

# Use, effectiveness and safety of isoniazid in the treatment of latent tuberculosis infection, what do we know?

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## Abstract

**Background** The treatment strategy for latent tuberculosis (TB) infection (LTBI) aims to promote a reduction in the number of cases that develop into TB and, consequently, a reduction in the transmission of pathogenic bacteria. **Objectives** The objective was to know the safety, effectiveness and adherence of the use of INH in two pharmaceutical presentations (300mg or 100mg tablet) reported in scientific studies. **Methods** A review protocol was registered a priori with PROSPERO (number CRD42020176694). The electronic databases Cochrane; PubMed; Embase; LILACS, Scopus, and Web of Science were searched for studies on use of INH for LTBI. The results and methods were presented in line with the PRISMA guidelines, and the methodological quality of the included reviews was assessed using the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. **Results** Most of the studies used isoniazid (H) as a treatment for LTBI, with a duration of 9 months. There was significant variation in the use of isoniazid, ranging from 0.3% to 98.6% of the participants. A similar variation was found in the 52 studies that similarly presented the rate of adherence to treatment with H, which ranged from 18% to 100% among study participants completing INH treatment for LTBI. In studies, the adverse events reported most frequent events reported were included hepatotoxicity, gastric intolerance, and neuropathy, the rates of occurrence of these with isoniazid, ranging from < 1% to 48%. In the studies that evaluated effectiveness of isoniazid for latent tuberculosis infection, a variation from 0 to 19.7% of people who did not have active TB after the follow-up period was observed, with the highest rate among HIV-positive individuals. **Conclusion** Our findings indicate that isoniazid is being widely used in the world as a prophylactic treatment for tuberculosis, rates of adherence to isoniazid were above 50%. It is important to emphasize the importance of keeping the follow-up of the person who uses isoniazid due to the risk of developing unwanted events resulting from the drug. Even with treatment challenges, we identified low rates of people who used isoniazid and developed active tuberculosis during the period they were followed. We believe that isoniazid continues to contribute to tuberculosis control in the world and better care actions are needed.

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Figura 1. Study Selection Flow

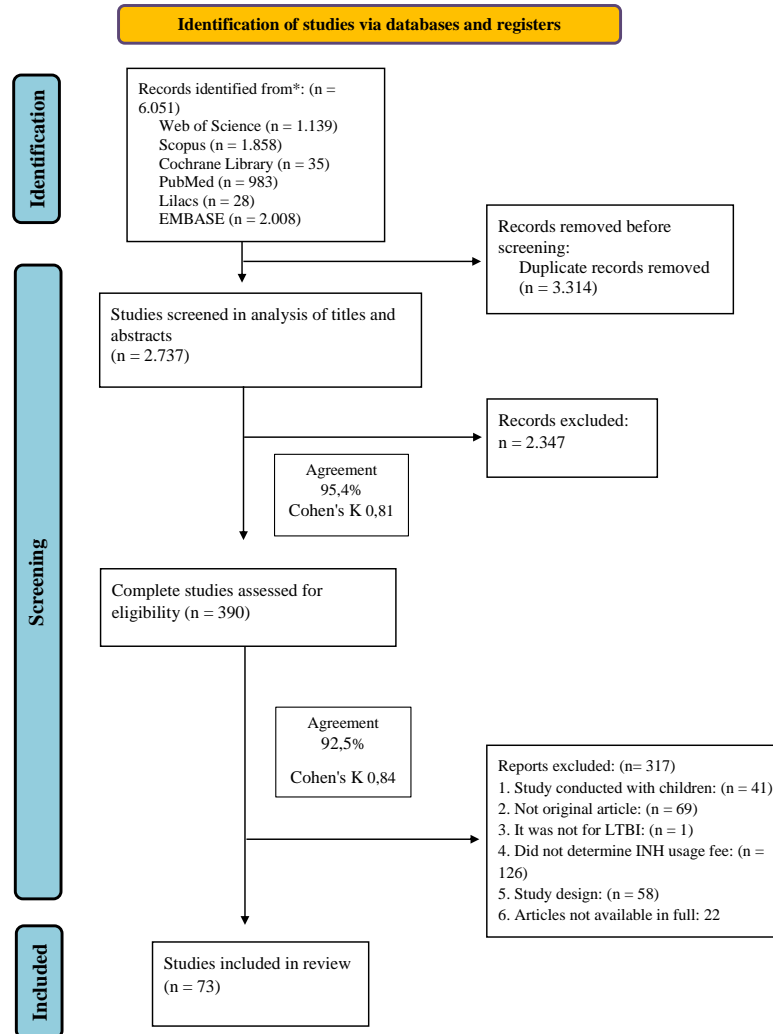
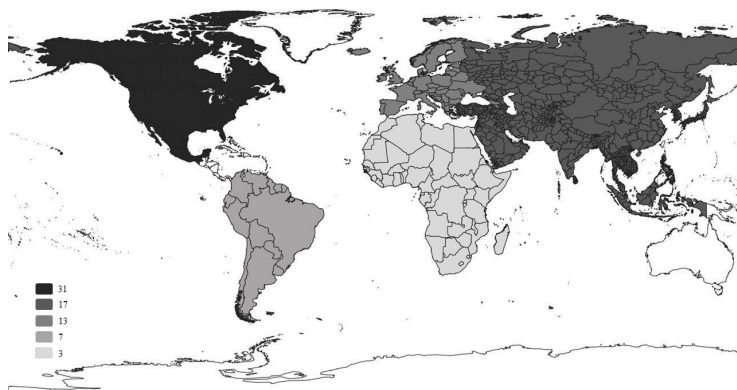


Figure 2. Number of studies included, by continent.



**Figure 3. Treatment adherence in continents**

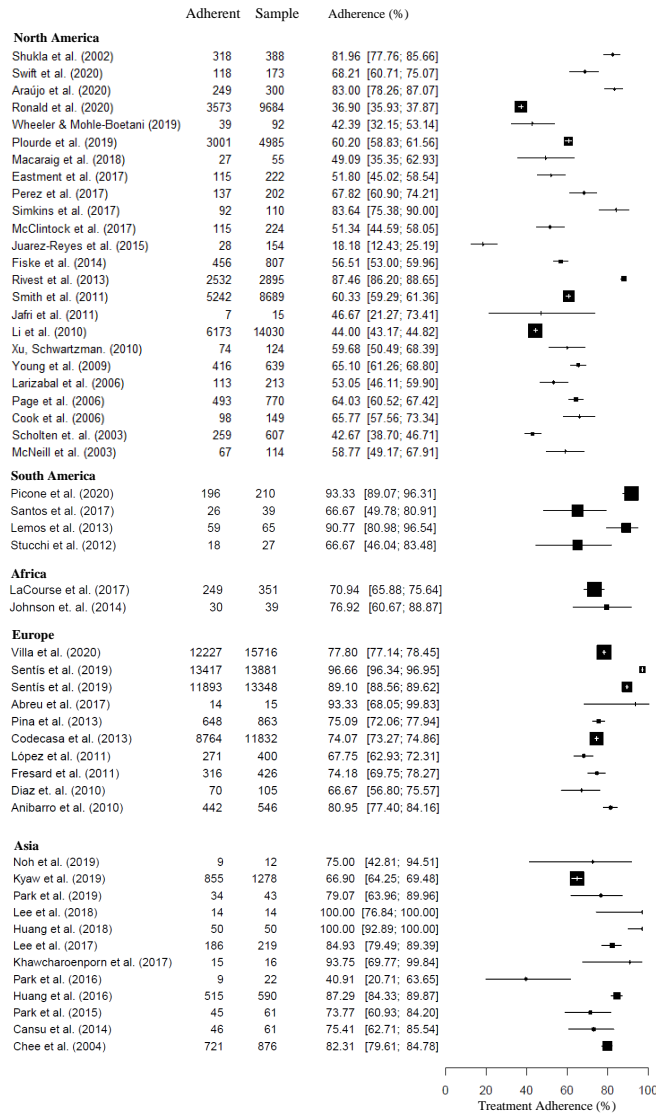


Figure 4. Quality assessment of cross-sectional studies

