

Pharmacy Standards

- ☐ **Medication Safety**
- ☐ **Pharmacy Instructions**
- ☐ **Albendazole**
- ☐ **Ivermectin**
- ☐ **Vitamin A**
- ☐ **Inhaler Instructions**

MEDICATION EDUCATION REFERENCE SHEET

	MEDICATION By GENERIC NAME	BRAND NAME	DOSAGE FORM	OTC/RX	THERAPEUTIC CLASS	TAKE WITH FOOD	STOMACH UPSET	CAUTION IN SUN	DIARRHEA
A-B	acetaminophen	Infant's Tylenol (80mg/0.8mL)	D	OTC	analgesic (pain) ; anti-pyretic (fever)				
	acetaminophen	Children's Tylenol 160mg/5mL	SU	OTC	analgesic (pain) ; anti-pyretic (fever)				
	acetaminophen	Tylenol (Regular Strength)	T	OTC	analgesic (pain) ; anti-pyretic (fever)				
	acetaminophen	Tylenol (Extra Strength)	T	OTC	analgesic (pain) ; anti-pyretic (fever)				
	albendazole	Vermox	T	RX	anti-helminthic	Y			
	albuterol inhaler	Ventolin HFA	IH	RX	inhaler (asthma)				
	amiodarone	Cordarone	T	RX	anti-arrhythmic (heart disease)	Y	Y	Y	
	amitriptyline	Endep	T	RX	antidepressant				
	amoxicillin	Amoxil	SU	RX	antibiotic	Y	Y		Y
	amoxicillin	Amoxil	C	RX	antibiotic	Y	Y		Y
	aspirin (not enteric coated)	Anacin	T	RX	analgesic (pain); platelet inhibitor	Y	Y		
	atovaquone/proguanil	Malarone	T	RX	antimalarial	Y	Y		
	azithromycin	Zithromax	T	RX	antibiotic				
	azithromycin	Zithromax	SU	RX	antibiotic				
	azithromycin	Zithromax	SU	RX	antibiotic				
C-D	captopril	Capoten	T	RX	anti-hypertensive	N (empty stomach)	Y	Y	
	carbamazepine	Tegretol	T	RX	anticonvulsant	Y		Y	
	carbamide peroxide	Debrox	otic drops	OTC	earwax remover				
	ceftriaxone	Rocephin	IJ	RX	antibiotic				Y
	cefuroxime	Ceftin	T	RX	antibiotic	Y	Y		Y
	cephalexin	Keflex	C	RX	antibiotic				Y
	cephalexin	Keflex	C	RX	antibiotic				Y
	chloroquine	Aralen	T	RX	anti-malarial	Y	Y	Y	
	ciprofloxacin	Cipro	T	RX	antibiotic			Y	Y
	clindamycin	Cleocin	C	RX	antibiotic				Y
	coal tar	Estar Gel	TP	OTC	psoriasis			Y	

MEDICATION EDUCATION REFERENCE SHEET

	MEDICATION By GENERIC NAME	BRAND NAME	DOSAGE FORM	OTC/RX	THERAPEUTIC CLASS	TAKE WITH FOOD	STOMACH UPSET	CAUTION IN SUN	DIARRHEA
C-D	contraceptive (oral), Estrogen	Estrogen	T	RX	contraceptive			Y	
	cyclobenzaprine	Flexeril	T	RX	muscle relaxant			Y	
	cyproheptadine	Periactin	T, SY	RX	appetite stimulant			Y	
	demeclocycline	Declomycin	T	RX	antibiotic			Y	
	desipramine	Norpramin	T	RX	antidepressant			Y	
	diphenhydramine	Benadryl	T	RX	anti-histamine				
	diphenhydramine 50mg/ml vial	Benadryl IV	IJ	RX	anti-histamine				
	diclofenac	Voltaren	T	RX	NSAID; antiarthritic	Y	Y	Y	
	diflunisal	Dolobid	T	RX	NSAID; antiarthritic	Y	Y	Y	
	diltiazem	Cardizem	T	RX	anti-hypertensive			Y	
	doxycycline	Doxy	T	RX	antibiotic	Y	Y	Y	
E-F	enalapril	Vasotec	T	RX	anti-hypertensive			Y	
	famotidine	Pepcid	T	RX	heartburn relief; anti-inflammatory				
	ferrous sulfate	Feosol	T	RX	iron supplement	Y	Y		
	fluconazole	Diflucan	T	RX	antifungal				Y
	fluphenazine	Prolixin		RX	anti-psychotic; tranquilizer			Y	
	furosemide	Lasix	T	RX	anti-hypertensive; diuretic			Y	
G-H-I	gentamicin	Garamycin	IJ	RX	antibiotic			Y	
	glipizide	Glucotrol	T	RX	anti-diabetic; sulfonylurea			Y	
	haloperidol	Haldol	T; SU	RX	anti-psychotic; tranquilizer			Y	
	hydralazine	Apresoline	T	RX	anti-hypertensive			Y	
	hydrochlorthiazide	Hydrodiuril	T	RX	anti-hypertensive			Y	
K-L	ibuprofen	Motrin	T; SU	OTC	NSAID; antiarthritic	Y	Y	Y	
	indapamide	Lozol	T	RX	anti-hypertensive; diuretic			Y	

MEDICATION EDUCATION REFERENCE SHEET

	MEDICATION By GENERIC NAME	BRAND NAME	DOSAGE FORM	OTC/RX	THERAPEUTIC CLASS	TAKE WITH FOOD	STOMACH UPSET	CAUTION IN SUN	DIARRHEA
K-L	ivermectin 6mg	Stromectol	T	RX	antihelminthic	N (empty stomach)			
	labetalol	Normodyne	T	RX	anti-hypertensive			Y	
	loperamide	Immodium	SU	OTC	anti-diarrheal				
	lovastatin	Mevacor	T	RX	anti-cholesterol			Y	
M	mefloquine	Lariam	T	RX	antimalarial	Y	Y		
	metolazone	Zaroxolyn	T	RX	anti-hypertensive; diuretic			Y	
	metronidazole	Flagyl	T	RX	antibiotic				
	minocycline	Minocin	C	RX	antibiotic			Y	Y
	minoxidil	Rogaine	TP	OTC	hair-growth stimulator			Y	
	moxifloxacin	Avelox	T	RX	antibiotic	Y	Y		Y
	naprosyn	Anaprox	T	OTC	NSAID; antiarthritic	Y	Y		
N-Z	nifedipine	Adalat	T	RX	antihypertensive				
	nortriptyline	Pamelor	T	RX	antidepressant				
	perphenazine	Trilafon	T	RX	anti-psychotic; tranquilizer			Y	
	phenytoin	Dilantin	C	RX	anticonvulsant				
	prednisolone 15mg/5ml	Prelone	SY	RX			Y		
	prednisone	Winpred	T	RX	anti-inflammatory steroid	Y	Y		
	prochlorperazine	Compazine	T;SP	RX	antinausea; antiemetic				
	selegiline	Eldepryl	T	RX	anti-Parkinsonism; MAO Inhibitor			Y	
	sulfamethoxazole/trimeth	Bactrim DS	T;SU	RX	antibiotic	stomach)			
	triamterene	Dyrenium	C	RX	anti-hypertensive; diuretic			Y	
	tobramycin ophthalmic	Tobrex	OP	RX	anti-biotic/inflammatory steroid				
	valproic acid	Depakote	T;SU	RX	anticonvulsant	Y	Y		

LEGEND

T = tablets
C = capsules
D = oral drops

IJ = injection

IH = inhaler
OI = ointment
OP = eye drops





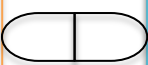
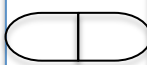
SU = oral suspension

SY = oral syrup
SP= suppository
TP= topical product






PHARMACY INSTRUCTIONS:

Many of the patients that we will meet are illiterate. Our scripts are pictorial based and universally recognized by medical missions. Please fill in the blank squares under the pictures to show when medication should be taken (sunrise, noon, sunset and night). When filling in, please draw the amount of medicine that needs to be taken with the appropriate shape of pill. For example:








Take 1 capsule twice a day:

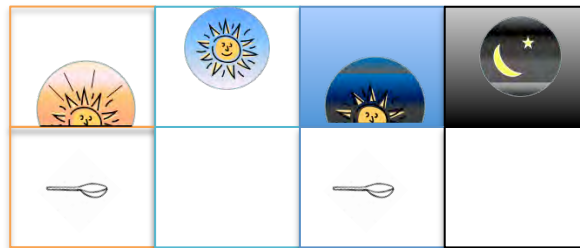
Take one tablet one time a day:

Take a half tablet 3 times per day:

Take 1 teaspoon twice a day:

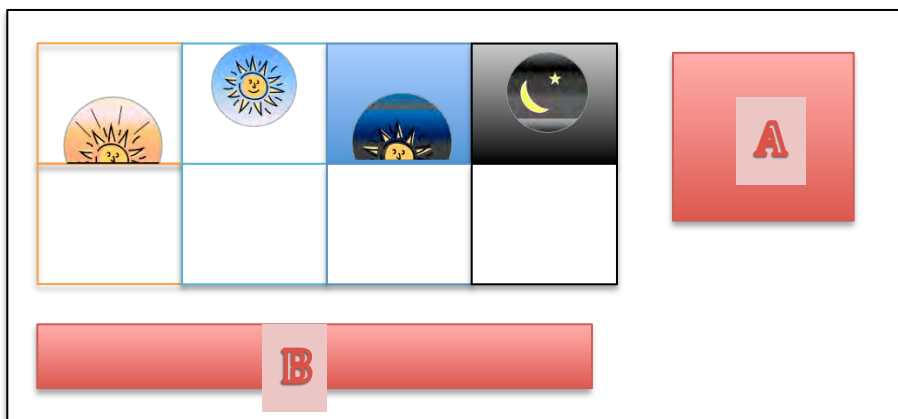


Explaining proper medication treatment is imperative to the success of our clinic and the healing of the patient. Please have patients repeat how often, when and what amount of medication they are taking to ensure proper safety.

NAMES FOR SCRIPTS:

Section A: The right side of each label has room for one of our colored stamps. Please stamp each patients hand (designating that they have been to pharmacy) and stamp the script label with the same stamp. This will help mothers identify which script is for which child once she is home. The example script below shows this space is in red noted at 'A'.

Section B: If they can read there is room underneath the grid to write their name. The example script below shows this space is in red noted at 'B'.



Albendazole Dosage

The information at Drugs.com is not a substitute for medical advice. ALWAYS consult your doctor or pharmacist.

Usual Adult Dose for:

- Hydatid Disease
- Neurocysticercosis
- Cutaneous Larva Migrans
- Ascariasis
- Trichostrongylosis
- Pinworm Infection (*Enterobius vermicularis*)
- Filariasis
- Hookworm Infection (*Necator* or *Ancylostoma*)
- Visceral Larva Migrans (*Toxicariasis*)
- Strongyloidiasis
- Trichinosis
- Whipworm Infection (*Trichuris trichiura*)
- Capillariasis
- Gnathostomiasis
- *Clonorchis sinensis* (Liver Fluke)
- Giardiasis
- *Cysticercus cellulosae* (*Cysticercosis*)
- Echinococcus Infection
- Microsporidiosis

Usual Pediatric Dose for:

- Hydatid Disease
- Neurocysticercosis
- Capillariasis
- Cutaneous Larva Migrans
- *Cysticercus cellulosae* (*Cysticercosis*)

- Echinococcus infection
- Ascariasis
- Trichostrongylosis
- Pinworm Infection (*Enterobius vermicularis*)
- Filariasis
- Hookworm Infection (*Necator* or *Ancylostoma*)
- Visceral Larva Migrants (Toxicariasis)
- Strongyloidiasis
- Trichinosis
- Whipworm Infection (*Trichuris trichiura*)
- Gnathostomiasis
- *Clonorchis sinensis* (Liver Fluke)
- Giardiasis

Additional dosage information:

- Renal Dose Adjustments
- Liver Dose Adjustments
- Precautions
- Dialysis
- Other Comments

Usual Adult Dose for Hydatid Disease

Cystic hydatid disease of the liver, lung, and peritoneum due to *Echinococcus granulosus*:

60 kg or more: 400 mg orally twice a day with meals

Less than 60 kg: 15 mg/kg/day orally, given in divided doses twice a day with meals (maximum dose: 800 mg/day)

Duration: 28-day cycle followed by a 14-day albendazole-free interval, for a total of 3 cycles

When administering albendazole in the presurgical or postsurgical setting, optimal killing of cyst contents is achieved when 3 courses of therapy have been given.

Usual Adult Dose for Neurocysticercosis

Parenchymal neurocysticercosis:

60 kg or more: 400 mg orally twice a day with meals

Less than 60 kg: 15 mg/kg/day orally, given in divided doses twice a day with meals (maximum dose: 800 mg/day)

Duration: 8 to 30 days

Usual Adult Dose for Cutaneous Larva Migrans

400 mg orally once a day for 3 days

Case Report (4)

400 mg orally twice a day for 3 days; in some of the reports therapy was continued for 5 days

Usual Adult Dose for Ascariasis

400 mg orally once as a single dose

Usual Adult Dose for Trichostrongylosis

400 mg orally once as a single dose

Usual Adult Dose for Pinworm Infection (*Enterobius vermicularis*)

400 mg orally once as a single dose; may repeat in 2 weeks

Some clinicians recommend all household contacts of patients with enterobiasis receive treatment, especially when multiple or repeated symptomatic infections occur, since such contacts commonly also are infected.

Usual Adult Dose for Filariasis

Due to *Mansonella perstans*: 400 mg orally twice a day for 10 days

Usual Adult Dose for Hookworm Infection (*Necator* or *Ancylostoma*)

Intestinal infections due to *A duodenal* or *N americanus*: 400 mg orally once as a single dose; stool examination for eggs should be repeated 2 weeks after treatment and dose should be repeated if positive

Eosinophilic enterocolitis due to *A caninum*: 400 mg orally once as a single dose

Usual Adult Dose for Visceral Larva Migrans (Toxicariasis)

400 mg orally twice a day for 5 days; however, optimum duration is unknown and some clinicians recommend treatment for up to 20 days

Usual Adult Dose for Strongyloidiasis

400 mg orally twice a day for 2 days; may be necessary to repeat or prolong treatment or use other agents in immunocompromised patients or patients with disseminated disease

Usual Adult Dose for Trichinosis

400 mg orally twice a day for 8 to 14 days

Usual Adult Dose for Whipworm Infection (*Trichuris trichiura*)

400 mg orally once a day for 3 days

Usual Adult Dose for Capillariasis

400 mg orally once a day for 10 days

Usual Adult Dose for Gnathostomiasis

400 mg orally twice a day for 21 days

Usual Adult Dose for *Clonorchis sinensis* (Liver Fluke)

10 mg/kg orally once a day for 7 days

Usual Adult Dose for Giardiasis

400 mg orally once a day for 5 days; may be given alone or in combination with metronidazole

Usual Adult Dose for *Cysticercus cellulosae* (Cysticercosis)

400 mg orally twice a day for 8 to 30 days; may repeat as necessary

Usual Adult Dose for Echinococcus Infection

E. granulosus: 400 mg orally twice a day for 1 to 6 months

Usual Adult Dose for Microsporidiosis

Disseminated: 400 mg orally twice a day

Intestinal: 400 mg orally twice a day for 21 days

Ocular: 400 mg orally twice a day in combination with fumagillin (not commercially available in the US)

Usual Pediatric Dose for Hydatid Disease

Cystic hydatid disease of the liver, lung, and peritoneum due to *Echinococcus granulosus*:

60 kg or more: 400 mg orally twice a day with meals

Less than 60 kg: 15 mg/kg/day orally, given in divided doses twice a day with meals (maximum dose: 800 mg/day)

Duration: 28-day cycle followed by a 14-day albendazole-free interval, for a total of 3 cycles

When administering albendazole in the presurgical or postsurgical setting, optimal killing of cyst contents is achieved when 3 courses of therapy have been given.

Usual Pediatric Dose for Neurocysticercosis

Parenchymal neurocysticercosis:

60 kg or more: 400 mg orally twice a day with meals

Less than 60 kg: 15 mg/kg/day orally, given in divided doses twice a day with meals (maximum dose: 800 mg/day)

Duration: 8 to 30 days

Usual Pediatric Dose for Capillariasis

400 mg orally once a day for 10 days

Case Reports (n=2)

Greater than 18 months: 400 mg per day for 21 days, up to 100 days

Usual Pediatric Dose for Cutaneous Larva Migrans

400 mg orally once a day for 3 days

Case Report (n=1)

11 months: 2.5 mL (suspension: 200 mg/5 mL) orally twice a day for 3 days

Usual Pediatric Dose for *Cysticercus cellulosae* (Cysticercosis)

15 mg/kg/day orally, given in divided doses twice a day for 8 to 30 days; may repeat as necessary

Maximum dose: 800 mg/day

Usual Pediatric Dose for *Echinococcus* Infection

E. granulosus: 15 mg/kg/day orally, given in divided doses twice a day for 1 to 6 months

Maximum dose: 800 mg/day

Usual Pediatric Dose for Ascariasis

400 mg orally once as a single dose

Usual Pediatric Dose for Trichostrongylosis

400 mg orally once as a single dose

Usual Pediatric Dose for Pinworm Infection (*Enterobius vermicularis*)

400 mg orally once as a single dose; may repeat in 2 weeks

Some clinicians recommend all household contacts of patients with enterobiasis receive treatment, especially

when multiple or repeated symptomatic infections occur, since such contacts commonly also are infected.

Usual Pediatric Dose for Filariasis

Due to *Mansonella perstans*: 400 mg orally twice a day for 10 days

Usual Pediatric Dose for Hookworm Infection (*Necator* or *Ancylostoma*)

Intestinal infections due to *A duodenal* or *N americanus*: 400 mg orally once as a single dose; stool examination for eggs should be repeated 2 weeks after treatment and dose should be repeated if positive

Eosinophilic enterocolitis due to *A caninum*: 400 mg orally once as a single dose

Usual Pediatric Dose for Visceral Larva Migrans (Toxicariasis)

400 mg orally twice a day for 5 days; however, optimum duration is unknown and some clinicians recommend treatment for up to 20 days

Usual Pediatric Dose for Strongyloidiasis

400 mg orally twice a day for 2 days; may be necessary to repeat or prolong treatment or use other agents in immunocompromised patients or patients with disseminated disease

Usual Pediatric Dose for Trichinosis

400 mg orally twice a day for 8 to 14 days

Usual Pediatric Dose for Whipworm Infection (*Trichuris trichiura*)

400 mg orally once a day for 3 days

Usual Pediatric Dose for Gnathostomiasis

400 mg orally twice a day for 21 days

Usual Pediatric Dose for *Clonorchis sinensis* (Liver Fluke)

10 mg/kg orally once a day for 7 days

Usual Pediatric Dose for Giardiasis

400 mg orally once a day for 5 days; may be given alone or in combination with metronidazole

Renal Dose Adjustments

Liver Dose Adjustments

Data not available

Precautions

Rare fatalities associated with albendazole use have been reported due to granulocytopenia or pancytopenia. Bone marrow suppression, aplastic anemia, and agranulocytosis in patients with and without underlying hepatic dysfunction have been observed with albendazole. Occasional reversible reductions in total white blood cell count have also been reported with albendazole. Blood counts should be monitored at the start of each 28-day treatment cycle, and every 2 weeks while on albendazole in all patients. Patients with liver disease, including hepatic echinococcosis, appear to be more susceptible to bone marrow suppression leading to pancytopenia, aplastic anemia, agranulocytosis, and leukopenia and therefore require closer monitoring of blood counts. Albendazole should be discontinued in all patients if clinically significant decreases in blood cell counts occur.

In clinical trials, albendazole has been associated with mild to moderate elevations of hepatic enzymes. These elevations have generally returned to normal upon discontinuation of albendazole therapy. There have also been reports of acute liver failure of uncertain causality and hepatitis. Liver function tests (transaminases) should be performed before the start of each treatment cycle and at least every 2 weeks during therapy. If hepatic enzymes exceed twice the upper limit of normal, discontinuation of albendazole treatment should be considered based on individual patient circumstances. Restarting albendazole treatment in patients whose hepatic enzymes have normalized off treatment is an individual decision that should take into account the risk/benefit of further albendazole usage. Laboratory tests should be performed frequently if albendazole treatment is restarted. Patients with abnormal liver function test results are at risk for hepatotoxicity and bone marrow suppression. Therapy should be discontinued if liver enzymes are significantly increased or if clinically significant decreases in blood cell counts occur.

Patients being treated for neurocysticercosis should receive anticonvulsant and steroid therapy as required. Corticosteroids (oral or IV) should be considered to prevent cerebral hypertensive episodes during the first week of treatment.

Preexisting neurocysticercosis may be found in patients treated with albendazole for other conditions. If patients experience neurological symptoms soon after treatment due to an inflammatory reaction caused by parasitic death within the brain, appropriate steroid and anticonvulsant therapy should be started at once.

Cysticercosis may involve the retina in rare cases. Before starting neurocysticercosis therapy, the patient should be examined for retinal lesions. If such lesions are present, the need for anticysticercal therapy should be weighed against the possibility of retinal damage caused by albendazole-induced changes to the retinal lesion.

Pregnant women should not use albendazole except in clinical circumstances where no alternative therapy is appropriate. Women of childbearing age should begin treatment after a negative pregnancy test and should be cautioned against becoming pregnant during or within 1 month of completing albendazole treatment. If pregnancy occurs while taking albendazole, therapy should be discontinued at once and the patient should be apprised of the potential risk to the fetus.

Dialysis

Data not available

Other Comments

Albendazole should be administered with food. Administration of albendazole with a fatty meal (fat content 43.1 g) has shown an increase in plasma concentrations of albendazole sulfoxide in a dose-proportional manner over the therapeutic dose range.

In patients who have difficulty swallowing the tablets whole, the tablets should be crushed or chewed and swallowed with a little water.

How to Give Deworming Tablets to Children 12-59 Months as Part of Universal Distribution of Vitamin A

Many countries with vitamin A deficiency are also endemic with soil-transmitted helminthes (STHs) or “intestinal worms”--this contributes to child undernutrition. Providing deworming tablets to children together with vitamin A is a simple, effective way to improve a child's vitamin A status and overall health.



Deworming coupled with vitamin A can help:

- Prevent or eliminate intestinal worms that rob the body of essential nutrients

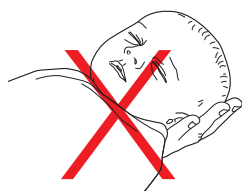
Recommendations:

- Albendazole can be provided without water.
- If mebendazole is used, provide clean drinking water for children.

Deworming Dosing Instructions: in combination with Universal Distribution of Vitamin A

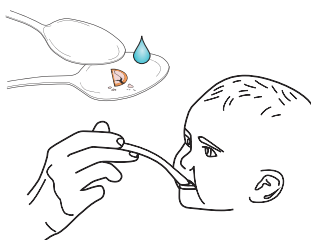
Albendazole (400 mg)

Infants younger than 1 year (0-11 months)



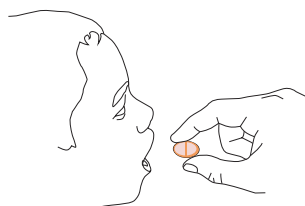
Do not give to infants younger than 1 year (0-11 months) of age

Children ages 1 year up to 2 years (12-23 months)



Give children ages 1 year up to 2 years (12-23 months) ½ tablet of albendazole - crushed between 2 spoons and dissolved by adding a small amount of clean water - to eat.

Children ages 2 years up to 5 years (24-59 months)



Give children 2 years up to 5 years (24-59 months) 1 tablet to chew.

How often



Give to children 1 year up to 5 years (12-59 months) of age. It is safe and effective to give deworming tablets in combination with vitamin A to children ages 1 year up to 5 years (12-59 months) every 4-6 months.

Deworming Dosing Instructions: in combination with Universal Distribution of Vitamin A

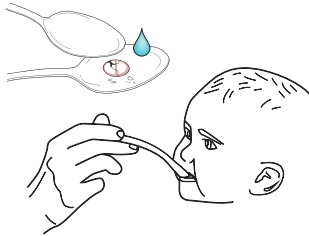
Mebendazole (500 mg)

Infants younger than 1 year (0-11 months)



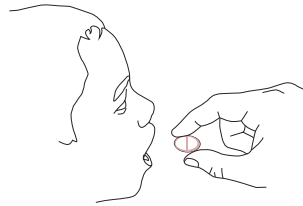
Do not give to infants younger than 1 year (0-11 months) of age

Children ages 1 year up to 2 years (12-23 months)



Give children 1 year up to 2 years (12-23 months) 1 tablet of mebendazole - crushed between 2 spoons and dissolved by adding a small amount of clean water - to eat.

Children ages 2 years up to 5 years (24-59 months)



Give children 2 years up to 5 years (24-59 months) 1 tablet to chew.

How often



Give to children 1 year up to 5 years (12-59 months) of age. It is safe and effective to give deworming tablets in combination with vitamin A to children ages 1 year up to 5 years (12-59 months) every 4-6 months.

Vitamin Angels' Deworming Tablet Donations:

Vitamin Angels provides its donations of deworming tablets to be given to children ages 12-59 months together with vitamin A 200,000 IU supplementation only and in accordance with the recommended vitamin A 4-6 month dosing schedule.

STORAGE: Store in a **COOL, DRY** place. Keep bottle tightly closed.

WARNING: This product should be administered by qualified healthcare personnel. Do not take this product without direct supervision by qualified healthcare personnel.

STORE THIS PRODUCT OUT OF REACH OF CHILDREN.

Ivermectin Dosage

The information at Drugs.com is not a substitute for medical advice. ALWAYS consult your doctor or pharmacist.

Usual Adult Dose for:

- Onchocerciasis
- Strongyloidiasis
- Ascariasis
- Cutaneous Larva Migrans
- Filariasis
- Scabies

Usual Pediatric Dose for:

- Filariasis

Additional dosage information:

- Renal Dose Adjustments
- Liver Dose Adjustments
- Dose Adjustments
- Precautions
- Dialysis
- Other Comments

Usual Adult Dose for Onchocerciasis

0.15 mg/kg orally once every 12 months

Patients with heavy ocular infection may require retreatment every 6 months. Retreatment may be considered at intervals as short as 3 months.

Dosage guidelines based on body weight:

15 to 25 kg: 3 mg orally one time

26 to 44 kg: 6 mg orally one time

45 to 64 kg: 9 mg orally one time

65 to 84 kg: 12 mg orally one time

85 kg or more: 0.15 mg/kg orally one time

Usual Adult Dose for Strongyloidiasis

0.2 mg/kg orally once

In immunocompromised (including HIV) patients, the treatment of strongyloidiasis may be refractory requiring repeated treatment (i.e., every 2 weeks) and suppressive therapy (i.e., once a month), although well-controlled studies are not available. Cure may not be achievable in these patients.

Dosage guidelines based on body weight:

15 to 24 kg: 3 mg orally one time

25 to 35 kg: 6 mg orally one time

36 to 50 kg: 9 mg orally one time

51 to 65 kg: 12 mg orally one time

66 to 79 kg: 15 mg orally one time

80 kg or more: 0.2 mg/kg orally one time

Usual Adult Dose for Ascariasis

0.2 mg/kg orally once

Usual Adult Dose for Cutaneous Larva Migrans

0.2 mg/kg orally once

Usual Adult Dose for Filariasis

0.2 mg/kg orally once

Study (n=26,000)

Mass treatment in Papua, New Guinea:

Bancroftian filariasis: 0.4 mg/kg orally once yearly (with a single annual dose of diethylcarbamazine 6 mg/kg), for 4 to 6 years

Usual Adult Dose for Scabies

0.2 mg/kg orally once, and repeated in 2 weeks

Ivermectin therapy may be combined with a topical scabicide.

Usual Pediatric Dose for Filariasis

Study (n=26,000)

Mass treatment in Papua, New Guinea:

Bancroftian filariasis:

5 years or older: 0.4 mg/kg orally once yearly (with a single annual dose of diethylcarbamazine 6 mg/kg), for 4 to 6 years

Renal Dose Adjustments

Liver Dose Adjustments

Data not available

Dose Adjustments

Retreatment is required because ivermectin has no activity against adult *onchocerca volvulus* parasites which tend to reside in subcutaneous nodules. Surgical excision of these nodules may be considered to eliminate the adult reproduction of *microfilariae*.

Patients with crusted scabies may require two or more doses of ivermectin spaced at one to two week intervals.

Precautions

Cutaneous, systemic and/or ophthalmological reactions have been reported with other microfilaricidal drugs. Allergic and inflammatory reactions (the Mazzotti reaction) may occur with ivermectin, probably due to the death of the *microfilariae*. Patients treated with ivermectin therapy for onchocerciasis may experience these reactions in addition to clinical adverse reactions possibly, probably, or definitely related to the therapy itself. The treatment of severe Mazzotti reactions has not been subjected to controlled clinical studies. Oral or intravenous rehydration, corticosteroids, antihistamines, acetaminophen and/or aspirin have been used for treatment.

After treatment with microfilaricidal medications, patients with hyperreactive onchodermatitis (sowda) may be more likely than others to experience severe adverse reactions, especially edema and aggravation of onchodermatitis.

Serious or fatal encephalopathy has been reported rarely in patients with onchocerciasis, and heavily infected with *Loa loa*, either spontaneously or after treatment with ivermectin. In these patients, pain (including neck and back pain), red eye, conjunctival hemorrhage, dyspnea, urinary and/or fecal incontinence, difficulty in standing/walking, mental status changes, confusion, lethargy, stupor, seizures, or coma have been reported. This syndrome has been seen very rarely following the use of ivermectin therapy. Pretreatment assessment for loiasis and careful posttreatment follow-up should be implemented in all patients considered for treatment with ivermectin for any reason and who had exposure to *Loa loa* endemic areas of West and Central Africa.

The patient should be advised of the need for repeated stool examinations to document clearance of infection with *Strongyloides stercoralis*.

The patient should be advised that treatment with ivermectin does not kill the adult *Onchocerca* parasites, and therefore repeated follow-up and retreatment is usually necessary.

In immunocompromised (including HIV-infected) patients being treated for intestinal strongyloidiasis, repeated courses of therapy may be necessary. Adequate and well-controlled clinical trials have not been conducted in such patients to determine the optimal dosing regimen. Several treatments, i.e., at 2-week intervals, may be required, and cure may not be attained. Control of extraintestinal strongyloidiasis in these patients is difficult, and suppressive therapy, i.e., once per month, may be useful.

ivermectin is extensively metabolized in the liver and should be used cautiously in patients with hepatic disease. Dosage adjustments may be needed, although specific recommendations are not currently available. The manufacturer does not recommend that ivermectin treatment be excluded in patients with liver disease.

Clinical trials of ivermectin did not include sufficient numbers of patients aged 65 and over to determine whether they respond differently from younger patients. Other reported clinical experience has not identified differences in responses between elderly and younger patients. In general, treatment of elderly patients should be cautious, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

Safety and effectiveness in pediatric patients weighing less than 15 kg have not been determined.

Dialysis

Data not available

Other Comments

Each ivermectin dose should be taken on an empty stomach with a full (8 oz) glass of water.

A recent pharmacokinetics study reports that following a high-fat meal absorption was significantly higher (about 2.5 times) than in the fasted state.

How to Give Vitamin A to Children 6-59 Months

In countries experiencing vitamin A deficiency, providing supplemental nutrition in the form of a vitamin A capsule every 4 to 6 months is vital for good infant and child health, growth, and development and is accepted as an essential part of child survival programs. One capsule of vitamin A given at least twice a year to children 6 to 59 months of age can reduce under-5 child mortality by 24%.



Vitamin A Supplementation can help to protect infant and child health because it:

- Increases the chance of child survival
- Supports a healthy immune system
- Reduces new cases or incidence of diarrhea and measles
- Protects eyes and eyesight and prevents anemia
- Promotes physical growth

Recommendations:

- Infants during the first 6 months of life should be exclusively breastfed.
- Pregnant and lactating women, and children over 6 months of age should seek to eat a nutritious diet that includes animal products such as dairy and meat, a variety of brightly colored fruits and vegetables, nuts, oils, and legumes.
- Infants 6 to 11 months of age should receive one 100,000 IU dose of vitamin A.
- Children 12 to 59 months of age should receive one 200,000 IU dose of vitamin A twice a year.



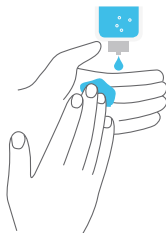
Vitamin A Dosing Instructions:

Infection Prevention

Always ensure that hands are clean when giving vitamin A to infants and children to minimize the spread of infection from one child to another.



Soap and clean water, or



Alcohol-based hand sanitizer

Capsule Cutting

With the capsule's narrow tip pointing up, use clean scissors to cut off the tip of the capsule.

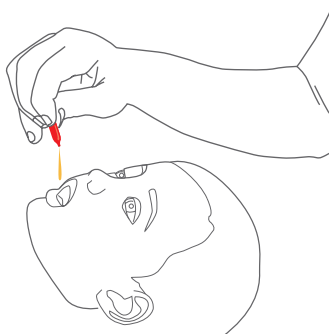


Infants 6 months to 11 months of age



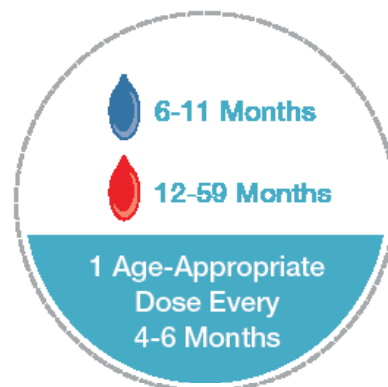
Ask the caregiver (e.g., mother) to support the infant's head and press the cheeks together to open the infant's mouth. Without touching the child, squeeze the liquid vitamin A 100,000 IU from the capsule into the infant's open mouth, ensuring that s/he swallows entire dose. Crawling can indicate that an infant is under 1 year of age.

Children 1 year up to 5 years of age



Ask the caregiver (e.g., mother) to support the child's head and instruct the child to open his/her mouth. Without touching the child, squeeze the liquid vitamin A 200,000 IU from the capsule into child's open mouth ensuring that s/he swallows entire dose. Walking can indicate that a child is at least 1 year of age.

How Often



One age-appropriate dose of vitamin A should be given every 4 to 6 months.

STORAGE: Store in a **COOL, DRY** place. Keep bottle tightly closed.

- Except if the child has a respiratory infection and is unable to breathe, there are no conditions or illnesses that prevent a child age 6 – 59 months from being given VAS. If a child is suffering from respiratory distress, s/he should be referred for immediate medical attention.
- Infants and children who have received Universal Vitamin A Supplementation within the past 1 month (4 weeks) will not get any additional benefits from a second dose of vitamin A given in the same month, and it should not be given.

Guide for Vitamin A Supplementation (VAS) Distribution Supervisors

Healthcare Provider Training

Before providing vitamin A to infants and children, all healthcare providers should be trained. Distribution Supervisors should train all workers involved in vitamin A supplementation (VAS) delivery using the steps and sequence provided, below, to ensure health service standardization.

Vitamin A Introduction and Entrance Counseling

- Caregiver and child are greeted/welcome by health worker
- Information about VAS, including recommended dosing schedule and how VAS will be administered is communicated
- VAS safety, side effects, and appropriate responses are communicated
- Caregiver questions on VAS are requested and answered accurately

Vitamin A Eligibility Screening

- Child's name is requested and received
- VAS eligibility is determined using the 3 criteria (age, respiratory health, and VAS history) and responded to appropriately
- Age-appropriate dose is selected and communicated to the caregiver

Infection Prevention

- Hands are washed or sanitized (periodically, including before and after giving a sick child vitamin A)

Vitamin A Dosing

- Caregiver is asked to support the child's head and ensure that his/her mouth is open
- Clean scissors are used to cut off the narrow tip of the vitamin A capsule
- Without directly touching the child, healthcare provider squeezes all liquid vitamin A into child's mouth
- Healthcare provider has checked that the child has swallowed the vitamin A dose and is comfortable
- Vitamin A capsule is disposed of in a plastic bag and residual oil is removed from hands and scissors

Recordkeeping

- Age-appropriate vitamin A dose given to the child is recorded on child health card and tally sheet and/or distribution register

Exit Counseling

- VAS side effects and appropriate responses are communicated to caregiver
- Caregiver questions on VAS are requested and answered accurately
- Information about upcoming VAS events, including next dosing date is shared with caregiver
- Caregiver and child are thanked for their attendance

Supply Checklist

- ☐ Vitamin A 100,000 IU Capsules - enough for all children 6-11 months of age
- ☐ Vitamin A 200,000 IU Capsules - enough for all children 12-59 months of age
- ☐ Albendazole/Mebendazole Tablets - enough for all children 12-59 months of age
- ☐ Storage Place - cool, dry, out of direct sunlight, and where products are out of reach of children
- ☐ Hand Hygiene Materials - alcohol-based hand sanitizer, sanitizing wipes, soap and clean water, serviettes
- ☐ Scissors - to cut off the narrow tip of the vitamin A capsule
- ☐ Plastic Bag - to collect and dispose of used capsules
- ☐ Pens - for recordkeeping purposes
- ☐ Child Health Card (if not provided by the caregiver) - to give to caregiver
- ☐ Tally Sheet/Distribution Register - to record the number of age appropriate doses distributed and the number of children reached with vitamin A supplementation
- ☐ Medical Referral - for children with respiratory illness who are unable to breathe and/or for children with symptoms that require medical attention (e.g., xerophthalmia including night blindness and Bitot's spots, or measles)

Giving Vitamin A to Children 6-59 Months

Vitamin A 100,000 IU : Infants 6 -11 Months

Vitamin A 200,000 IU : Children 12- 59 Months



Blue capsule



Crawling



6-11 Months



12-59 Months

1 Age-Appropriate Dose Every 4-6 Months



Red capsule



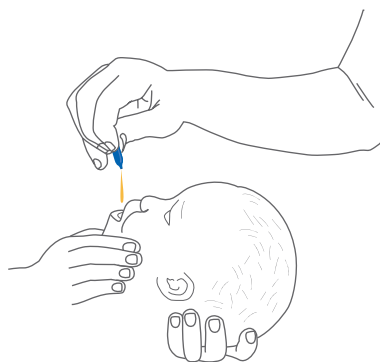
Walking



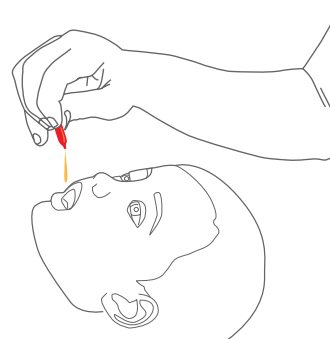
Healthcare provider's hands are cleaned using soap and clean water **or** an alcohol-based hand sanitizer



Cut off the narrow tip of the capsule using clean scissors



While the caregiver supports the child's head and ensures that his/her mouth is open, squeeze vitamin A oil into the child's mouth without touching the child.



- Except if the child has a respiratory infection and is unable to breathe, there are no conditions or illnesses that prevent a child age 6 – 59 months from being given VAS. If a child is suffering from respiratory distress, s/he should be referred for immediate medical attention.
- Infants and children who have received Universal Vitamin A Supplementation within the past 1 month (4 weeks) will not get any additional benefits from a second dose of vitamin A given in the same month, and it should not be given.



1

Wash your hands thoroughly with soap and warm water.



2

Remove the cap and hold the inhaler upright.

3

Shake the inhaler.



4

Breathe out slowly through your mouth.



5

Hold your inhaler as shown in the picture or as recommended by your doctor.



6

While you are breathing in, press down on your inhaler one time to release the medication.

7

Continue to breathe in slowly and as deeply as you can.

8

Hold your breath for 10 seconds, if you can, to allow the medication to reach deeply into your lungs.

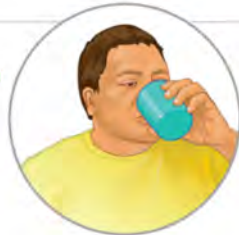


9

Repeat steps 3 to 8 until you have inhaled the number of puffs that your doctor prescribed. Ask your doctor or pharmacist if you need to wait between puffs of your medication.

10

Rinse your mouth thoroughly with water.



11

Spit out the water. Do not swallow.

