

NTD Guidelines update

TREATMENT AND DIAGNOSTIC GUIDELINES, ESSENTIAL MEDICINES LISTS, ESSENTIAL IN VITRO DIAGNOSTICS LIST

Joint UNICEF, UNFPA and WHO meeting with manufacturers and suppliers, 2-6 December 2024

Dr Daniel Argaw Dagne

Road map for neglected tropical disease 2021–2030

- NTDs affect over 1 billion people worldwide
- The road map sets global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups as well as cross-cutting targets aligned with the **Sustainable Development Goals**.
- WHO's blueprint to guide global NTD actions, with its pillars, shifts and targets (overarching, cross-cutting and disease-specific)
- Endorsed by WHO on 13 November 2020 & launched on World NTD Day 2021
- The road map set targets to eradicate 2 NTDs, eliminate 8 NTDs and significantly control another 10/11 NTDs by 2030

WHA73(33) Road map for neglected tropical diseases 2021–2030¹

The Seventy-third World Health Assembly, having considered the report on neglected tropical diseases,² and recalling resolution WHA66.12 (2013) on neglected tropical diseases, WHO's road map for accelerating work to overcome the global impact of neglected tropical diseases (2012–2020), and Member States' commitment to Sustainable Development Goal target 3.3 (by 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases), decided:

- (1) to endorse, and urge Member States to implement, the new road map for neglected tropical diseases 2021–2030, "Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030";³



Recently published NTD treatment and diagnostic guidelines

WHO guideline for the treatment of visceral leishmaniasis in HIV co-infected patients in East Africa and South-East Asia

Current standard treatment for HIV/visceral leishmaniasis coinfection comprises single injections of liposomal amphotericin B (LAmB). The new treatment recommendation is a combination of **miltefosine and Liposomal Amphotericin B**.

WHO GUIDELINE for the treatment of visceral leishmaniasis in HIV co-infected patients in East Africa and South-East Asia



WHO guidelines on management of Taenia solium neurocysticercosis

<https://www.who.int/publications/i/item/9789240032231>

Considerations for the use of anthelmintic therapy for the treatment of neurocysticercosis

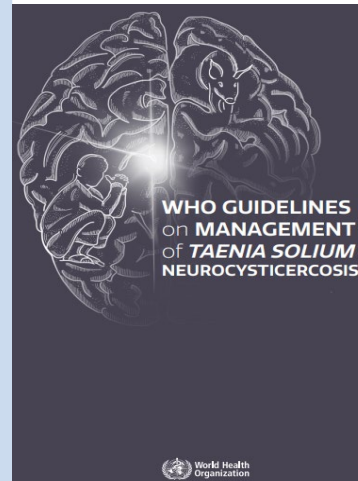
(<https://www.who.int/publications/i/item/9789240068155>)

These guidelines were developed to assist health-care providers in appropriate, evidence-based management(Dx & Tx) of **parenchymal neurocysticercosis**.

Treatment of neurocysticercosis with anthelmintics and anti-inflammatory agents – **Albendazol+ Corticosteroids or Albendazole +PZQ+Corticosteroids**

Treatment of neurocysticercosis and epilepsy with **antiepileptic drugs- Conditional**

Treatment of neurocysticercosis in immunocompromised patients (Only HIV coinfectd patients should be treated)



Recently published NTD treatment and diagnostic guidelines

WHO guideline for the treatment of visceral leishmaniasis in HIV co-infected patients in East Africa and South-East Asia

Current standard treatment for HIV/visceral leishmaniasis coinfection comprises single injections of **liposomal amphotericin B (LAmB)**.
The new treatment recommendation is a combination of **miltefosine and Liposomal Amphotericin B**.

WHO GUIDELINE
for the treatment of visceral leishmaniasis in HIV co-infected patients in East Africa and South-East Asia



WHO guidelines on management of *Taenia solium* neurocysticercosis

<https://www.who.int/publications/i/item/9789240032231>

Considerations for the use of anthelmintic therapy for the treatment of neurocysticercosis

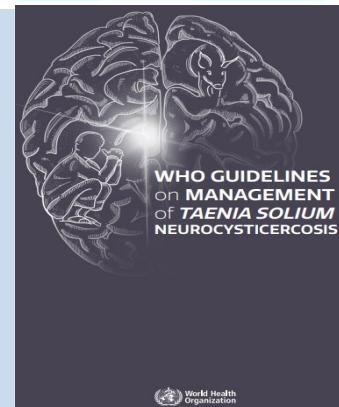
(<https://www.who.int/publications/i/item/9789240068155>)

Developed to assist HWs in appropriate, evidence-based management(Dx & Tx) of **parenchymal neurocysticercosis**.

Treatment of neurocysticercosis with anthelmintics and anti-inflammatory agents – **Albendazol+ Corticosteroids or Albendazole +PZQ+Corticosteroids**

Treatment of neurocysticercosis and epilepsy with **antiepileptic drugs- Conditional**

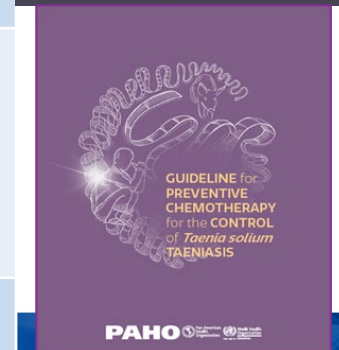
Treatment of neurocysticercosis in immunocompromised **patients**
(Only HIV coinfectd patients should be treated)



Guideline for Preventive Chemotherapy for the Control of *Taenia solium* Taeniasis

<https://www.who.int/publications/i/item/9789275123720>

Provides recommendations for preventive chemotherapy in *Taenia solium*-endemic areas using niclosamide, praziquantel, or albendazole, including dosage and population groups



Recently published NTD treatment and diagnostic guidelines

WHO guideline on preventive chemotherapy for public health control of strongyloidiasis

- Single dose ivermectin -adults and school-aged children (i.e. MDA) in endemic settings that are above a defined prevalence threshold;
- a school-based programme alone (i.e. targeted preventive chemotherapy) in endemic settings that are above a defined prevalence threshold; or
- Individual case management

Guidelines for the treatment of human African trypanosomiasis

- The *WHO interim guidelines for the treatment of gambiense HAT*, issued in 2019 added as a therapeutic option the new medicine **fexinidazole**.
- The present guidelines recommends the use of fexinidazole for treatment of rhodesiense HAT and incorporates therapeutic choices for both disease forms.

Protocol for a well-performed rabies PEP delivery: to read along with the decision trees 1- Wound risk assessment and 2 - PEP risk assessment

WHO wound category II

Minor scratches or abrasions, nibbling of uncovered skin

RIG/RmAbs and ARV

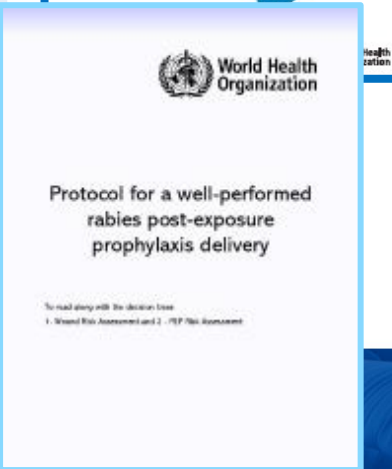
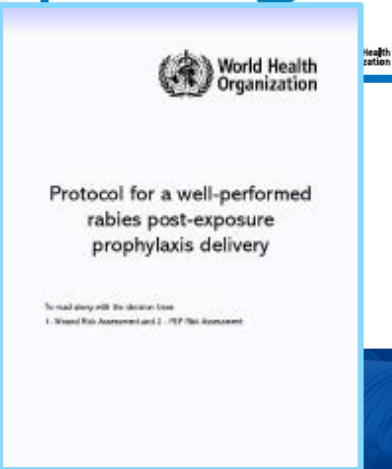
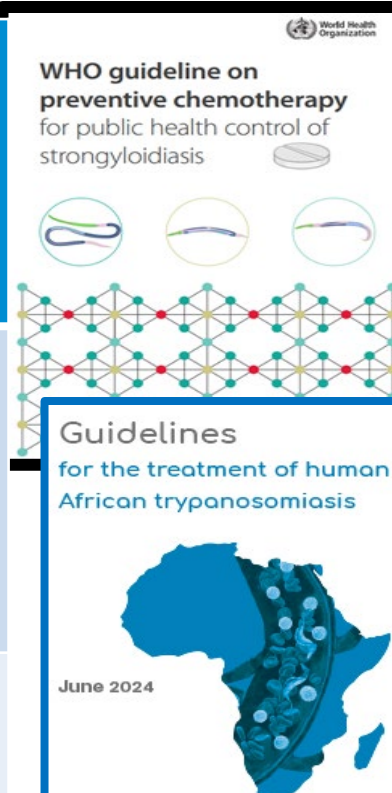


WHO wound category III

Transdermal bites or scratches, licks on broken skin, contamination of mucous membrane with saliva, exposure to a bat

Wound washing⁵, RIG/RmAbs and

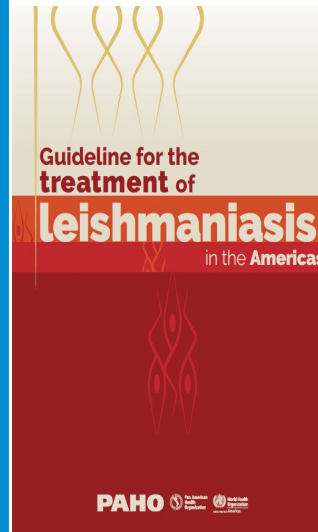
ARV



Recently published NTD treatment and diagnostic guidelines

Guidelines for the treatment of leishmaniasis in the Americas

These guidelines include several changes from the first edition. For cutaneous leishmaniasis, ketoconazole has been removed from the list of treatment options; the number of *Leishmania* species with strong evidence for the efficacy of **miltefosine** increased from **two to four**; and the recommendation for **intralesional antimonials** is now strong. For mucosal leishmaniasis, a strong recommendation for pentavalent antimonials with or without oral pentoxifylline. For visceral leishmaniasis, strong recommendations for pentavalent antimonials and amphotericin B deoxycholate are now conditional. For **miltefosine**, there is strong evidence against its usage in patients with leishmaniasis caused by *Leishmania infantum*. Other changes include recommendations by adult and pediatric populations, addition of *Leishmania* species, and for immunocompromised patients, conditions with a strong recommendation against the use of pentavalent antimonials.

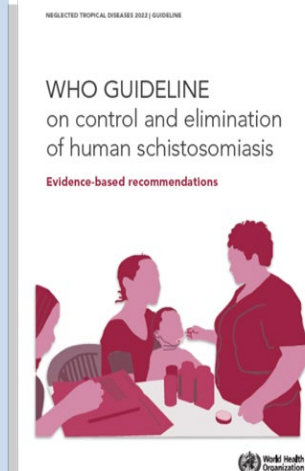


WHO Guideline on control and elimination of human schistosomiasis

In endemic communities with prevalence of *Schistosoma* spp. infection $\geq 10\%$, recommends annual PC with a single dose of **praziquantel** at $\geq 75\%$ treatment coverage in all age groups from **2 years old, including adults, pregnant women after the first trimester and lactating women**.

Younger children, **aged < 2 years**, may be considered for treatment on an individual clinical basis. The medication for children aged <2 years should be an **oral disintegrating tablet formulation**.

Point-of-care **circulating cathodic antigen** test can be used to determine prevalence of *S. mansoni*;



Anthelmintics – WHO model list of essential medicines, 23rd list, 2023

Medicine name	EML section	Formulations	Indication
albendazole	Intestinal anthelmintics	Oral > Solid > tablet: 400 mg (chewable, scored)	Echinococcosis
albendazole	Intestinal anthelmintics	Oral > Solid > tablet: 400 mg (chewable, scored)	Enterobiasis
albendazole	Intestinal anthelmintics	Oral > Solid > tablet: 400 mg (chewable, scored)	Trichuriasis
albendazole	Intestinal anthelmintics	Oral > Solid > tablet: 400 mg (chewable, scored)	Hookworm diseases
albendazole	Intestinal anthelmintics	Oral > Solid > tablet: 400 mg (chewable, scored)	Cysticercosis
albendazole	Intestinal anthelmintics	Oral > Solid > tablet: 400 mg (chewable, scored)	Ascariasis
albendazole	Cysticidal medicines	Oral > Solid > tablet: 400 mg (chewable, scored); 200 mg (chewable)	Other specified echinococcosis
albendazole	Cysticidal medicines	Oral > Solid > tablet: 400 mg (chewable, scored); 200 mg (chewable)	Cysticercosis of CNS
albendazole	Antifilarials	Oral > Solid > tablet: 400 mg (chewable, scored)	Lymphatic filariasis
diethylcarbamazine	Antifilarials	Oral > Solid: 50 mg tablet (dihydrogen citrate); 100 mg tablet (dihydrogen citrate)	Lymphatic filariasis
ivermectin	Intestinal anthelmintics	Oral > Solid > tablet: 3 mg	Strongyloidiasis
ivermectin	Intestinal anthelmintics	Oral > Solid > tablet: 3 mg	Ascariasis
ivermectin	Intestinal anthelmintics	Oral > Solid > tablet: 3 mg	Trichuriasis
ivermectin	Intestinal anthelmintics	Oral > Solid > tablet: 3 mg	Hookworm diseases
ivermectin	Intestinal anthelmintics	Oral > Solid > tablet: 3 mg	Ancylostomiasis
ivermectin	Antifilarials	Oral > Solid > tablet: 3 mg	Onchocerciasis
ivermectin	Antifilarials	Oral > Solid > tablet: 3 mg	Lymphatic filariasis
levamisole	Intestinal anthelmintics	Oral > Solid > tablet: 50 mg (as hydrochloride); 150 mg (as hydrochloride)	Ascariasis
mebendazole	Intestinal anthelmintics	Oral > Solid > tablet: 100 mg (chewable); 500 mg (chewable)	Ascariasis
mebendazole	Intestinal anthelmintics	Oral > Solid > tablet: 100 mg (chewable); 500 mg (chewable)	Enterobiasis
mebendazole	Intestinal anthelmintics	Oral > Solid > tablet: 100 mg (chewable); 500 mg (chewable)	Trichuriasis

<https://www.who.int/groups/expert-committee-on-selection-and-use-of-essential-medicines/essential-medicines-lists>

Anthelmintics – WHO model list of essential medicines, 23rd list, 2023

mebendazole	Intestinal anthelmintics	Oral > Solid > tablet: 100 mg (chewable); 500 mg (chewable)	Hookworm diseases
mebendazole	Cysticidal medicines	Oral > Solid > tablet: 100 mg (chewable); 500 mg (chewable)	Other specified echinococcosis
niclosamide	Intestinal anthelmintics	Oral > Solid: 500 mg tablet (chewable)	Hymenolepiasis
niclosamide	Intestinal anthelmintics	Oral > Solid: 500 mg tablet (chewable)	Diphyllobothriasis
niclosamide	Intestinal anthelmintics	Oral > Solid: 500 mg tablet (chewable)	Taeniasis due to Taenia saginata
niclosamide	Intestinal anthelmintics	Oral > Solid: 500 mg tablet (chewable)	Taeniasis due to Taenia solium
oxamniquine	Antischistosomes and other antitremitodes	Oral > Liquid: 250 mg per 5 mL Oral > Solid > capsule: 250 mg	Schistosomiasis due to S mansoni
praziquantel	Antischistosomes and other antitremitodes	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Paragonimiasis
praziquantel	Antischistosomes and other antitremitodes	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Clonorchiasis
praziquantel	Antischistosomes and other antitremitodes	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Opisthorchiasis
praziquantel	Antischistosomes and other antitremitodes	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Schistosomiasis
praziquantel	Intestinal anthelmintics	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Taeniasis due to Taenia saginata
praziquantel	Intestinal anthelmintics	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Taeniasis due to Taenia solium
praziquantel	Intestinal anthelmintics	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Hymenolepiasis
praziquantel	Intestinal anthelmintics	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Diphyllobothriasis
praziquantel	Cysticidal medicines	Oral > Solid > tablet: 600 mg (scored); 500 mg; 150 mg	Cysticercosis of CNS
pyrantel	Intestinal anthelmintics	Oral > Solid > tablet: 250 mg (chewable) (as embonate or pamoate)	Ascariasis
pyrantel	Intestinal anthelmintics	Oral > Solid > tablet: 250 mg (chewable) (as embonate or pamoate)	Trichuriasis
pyrantel	Intestinal anthelmintics	Oral > Solid > tablet: 250 mg (chewable) (as embonate or pamoate)	Enterobiasis
pyrantel	Intestinal anthelmintics	Oral > Solid > tablet: 250 mg (chewable) (as embonate or pamoate)	Hookworm diseases
suramin sodium	Antifilarials	Parenteral > General injections > IV: 1 g in vial	Filariasis
triclabendazole	Antischistosomes and other antitremitode medicines	Oral > Solid > tablet: 250 mg (scored)	Paragonimiasis
triclabendazole	Antischistosomes and other antitremitode medicines	Oral > Solid > tablet: 250 mg (scored)	Fascioliasis

Antibacterial - WHO model list of essential medicines, 23rd list, 2023

azithromycin	Watch group antibiotics	Oral > Liquid: 200 mg per 5 mL (anhydrous) powder for oral liquid Oral > Solid > dosage form: 250 mg (anhydrous); 500 mg (anhydrous)	Trachoma
azithromycin	Watch group antibiotics	Oral > Liquid: 200 mg per 5 mL (anhydrous) powder for oral liquid Oral > Solid > dosage form: 250 mg (anhydrous); 500 mg (anhydrous)	Cholera
azithromycin	Watch group antibiotics	Oral > Liquid: 200 mg per 5 mL (anhydrous) powder for oral liquid Oral > Solid > dosage form: 250 mg (anhydrous); 500 mg (anhydrous)	Yaws
azithromycin	Watch group antibiotics	Oral > Liquid: 200 mg per 5 mL (anhydrous) powder for oral liquid Oral > Solid > dosage form: 250 mg (anhydrous); 500 mg (anhydrous)	Chlamydia trachomatis
azithromycin	Watch group antibiotics	Oral > Liquid: 200 mg per 5 mL (anhydrous) powder for oral liquid Oral > Solid > dosage form: 250 mg (anhydrous); 500 mg (anhydrous)	Typhoid fever
azithromycin	Watch group antibiotics	Oral > Liquid: 200 mg per 5 mL (anhydrous) powder for oral liquid Oral > Solid > dosage form: 250 mg (anhydrous); 500 mg (anhydrous)	Gonococcal infection
clofazimine	Antileprosy medicines	Oral > Solid: 100 mg; 50 mg	Leprosy
cloxacillin	Access group antibiotics	Oral > Liquid: 125 mg per 5 mL (as sodium salt) powder for oral liquid Oral > Solid: 500 mg (as sodium salt) capsule; 1 g (as sodium salt) capsule Parenteral > General injections > unspecified: 500 mg in vial (as sodium salt) powder for injection Oral > Liquid: 125 mg per 5 mL (as sodium salt) powder for oral liquid; 250 mg per 5 mL (as sodium salt) powder for oral liquid Parenteral > General injections > unspecified: 500 mg in vial (as sodium salt) powder for injection; 250 mg in vial (as sodium salt) powder for injection Oral > Solid > capsule: 500 mg (as sodium salt); 1 g (as sodium salt); 250 mg (as sodium salt)	Bacterial cellulitis, erysipelas or lymphangitis
dapsone	Antileprosy medicines	Oral > Solid: 100 mg tablet; 50 mg tablet; 25 mg tablet	Leprosy
ofloxacin	Antituberculosis medicines	Oral > Solid: 200 mg; 400 mg	Multi-drug resistant Mycobacterium tuberculosis

Antibacterial - WHO model list of essential medicines, 23rd list, 2023

clindamycin	Access group antibiotics	<p>Oral > Liquid: 75 mg per 5 mL (as palmitate hydrochloride)</p> <p>Oral > Solid: 150 mg (as hydrochloride) capsule</p> <p>Parenteral > General injections > unspecified: 150 mg per mL (as phosphate) injection</p> <p>Parenteral > General injections > IV: 150 mg per mL (as phosphate); 600 mg per 4 mL (as phosphate); 900 mg per 6 mL (as phosphate)</p> <p>Oral > Liquid: 75 mg per 5 mL powder for oral liquid (as palmitate hydrochloride)</p> <p>Oral > Solid: 150 mg (as hydrochloride)</p>	Necrotising fasciitis
clindamycin	Access group antibiotics	<p>Oral > Liquid: 75 mg per 5 mL (as palmitate hydrochloride)</p> <p>Oral > Solid: 150 mg (as hydrochloride) capsule</p> <p>Parenteral > General injections > unspecified: 150 mg per mL (as phosphate) injection</p> <p>Parenteral > General injections > IV: 150 mg per mL (as phosphate); 600 mg per 4 mL (as phosphate); 900 mg per 6 mL (as phosphate)</p> <p>Oral > Liquid: 75 mg per 5 mL powder for oral liquid (as palmitate hydrochloride)</p> <p>Oral > Solid: 150 mg (as hydrochloride)</p>	Bacterial infection of joint
rifampicin	Antituberculosis medicines	<p>Oral > Liquid: 20 mg per mL</p> <p>Oral > Solid: 150 mg; 300 mg</p> <p>Parenteral > General injections > IV: 600 mg in vial powder for injection</p>	Other specified tuberculosis
rifampicin	Antileprosy medicines	<p>Oral > Liquid: 20 mg per mL</p> <p>Oral > Solid: 150 mg; 300 mg</p>	Leprosy

Antiprotozoal NTD medicines, WHO model list of essential medicines, 23rd list, 2023

Medicine name	EML section	Formulations	Indication
amphotericin B	Antileishmaniasis medicines	Parenteral > General injections > IV: 50 mg in vial powder for injection (liposomal complex); 50 mg in vial powder for injection (as sodium deoxycholate)	Visceral leishmaniasis
eflornithine	Medicines for treatment of 2nd stage African trypanosomiasis	Parenteral > General injections > IV: 200 mg per mL in 50 mL bottle (hydrochloride)	African trypanosomiasis
fexinidazole	Medicines for treatment of 1st stage African trypanosomiasis	Oral > Solid: 600 mg	African trypanosomiasis
fexinidazole	Medicines for treatment of 2nd stage African trypanosomiasis	Oral > Solid: 600 mg	African trypanosomiasis
meglumine antimoniate	Antileishmaniasis medicines	Parenteral > General injections > IM: 1.5 g per 5 mL in 5 mL ampoule	Visceral leishmaniasis
meglumine antimoniate	Antileishmaniasis medicines	Parenteral > General injections > IM: 1.5 g per 5 mL in 5 mL ampoule	Cutaneous leishmaniasis
meglumine antimoniate	Antileishmaniasis medicines	Parenteral > General injections > IM: 1.5 g per 5 mL in 5 mL ampoule	Mucocutaneous leishmaniasis
miltefosine	Antileishmaniasis medicines	Oral > Solid: 10 mg; 50 mg	Visceral leishmaniasis
miltefosine	Antileishmaniasis medicines	Oral > Solid: 10 mg; 50 mg	Mucocutaneous leishmaniasis
miltefosine	Antileishmaniasis medicines	Oral > Solid: 10 mg; 50 mg	Cutaneous leishmaniasis
nifurtimox	American trypanosomiasis	Oral > Solid > tablet: 30 mg (scored); 120 mg (scored)	Chagas disease
nifurtimox	Medicines for the treatment of 2nd stage African trypanosomiasis	Oral > Solid > tablet: 30 mg (scored); 120 mg (scored)	African trypanosomiasis
paromomycin	Antileishmaniasis medicines	Parenteral > General injections > IM: 750 mg paromomycin base (as sulfate)	Visceral leishmaniasis
pentamidine	Antileishmaniasis medicines	Parenteral > General injections > IM: 200 mg (as isetionate); 300 mg (as isetionate)	Visceral leishmaniasis
pentamidine	Medicines for the treatment of 1st stage African trypanosomiasis	Parenteral > General injections > IM: 300 mg in vial (as isetionate) powder for injection	African trypanosomiasis
sodium stibogluconate	Antileishmaniasis medicines	Parenteral > General injections > unspecified: 100 mg per mL in 30 mL vial	Visceral leishmaniasis
sodium stibogluconate	Antileishmaniasis medicines	Parenteral > General injections > unspecified: 100 mg per mL in 30 mL vial	Mucocutaneous leishmaniasis
sodium stibogluconate	Antileishmaniasis medicines	Parenteral > General injections > unspecified: 100 mg per mL in 30 mL vial	Cutaneous leishmaniasis
suramin sodium	Medicines for the treatment of 1st stage African trypanosomiasis	Parenteral > General injections > IV: 1 g in vial	African trypanosomiasis

Antileprosy medicines

Guidelines for the Diagnosis, Treatment and Prevention of Leprosy



Table 4. Recommended regimens for drug-resistant leprosy

Resistance type	Treatment	
	First 6 months (daily)	Next 18 months (daily)
Rifampicin resistance	Ofloxacin 400 mg* + minocycline 100 mg + clofazimine 50 mg	Ofloxacin 400 mg* OR minocycline 100 mg + clofazimine 50 mg
	Ofloxacin 400 mg* + clarithromycin 500 mg + clofazimine 50 mg	Ofloxacin 400 mg* + clofazimine 50 mg
Rifampicin and ofloxacin resistance	Clarithromycin 500 mg + minocycline 100 mg + clofazimine 50 mg	Clarithromycin 500 mg OR minocycline 100 mg + clofazimine 50 mg

*Ofloxacin 400 mg can be replaced by levofloxacin 500 mg OR moxifloxacin 400 mg

Table 5. Rifampicin dose for single-dose rifampicin (SDR)

Age/weight	Rifampicin single dose
15 years and above	600 mg
10–14 years	450 mg
Children 6–9 years (weight ≥20 kg)	300 mg
Children <20 kg (≥2 years)	10–15 mg/kg

NTD medicines

Increased interest in NTD market

Expert Review Panel (ERP) supports the immediate procurement needs of partners and procurers

Challenges exist:

- Low profit and unattractive market for manufacturers
- Lack of visible market
- Donation of medicines from pharmaceutical companies

Priority list of medicines (included in 9th invitation to EOI)

Medicines	Prequalified	Under PQ assessment	ERP risk category 1 or 2**
Albendazole 400mg tablet (chewable)	3	2	1
Mebendazole 500mg tablet (chewable)	1	0	0
Diethylcarbamazine citrate 100mg tablet	1	0	0
Praziquantel 600mg tablet	3	1	0
Arpraziquantel 150mg and 300mg dispersible tablet	1	0	0
Ivermectin 3mg tablet	2	0	0
Moxidectin 2mg tablet	0	0	0
Miltefosine 10mg and 50mg capsule	1	1	1
Sodium stibogluconate 10% SB ⁵⁺ (100 mg/ml) 30ml or 100ml vial (injectable)	0	1	1
Paromomycin solution for injection 375mg/ml, 2 ml ampoule	0	0	0
Azithromycin 500mg tablet	1	1	0
Fexinidazole 600mg tablet	1	0	0
Rifampicin 150mg and 300mg capsules	4	0	
Liposomal amphotericin B powder for injection, 50mg vial	1	0	0
Rifampicin/Clarithromycin tablet 300mg/250mg	0	0	0

Thank you



Health For All



VISIT WHO.INT

