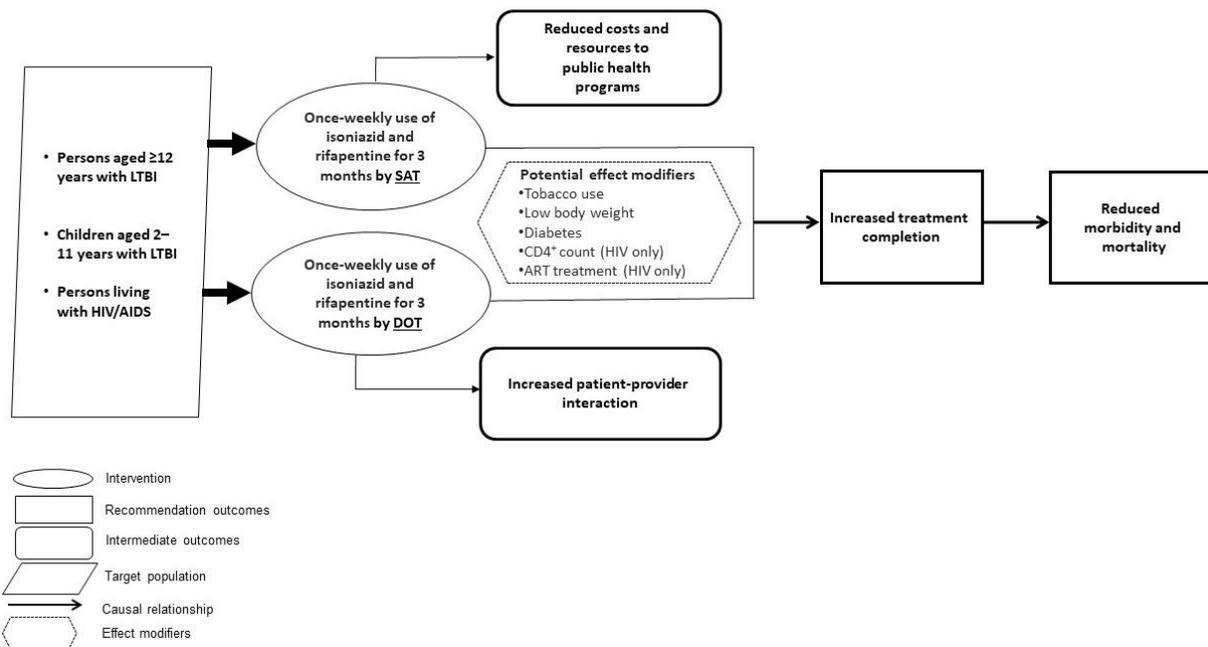


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Appendix Figure 1. Analytic framework.



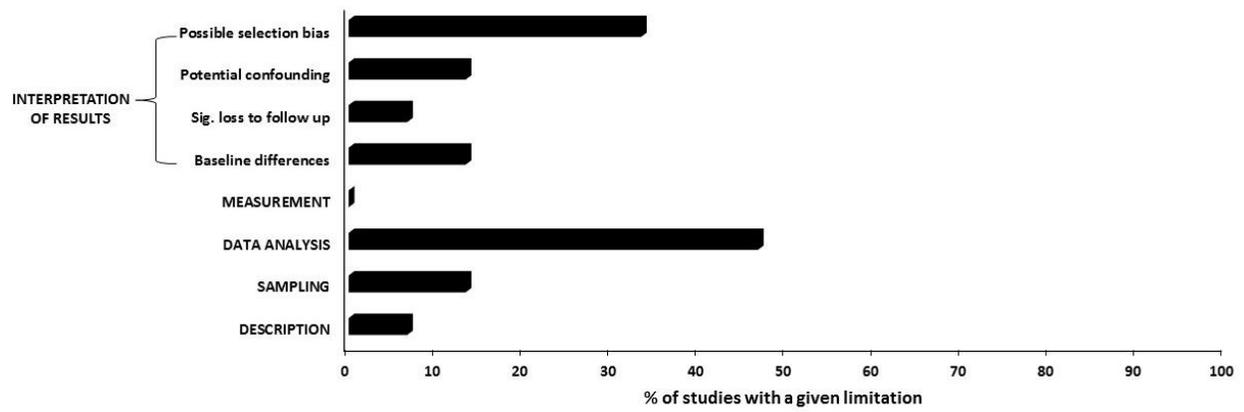
ART, antiretroviral therapy; DOT, directly observed therapy; LTBI, latent tuberculosis infection; SAT, self-administered therapy

Appendix Table 1. Search Strategy for Studies Using Isoniazid–Rifapentine to Treat Latent Tuberculosis Infection

Database	Search term strategy
MEDLINE (OVID)	(Latent ADJ2 tuberculosis) OR LTBI AND Drug Therapy, Combination/ OR (Isoniazid and rifapentine) OR (combination ADJ3 regime*) OR (combination ADJ3 therap*) OR (combination ADJ3 treatment) OR 3HP NOT Exp animals/ NOT exp humans/ 1995–present; English
Embase (OVID)	(Latent ADJ2 tuberculosis) OR LTBI AND Combination drug therapy/ OR (Isoniazid and rifapentine) OR (combination ADJ3 regime*) OR (combination ADJ3 therap*) OR (combination ADJ3 treatment) OR 3HP NOT Exp animals/ NOT exp humans/ 1995–present; English; Exclude Medline Journals
CINAHL (Ebsco)	(Latent N2 tuberculosis) OR LTBI AND (Isoniazid and rifapentine) OR (combination N3 regime*) OR (combination N3 therap*) OR (combination N3 treatment) OR 3HP Humans; 1995–present; English; Exclude Medline Records
Cochrane Library	(Latent NEAR/2 tuberculosis) OR LTBI AND (Isoniazid and rifapentine) OR (combination NEAR/3 regime*) OR (combination NEAR/3 therap*) OR (combination NEAR/3 treatment) OR 3HP 1995–present
Scopus	TITLE-ABS-KEY(((Latent W/2 tuberculosis) OR LTBI) AND ((Isoniazid and rifapentine) OR (combination W/3 regime*) OR (combination W/3 therap*) OR (combination W/3 treatment) OR 3HP)) AND NOT INDEX(medline)
Clinicaltrials.gov	Isoniazid and rifapentine

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Appendix Figure 2. Study limitations assigned using Community Guide methods to assess risk of bias.



Sig., significant

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Appendix Table 2. Study Characteristics of Abstracted Studies

Author, year	Study design	Study location	Administration mode	Comparator regimen
Belknap, 2017	RCT	U.S., Spain, South Africa, Hong Kong	DOT and SAT	None
Cruz, 2016	Retrospective cohort	U.S.	DOT	None
De Castilla, 2014	Prospective cohort	U.S.	DOT	None
Hatzenbuehler, 2016	Prospective cohort	U.S.	DOT	None
Huang, 2016	Prospective cohort	Taiwan	DOT	9H
Juarez-Reyes, 2016	Retrospective + Prospective cohort	U.S.	DOT	9H
Knoll, 2017	Prospective cohort	U.S.	DOT	None
Lines, 2015	Retrospective cohort	U.S.	DOT	9H
Martinson, 2011	RCT	South Africa	DOT	6H, 4 months RIF-INH, or continuous, daily INH (≤ 6 years)
McClintock, 2017	Retrospective cohort	U.S.	DOT	9H or 4R
Sandul, 2017	Prospective cohort	U.S.	DOT	None
Schechter, 2006	RCT	Brazil	DOT	RIF-PZA
Simkins, 2017	Retrospective cohort	U.S.	SAT	9H
Stennis, 2016	Prospective cohort	U.S.	DOT	9H
Sterling, 2011	RCT	U.S., Canada, Spain, Brazil	DOT	9H
^a Sterling, 2016	RCT	U.S., Canada, Spain, Brazil, Peru, Hong Kong	DOT	9H
^a Villarino, 2015	RCT	U.S., Canada, Spain, Brazil, Hong Kong	DOT	9H

^aLinked to Sterling et al., 2011

4R, 4-month rifampin; 6H, 6-month isoniazid; 9H, 9-month isoniazid; DOT, directly observed therapy; INH, isoniazid; PZA, pyrazinamide; RIF, rifampin; SAT, self-administered therapy.

Appendix Table 3. Population Characteristics From Included Studies Using Isoniazid-Rifapentine to Treat Latent Tuberculosis Infection

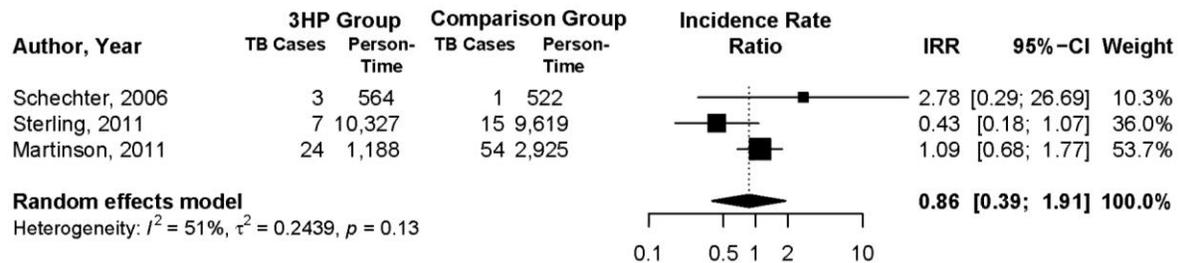
Characteristic	Number of studies reporting characteristic (%)^a	Median (IQI), %
Age (years)	14 (93.3)	36.9 (35.2–39.6)
Sex		
Male	15 (100)	52.2 (43.6–56.3)
Female	15 (100)	47.8 (43.7–56.4)
Race/ethnicity		
White	10 (66.7)	40.0 (11.5–53.7)
Black/African American	10 (66.7)	24.7 (21.2–33.85)
Asian/Pacific Islander	10 (66.7)	18.6 (12.9–20.95)
Other	10 (66.7)	3.40 (2.85–4.38)
Hispanic	10 (66.7)	52.8 (37.2–64.0)
Education		
Less than high school	3 (17.6)	22.0 (19.5–61.0)
High school graduate	6 (35.3)	61.1 (49.8–64.7)
College or university	0 (0)	N/A
Comorbidities		
Diabetes	7 (41.2)	7.40 (6.00–8.80)
Hepatitis C	5 (29.4)	11.0 (5.50–12.0)
HIV/AIDS	5 (29.4)	3.80 (2.60–100)
Indication for LTBI		
Contact	7 (46.7)	36.0 (32.3–71.7)
TST converter	3 (29.4)	10.1 (9.50–23.9)
Other (e.g., HIV/AIDS, immunosuppressed)	7 (41.2)	34.0 (1.00–100)

^aTotal number of studies (and proportion of total number of included studies) that reported specific demographic characteristics.

IQI, interquartile interval; LTBI, latent tuberculosis infection; NA, not available; TST, tuberculin skin test.

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Appendix Figure 3. Incidence rate ratio of tuberculosis disease among participants receiving treatment with 3-month isoniazid-rifapentine compared to other latent tuberculosis infection regimens.



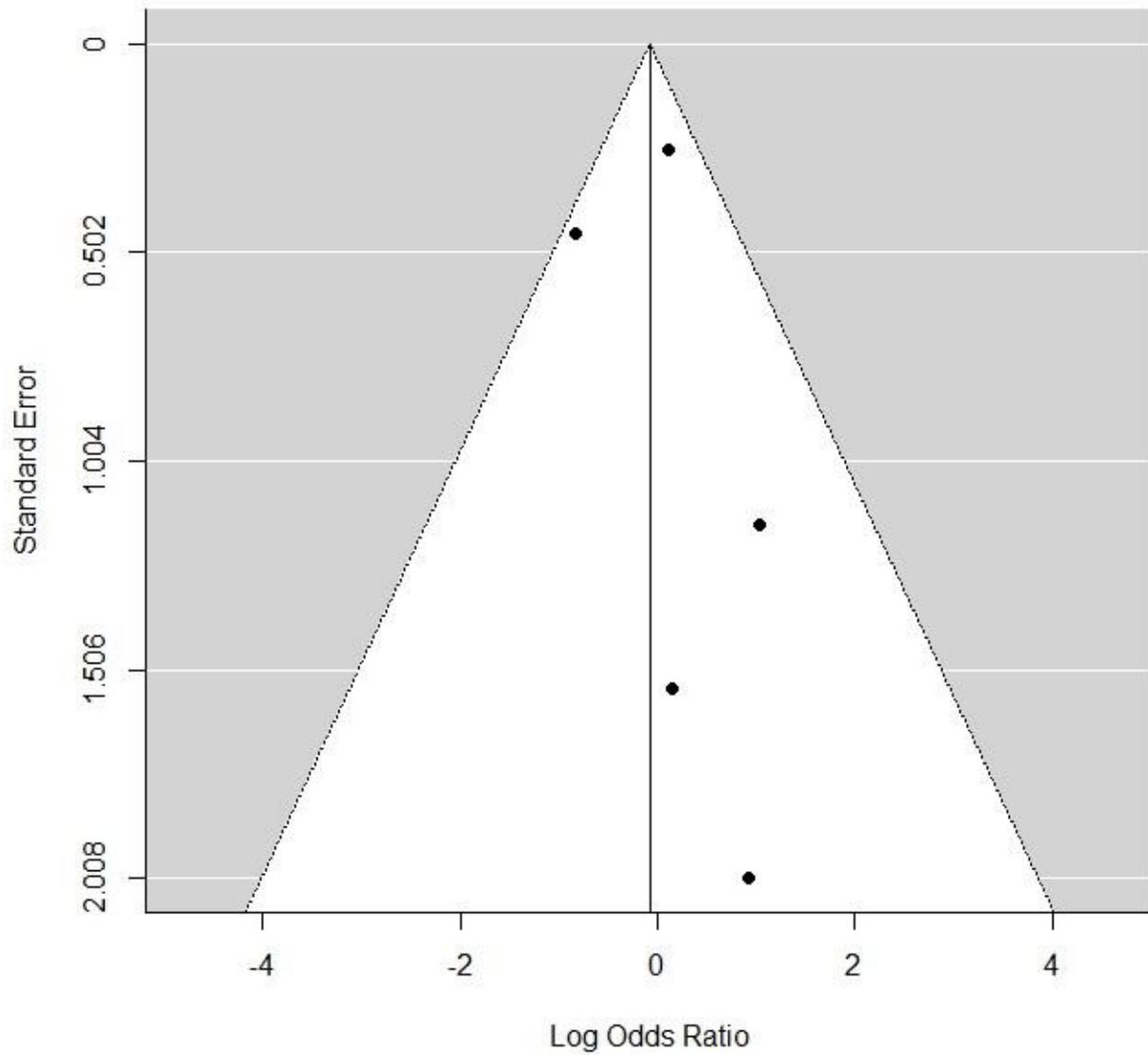
3HP, 3-month isoniazid-rifapentine; TB, tuberculosis

Appendix Table 4. Secondary Outcomes From Included Studies Using Isoniazid–Rifapentine to Treat Latent Tuberculosis Infection

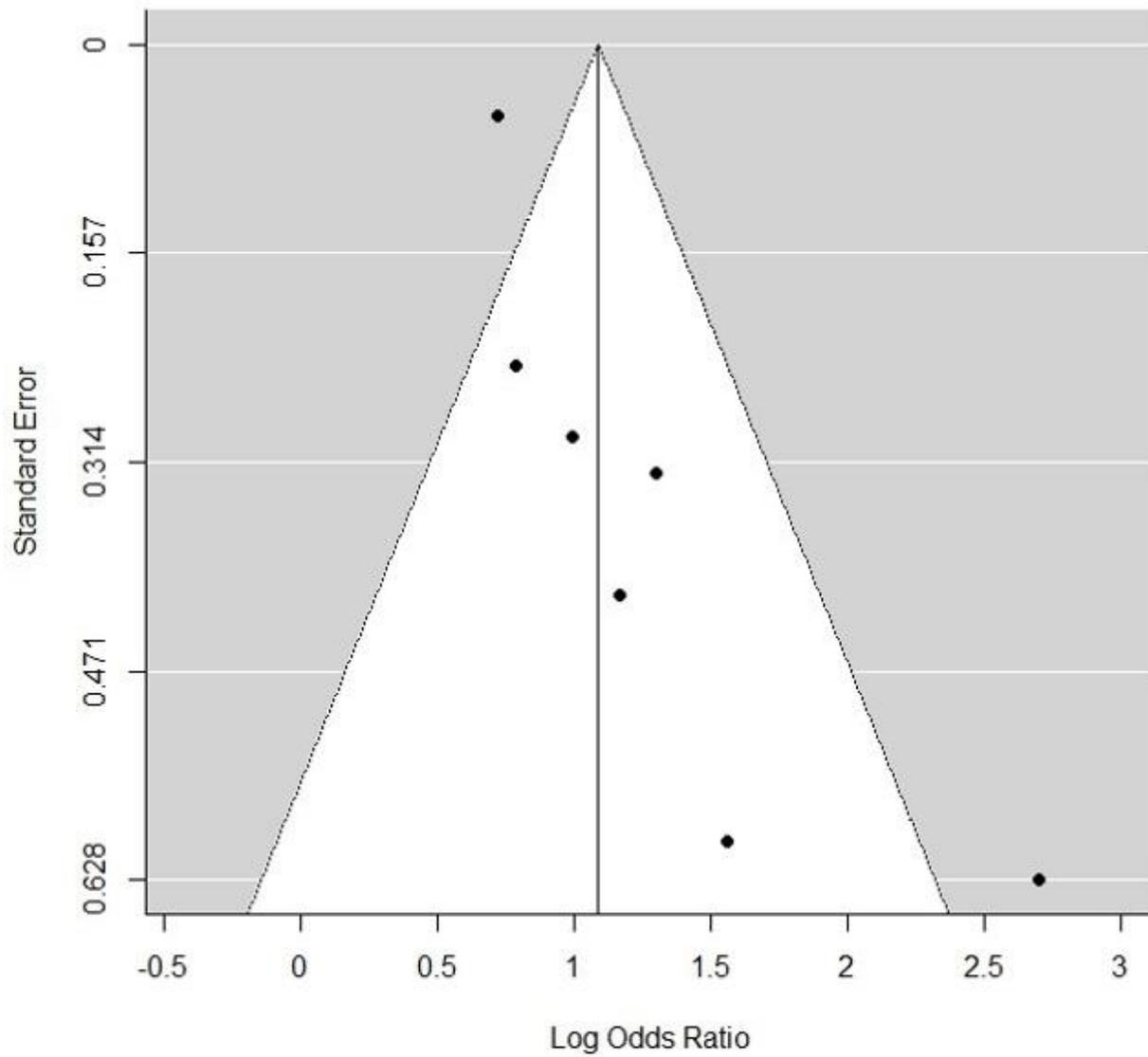
Outcome/Number of studies reporting	Number of participants	Risk ratio (95% CI)	Percent of participant who experienced outcome (95% CI)
Adverse events while on 3HP			
5	10,190	0.59 (0.23, 1.52)	–
9	9,275	–	8 (4, 16)
Treatment discontinuation because of adverse events			
5	10,122	0.48 (0.17, 1.34)	–
10	9,364	–	4 (3, 6)
Death			
4	9,969	0.79 (0.56, 1.11)	–
5	5,623	–	0.7 (0.2, 2)

3HP, 3-month isoniazid-rifapentine

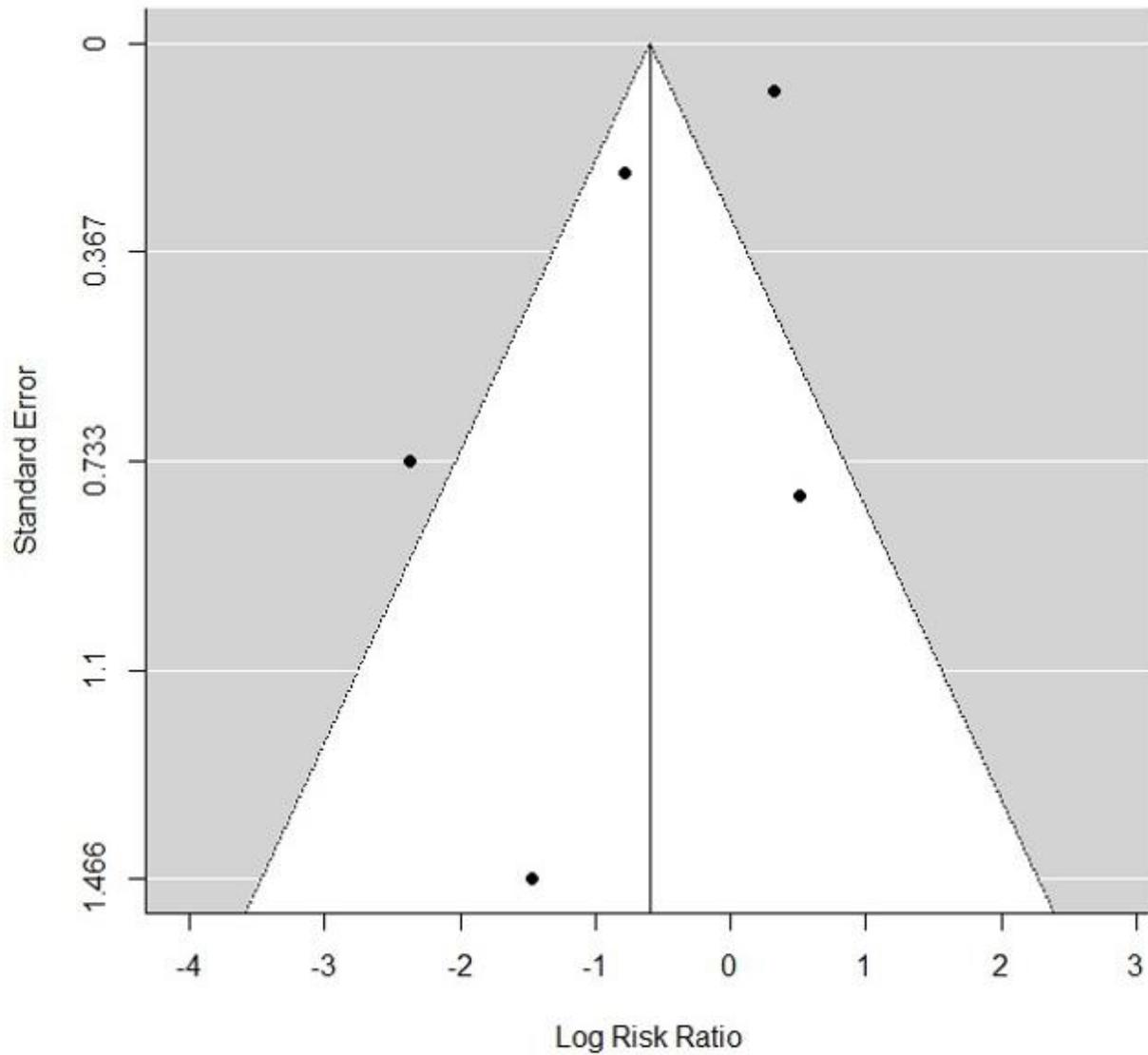
Appendix Figure 4. Funnel plot for studies reporting prevention of TB disease.



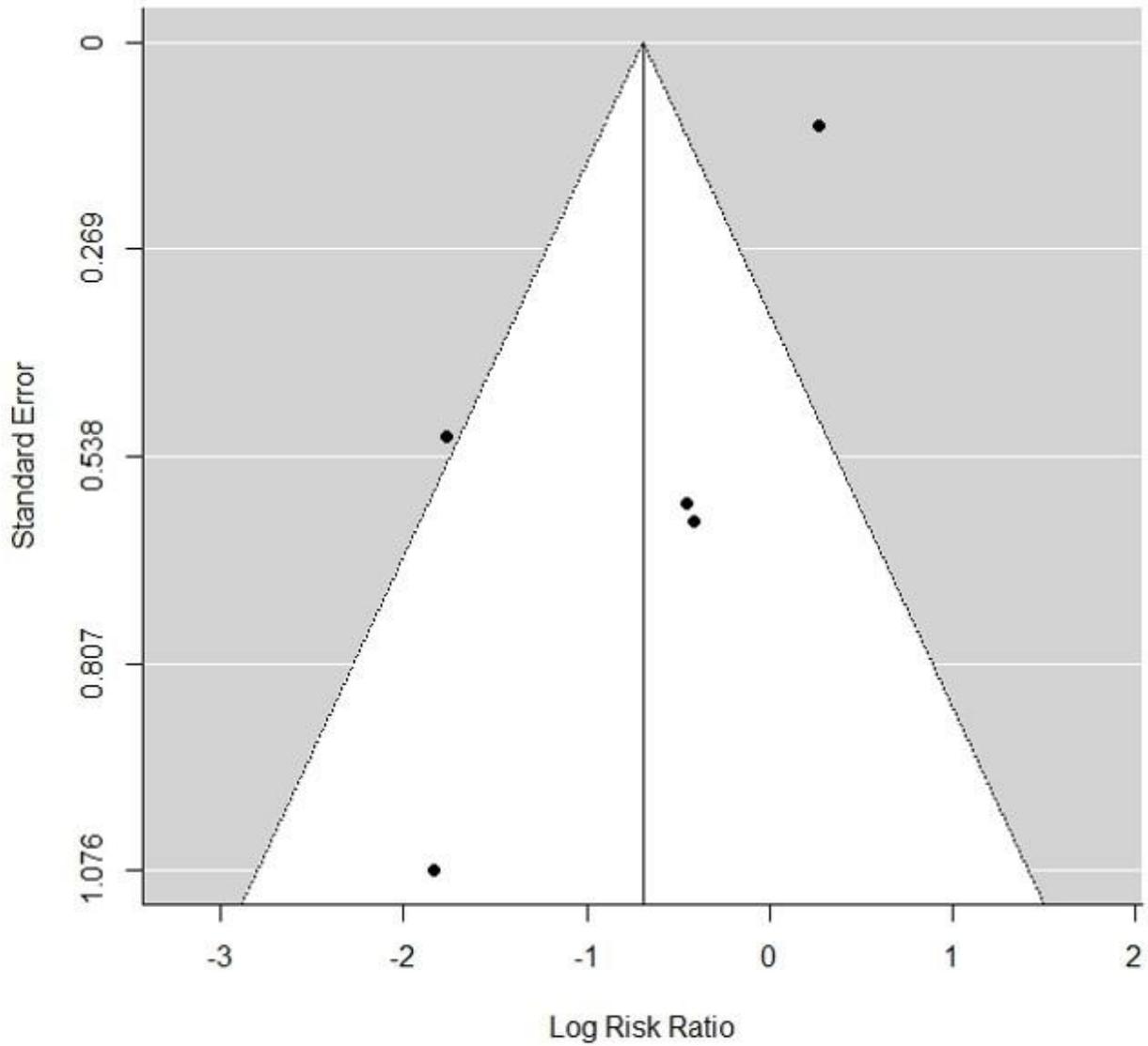
Appendix Figure 5. Funnel plot for studies reporting treatment completion.



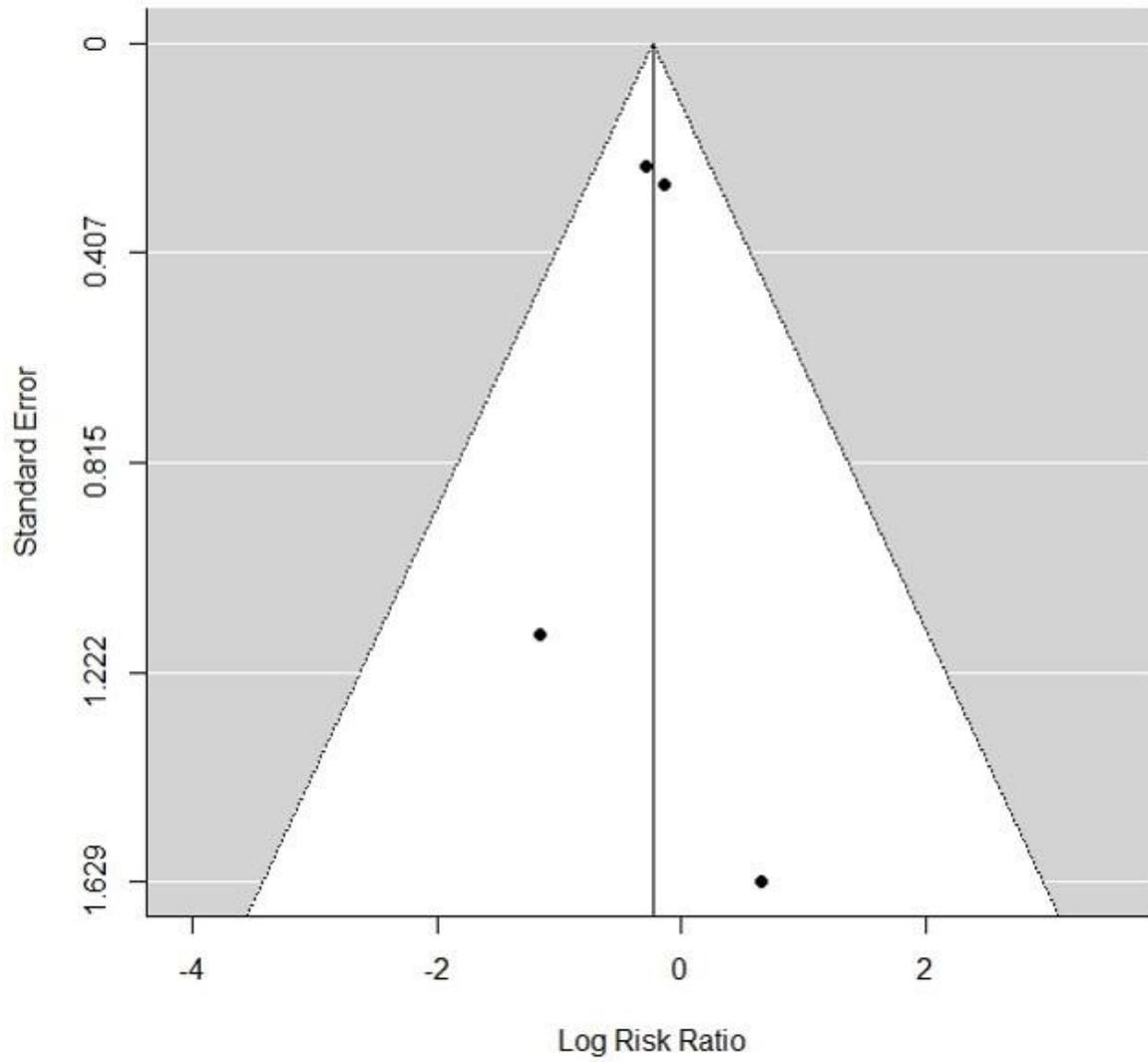
Appendix Figure 6. Funnel plot for studies reporting adverse events.



Appendix Figure 7. Funnel plot for studies reporting discontinuation of treatment.



Appendix Figure 8. Funnel plot for studies reporting death.



Appendix Table 5. Summary Evidence Tables From Included Studies

Title: Adherence to once-weekly self-administered INH and rifapentine for latent TB: iAdhere

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Belknap et al., 2017</p> <p>Location: U.S., Spain, South Africa, Hong Kong</p> <p>Setting: Not reported</p> <p>Study design: RCT</p> <p>Quality of execution: Good (0 limitations)</p> <p>Limitations: None</p> <p>Applicability: Adults recommended for LTBI treatment by DOT or SAT</p> <p>Funding: CDC</p>	<p>Target population (N=2,176): Adults with latent tuberculosis infection</p> <p>Inclusion criteria: Adults (aged >18 years) with diagnosed LTBI and recommended for treatment by local standards were screened. Men and non-pregnant, non-nursing women were eligible. Because fixed doses of INH 900 mg/body weight and rifapentine 900 mg/body weight were used, participants had to weigh >45kg.</p> <p>Exclusion criteria: Individuals with confirmed or suspected active TB disease, known contact with someone with INH- or rifampin-resistant TB, prior intolerance to INH or any rifamycin, or baseline serum alanine aminotransferase (ALT) >5 times the upper limit of normal were excluded. Anyone who was not a candidate for SAT by local standards or who had ever taken >1 week of active or latent TB treatment was ineligible.</p> <p>Reported baseline demographic [3HP by DOT arm]:</p> <p>Median age:36.0 years</p>	<p>Intervention details (n=1,002):</p> <p>For those randomized to DOT, doses were prepared from the assigned medication box and administered in the clinic or the community by healthcare personnel. DOT doses were determined by the clinics' drug administration records and pill counts from the assigned medication boxes.</p> <p>+</p> <p>Those receiving SAT could get DOT doses at their initial clinic visit and during the monthly follow-up visits (maximum 4). Participants randomized to SAT were administered a medication box to take home and instructed to bring it to their follow-up visit. An educational flip chart was used during initiation to standardize education about correct pill taking and symptoms of drug toxicity.</p> <p>+</p> <p>The eSAT group received text reminders with the message "Remember, iAdhere today" and the words "remember" and "today" translated into the participant's preferred language were sent once</p>	<p>Treatment completion:</p> <p>3HP via DOT (n=337): 294/337=0.87</p> <p>3HP via SAT (n=337): 249/337=0.74</p> <p>3HP via eSAT (n=328): 251/328=0.77</p> <p>Drug discontinuation:</p> <p>3HP via DOT (n=337): 12/337=0.04</p> <p>3HP via SAT (n=337): 19/337=0.06</p> <p>3HP via eSAT (n=328): 14/328=0.04</p> <p>Adverse events:</p> <p>3HP via DOT (n=337): 24/337=0.07</p> <p>3HP via SAT (n=337): 28/337=0.08</p> <p>3HP via eSAT (n=328): 26/328=0.08</p>

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	<p>Sex: Male: 54.6%; Female:45.4%</p> <p>Race/ethnicity: White: 50.7%; Black/AA: 24.9%; Asian/Pacific Islander: 20.2%; Other: 4.2%</p> <p>Education: High school graduate: 64.7%</p> <p>Indications for LTBI: Contact: 32.3%; Converter: 9.5%</p> <p>[3HP by SAT arm]: Median age: 36.0 years Sex: Male: 52.2%; Female:47.8% Race/ethnicity: White:51.9%; Black/AA:27.0%; Asian/Pacific Islander:18.4%; Other:2.7% Education: High school grad: 64.7% Indications for LTBI: Contact:32.9%; Converter:10.1%</p> <p>[3HP by eSAT w/reminder arm]: Median age: 38.0 years old Sex: Male: 48.8%; Female: 51.2% Race/ethnicity: White: 52.4%; Black/AA: 22.9%; Asian/Pacific Islander: 21.3%; Other: 3.4% Education: High school graduate: 62.2% Indications for LTBI: Contact: 37.8%; Converter: 9.5%</p>	<p>weekly, on the day and time chosen by the patient, using a central service. Participants were instructed to recognize this message as a reminder to take the study medications, but were told not to respond.</p> <p>Comparison details: No comparison group</p>	<p>Summary: The iAdhere study supports the use of 3HP by SAT in the U.S.</p>
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3HP, isoniazid-rifapentine regimen; CDC, Centers for Disease Control and Prevention; DOT, directly observed therapy; e-SAT, self-administered therapy with text reminders; INH, isoniazid; LTBI, latent tuberculosis infection; SAT, self-administered therapy

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Title: Safety and adherence for 12 weekly doses of isoniazid and rifapentine for pediatric tuberculosis infection

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Cruz et al., 2016</p> <p>Location: U.S.</p> <p>Setting: Health care</p> <p>Study design: Retrospective cohort</p> <p>Quality of execution: Good (1 limitation)</p> <p>Limitation: Possible selection bias</p> <p>Applicability: Children and adolescents receiving treatment in a hospital setting</p> <p>Funding: Not reported</p>	<p>Target population (N=80): Children and adolescents with LTBI</p> <p>Inclusion criteria: Children aged ≤21 years who received 3HP treatment at the Children’s TB Clinic at Texas Children’s Hospital</p> <p>Exclusion criteria: Not reported</p> <p>Reported baseline demographic [Intervention arm]:</p> <p>Median age: 14.7 years</p> <p>Sex: Male:35%; Female:65%</p> <p>Race/ethnicity: White: 1% ; Black/AA: 25%; Asian/Pacific Islander: 13%; Hispanic: 61%</p> <p>Indications for LTBI: Contact: 36%; Immigration from a high burden country: 43%; Travel to high burden country: 9%; Foreign-born parent: 15%</p>	<p>Intervention details (n=80): All individuals with a positive TST or IGRA test were started on 3HP treatment. The INH does was 15 mg/kg (max dose: 900 mg). Rifapentine was dosed by weight class: 300 mg for children weighing 10–14 kg; 450 mg for 14.1–25 kg; 600 mg for 25.1–32 kg; 750 mg for 32.1–49.9 kg and 900 mg for ≥50 kg. 3HP was administered via DOT by the health department or a school nurse.</p> <p>Comparison details: N/A</p>	<p>Treatment completion: 3HP group (n=80): 79/80=0.988 Comparison group: N/A OR: Not calculated</p> <p>Drug discontinuation: 3HP group (n=80): 1/80=0.013 Comparison group: N/A Relative risk: Not calculated</p> <p>Adverse events: 3HP group (n=80): 5/80=0.063 Comparison group: N/A Relative risk: Not calculated</p> <p>Summary: 3HP is safe and well-tolerated and has much higher completion rates than traditional TBI regimens.</p>

3HP, isoniazid-rifapentine regimen; AA, African American; DOT, directly observed therapy; IGRA, interferon-gamma release assay; INH, isoniazid; LTBI, latent tuberculosis infection; N/A, not applicable; TST, tuberculin skin test

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Title: Short-course isoniazid plus rifapentine directly observed therapy for latent tuberculosis in solid-organ transplant candidates

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: De Castilla et al., 2014</p> <p>Location: U.S.</p> <p>Setting: Healthcare facility</p>	<p>Target population (N=17): Solid organ transplant candidates at the University of Washington Medical Center</p> <p>Inclusion criteria: Consecutive SOT candidates with a positive TST or a positive IGRA underwent a chest radiograph and were evaluated by an infectious diseases physician who ruled out active TB before starting treatment for LTBI.</p>	<p>Intervention details (N=17): Patients were offered a 12-week combination regimen of INH 15 mg/kg body weight, rounded to the nearest 50–100 mg (maximum dose, 900 mg) plus rifapentine (32 to 50 kg body weight, 750 mg; 950 kg body weight, 900 mg) along with vitamin B6 50 mg, all administered weekly with supervision by DOT.</p>	<p>Treatment completion: 3HP group (n=17): 13/17=0.765 Comparison group: N/A OR: Not calculated</p> <p>Drug discontinuation: 3HP group (n=17): 2/17=0.118 Comparison group: N/A Relative risk: Not calculated</p>
<p>Study design: Prospective cohort</p>	<p>Exclusion criteria: Patients with previous treatment of LTBI or active TB were excluded from this study</p>	<p>Comparison details: No comparison group</p>	<p>Adverse events: 3HP group (n=17): 2/17=0.118 Comparison group: N/A Relative Risk: Not calculated</p>
<p>Quality of execution: Fair (4 limitations)</p> <p>Limitations:</p> <ol style="list-style-type: none"> 1. Appropriate statistical testing not conducted based on type of candidate 2. <80% of completed study 3. Potential selection bias 	<p>Reported baseline demographic [Intervention arm]:</p> <p>Median age: 57.0 years</p> <p>Sex: Male: 82.3%; Female: 17.7%</p> <p>Race/ethnicity: Not reported</p> <p>Special population: Non-U.S.-born: 82.4%</p>		<p>Summary: For solid organ transplant candidates, 3HP given by DOT was well-tolerated and is associated with a relatively high completion rate.</p>

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4. Small sample size			
Applicability: Solid organ transplant candidates receiving LTBI treatment Funding: Not reported			

3HP, isoniazid-rifapentine regimen; DOT, directly observed therapy; IGRA, interferon-gamma release assay test; LTBI, latent tuberculosis infection; N/A, not applicable; SOT, solid organ transplant; TB, tuberculosis; TST, tuberculin skin test.

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Title: School-based study to identify and treat adolescent students at risk for tuberculosis infection

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Hatzenbuehler et al., 2016</p> <p>Location: U.S.</p> <p>Setting: High schools</p> <p>Study design: Prospective cohort</p> <p>Quality of execution: Fair (4 limitations)</p>	<p>Target population (N=925): Adolescent students from 2 public high schools</p> <p>Inclusion criteria: Participants included students with a completed parental risk factor questionnaire and parent consent form who gave consent for IGRA testing. Students with ≥ 1 TB risk factor were invited for testing using 2 IGRAs: QuantiFERON Gold In-Tube (QFT)30 (Qiagen; Germantown, Maryland) and the T-SPOT.TB (Oxford Immunotec; Marlborough, Massachusetts)</p>	<p>Intervention details (n=16): Students with positive IGRA (after determining they had ≥ 1 risk factor for TB) were offered treatment with 12 weekly doses of 3HP to be administered at school under DOT by the school nurse.</p> <p>Comparison details: No comparison group; all eligible students opted for 3HP so there were no 9H treatments</p>	<p>Treatment completion: 3HP group (n=16):16/16=1</p> <p>OR: Not calculated</p> <p>Summary: School-based tuberculosis education, screening, testing using IGRAs and administration of 3HP treatment is feasible to improve the identification and treatment of adolescent students at risk for TB</p>
<p>Limitations:</p> <ol style="list-style-type: none"> 1. 3HP intervention not well described (e.g., dosage) 2. Outcomes not stratified by school 3. Potential selection bias 4. Schools were not comparable at baseline <p>Applicability: High school age adolescents with LTBI</p>	<p>Exclusion criteria: Students without TB risk factors, those with severe intellectual disabilities, and those who were previously treated for TB infection</p> <p>Reported baseline demographic [Intervention arm]: Median age: 15.75 years Sex: Male: 45.4%; Female: 54.6% Race/ethnicity: White: 29.2%; Black/AA: 11.7%; Asian/Pacific Islander: 20.8%; Other: 38.1%; Hispanic: 62.3%</p> <p>Indications for LTBI: Immigration from a high-burden country: 25%</p>		

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Funding: Study funding not reported; however, Qiagen and Oxford Immunotec donated a portion of the IGRA kits			
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3HP, isoniazid-rifapentine regimen; 9H, 9-month isoniazid regimen; IGRA, interferon-gamma release assay; LTBI, latent tuberculosis infection

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Title: Impact of 12-dose regimen for latent tuberculosis infection: treatment completion rate and cost-effectiveness in Taiwan

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Huang et al., 2016</p>	<p>Target population (N=691): recent contacts to patients diagnosed with active TB</p>	<p>Intervention details (n=101): 12-dose combined regimen of weekly rifapentine (900 mg) plus isoniazid (900 mg) was administered by DOT.</p>	<p>Tuberculosis disease: 3HP group (n=101): 0/101=0 Comparison group (n=590): 2/590=0.003 Relative incidence rate: 0</p>
<p>Location: Taiwan</p> <p>Setting: Hospital</p> <p>Study design: Prospective cohort</p> <p>Quality of execution: Fair (2 limitations)</p> <p>Limitations:</p> <ol style="list-style-type: none"> Comparison groups were not comparable at baseline Did not control for design effects in statistical model <p>Applicability: Healthy adults who</p>	<p>Inclusion criteria: Recent contact with patients who have newly developed TB disease and are not resistant to INH or rifampin. Positive tuberculin skin test result with an in duration ≥ 10 mm within 72 hours of undergoing a skin test, or PPD < 10 mm, but measured ≥ 10 mm after 3 months. No clinical TB symptoms, chest radiograph image presents no sign of disease development or bacteriological evidence.</p> <p>Exclusion criteria: Pregnant women or women who plan to be pregnant. Children aged < 12 years. HIV patients who are undergoing antiretroviral therapy. Abnormal liver and kidney function indices, and cirrhosis or uremia diagnosed by a hepatobiliary, gastroenterology, or liver specialist. Frequent contact with patients resistant to INH or rifapentine.</p>	<p>Comparison details (n=590): TB contacts who were required to receive LTBI treatment after being referred for assessment by the Changhua County Public Health Bureau. INH was administered once daily for 270 doses (9 months) and was also administered by DOT.</p>	<p>Treatment completion: 3HP group (n=101): 98/101=0.97 Comparison group (n=590): 515/590=0.87 OR: 4.76</p> <p>Drug Discontinuation: 3HP Group (n=101): 3/101=0.03 Comparison Group (n=590): 28/590=0.05 Relative Risk: 0.63</p> <p>Deaths: 3HP group (n=101): 0/101=0 Comparison group (n=590): 2/590=0.003 Risk Ratio: 0</p> <p>Summary: 3HP reduced costs and resulted in high</p>

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<p>are contacts of a recently diagnosed TB patient</p> <p>Funding: Not reported</p>			<p>treatment completion than the standard INH treatment in Taiwan.</p>
	<p>Reported baseline demographic [Intervention arm]: Median age: 35.94 years Sex: Male:43.56%; Female: 56.44% Race/ethnicity: Asian/Pacific Islander: 100% Indications for LTBI: Contact: 100%</p>		

3HP, isoniazid-rifapentine regimen; DOT, directly observed therapy; INH, isoniazid; TB, tuberculosis

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Title: Completion rate and side-effect profile of 3-month isoniazid and rifapentine treatment for latent tuberculosis infection in an urban county jail

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Juarez-Reyes et al., 2016</p> <p>Funding: Centers for Disease Control and Prevention</p>	<p>Target population (N=245): Incarcerated adults with latent TB infection</p>	<p>3HP group details (n=91): Patients received 900 mg of rifapentine, 900 mg of INH, and 50 mg of pyridoxine weekly by DOT for 12 doses (3 months)</p>	<p>Treatment Completion: 3HP group (n=91): 77/91=0.846 9H group (n=154): 28/154=0.182 OR: 24.8</p>
<p>Location: U.S.</p>	<p>Inclusion criteria: Asymptomatic patients with a positive TST and normal chest radiographs</p>	<p>Comparison details (n=154): Patients received 900 mg of isoniazid (INH) and 50 mg of pyridoxine twice weekly for 9 months by DOT</p>	<p>Summary: LTBI treatment completion increased with implementation of the 3HP regimen in an urban county jail setting</p>
<p>Setting: County jail</p>	<p>Exclusion criteria: Active TB + known treatment drug allergy + AST/ALT 3x ULN + pregnancy + previously completed LTBI treatment</p>		
<p>Study Design: Retrospective cohort (for 9H group); Prospective cohort (for 3HP) study</p> <p>Quality of Execution: Fair (2 limitations)</p> <p>Limitations:</p> <ol style="list-style-type: none"> 1. Statistical test not reported 2. 9H and 3HP were not comparable 	<p>Reported baseline demographic [Intervention arm]:</p> <p>Median age: 39.0 years</p> <p>Sex: Male: 95.5% Female: 4.4%</p> <p>Race/ethnicity: White: 4.4%; Asian/Pacific Islander: 18.7%; Other: 7.8%; Hispanic: 69.2%</p> <p>Co-morbidities: Diabetes: 8.8%; Hepatitis B: 1.1%; Hepatitis C: 5.5%</p>		
<p>Applicability: Adults in an urban county jail being treated for latent TB infection</p>			

3HP, isoniazid-rifapentine regimen; 9H, 9-month isoniazid regimen; ALT, alanine aminotransferase, AST, aspartate aminotransferase; ULN, upper limit normal

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Title: Three months of weekly rifapentine plus isoniazid for latent tuberculosis treatment in solid organ transplant candidates

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Knoll et al., 2017</p> <p>Location: U.S.</p> <p>Setting: Healthcare facility</p> <p>Study design: Prospective cohort</p> <p>Quality of execution: Fair (3 limitations)</p> <p>Limitations:</p> <ol style="list-style-type: none"> 1. Statistical methods not reported 2. Small sample size 3. Results not stratified by patient type 	<p>Target population (N=12): Solid organ transplant candidates with LTBI</p> <p>Inclusion criteria: Positive IGRA + liver and kidney transplant candidates</p> <p>Exclusion criteria: No prior history of active TB or LTBI</p> <p>Reported baseline demographic [Intervention Arm]:</p> <p>Median age: 60.0 years</p> <p>Sex: Male: 92.0%; Female: 8.0%</p> <p>Comorbidities: Hepatitis C: 50%</p>	<p>Intervention details (n=12): Isoniazid 15 mg/kg per dose (maximum 900 mg), rifapentine >50 kg: 900 mg, and pyridoxine 50 mg were given by mouth under direct observation once weekly for 3 months. Prior to each dose administration and following 1 month after treatment, patients were clinically evaluated for adverse events by an infectious diseases physician. Medications were reviewed with each visit for possible drug–drug interactions. Liver enzyme levels were obtained at baseline, prior to each dose, and 1 month following the last dose</p>	<p>Treatment completion: 3HP group (n=12): 12/12=1</p> <p>Adverse events: 3HP group (n=12): 0/12=0</p> <p>Summary: All patients completed 3HP treatment and 3 underwent transplantation and none developed tuberculosis</p>
<p>Applicability: Solid organ transplant candidates seeking LTBI treatment while awaiting organ transplantation</p> <p>Funding: Not reported</p>		<p>Comparison details: No comparison group</p>	

3HP, isoniazid-rifapentine regimen; IGRA, interferon-gamma release assay; LTBI, latent tuberculosis disease

Appendix
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Title: Improving treatment completion rates for latent tuberculosis infection: a review of two treatment regimens at a community health center

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
Authors: Lines et al., 2015	Target population (N=168): Persons seeking LTBI treatment at a federally qualified healthcare center	Intervention details (n=45): Patients received 3HP administered as DOT for 12 weeks and were provided medications at each weekly visit and clinically assessed for adverse events including hepatitis	Treatment completion: 3HP Group (n=45): 35/45=0.778 Comparison Group (n=94): 49/94=0.521 OR: 3.21
Location: U.S. Setting: Healthcare facility Study design: Retrospective cohort	Inclusion criteria: All patients with a positive interferon gamma release assay (QuantiFERON®- TB Gold) or tuberculin skin test and accepting treatment for LTBI during January 1, 2012–December 31, 2013 were considered for inclusion in this study	Comparison details (n=94): Patients were treated with 9-months of INH. Patients were provided a 1-month supply of medication in clinic at the initial visit and at monthly follow-up visits where patients are assessed for signs and symptoms of hepatitis	Summary: High completion rates for LTBI treatment can be achieved at a community health center using INH- RPT administered via DOT. Greater success treating with INH-RPT may be attributed to DOT strategy and a shorter treatment regimen.
Quality of execution: Good (0 limitation) Limitations: None	Exclusion criteria: 1. Ages <12 years 2. Previous LTBI treatment 3. Individuals living with HIV/AIDS 4. Individuals taking rifampin		
Applicability: Individuals receiving treatment at a community health center Funding: Not reported	Reported baseline demographic [Intervention arm]: Mean age: 40.1 years Sex: Male:42.2%; Female: 57.8% Race/ethnicity: White: 93.3%; Black/AA: 4.5%; Asian/Pacific Islander: NR; Hispanic:97.8%; Other: 2.2% Comorbidities: Diabetes: 22.2%		

3HP, isoniazid-rifapentine regimen; DOT, directly observed therapy; INH, isoniazid; LTBI, latent tuberculosis infection; RPT, rifapentine

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Title: New regimens to prevent tuberculosis in adults with HIV infection

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Martinson et al., 2011</p> <p>Location: South Africa</p> <p>Setting: Not reported</p> <p>Study Design: RCT</p> <p>Quality of Execution: Good (0 limitations)</p> <p>Limitations: None</p> <p>Applicability: Persons living with HIV/AIDS with LTBI</p> <p>Funding: NIH + USAID</p>	<p>Target population (N=1,528): Adults with positive TST who are HIV-infected</p> <p>Inclusion criteria: Eligible patients were aged ≥ 18 years, were not pregnant or breastfeeding, and did not have active TB, as ruled out on the basis of symptom review, chest radiography, and if indicated, sputum culture.</p> <p>Exclusion criteria: Patients were also excluded if they had ever received TB therapy for >2 months, were currently receiving antiretroviral therapy, or had a CD4+ cell count of <200 per cubic millimeter.</p> <p>Reported baseline demographic [Intervention arm]: Median age: 30.3 years Sex: Male: 15.5%; Female: 84.5% Race/ethnicity: Black/African American: 99% Education: High School: 28.4% Indications for LTBI: HIV: 100%</p>	<p>Intervention details (n=328): Rifapentine (900 mg) plus INH (900 mg) once weekly for 12 weeks. Treatment in the INH-rifapentine group was directly observed in the study clinic</p> <p>Comparison details (n=820): A control regimen of INH (300 mg) daily for 6 months. All patients received pyridoxine (25 mg) with each dose of anti-tuberculosis medication. Other comparison groups included rifampin (600 mg) plus INH (900 mg) twice weekly for 12 weeks (rifampin-INH), INH (300 mg) daily for the duration of the study (≤ 6 years) (continuous INH).</p>	<p>Tuberculosis disease: 3HP group (n=328): 24/1,187.5=0.020 6H group (n=327): 22/1143.9=0.019 Incidence rate: 1.05/100 person-years</p> <p>3HP group (n=328): 24/1187.5=0.020 Cont. INH group (n=164): 8/561=0.014 Incidence rate: 1.43/100 person-years</p> <p>3HP group (n=328): 24/1187.5=0.020 RIF/INH group (n=329): 24/1,219.7=0.020 Incidence rate: 1</p> <p>Treatment completion: 3HP group (n=328): 314/328=0.957 6H group (n=327): 274/327=0.838 OR: 4.34</p> <p>3HP group (n=328): 314/328=0.957 Cont. INH group (n=164): 146/164=0.890 OR: 2.77</p>

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			<p>3HP group (n=328): 314/328=0.957 RIF/INH group (n=329): 312/329=0.899 OR: 1.22</p>
			<p>Drug discontinuation: 3HP group (n=328): 4/328=0.012 6H group (n=327): 4/327=0.012 Relative risk: 1</p> <p>3HP group (n=328): 4/328=0.012 Cont. INH group (n=164): 50/164=0.305 Relative risk: 0.04</p> <p>3HP group (n=328): 4/328=0.012 6H group (n=329): 8/329=0.024 Relative Risk: 0.50</p> <p>Adverse Events: 3HP group (n=328): 21/328=0.064 6H group (n=327): 31/327=0.095 Relative risk: 0.68</p> <p>3HP group (n=328): 21/328=0.064 Cont. INH group (n=164): 53/164=0.32 Relative risk: 0.20</p> <p>3HP group (n=328): 21/328=0.064</p>

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			<p>RIF/INH group (n=329): 24/329=0.073 Relative risk:0.88</p> <p>Deaths: 3HP group (n=328): 17/328=0.052 6H group (n=327): 25/327=0.076 OR: 0.66</p> <p>3HP group (n=328): 17/328=0.052 Cont. INH group (n=164): 8/164=0.049 OR: 1.07</p> <p>3HP group (n=328): 17/328=0.052 RIF/INH group (n=329): 16/329=0.049 OR: 1.07</p> <p>Summary: The 3 new prophylactic regimens against TB among HIV-infected adults were not superior to 6 months of INH.</p>
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3HP, 6H, 6-month isoniazid regimen; isoniazid-rifapentine regimen; INH, isoniazid; USAID, United States Agency for International Development; RIF, rifampin; TB, tuberculosis; TST, tuberculin skin test

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Title: Treatment completion for latent tuberculosis infection: a retrospective cohort study comparing 9 months of isoniazid, 4 months of rifampin, and 3 months of isoniazid and rifapentine

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: McClintock et al., 2017</p> <p>Location: U.S.</p> <p>Setting: Healthcare facility</p> <p>Study design: Retrospective cohort</p> <p>Quality of Execution: Good (0 limitations)</p> <p>Limitations: None</p> <p>Applicability: Patients seeking LTBI treatment in different outpatient settings</p> <p>Funding: Not reported</p>	<p>Target population (N=393): LTBI patients being treated at hospital-affiliated outpatient clinics</p> <p>Inclusion criteria: Patients aged ≥18 years and older with a positive TST or IGRA with chest radiograph</p> <p>Exclusion criteria: Patients living with HIV/AIDS</p> <p>Reported baseline demographic [Intervention arm]: Median age: 43.2 years Sex: Male: 56.3%; Female: 43.7% Race/ethnicity: White: 9.9%; Black/AA: 22.2%; Asian/Pacific Islander: 49.4%; Other: 4.9%; Hispanic: 13.6%; Special populations: Homeless: 31.2%</p>	<p>Intervention details (n=87): Patients on INH and rifapentine were seen weekly for DOT by either a nurse or an outreach worker. A small number of the patients on INH and rifapentine received weekly phone calls or met virtually with an outreach worker by webcam, rather than in-person contact</p> <p>Comparison details (n=306): Patients on the 9-month INH and 4-month rifampin daily regimens were typically seen monthly in the public health clinics, and monthly or less often in the outpatient clinics. Patients monitored less than monthly were monitored this way because of poor attendance in clinic</p>	<p>Treatment completion: 3HP group (n=87): 74/87=0.85 9H group (n=224): 115/224=0.51 OR: 5.39</p> <p>3HP group (n=87): 74/87=0.85 4R group: (n=82): 70/82=0.85 OR: 1</p> <p>Summary: Patients were equally as likely to complete the 3 months of INH and rifapentine as 4 months of rifampin. Four months of rifampin is similar in efficacy to placebo as INH and rifapentine but does not require directly observed therapy, and is less expensive, compared with combination therapy with INH and rifapentine, and thus can be the optimal treatment regimen to achieve the maximal efficacy in a community setting.</p>

3HP, isoniazid-rifapentine regimen; 4R, 4-month rifampin regimen; 9H, 9-month isoniazid regimen; AA, African American; IGRA, interferon-gamma release assay; LTBI, latent tuberculosis; INH, isoniazid; TST, tuberculin skin test

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Title: High rates of treatment completion in program settings with 12-dose weekly isoniazid and rifapentine (3HP) for latent mycobacterium tuberculosis infection

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Sandul et al., 2017</p> <p>Location: U.S.</p> <p>Setting: Varied, healthcare settings</p> <p>Study design: Prospective cohort</p> <p>Quality of execution: Fair (2 limitations)</p> <p>Limitations:</p> <ol style="list-style-type: none"> 1. Inclusion/exclusion criteria not explicitly stated 2. Potential selection bias 	<p>Target population (N=3,327): Patients on 3HP from 16 U.S. programs</p> <p>Inclusion criteria: Not reported</p> <p>Exclusion criteria: Not reported</p> <p>Reported baseline demographic [Intervention arm]:</p> <p>Median age: Not reported</p> <p>Sex: Male: 53.5%; Female: 46.5%</p> <p>Race/ethnicity: White: 21.9%; Black/AA: 36.3%; Asian/Pacific Islander: 16.4%; Other: 2.5%; Hispanic: 22.8%</p> <p>Special populations: Incarcerated: 15.7%; Non-U.S.-born: 39.4%</p> <p>Indications for LTBI:</p>	<p>Intervention details (n=3,288): Intervention group received 3HP (weight adjusted, maximal dose of 900 mg each of rifapentine and INH for patients weighing at least 50 kg)</p> <p>Comparison details: No comparison group</p>	<p>Treatment completion: 3HP group (n=3,288): 2,867/3,288=0.87</p> <p>Drug discontinuation: 3HP group (n=3,288): 421/3,288=0.13</p> <p>Adverse events: 3HP^a group (n=3,288): 1,174/3,288=0.36</p> <p>Summary: Completion of 3HP in routine healthcare settings was greater overall than rates reported from clinical trials, and greater than historically observed by using other regimens among reportedly nonadherent populations.</p>

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	Contact: 25%; Converter: 24.3%		
<p>Applicability: Patients receiving LTBI treatment from various U.S. settings</p> <p>Funding: Centers for Disease Control and Prevention</p>			

^aAdverse events reported by this study were not adjudicated.

3HP, isoniazid-rifapentine regimen; AA, African American; INH, isoniazid; LTBI, latent tuberculosis infection

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Title: Weekly rifapentine/isoniazid or daily rifampin/pyrazinamide for latent tuberculosis in household contacts

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Schechter et al., 2006</p> <p>Location: Brazil</p> <p>Setting: Not reported</p> <p>Study design: RCT</p> <p>Quality of execution: Good (1 limitation)</p>	<p>Target population (N=399): Household contacts of patients diagnosed with active TB in Brazil</p> <p>Inclusion criteria: Subjects aged ≥ 18 years, with an induration of ≥ 5 mm, no TB symptoms, and a chest radiograph without evidence of active TB were offered enrollment; patients with comorbid conditions were eligible to enroll</p>	<p>Intervention details (n=206): Participants received 900 mg of rifapentine and 900 mg of INH once weekly for 12 weeks. At weekly follow-up visits, participants were questioned about drug toxicity and signs and symptoms of TB.</p>	<p>Tuberculosis disease: 3HP group (n=206): 3/564=0.005 Comparison group (n=193): 1/522=0.002 Incidence rate: 2.5/100 person-years</p> <p>Treatment completion: 3HP group (n=206): 192/206=0.932 Comparison group (n=193): 181/193=0.938 OR: 0.91</p>
<p>Limitations: 1. Authors did not control for design effects in the statistical model</p> <p>Applicability: Adult contacts of patients with TB sharing the same household</p> <p>Funding: NIH</p>	<p>Exclusion criteria: Contacts could have no evidence of liver or renal dysfunction or anemia, and could not ever have received TB drugs for >1 month</p> <p>Reported baseline demographic [Intervention arm]: Median age: 37.7 years Sex: Male: 37%; Female: 63% Race/ethnicity:</p>	<p>Comparison details (n=193): Rifampin 450 mg and pyrazinamide 750 mg (weight 50 kg) or rifampin 600 mg and pyrazinamide 1,500 mg (weight 50 kg) once daily for 8 weeks. Rifapentine/INH ingestion was directly observed in the clinic; daily rifampin/pyrazinamide recipients took 1 observed dose/week at the clinic and the remainder by self-administration</p>	<p>Drug discontinuation: 3HP group (n=206): 1/206=0.005 Comparison group (n=193): 6/193=0.031 Relative risk: 0.16</p> <p>Adverse events: 3HP group (n=206): 2/206=0.010 Comparison group (n=193): 20/193=0.10 Relative risk: 0.09</p> <p>Deaths: 3HP group (n=206): 1/206=0.005</p>

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	<p>White: 59.3%; Black/AA: 20.8%; Asian/Pacific Islander: 4.9%; Other: 15.1%</p> <p>Education: <High School: 17%; High School:14%</p> <p>Indications for LTBI: Contact: 100%</p>		<p>Comparison group (n=193): 3/193=0.010</p> <p>OR: 0.31</p> <p>Summary: Rifapentine/INH was better tolerated than rifampin/pyrazinamide and was associated with good protection against TB. Rifapentine/INH weekly for 12 weeks is likely a promising therapy for latent TB infection.</p>
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3HP, isoniazid-rifapentine regimen; AA, African American; INH, isoniazid; TB, tuberculosis

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Isoniazid-Rifapentine for Latent Tuberculosis Infection: A Systematic Review and Meta-analysis
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Title: Twelve-week Rifapentine plus isoniazid versus 9-month isoniazid for the treatment of latent tuberculosis in renal transplant candidates

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Simkins et al., 2017</p> <p>Location: U.S.</p> <p>Setting: Home</p> <p>Study design: Retrospective cohort</p> <p>Quality of execution: Fair (3 limitations)</p>	<p>Target population (N=153): Renal transplant candidates with latent tuberculosis infection</p> <p>Inclusion criteria: Patients with a positive QuantiFERON-TB gold in-tube and absence of clinical and radiological evidence of active infection</p> <p>Exclusion criteria: Not reported</p>	<p>3HP details (n=43): Renal transplant candidates were given 900 mg of rifapentine (if weighing >50kg) and isoniazid (900 mg max) for 12 weeks</p> <p>Comparison details (n=110): Daily isoniazid (300 mg max) for 9 months</p>	<p>Tuberculosis disease: 3HP group (n=43): 0/43=0 Comparison group (n=110): 0/110=0 Relative rate: 0</p> <p>Treatment completion: 3HP group (n=43): 40/43=0.93 Comparison group (n=110): 52/110=0.47 OR: 14.9</p> <p>Drug discontinuation: 3HP group (n=43): 3/43=0.70 Comparison group (n=110): 12/110=0.11 Relative risk: 0.64</p>
<p>Limitations:</p> <ol style="list-style-type: none"> Did not control for selection bias 3HP and 9H groups not comparable Sampling frame not described <p>Applicability: Renal transplant candidates undergoing LTBI treatment before transplantation</p> <p>Funding: Not reported</p>	<p>Reported baseline demographic [Intervention arm]:</p> <p>Median age: 53.23 years</p> <p>Sex: Male: 77.0% Female: 23.0%</p> <p>Race/ethnicity: White: 12%; Black/AA: 47%; Asian/Pacific Islander: 0%; Hispanic: 42%</p>		<p>Summary: Twelve-week of 3HP treatment by SAT resulted in high completion rates and could be considered as an alternative when 3HP by DOT is not feasible.</p>

3HP, isoniazid-rifapentine; 9H, isoniazid; AA, African American; DOT, directly observed therapy; SAT, self-administered therapy

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Isoniazid-Rifapentine for Latent Tuberculosis Infection: A Systematic Review and Meta-analysis
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Title: Treatment for Tuberculosis Infection with 3 Months of Isoniazid and Rifapentine in New York City Health Department Clinics

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
Authors: Stennis et al., 2016	Target population (N=631): New York City residents diagnosed with LTBI seeking care at 2 TB clinics	Intervention details (n=302): Patients received 3HP by DOT and were educated about the regimen and potential side effects	Treatment completion: 3HP group (n=302): 196/302=0.649 Comparison group (n=92): 42/92=0.457 OR: 2.20
Location: U.S. Setting: TB clinics	Inclusion criteria: All patients aged ≥ 12 years who were eligible were offered treatment with 3HP; those refusing 3HP were offered 9H or a rifamycin-based regimen.	Comparison details (n=92): Those refusing 3HP were offered isoniazid or another other rifamycin drug. LTBI treatment with either 9 months of INH or 4 months of Rifampin	Drug discontinuation: 3HP group (n=302): 12/302=0.04 Comparison group (n=92): 0/92=0 Relative risk: Not calculated
Study design: Prospective cohort Quality of execution: Good (1 limitation) Limitations: Potential selection bias concerns and sample size for comparison group is small	Exclusion criteria: Patients aged < 12 years were excluded from treatment with 3HP, following CDC guidelines at the time. Patients unable to demonstrate understanding of side effects or signs and symptoms of TB disease and those without a valid address were considered ineligible for all TBI treatment.		Adverse events: 3HP group (n=302): 40/302=0.13 Comparison group (n=92): Not reported Relative risk: Not calculated Summary: Implementation of 3HP by DOT increased treatment completion in TB clinics in NYC by 31 percentage points, compared to historical estimates
Applicability: Patients with LTBI seeking care at a	Reported baseline demographic [Intervention arm]: Median age: 33.0 years Sex: Male: 51%; Female: 49%		

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<p>public TB clinic in a large urban city</p> <p>Funding: New York City Department of Health and Mental Hygiene</p>	<p>Race/ethnicity: Not reported</p> <p>Education: <High School 22%; High School: 71%;</p> <p>Indications for LTBI: Contact:14%</p>		
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3HP, isoniazid-rifapentine regimen; 9H, 9-month isoniazid regimen; CDC, Centers for Disease Control and Prevention; DOT, directly observed therapy; LTBI, latent tuberculosis infection; TB, tuberculosis

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Isoniazid-Rifapentine for Latent Tuberculosis Infection: A Systematic Review and Meta-analysis
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Title: The months of rifapentine and isoniazid for latent tuberculosis infection

Study details	Population characteristics	Intervention + comparison description	Major results and summary
<p>Authors: Sterling et al., 2011</p> <p>Funding: Centers for Disease Control and Prevention</p> <p>Locations: U.S., Canada, Brazil, and Spain</p> <p>Setting: NR</p> <p>Study design: RCT</p>	<p>Target population (N=8,053): Persons aged ≥ 12 years who were contacts of a patient with TB</p> <p>Inclusion criteria: ≥ 12 years old + close contact of a TB patient + positive TST</p> <p>Exclusion criteria: Confirmed or suspected TB + resistance to INH or RIF + treatment with rifamycin or INH in prior 2 years + previous treatment for TB + AST 5x ULN + pregnancy or lactation + HIV therapy within 90 days after enrollment + weight < 10 kg</p>	<p>3HP group details (n=3,986): Rifapentine dose of 900 mg, with incremental adjustment of persons weighing < 50 kg; INH dose at 15 to 25 mg/kg body weight, rounded up to the nearest 50 mg, with a maximum dose of 900 mg + administered under direct observation once weekly for 3 months</p>	<p>Tuberculosis disease: 3HP group (n=3,577): 7 cases/10,327 person-years=0.00068 9H Group (n=3,310): 15 cases/9,619 person-years=0.0016 Incidence rate: 0.432/100 person-years</p> <p>Treatment completion: 3HP group (n=4,040): 3,317/4,040=0.821 9H group (n=3,759): 2,594/3,759=0.69 OR: 2.06</p>
<p>Quality of execution: Good</p> <p>Limitations: None</p> <p>Applicability: Persons aged > 12 years being treated for LTBI</p>	<p>Reported baseline demographic [Intervention arm]: Median age: 36 years Sex: Male: 55.4% Female: 44.6% Race/ethnicity: White: 57.6%; Black/AA: 24.5%; Asian/Pacific Islander: 12.4%; American Indian: 2.1%; Multiracial (Brazil only): 3.4% Hispanic: 43.2. Education: Completed High School: 56.9 Co-morbidities: HIV infection: 2.6%; liver disease: 3.6%</p>	<p>Comparison details (n=3,745): INH at a dose of 5–15 mg/kg body weight, rounded to the nearest 50 mg, with a maximum dose of 300 mg + self-administered daily for 9 months</p>	<p>Drug discontinuation: 3HP group (n=4,040): 196/3,986=0.049 9H group (n=3,759): 139/3,745=0.037 Relative risk: 1.32</p> <p>Adverse events: 3HP group (n=4,040): 595/4,040=0.15 9H group (n=3,759): 661/3,759=0.18 Relative risk: 0.837</p>

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			<p>Deaths: 3HP group (n=4,040): 31/3,986=0.0077 9H group (n=3,759): 39/3,745=0.010 OR: 0.744</p> <p>Summary: Use of INH-rifapentine for 3 months was as effective as 9 months of INH alone in preventing active TB and had a higher treatment completion rate.</p>
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3HP, isoniazid-rifapentine; 9H, 9-months isoniazid; AA, African American; AST, aspartate aminotransferase; INH, isoniazid; LTBI, latent tuberculosis infection; RIF, rifampin; TB, tuberculosis; ULN, upper limit normal

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Title: Three months of weekly rifapentine plus isoniazid for treatment of *Mycobacterium tuberculosis* infection in HIV co-infected persons

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Sterling et al., 2016</p> <p>Funding: CDC + NIH + Sanofi (provided rifapentine)</p> <p>Location: U.S., Canada, Spain, Brazil, Hong Kong</p> <p>Setting: NR</p>	<p>Target population (N=403): HIV co-infected persons who were TST positive or close contacts of TB cases</p> <p>Inclusion criteria: ≥2 years or older who are TST positive or had close contact with TB cases</p> <p>Exclusion criteria: Confirmed or suspected TB, resistance to INH or RIF + sensitivity or intolerance to INH or rifamycins +AST 5x ULN + pregnancy or breastfeeding + weight <10.0 kg + receiving ART</p>	<p>3HP details (n=206): Individuals aged 2–11 years received INH 25 mg/kg body weight (rounded up to the nearest 50 or 100 mg; 900 mg max) administered by direct observation once weekly + individuals ≥12 years old receive INH 15 mg/kg body weight (rounded up to the nearest 50 or 100 mg; 900 mg max) administered by direct observation once</p>	<p>Tuberculosis disease: 3HP group (n=206): 2 cases/517 person-years 9H group (n=193): 6 cases/481 person-years</p> <p>Incidence rate: 0.31/100 person-years</p> <p>Treatment completion: 3HP group (n=206): 183/206=0.89 Comparison group (n=193): 123/193=0.64 OR: 4.53</p>
<p>Study design: RCT</p> <p>Quality of execution: Good</p> <p>Limitations: None</p> <p>Applicability: Individuals aged ≥2 years living with</p>	<p>Reported baseline demographic [Intervention arm]:</p> <p>Median age: 36 years</p> <p>Sex: Male: 71%; Female: 29%</p> <p>Race/ethnicity: White: 37%; Black/AA: 36%; Asian/Pacific Islander: 3%; American Indian: 2%</p> <p>Education: High School: 60</p> <p>Indications for LTBI: Contact: 95%; Converter: 5%</p> <p>Antiretroviral therapy reported: 33%</p>	<p>Comparison details (n=193): 9 months of daily self-administered INH 5 mg/kg body weight (15 mg/kg in children, rounded up to nearest 50 mg, 300 mg max) + vitamin B6 50 mg with each dose of INH</p>	<p>Drug discontinuation: 3HP group (n=206): 4/207=0.019 Comparison group (n=193): 8/186=0.043 Relative risk: 0.79</p> <p>Adverse events: 3HP group (n=206): 18/207=0.086 Comparison group (n=193): 28/186=0.151 Relative risk: 0.58</p>

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Isoniazid-Rifapentine for Latent Tuberculosis Infection: A Systematic Review and Meta-analysis
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<p>HIV/AIDS being treated for LTBI</p>			<p>Deaths: 3HP group (n=206): 6/207=0.028 Comparison group (n=193): 5/186=0.027 OR: 1.08</p> <p>Summary: 3HP was a safe and effective treatment for LTBI in persons co-infected with HIV/AIDS</p>
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3HP, isoniazid-rifapentine; 9H, 9-months isoniazid; AA, African American; ART, antiretroviral therapy; AST, aspartate aminotransferase; INH, isoniazid, LTBI, latent tuberculosis infection; ULN, upper limit normal

Appendix
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Title: Treatment for preventing tuberculosis in children and adolescents: a randomized clinical trial of a 3-month, 12-dose regimen of a combination of rifapentine and isoniazid

Study details	Population characteristics	Intervention + comparison description	Outcomes and summary
<p>Authors: Villarino et al., 2015</p> <p>Location: U.S., Canada, Spain, Brazil, Hong Kong</p> <p>Setting: Not reported</p> <p>Study design: RCT</p> <p>Quality of execution: Good (0 limitation)</p> <p>Limitations: None</p> <p>Applicability: Children ≥ 2 years old receiving LTBI treatment with 3HP via DOT</p> <p>Funding: CDC Foundation + Sanofi (provided rifapentine)</p>	<p>Target population (N=1,058): children and adolescents seeking LTBI treatment</p> <p>Inclusion criteria: Children and adolescents at high risk for TB disease according to age, TST results, and TB exposure history</p> <p>Exclusion criteria: Current confirmed culture-positive or clinical TB; suspected TB (as defined by the site investigator); tuberculosis resistant to INH or rifampin in the source TB case; history of treatment for >14 consecutive days with a rifamycin</p> <p>Reported baseline demographic [Intervention arm]: Median age: 10.0 years Sex: Male: 53.8%; Female: 46.2% Race/ethnicity: White: 4.9%; Black/AA: 11.3%; Other: 9.5%; Hispanic: 74.4%</p> <p>Indications for LTBI: Contact: 94%; Converter: 5.9%</p>	<p>Intervention details (n=552): Children enrolled in the 3HP group were prescribed a regimen of 12 weekly doses of a combination of rifapentine and INH. All doses for 3HP were administered by DOT. Completion of 3HP was defined as administration of 11 of no more than 12 weekly, DOT doses in 10–16 weeks.</p> <p>Comparison details (n=506): Children in the 9H group were prescribed 270 daily doses of INH dispensed in 30-day allotments. For this arm of the trial, INH was either self-administered (i.e., by the patient or the parent, without supervision by a healthcare professional) or directly observed, following the study site administration guidelines for children. If DOT was used during INH-only treatment, frequency remained daily</p>	<p>Tuberculosis disease: 3HP group (n=471): 0/1,204=0 Comparison group (n=434): 3/1,116=0.003 Incidence rate: 0.13/100 person-years</p> <p>Treatment completion: 3HP group (n=471): 415/471=0.881 Comparison group (n=434): 351/434=0.809 OR:1.75</p> <p>Drug discontinuation: 3HP group (n=471): 8/471=0.017 Comparison group (n=434): 2/434=0.005 Relative risk: 3.69</p> <p>Adverse events: 3HP group (n=539): 14/539=0.026 Comparison group (n=493): 6/493=0.012 Relative risk: 2.13</p>

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			<p>Deaths: 3HP group (n=539): 0/539=0 Comparison group (n=493): 0/493=0 OR: Not calculated</p> <p>Summary: Treatment with 3HP was as effective as 9H in prevention of TB disease in individuals aged 2–17 years. 3HP also had a higher completion rate than 9H.</p>
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3HP, isoniazid-rifapentine; 9H, 9-month isoniazid regimen; AA, African American; DOT, directly observed therapy; INH, isoniazid; LTBI, latent tuberculosis infection; TB, tuberculosis; TST, tuberculin skin test