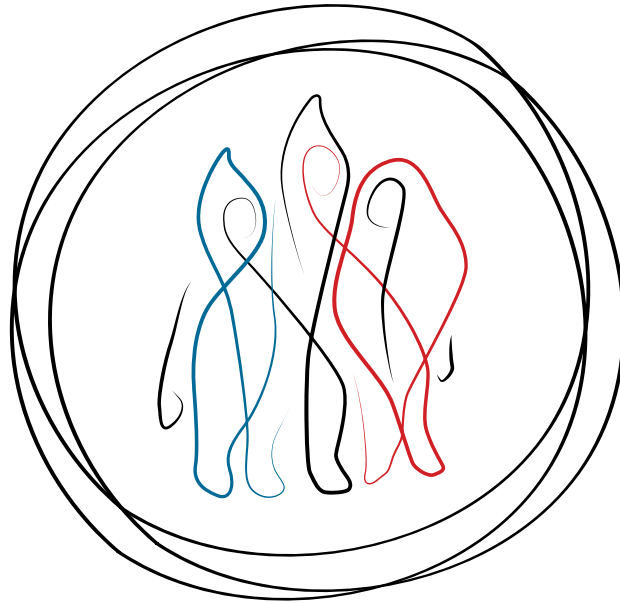
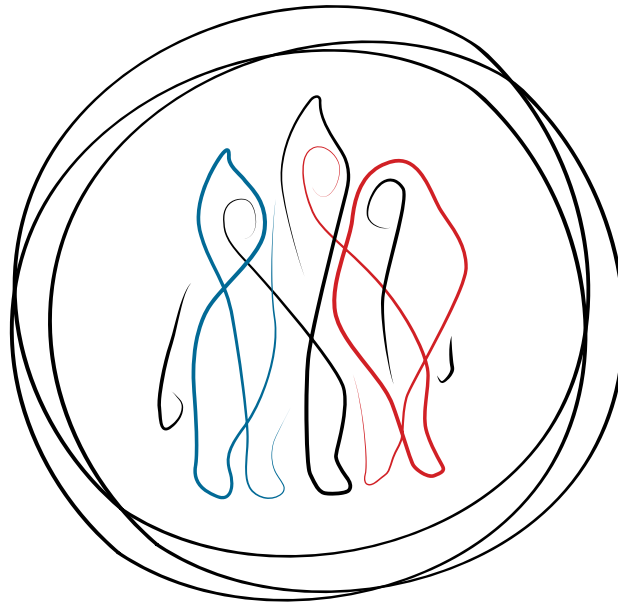


# Guide for TB infection treatment with 3HP in Nunavik

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**No conflict of interest to declare**



## Acknowledgements

We would like to thank the Nunavut Department of Health and the North Shore Public Health Department for sharing their 3HP protocols, from which the following content is inspired

# Training objectives

After this training session, participants will be able to:

- ✓ Provide a clear definition of the 3HP treatment;
- ✓ Explain the indications and contraindications associated with the 3HP treatment;
- ✓ Identify the side effects and potential interactions;
- ✓ Provide appropriate follow-up to patients on treatment.



# A few basic concepts

## Definition

**TB infection (TBI or LTBI)** refers to “the presence of *Mycobacterium tuberculosis* (MTB) bacilli inside the body without signs of the disease”

## Persons with TBI:

- exhibit no clinical signs or symptoms of the disease;
- are not contagious, hence do not present a risk for the people around them;
- show no signs of active TB disease on the chest X-ray (CXR);
- obtain negative microbiological test results (GeneXpert, smears, cultures);
- are not subject to mandatory treatment.

# TBI treatment

- ✓ Only approach to prevent active TB disease.
- ✓ Clinical and radiological follow-up  $\neq$  prevention:
  - can only detect active TB once it has manifested itself, but it does not prevent the disease!





# Risk of active TB disease and manifestations according to age

**Table 2. Average age-specific risk for disease development after untreated primary infection.**



Age at primary infection	Manifestations of disease	Risk of disease (%)
<12 months	No disease	50
	Pulmonary disease	30-40
	TB meningitis or miliary disease	10-20
12-23 months	No disease	70-80
	Pulmonary disease	10-20
	TB meningitis or miliary disease	2-5
2-4 years	No disease	95
	Pulmonary disease	5
	TB meningitis or miliary disease	0.5
5-10 years	No disease	98
	Pulmonary disease	2
	TB meningitis or miliary disease	<0.5
>10 years	No disease	80-90
	Pulmonary disease	10-20
	TB meningitis or miliary disease	<0.5

Source: Adapted from Marais et al.<sup>9</sup>



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Source: Adapted from Marais et al.<sup>9</sup>



**3** → 3 months of weekly Tx

**H** → INH (Isoniazid )

**P** → Prifitin (Rifapentine)

# TBI treatments offered in Nunavik

	Molecules	Duration	Frequency	Administration
First line	Rifapentine (RPT) and Isoniazid (INH) – 3HP	3 months	Once weekly	DOT
	Rifampicin (RIF)	4 months	Daily	SA (self-administration)
Second line	Isoniazid (INH)	9 months	Daily	SA (self-administration)
Third line	Isoniazid (INH)	9 months	Twice weekly	DOT

Source: CTS, 2022 and TB toolbox - NRBHSS

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Source: CTS, 2022 and TB toolbox - NRBHSS

## 3HP: First line therapy in Canada



Source: <https://bhekisisa.org/resources/general-resource/2020-04-01-world-health-organisation-guidelines-for-managing-and-treating-latent-tb/>

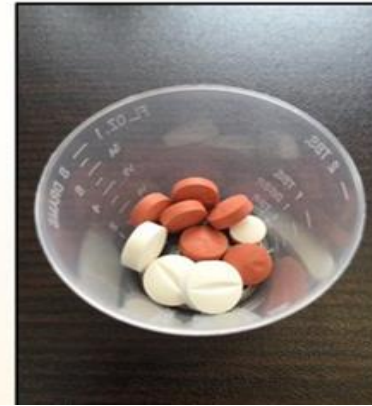
- ✓ As effective as Rifampicin (RIF)
- ✓ Standard of care in the United States
- ✓ Used in Nunavut and other regions of Québec (e.g. North Shore)
- ✓ Priftin = not registered in Canada\*

\*Available through Health Canada's access program for urgent public health needs and through Indigenous Services Canada (ISC).

Sources: NCS, 8 ed., 2022 ; Alvarez et al., 2020

3HP

Maximum dose is 10 tablets  
for weight  $\geq$  50kg.



**6 (red) Rifapentine**  
**3 (large white) INH**  
**1 (small white) Vitamin B6**

Source: Nunavut Department of Health

- ✓ Shortest treatment available : 12 weeks
- ✓ Dose taken once a week
- ✓ Lower hepatotoxicity than with INH alone
- ✓ Addition of vitamin B6 ( $\downarrow$  neurotoxicity)



**Better completion rates**

Sources: INESSS, 2019; CTS, 2022; Alvarez et al., 2020; CTS, 2022

# Who can be treated with 3HP?

- **Children and adults between 2 and 65 years of age** (on a case by case basis if 65+ yo)

## Treatment indications

- Recently diagnosed TBI
- Untreated or inadequately treated old TBI
- Window period prophylaxis (WPP) for vulnerable contacts (young children between 2 and 4 years of age)





# Exclusions



- Pregnancy, breastfeeding or < 3 mo postpartum
- Children < 2 yrs old
- Adults > 65 yrs old (on a case by case basis)
- Persons with risk factors for hepatotoxicity



# DOT – Directly Observed Therapy

## Objectives

- ✓ ↑ treatment compliance and success rate
  - ✓ ↑ early detection of adverse reactions, difficulties associated with treatment and other potential issues
  - ✓ ↑ individual support throughout the treatment
- ↓ **risk of active TB in the future**

# Nitrosamine contamination

- Since 2020, small quantities of contaminants called nitrosamines have been detected in rifapentine.
- Nitrosamines are potential carcinogenic compounds also found in certain food products and drugs, as well as in the environment.
- 3 months exposure with 3HP ≈ «normal» daily exposure x 1 year

## Health Canada and CDC conclusions

- Risk of not treating TBI >>> Limited risk of exposure to nitrosamines due to 3HP.



Source: Kim, Thal et Szkwarko, 2023; TAG, 2021

## Adverse reactions

**3HP is a safe treatment that is usually well-tolerated**



**However, can be associated with:**

- Mild or moderate reactions mostly  usually no need to stop the treatment
- Rare severe adverse reactions  stop treatment and reassess the situation



# Common reactions

## Orange coloration of body fluids (tears, urine, sweat)

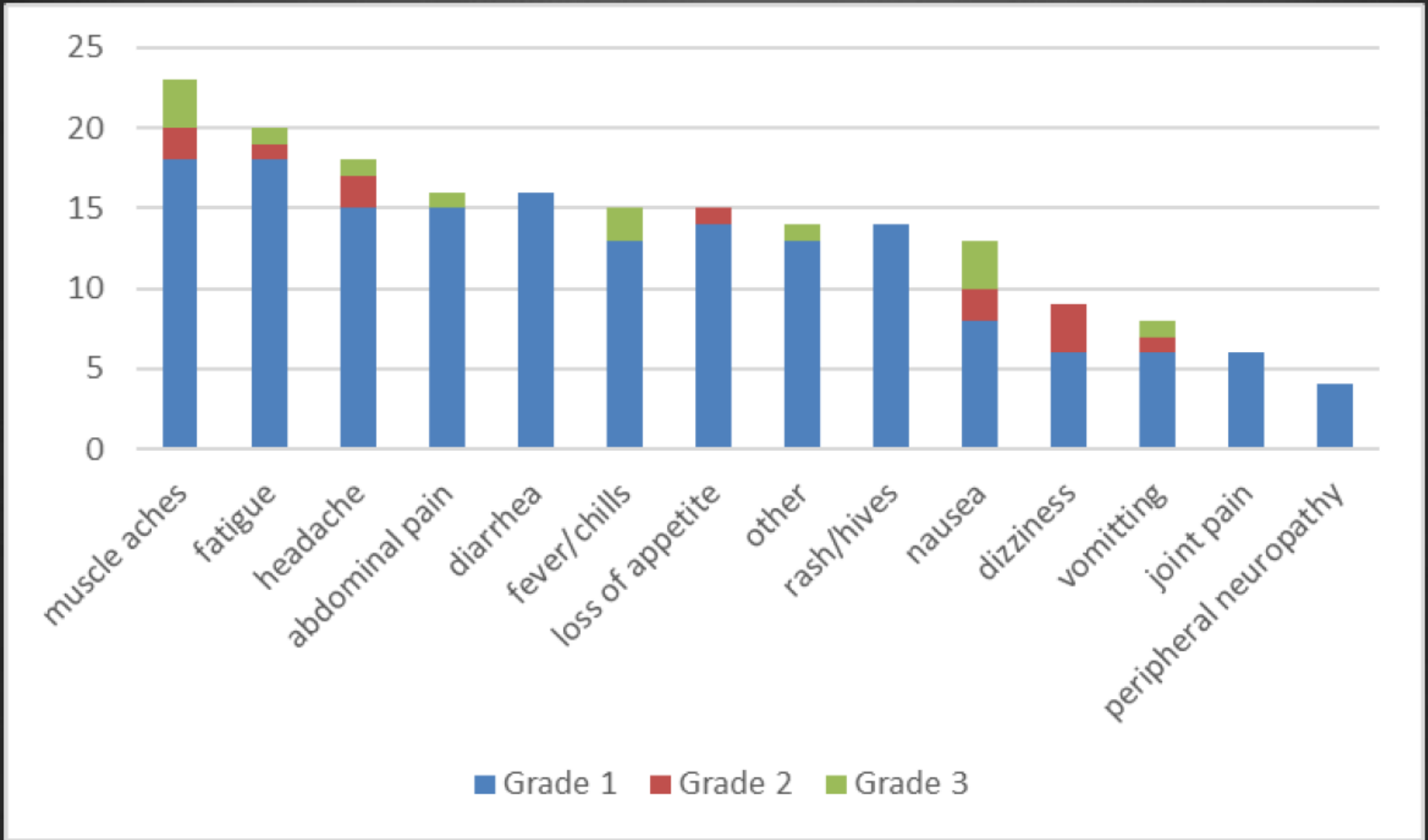
- Disappear on cessation of treatment



Caution: may stain contact lenses and dentures.



Figure 3 – Frequency of possibly related or related adverse events stratified by grade\*



\* Includes all adverse events reported by participants deemed as 'related' or 'possibly related' to 3HP by the investigators. Number of participants experiencing an adverse event with one or more doses where each participant is counted only once at the highest level of severity (Grade) for that symptom. Grade 1=Mild - discomfort noticed but no disruption of normal daily activity, Grade 2=Moderate - discomfort sufficient to reduce or affect daily activity, Grade 3=Severe - inability to work or perform normal daily activity, Grade 4=Life Threatening or Disabling - represents an immediate threat to life, Grade 5=Death related to adverse event.

Sources: Nunavut Department of Health, 2019 ; Alvarez, G. (2020)



# Management of adverse reactions

	Definition	Recommended steps to take
<b>Grade 1</b>	Temporary reaction, no impact on daily routine (short-lived and not disabling).	<ul style="list-style-type: none"> <li>• Notify the treating physician PRN</li> <li>• Ensure appropriate monitoring</li> <li>• Continue treatment</li> </ul>
<b>Grade 2</b>	Reaction with an impact on daily routine and which limits usual functioning or persisting over 12-24 hours.	<ul style="list-style-type: none"> <li>• Notify the treating physician</li> <li>• Ensure appropriate monitoring</li> <li>• Treat symptoms PRN</li> <li>• May require laboratory tests and temporary suspension of treatment</li> </ul>
<b>Grade 3</b>	Reaction with a significant impact on daily routine and which is disabling in terms of work or usual tasks and activities.	<ul style="list-style-type: none"> <li>• Notify the treating physician</li> <li>• Stop treatment</li> <li>• Ensure appropriate monitoring</li> <li>• Treat symptoms or provide support (PRN).</li> <li>• Laboratory tests (as per the clinic)</li> <li>• Report the situation as per the institution's procedure</li> </ul>





## Adverse reactions

# Hepatotoxicity\*

Jaundice

Abdominal pain/discomfort

Anorexia

Nausea/vomiting

Dark (tea-coloured) urine

Pale (whitish) stool

Rash

Pruritus

\*In the presence of jaundice or if suspicion of hepatotoxicity, do a liver function workup and suspend treatment.

## Adverse reactions

# Hepatotoxicity

If concentration of transaminases (AST/ALT) is **5X** the upper limit of normal range without symptoms

**OR**

If concentration of transaminases (AST/ALT) is **3X** the upper limit of normal range in the presence of symptoms



Notify the treating physician and **Stop treatment**

## Adverse reactions

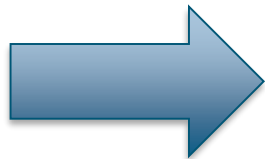
# Hypersensitivity = severe reaction

## Presence of ONE of the following Sx:

- Hypotension (systolic BP < 90 mm Hg)
- Hives (urticaria)
- Angiodema (swelling of lips and eyelids)
- Acute bronchospasm
- Conjunctivitis (red eyes)

## And ≥ 4 of the following symptoms:

- Weakness, fatigue, nausea, vomiting, headache, fever, chills, sore muscles, dizziness, shortness of breath, hot flashes, profuse sweating (diaphoresis)



**Cessation of treatment and urgent medical assessment**

# REMINDER

Particular conditions and moderate or severe adverse reactions must be documented and reported to the treating physician:

- ✓ abnormal laboratory results;
- ✓ potential adverse drug reactions;
- ✓ active TB symptoms;
- ✓ possible pregnancy;
- ✓ change in a pre-existing medical condition;
- ✓ visit to the ER or clinic;
- ✓ other special conditions presenting during treatment.

# REMINDER

Any severe or unforeseen adverse reaction due to treatment/medication needs to be declared by the pharmacist to Health Canada as stipulated by the health centre's internal procedure.

<https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/adverse-reaction-reporting.html>

## Drug interactions\*

**Before starting any treatment, important to check:**

- ✓ Medication taken on a regular or occasional basis
- ✓ Natural products used
- ✓ Substance use/abuse
- ✓ Potential interactions (confirm with pharmacist)

\*Certain severe reactions can occur as a result of undocumented interactions.

# Some interactions will require modifying the treatment while others may call for dosage adjustments or serum levels

Below is a partial list of molecules that can interact with 3HP:

- Certain antibiotics (clarithromycin, doxycycline, fluoroquinolones such as ciprofloxacin, levofloxacin, etc.)
- Warfarin
- Methadone
- Cyclosporin, tacrolimus
- Antihypertensive drugs (propranolol)
- Prednisone
- Digoxin
- Sulfonylureas
- Levothyroxine
- Fibrates and antilipemic agents
- Phosphodiesterase-5 inhibitors (sildenafil)
- Ticagrelor
- Anticonvulsants (phenytoin, valproic acid)
- Tricyclic antidepressants (amitryptiline, nortriptyline)
- Antifungals (fluconazole, itraconazole, ketoconazole)

## Drug interactions

### Examples

Antiretroviral substances



**Combination not recommended**

Combined Oral Contraceptives (COC) and other hormonal contraceptives



**Decreases effectiveness:**  
add a barrier method



# TB Toolbox



## Professionals

Professionals

Nunavik DPH Publications

Info-Vaccin

Infectious Diseases ▶

Sexual-health

Ece and schools

Environmental Health

Overdose

Training

Vaccination

## Tuberculosis (TB) Toolbox

### ▼ [Introduction](#)

Under the coordination of the Nunavik Public Health Department, this TB toolbox brings together all the tuberculosis assessment and follow-up protocols and documents used at regional level in Nunavik's two health centers.

Its objectives are to :

- standardize tuberculosis clinical and public health practice guidelines at regional level;
- support and guide the interventions of the various professionals involved in tuberculosis control.

It is the fruit of consultation and consensus-building between all institutional and professional partners involved in the regional fight against tuberculosis.

This TB toolbox is regularly updated and improved with the gradual addition of new tools.

### ▶ [Priority villages](#)

### ▶ [Guides for practice](#)

### ▶ [Diagnostic investigations](#)

### ▶ [Latent tuberculosis infection \(LTBI\)](#)

### ▶ [Active tuberculosis \(TB\)](#)

### ▶ [Teaching materials](#)

### ▶ [Mass screening](#)

### ▶ [Capsules de formation avancée en tuberculose pour le Nunavik](#)




### ▶ [S'abonner](#)

## Latent tuberculosis infection (LTBI).




### Prescription of LTBI medication

Prescription of LTBI medication - RIF 	1 <sup>ère</sup> diffusion 2023-10-02	Mise à jour 2024-03-14
Prescription of LTBI medication – INH DOT 	2023-10-02	2024-03-14
Prescription of LTBI medication – INH daily 	2023-10-02	2024-03-14
Prescription of LTBI medication - RIF window-period 	2023-10-02	2024-03-14



### LTBI follow-up protocols

Follow-up protocol - RIF 	2023-10-02	2023-10-01
Follow-up protocol – INH Daily and DOT 	2023-10-02	2023-10-01
Follow-up protocol – RIF window-period 	2023-10-02	2023-10-01



### Registration of the LTBI medication

Registration of the medication - RIF 	2023-10-02	2023-10-01
Registration of the medication – INH DOT 	2023-10-02	2023-10-01
Registration of the medication – INH daily 	2023-10-02	2023-10-01

### Compliance curve

Compliance curve – RIF 	2023-10-02	2023-10-01
Compliance curve – INH daily 	2023-10-02	2023-10-01

### Monthly clinical assessment

Adverse reactions of the main TB treatments 	2023-10-02	2023-10-01
Monthly clinical assessment 	2020-03-25	2023-10-02

### Clinical and radiological follow-up

Clinical and radiological follow-up guide 	2023-10-02	2023-10-01
STANDARD clinical and radiological follow-up - Clinical evaluation and medical action 	2023-10-02	2023-10-01
ADDITIONAL clinical and radiological follow-up - Clinical evaluation and medical action 	2023-10-02	2023-10-01

# Prescription – TBI (LTBI)

<b>TB Program</b> <b>Medical prescription</b>
TREATMENT FOR LATENT TUBERCULOSIS INFECTION – 3HP (Rifapentine and Isoniazid) DOT
Allergies: <input type="checkbox"/> Nil or Specify: _____ Attention: Pregnancy and breastfeeding are contraindications.

EMBOSSER ICI LA CARTE DU CSI OU CSTU,  
SI NON DISPONIBLE, INSCRIRE LES NOM, PRÉNOM,  
DATE DE NAISSANCE ET NUMÉRO DE DOSSIER  
EMBOSS THE CARD OF THE IHC OR UTHC HERE,  
IF NOT AVAILABLE, WRITE THE NAME, SURNAME,  
DATE OF BIRTH AND FILE NUMBER



**CHILD OR ADULT** (2 to 65 years)

Date of the prescription: \_\_\_ / \_\_\_ / \_\_\_  
YYYY-MM-DD

Weight: _____ kg
------------------

**3HP – Rifapentine (RPT) and Isoniazid (INH)**

**1 dose/week PO administered under directly observed therapy (DOT) x 12 weeks (maximum of 16 weeks)**

**Rifapentine (RPT)** – Child or adult (2 to 65 years)  
(max.: 900 mg), thus:

- 10.0 - 14.0 kg: 300 mg
- 14.1 - 25.0 kg: 450 mg
- 25.1 - 32.0 kg: 600 mg
- 32.1 - 49.9 kg: 750 mg
- ≥ 50.0 kg: 900 mg

**Isoniazid (INH)** (max.: 900 mg), thus:  
(Round up to the next 50 mg dose)

- Child (2 to 11 years): 25 mg/kg
- Adolescent or adult (12 to 65 years): 15 mg/kg

**Pyridoxine** (vitamin B6) - Child or adult (2 to 65 years):

- 2 mg/kg (max.: 50 mg)

**TO BE COMPLETED BY THE PHARMACY:**

RPT: \_\_\_\_\_ mg PO 1x/week X 12 doses

INH: \_\_\_\_\_ mg PO 1x/week X 12 doses

Vit. B6: \_\_\_\_\_ mg PO 1x/week X 12 doses

Signature : \_\_\_\_\_

Name: \_\_\_\_\_

License #: \_\_\_\_\_

# Protocol – TBI (LTBI)

Time	F-up	Interventions and investigations	Date and Signature
<p>Prior to treatment</p> <p>____/____/____</p> <p>YY/MM/DD</p>	<p>MD</p>	<p><b>Before prescribing 3HP, ensure that:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Patient is between the ages of 2 and 65 (If &gt; 65, assess on a case by case basis).</li> <li><input type="checkbox"/> Patient has no known allergies or severe side effects (hepatotoxicity, hypersensitivity, thrombocytopenia) to Isoniazid (INH), Rifapentine (RPT) or Rifampicin (RIF).</li> <li><input type="checkbox"/> A chest X-ray was done recently (&lt; 8 weeks if LTBI diagnosis over the past 24 months or &lt; 12 weeks in all other instances).</li> <li><input type="checkbox"/> If bacteriological specimens were requested, all results (smears/cultures) were negative (unless otherwise indicated by the treating pneumologist).</li> <li><input type="checkbox"/> If patient is a female of child-bearing age: negative results from a urine <math>\beta</math>-hCG test and not planning to get pregnant in the near future (12 to 16 weeks).</li> <li><input type="checkbox"/> If patient gave birth recently, ensure <math>\geq</math> 3 months postpartum and not breastfeeding.</li> </ul> <p><b>Also check for:</b></p> <ul style="list-style-type: none"> <li>1. Prior active TB: <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span></li> <li>2. History of abnormal liver function (AST-ALT <math>\geq</math> 3 times normal) or porphyria: <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span></li> <li>3. Index case resistant to RIF or INH<sup>2</sup>: <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span></li> </ul> <p><b>Note:</b> If <b>YES</b> to 1, 2 or 3, consult the pediatric or adult pneumologist. If <b>NO</b> to 1, 2 and 3, initiate the LTBI treatment (<a href="#">ITL_PRESC-MED-3HP_EN</a>).</p> <p><b>Prescribe:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Initial blood tests: <span style="margin-left: 20px;"><input type="checkbox"/> Liver function, creat., CBC.</span> <span style="margin-left: 40px;"><input type="checkbox"/> Syphilis<sup>3</sup>, HIV<sup>3</sup></span></li> <li><input type="checkbox"/> For patients <math>\geq</math> 12 years: follow-up blood tests of liver function after 1<sup>st</sup> month of treatment.</li> <li><input type="checkbox"/> Follow-up blood tests every month PRN<sup>4</sup>: liver function, creat., CBC.</li> <li><input type="checkbox"/> Initial and monthly <math>\beta</math>-hCG urine<sup>5</sup> test.</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Check with pharmacist for potential interactions with other drugs (e.g., Dilantin) (<a href="#">DSPu-TB_INTERACTIONS_MED_EN</a>).</li> <li><input type="checkbox"/> Plan medication dosage or adjustment (e.g., Dilantin levels) during treatment if required.</li> <li><input type="checkbox"/> Counselling with regard to contraceptive use: if hormonal contraceptives are being used, promote adding another method (barrier contraception, such as condom).</li> </ul>	<p>____/____/____</p> <p>YY/MM/DD</p> <p>Signature</p>

- Symptomatic
- Abnormal initial workup results
- 50 years+ of age
- Hx of cirrhosis or hepatitis
- Rx at risk for hepatotoxicity
- Alcohol consumption

# Protocol – TBI (LTBI)

Time*	F-up	Interventions and investigations	Date and Signature
<p><b>1<sup>st</sup> day/date of the onset of treatment</b></p> <p>/ / YY/ MM/ DD</p>	Nurse	<p><b>Before initiating 3HP:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Make sure there are no active TB symptoms. In case of symptoms, request a medical opinion STAT.</li> <li><input type="checkbox"/> Take the patient's blood pressure and weight (<a href="#">ITL_EVAL-CLIN-HEBDO-3HP_EN</a>).</li> <li><input type="checkbox"/> Initiate 3HP according to the medical order.</li> <li><input type="checkbox"/> Inform the patient (treatment, compliance, side effects).</li> <li><input type="checkbox"/> Prepare to complete follow-up forms:               <ul style="list-style-type: none"> <li><input type="checkbox"/> Registration of the medication (<a href="#">ITL-ENREG-MED-INH-DIE_EN</a>).</li> <li><input type="checkbox"/> Weekly clinical evaluation (<a href="#">ITL_EVAL-CLIN-HEBDO-3HP_EN</a>)</li> </ul> </li> </ul> <p>As per the medical order:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Do initial blood tests: liver function, creat., CBC, Syphilis<sup>3</sup>, HIV infection<sup>3</sup>.</li> <li><input type="checkbox"/> Have a urine <math>\beta</math>-hCG test done<sup>6</sup>.</li> </ul>	<p>Signature</p> <p>/ / YY/ MM/ DD</p>
<p><b>End of the 4<sup>th</sup> week of treatment</b></p> <p>/ / YY/ MM/ DD</p>	Nurse	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Regular monthly follow-up:</b> Notify the physician if abnormal.           <ul style="list-style-type: none"> <li><input type="checkbox"/> Medication follow-up and provide support to the patient (<a href="#">ITL_ENREG-MED-3HP_EN</a>)</li> <li><input type="checkbox"/> Complete clinical evaluation for each dose administered (<a href="#">ITL_EVAL-CLIN-HEBDO-3HP_EN</a>)</li> </ul> </li> </ul> <p>As per the medical order:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Do follow-up blood tests PRN: liver function, creat., CBC.</li> <li><input type="checkbox"/> Have a urine <math>\beta</math>-hCG test done<sup>6</sup>.</li> </ul>	<p>Signature</p> <p>/ / YY/ MM/ DD</p>
<p><b>End of the 8<sup>th</sup> week of treatment</b></p> <p>/ / YY/ MM/ DD</p>	Nurse	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Regular monthly follow-up:</b> Notify the physician if abnormal.           <ul style="list-style-type: none"> <li><input type="checkbox"/> Medication follow-up and provide support to the patient (<a href="#">ITL_ENREG-MED-3HP_EN</a>)</li> <li><input type="checkbox"/> Complete clinical evaluation for each dose administered (<a href="#">ITL_EVAL-CLIN-HEBDO-3HP_EN</a>)</li> </ul> </li> </ul> <p>As per the medical order:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Do follow-up blood tests PRN: liver function, creat., CBC.</li> <li><input type="checkbox"/> Have a urine <math>\beta</math>-hCG test done<sup>6</sup>.</li> </ul>	<p>Signature</p> <p>/ / YY/ MM/ DD</p>





# Protocol – TBI (LTBI)

## FOLLOW-UP GUIDE FOR ADDITIONAL WEEKS

### Extension of the planned duration of the treatment

To be followed if the treatment is extended beyond the 12-week period. Apply the interventions in the End of treatment line if one or more additional weeks are needed to complete the treatment. Beyond 16 weeks, the prophylaxis is considered inadequate if fewer than 11 doses were administered.

Time	Follow-up	Interventions and investigations	Date and Signature
<b>End of treatment (12 to 16 weeks)</b>  / / YY/ MM/ DD	MD	<input type="checkbox"/> Document compliance and treatment outcome. <input type="checkbox"/> Complete and sign the <i>Clinical and radiological follow-up guide</i> <u>once the treatment has ended</u> ( <i>TB-ACT-ITL_GUIDE-SCR_EN</i> ). <input type="checkbox"/> Update the list of problems (prior history) in the patient's chart.	_____ Signature  / / YY/ MM/ DD
	Nurse	<input type="checkbox"/> <b>Regular monthly follow-up:</b> Notify the physician if abnormal. <ul style="list-style-type: none"> <li><input type="checkbox"/> Medication follow-up and provide support to the patient (<i>ITL_ENREG-MED-3HP_EN</i>).</li> <li><input type="checkbox"/> Complete clinical evaluation for each dose administered (<i>ITL_EVAL-CLIN-HEBDO-3HP_EN</i>).</li> </ul> As per the medical order: <ul style="list-style-type: none"> <li><input type="checkbox"/> Do follow-up blood tests PRN: liver function, creat., CBC</li> <li><input type="checkbox"/> Have a urine <math>\beta</math>-hCG test done<sup>g</sup>.</li> </ul> <input type="checkbox"/> Plan for clinical and radiological follow-up as required, <i>Clinical and radiological follow-up guide</i> ( <i>TB-ACT-ITL_GUIDE-SCR_EN</i> ). <input type="checkbox"/> Send all completed documents to Public Health team.	_____ Signature  / / YY/ MM/ DD





# Protocol - WPP

When	Monitoring	Interventions and investigations	Date and signature
<p>Pre-treatment</p> <p>____/____/____</p> <p>YY/MM/DD</p>	<p>MD</p>	<p><b>Before prescribing 3HP for window-period:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Confirm that child's age is between 2 and 4 years old and consult growth chart (minimum 10 Kg)</li> <li><input type="checkbox"/> Make sure there are no known allergies or serious side effects (hepatotoxicity, hypersensitivity, thrombocytopenia) with isoniazid (INH), rifapentine (RPT) or rifampicin (RIF)</li> <li><input type="checkbox"/> Eliminate an active TB diagnosis (normal chest X-ray (CXR) and clinical examination)</li> <li><input type="checkbox"/> If treatment longer than 12 weeks is expected due to an extended window-period (e.g., domestic contact of an active case isolated at home), prophylaxis with rifampicin is recommended</li> </ul> <p><b>Check for:</b></p> <ol style="list-style-type: none"> <li>1. Previous active TB: <input type="checkbox"/> Yes <input type="checkbox"/> No</li> <li>2. History of hepatic disorders (AST-ALT <math>\geq</math> 3 times normal) or porphyria: <input type="checkbox"/> Yes <input type="checkbox"/> No</li> <li>3. Index case resistant to RIF or INH<sup>1</sup>: <input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ol> <p><b>Note: If YES</b> to 1, 2 or 3: consult pediatric pneumologist.  <b>If NO</b> to 1, 2 and 3, begin 3HP treatment for window-period (<a href="#">DSPu-TB_ITL_PRESC-MED-3HP-FENETRE</a>).</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Prescribe initial blood tests: liver function, creat., CBC</li> <li><input type="checkbox"/> Prescribe follow-up blood tests PRN<sup>2</sup>: liver function, creat., CBC</li> <li><input type="checkbox"/> Check with pharmacist for possible interactions with other drugs (e.g., Dilantin) (<a href="#">DSPu-TB_INTERACTIONS_MED</a>)</li> <li><input type="checkbox"/> Plan medication dosage (e.g., Dilantin) during treatment if required</li> </ul>	<p>_____ Signature</p> <p>____/____/____ YY/MM/DD</p>
<p>1<sup>st</sup> day/start date of Tx</p> <p>____/____/____</p> <p>YY/MM/DD</p>	<p>Nurse</p>	<p><b>Before beginning 3HP:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Make sure there are no active TB symptoms. In case of symptoms, request a medical opinion STAT</li> <li><input type="checkbox"/> Weigh patient and record weight on growth chart</li> <li><input type="checkbox"/> Provide instructions for parent/guardian (treatment, observance, side effects)</li> </ul> <p><b>According to medical prescription:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Test liver function, creatinine, CBC</li> <li><input type="checkbox"/> Begin 3HP and fill out monitoring forms: <ul style="list-style-type: none"> <li>- Registration of the medication <a href="#">DSPu-TB_ITL_ENREG-MED-ITL-3HP-TOD</a></li> <li>- Clinical evaluation <a href="#">DPu-TB_ITL_EVAL-CLIN-HEBDO-3HP</a></li> </ul> </li> </ul>	<p>_____ Signature</p> <p>____/____/____ YY/MM/DD</p>



# Protocol - WPP

When	Monitoring	Interventions and investigations	Date and signature
End of 1 <sup>st</sup> month of Tx <hr/> YY/MM/DD	Nurse	<p><b>Regular monthly follow-up:</b> If abnormal, notify physician</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Complete Registration of medication form <a href="#">DSPu-TB_ITL_ENREG-MED-ITL-3HP-TOD</a></li> <li><input type="checkbox"/> Provide support to the patient</li> <li><input type="checkbox"/> Complete clinical evaluation before each dose <a href="#">DPu-TB_ITL_EVAL-CLIN-HEBDO-3HP</a></li> <li><input type="checkbox"/> As per medical prescription, test liver function, creat., CBC PRN<sup>2</sup></li> </ul>	<hr/> Signature YY/MM/DD
End of 2 <sup>nd</sup> month of Tx OR End of window period <sup>4</sup> <hr/> YY/MM/DD	Nurse	<p><b>Perform post-window-period TST<sup>3</sup>:</b> See section 4 of clinical evaluation of a contact of a case of active TB <a href="#">DSPu-TB_DETECT-EVAL-CLIN</a></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> If TST &lt; 5 mm and asymptomatic: Notify physician and stop window-period prophylaxis as per medical prescription</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> If TST ≥ 5 mm or conversion<sup>4</sup> or symptomatic patient: Notify physician</li> </ul> <p>If active TB is excluded:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Continue LTBI treatment with 3HP according to medical prescription and 3HP monitoring protocol: <a href="#">DSPu-TB_ITL_PRESC-MED-3HP</a> et <a href="#">DSPu-TB_ITL_PROT-SUIVI-3HP</a></li> <li><input type="checkbox"/> As per medical prescription, test liver function, creat., CBC PRN<sup>2</sup></li> <li><input type="checkbox"/> Send all completed documents concerning window-period to Public Health TB team <a href="mailto:tuberculose-santepublique.nrbhss@ssss.gouv.qc.ca">tuberculose-santepublique.nrbhss@ssss.gouv.qc.ca</a></li> </ul>	<hr/> Signature YY/MM/DD
	MD	<ul style="list-style-type: none"> <li><input type="checkbox"/> If post-window period TST ≥ 5 mm or conversion<sup>5</sup> or symptomatic patient: medical evaluation</li> <li><input type="checkbox"/> If medical evaluation is abnormal, consult <a href="mailto:mchtb@muhc.mcgill.ca">mchtb@muhc.mcgill.ca</a></li> <li><input type="checkbox"/> If active TB excluded:             <ul style="list-style-type: none"> <li><input type="checkbox"/> Prescribe LTBI treatment with 3HP <a href="#">DSPu-TB_ITL_PRESC-MED-3HP</a></li> <li><input type="checkbox"/> Sign 3HP LTBI protocol <a href="#">DSPu-TB_ITL_PROT-SUIVI-3HP</a></li> </ul> </li> </ul>	<hr/> Signature YY/MM/DD

# Weekly clinical evaluation



## WEEKLY CLINICAL ASSESSMENT - LTBI TREATMENT 3HP (Isoniazid and Rifapentine) DOT (2 to 65 years)

Starting weight: \_\_\_\_\_ kg on (date): \_\_\_\_ / \_\_\_\_ / \_\_\_\_

EMBOSSER ICI LA CARTE DU CSI OU CSTU,  
SI NON DISPONIBLE, INSCRIRE LES NOM, PRÉNOM,  
DATE DE NAISSANCE ET NUMÉRO DE DOSSIER

EMBOSS THE CARD OF THE IHC OR UTHC HERE,  
IF NOT AVAILABLE, WRITE THE NAME, SURNAME,  
DATE OF BIRTH AND FILE NUMBER

Presence of signs/symptoms <sup>1,2</sup> Enter N for No or Y for Yes If Yes, advise the physician		1	2	3	4	5	6	7	8	9	10	11	12
		yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd	yy/mm/dd
Hepatotoxicity	Deterioration of general condition												
	Abdominal pain/discomfort												
	Anorexia												
	Nausea/vomiting												
	Fatigue/drowsiness												
	Dark urine (tea-coloured) <sup>3</sup>												
	Pale stool (whitish)												
Jaundice/ rash / pruritis													
Hypersensitivity	ONE of the following symptoms: Hypotension (systolic blood pressure < 90 mm Hg) <sup>4</sup>	mm Hg											
	Hives												
	Swelling around the lips and eyes (angioedema)												
	Acute bronchospasm												
	Conjunctivitis (red eyes)												
	And ≥ 4 of the following symptoms: Weakness, fatigue, nausea, vomiting, headaches, fever, chills, sore muscles, dizziness, shortness of breath, hot flashes, sweating												
Flu-like symptoms (nausea, fatigue, aching muscles, fever, headaches, dizziness, abdominal pain)													
Referred to physician													
Nurse's initials	Initials	Initials	Initials	Initials	Initials	Initials	Initials	Initials	Initials	Initials	Initials	Initials	

<sup>1</sup> Simultaneously refer to the tool *Adverse reactions of the main TB treatments*.  
<sup>2</sup> In the absence of signs/symptoms, enter N for No. In the presence of signs/symptoms, enter Y for Yes, include a note in the chart and advise the physician.  
<sup>3</sup> Not to be confused with orange urine, which is a common side effect of taking Rifapentine.  
<sup>4</sup> Take blood pressure during the first dose and in the presence of symptoms compatible with hypersensitivity.  
 (DSPu-TB\_ITL\_EVAL-CLIN-HEBDO-3HP\_EN, V2024-03-28)







# Registration of medication

A missed dose can be taken in the next few days if the following criteria are met:

➤ **At least 72 hours** between the doses

**AND**

➤ **No more than 5 doses** in a 28-day period

Notify the treating physician if:

➤ **2 consecutive missed doses** over a period of **2 weeks**

➤ **3 missed doses** over a period of **6 weeks**

➤ **At week 11**, only **6 doses** have been taken

➤ Discontinue Tx if **less than 6 doses** taken at **week 12**



# Clinical and radiological follow-up

## TUBERCULOSIS

### CLINICAL AND RADIOLOGICAL FOLLOW-UP GUIDE

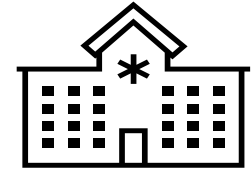
EMBOSSER ICI LA CARTE DU CSI OU CSTU,  
SI NON DISPONIBLE, INSCRIRE LES NOM, PRÉNOM,  
DATE DE NAISSANCE ET NUMÉRO DOSSIER  
EMBOSS HERE THE CARD OF IHC OR UTHC,  
IF NOT AVAILABLE, WRITE THE NAME, SURNAME,  
DATE OF BIRTH AND FILE NUMBER

CHECK THE APPLICABLE CATEGORY (BELOW)			FOLLOW-UP PLAN: ENTER SCHEDULED DATE(S)						
Untreated or inadequately treated LTBI	Clinical and radiological F/up	To schedule as of	6	12	18	24	36	48	60
<input type="checkbox"/> LTBI acquired over the past 2 years (recent)	q 6 months X 2 years, then q 12 months X 3 years	Date of significant TST yyyy/mm/dd							
<input type="checkbox"/> LTBI at an unknown date AND resident of a priority village	q 12 months X 5 years	Date of significant TST yyyy/mm/dd	X		X				
<input type="checkbox"/> LTBI at an unknown date AND resident of a non-priority village	At 12 months	Date of significant TST yyyy/mm/dd	X		X	X	X	X	X
<input type="checkbox"/> LTBI acquired between 3-5 years ago (prior)	q 12 months, ad 5 years after significant TST	Date of Tx cessation/refusal yyyy/mm/dd	X		X	X	X	X	X
<input type="checkbox"/> LTBI acquired more than 5 years ago (prior)	No follow-up required		X	X	X	X	X	X	X
<b>Treated LTBI</b>									
<input type="checkbox"/> Prophylaxis deemed acceptable	6 months after end of prophylaxis	End date of prophylaxis yyyy/mm/dd	X	X	X	X	X	X	X
<input type="checkbox"/> Optimal prophylaxis	No follow-up required		X	X	X	X	X	X	X
<b>Re-exposure to a case of smear-positive pulmonary TB (high-priority contacts according to Public Health)</b>									
<input type="checkbox"/> Prior active TB OR LTBI (already known) <sup>1</sup>	q 6 months X 2 years, then q 12 months X 3 years	Date of re-exposure yyyy/mm/dd							
<b>Follow-up after end of active TB treatment</b>									
<input type="checkbox"/> Active TB <u>confirmed</u> (cavitary) OR smear-positive	q 6 months X 2 years, then q 12 months X 3 years	End date of treatment yyyy/mm/dd							
<input type="checkbox"/> Active TB (non-cavitary) AND negative smear (confirmed or probable)	q 6 months X 2 years	End date of treatment yyyy/mm/dd					X	X	X

Signature of the physician: \_\_\_\_\_ License no.: \_\_\_\_\_ Date: yyyy/mm/dd

Program	Inadequate prophylaxis	Prophylaxis deemed acceptable	Optimal prophylaxis
3HP	• < 11 doses within 16 weeks	• ≥ 11 doses within a maximum of 16 weeks	• 12 doses in 12 weeks
Rifampicin	• < 90 doses or > 4.5 months for 90 doses or > 6 months for 120 doses	• Between 90 and 120 doses – Consult RIF compliance curve (ITL_COURBE-RIF)	• 120 doses taken over 120 consecutive days
Isoniazid (INH)	• < 180 doses – die self-administered (SA) • < 62 doses of INH (DOT)	• Program die 6 months = 180 doses SA over 9 months (270 days) • Program die 9 months = 270 doses SA over 13.5 months (405 days) • INH (DOT): ≥ 62 doses 2 times a week over 9 months (270 days) max.	• 270 doses die SA over 9 months • 78 doses INH (DOT) 2 times a week

# Rifapentine: supply



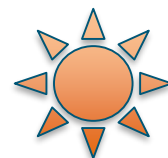
- Follow regular procedure with health centre (either UTHC for Ungava communities or IHC for Puvirnitug) or Pharmacie Voyer (for other communities served by IHC).
- Products available in Kuujjuaq and Puvirnitug if needed.
- Medication available in communities where there are outbreaks or where there is a screening initiative (e.g. to replace a lost or spoiled dose).
- Make sure that all 12 doses have been received before starting treatment.

# Rifapentine: storage and transportation

➤ Store at room temperature (between 20° and 25°)



➤ Store away from direct light



➤ Do not freeze



# Rifapentine: administration



- Administer with food if possible
- If medication is crushed, administer immediately after crushing
- Fill out the clinical evaluation form prior to each dose:  
In the presence of symptoms, do not give the dose and notify the treating physician.

# Recommendations for patients

## Prior to beginning and throughout the treatment:

- Encourage alcohol consumption reduction/cessation
- Ask for consumption of medication or substances that could potentially be hepatotoxic (e.g., acetaminophen)
- Check for risk or Sx of pregnancy
- Verify whether the patient has travel plans
- Ask for active TB symptoms
- Check for the presence of adverse reactions

# TRAITEMENT AU **3HP** POUR L'INFECTION TUBERCULEUSE LATENTE



Tant que nos poumons respirent,  
notre histoire se poursuit.

## 3HP treatment for latent tuberculosis infection



Contact at the clinic

Phone number: \_\_\_\_\_

### What is latent tuberculosis (LTBI) infection?

Latent TB infection (also known as sleeping TB) means that the TB germs are in the body, but they are NOT active and NOT causing the disease. The person does not have any symptoms and is not contagious.

### Why is it important to treat latent TB?

Latent TB treatment, with medication such as 3HP, can prevent you from getting sick and developing active TB disease.

### What is 3HP?

3HP is a combination of two medications, rifapentine and isoniazid, and vitamin B6.

This treatment is the shortest available in Nunavik. It is offered once a week for 12 weeks under Directly Observed Therapy (DOT). Under DOT, you take your medication in the presence of a healthcare professional to help detect any side effects and to help you complete your treatment.

### Who can take 3HP?

This treatment is offered to people from 2 to 65 years old. It is not recommended for pregnant or breast-feeding women, or women who expect to become pregnant. This treatment is also not recommended for people with some health conditions. Talk to your healthcare professional to find out if this treatment is right for you.

### What side effects can you expect?

3HP is a safe treatment and most people taking it do not have any side effects. You might see a red or orange discoloration of urine and other body fluids, like tears. This is normal. It will go away when you stop taking the medication. However, it can permanently stain dentures and contact lenses. Use glasses if possible.

This medication can make most contraceptive methods less effective. It is important to use condoms as an additional precaution. If you think you are pregnant, tell your healthcare professional.



In some rare situations, 3HP can be associated with liver toxicity. Avoiding or reducing alcohol intake will minimize the risks of developing adverse effects on the liver during treatment. If you do drink alcohol, blood tests will be done to check your liver function. Other drugs and medication can cause side effects if taken with 3HP (e.g. acetaminophen). Ask your healthcare professional if you have any questions about drug interactions.

Other rare side effects can occur. Make sure to mention them rapidly to your healthcare professional. They include:

- Flu-like symptoms: fever, headache, fatigue or weakness, muscle pain;
- Rash or hives, swelling of eyelids, lips, tongue or throat, hot flashes, chills or unusual sweats, dizziness, fainting, shortness of breath, wheezing;
- Numbness or tingling in your hands, arms, legs or feet;
- Nausea, vomiting, diarrhea, loss of appetite, stomach upset or pain, yellow skin, dark urine, pale stools.

You also need to mention any of the following symptoms to your healthcare professional:

- Cough that lasts more than three weeks;
- Blood in your sputum;
- Night sweats;
- Fever;
- Unusual weight loss or fatigue.

Since these symptoms can be suggestive of active TB disease, more tests can be necessary if they occur.

#### Nitrosamines in our food

Nitrosamines are potential carcinogens (could increase risk of cancer in a long time period) that were detected in very low quantity in rifapentine. They are common in some foods, drugs and in the environment. It is estimated that a three-month treatment with 3HP corresponds to about 1 year of "normal" exposure to nitrosamines in daily life. Levels found in rifapentine are safe and it is considered better to treat latent TB with 3HP than not to treat it.

#### What follow-up will be done during the treatment?

At the beginning of the treatment, and after the first month, a blood test will be done. If it is normal, most people will not need additional blood tests. If it is abnormal, further tests will be done.

Every week, your healthcare professional will monitor your symptoms and possible side effects of the treatment.

For women of child-bearing age, a urine test will be performed every month to make sure they are not pregnant.

#### What should you mention to your healthcare professional?

- Any new symptoms
- Pregnancy, or plan to get pregnant
- Drug or alcohol use
- Any new medication
- Vaccination received or planned
- Travel outside the community

\*\*\*Please mention that you are on 3HP treatment if you see another healthcare professional.



## Calendar

You are scheduled to take your 3HP  
dose every \_\_\_\_\_ for 12 weeks.

Dose	Date	Comments
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		



**If you forget your dose, visit the  
clinic as soon as possible.**



# Acknowledgements

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*Vanessa Bérubé, Pascale Desjardins, Marie-Neige Dion, Aurélie Heurtebize, Vannessa Jean-Marie, Jessika Huard, Gabriel Chouinard, Latoya Campbell, Élise Bélanger-Desjardins, Justin Grenier, Cécile Lecours, Van Duong, Marie-Ève Guay, Geneviève de Bellefeuille, Richard Massé and all other contributors to the project.*

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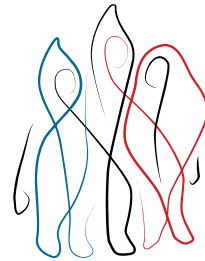
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# Questions



# Thank you! Nakurmiik!



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