What is TB infection?

Not everyone who is infected with Tuberculosis (TB) germ immediately develops TB disease. Some people go on to have a dormant form of TB that can be reactivated over time or when the immune system is suppressed. This form is called TB infection (TBI), and treating it can prevent the person from getting active TB.

Overview of TB transmission

**STAGE 1:**
Exposure
TB germs are inhaled into the lungs of a healthy person via droplets sneezed, coughed or spat by another PERSON WHO IS ILL WITH TB

**STAGE 2:**
TB germs are recognised as invaders and are contained by the healthy immune system (white blood cells - including CD4 CELLS)
This is known as TB INFECTION

**STAGE 3:**
Immune system unable to contain the TB germ which escapes into the rest of the lungs - and possibly other parts of the body causing disease.
This is known as ACTIVE TB DISEASE

1HP is a short-course Tuberculosis Preventive Treatment (TPT) regimen which is endorsed by the World Health Organisation.
Is treatment of TB infection effective?

Strong evidence shows that the treatment of TB infection (with isoniazid or rifampicin monotherapy, or in combination with other drugs) is effective in preventing progression to active disease in adults and children. There were an estimated 10 million new cases of tuberculosis (TB), around 1.2 million deaths from TB in HIV-negative people and 251,000 deaths from TB in HIV-positive people in 2021. The World Health Organisation (WHO) has set ambitious targets for reducing TB incidence and mortality by 90% in the next 10–20 years, with an aim to eliminating TB by 2035. Elimination of TB, however, cannot be considered without discussion of TB infection, its diagnosis and treatment. 1.7 billion people are estimated to have TB infection and are at risk of developing TB in their lifetime.

What is 1HP?

1HP is a short-course Tuberculosis Preventive Treatment (TPT) regimen which is endorsed by the WHO. It combines high dose isoniazid and high dose rifapentine once a day for 28 days. 1HP is associated with significantly lower hepatotoxicity and higher rates of treatment completion than isoniazid preventive treatment.

Is 1HP and 3HP superior to isoniazid monotherapy (IPT)?

There is no evidence that 3HP and 1HP are more effective than IPT, but studies have shown 3HP and 1HP to be equivalent to isoniazid in preventing progression to active disease. There is evidence, however, to show that 3HP and 1HP are less toxic to the liver than isoniazid-based regimens. However, the risk of drug reactions is increased among those taking 3HP and 1HP, but these are less likely to lead to discontinuation.

There is strong evidence to show that people taking shorter regimens such as 3HP and 1HP are much more likely to complete their course of treatment than people taking isoniazid.

3HP and 1HP are associated with significantly lower hepatotoxicity and higher rates of treatment completion.

Is short-course TPT cost-effective?

Previously, most studies have found 1HP and 3HP to be expensive in the short-term. However, the cost of rifapentine has recently been reduced in most countries. The shorter duration of treatment and higher rates of treatment completion can make it more cost-effective in the long-term.

For updated information on IMPAACT4TB and to download a copy of this document and other materials related to TB preventive therapy, please visit: www.impaaact4tb.org/3hp-tools