablet	Half of 50mg tablet
15kg and above	50 mg	Two tablets	One 50mg tablet
Adults	50 mg	Two tablets	One 50mg tablet