PRODUCT MONOGRAPH

PrBILTRICIDE®

(Praziquantel)

Tablets, 600 mg

Antihelminthic

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PrBILTRICIDE®

Praziquantel Tablets

PART I: HEALTH PROFESSIONAL INFORMATION

SUMMARY PRODUCT INFORMATION

Table 1 – Product Information Summary

Route of Administration	Dosage Form, Strength	Clinically Relevant Nonmedicinal Ingredients
Oral	Tablet, 600 mg	For a complete listing see **DOSAGE FORMS, COMPOSITION AND PACKAGING**.

INDICATIONS AND CLINICAL USE

BILTRICIDE (praziquantel) is indicated for the treatment of infections due to the following species of schistosoma: (*Schistosoma haematobium, Schistosoma japonicum, Schistosoma mansoni, and Schistosoma mekongi*), and infections due to the liver flukes *Clonorchis sinensis/Opisthorchis viverrini*. (Approval of this indication was based on studies in which the two species were not differentiated).

Pediatrics

Safety in children under 4 years of age has not been established.

Geriatrics (≥ 65 years of age)

No data is available. Safety in geriatric patients has not been established.

CONTRAINDICATIONS

BILTRICIDE (praziquantel) is contraindicated in patients who are hypersensitive to this drug or to any ingredient in the formulation or component of the container. For a complete listing, see the **DOSAGE FORMS, COMPOSITION AND PACKAGING** section of the product monograph.

Since parasite destruction within the eye may cause irreversible lesions, ocular cysticercosis must not be treated with BILTRICIDE.

The concomitant administration of praziquantel with strong inducers of Cytochrome P450 such as rifampin is contraindicated as therapeutically effective plasma levels of praziquantel may not be achieved (see **DRUG INTERACTIONS**, **Drug-Drug Interactions**).

WARNINGS AND PRECAUTIONS

General

When schistosomiasis or fluke infection is found in patients living in or coming from areas with endemic human cysticercosis, it is advisable to hospitalize the patient for the duration of treatment.

Treatment with praziquantel in the acute phase of infection may not prevent progression into chronic phase, based on data from two observational cohort studies in patients (n = 18, n = 11). Published in vitro data have shown a potential lack of efficacy of praziquantel against migrating schistosomulae (10, 11) (see **MICROBIOLOGY**).

Treatment of schistosomiasis with the use of praziquantel may be associated with clinical deterioration (paradoxical reactions, serum sickness, Jarisch-Herxheimer-like reactions: sudden inflammatory immune response suspected to be caused by the release of schistosomal antigens). These reactions predominantly occur in patients treated during the acute phase of schistosomiasis. They may lead to potentially life-threatening events, e.g. respiratory failure, encephalopathy, and/or cerebral vasculitis.

Patients should be warned not to drive a car and not to operate machinery on the day of BILTRICIDE treatment and for 24 hours after administration. BILTRICIDE may temporarily affect vigilance.

For established and potential drug interactions, see **DRUG INTERACTIONS**.

Cardiovascular

Patients suffering from cardiac irregularities should be monitored during treatment.

Hepatic/Biliary/Pancreas

Caution should be taken in patients with uncompensated liver insufficiency or with hepatosplenic schistosomiasis. Because of reduced drug metabolism in the liver, considerably higher and longer lasting concentrations of unmetabolized praziquantel can occur in the vascular system and/or collateral circulation, leading to prolonged plasma half-life. If necessary, the patient may be hospitalized for the duration of treatment. Mild increases in liver enzymes have also been reported in some patients (see **DETAILED PHARMACOLOGY**, **Human Pharmacology**, **Pharmacokinetics**, **Special Populations**).

Neurologic

As BILTRICIDE can exacerbate central nervous system pathology due to schistosomiasis, paragonimiasis, or Taenia solium cysticercosis, as a general rule this drug should not be administered to individuals reporting a history of epilepsy and/or other signs of potential central nervous systems involvement such as subcutaneous nodules suggestive of cysticercosis. When schistosomiasis or fluke infection is found in patients living in or coming from areas with endemic human cysticercosis, it is advised to hospitalize the patient for the duration of treatment.

Renal

Approximately 80% of praziquantel and its derivatives are excreted in the kidneys, almost exclusively in the form of metabolites. Excretion may be delayed in patients with impaired renal function, but accumulation of unchanged drug would not be expected. Therefore dose adjustment for renal impairment is not considered necessary. Nephrotoxic effects of praziquantel or its metabolites are not known. Nephrotoxic effects of BILTRICIDE have not been observed (see **DOSAGE AND ADMINISTRATION**, **Recommended Dose and Dosage Adjustment**, **Renal Impairment**).

Special Populations

Pregnant Women

No adequate and well-controlled studies have been conducted with BILTRICIDE in pregnant women.

An increase in the abortion rate was found in rats at three times the single human therapeutic dose. Although animal reproduction studies have not brought to light any evidence that the mother or the unborn child might be harmed, these studies are not always predictive of human response. Praziquantel should not be used in pregnancy unless the potential benefit of treating women of reproductive age and pregnant women far outweighs the risk to their health and to the health of their babies.

Nursing Women

Praziquantel appears in the milk of nursing women at a concentration of 20-25% that of maternal serum. Breastfeeding should be suspended for the day(s) of treatment and the following 72 hours. The physician should evaluate if the potential benefit clearly outweighs the potential risk (taking into consideration the quality of available alternative artificial nutrition).

Pediatrics

Safety in children under 4 years of age has not been established.

ADVERSE REACTIONS

Adverse Drug Reaction Overview

Adverse reactions vary according to dose and duration of BILTRICIDE (praziquantel) medication. Furthermore, they are dependent on the parasite species, extent of parasitization, duration of infection and localization of the parasites in the body.

Adverse reactions are based on publications and on spontaneous reports sorted by CIOMS III categories of frequency and MedDRA System Organ Classes. Frequencies of adverse reactions are estimated mainly based on data from medical literature.

The following adverse reactions have been observed after praziquantel administration. It is often not clear whether the complaints reported by patients or the undesired effects recorded by the physician are caused by praziquantel itself (direct relation), or may be considered to be an endogenous reaction to the death of the parasites (indirect relation) or are symptomatic

observations of the infestation (no relation). It may be difficult to differentiate between the possible variations.

Table 2 – Observed Adverse Drug Reactions – BILTRICIDE

System Organ Class	Adverse Drug Reaction (unknown frequency)
Cardiac Disorders	Arrhythmia
Gastrointestinal Disorders	Gastrointestinal and abdominal pains Nausea Vomiting Anorexia Diarrhea (very rarely bloody diarrhea)
General Disorders and Administration Site Conditions	Asthenia Feeling unwell Fever Fatigue
Immune System Disorders	Jarisch-Herxheimer Reaction Allergic reaction Polyserositis Eosinophilia
Musculoskeletal, Connective Tissue and Bone	Myalgia
Nervous System Disorders	Headache Dizziness Vertigo Somnolence Seizures
Skin and Subcutaneous Tissue Disorders	Urticaria Rash Pruritus

Abnormal Hematologic and Clinical Chemistry Findings

Mild increases in liver enzymes have been reported in some patients.

DRUG INTERACTIONS

Overview

Praziquantel is believed to be metabolized via the CYP450 enzyme system.

Many categories of drugs are known to inhibit or induce CYP450 enzymes causing an increase or decrease in serum concentration or bioavailability. Care must therefore be exercised when co-administering such drugs.

Reported, suspected or predicted drug interactions include, but are not limited to: albendazole, anticonvulsants, azole anti-fungal agents (e.g., miconazole, ketoconazole, itraconazole), cimetidine, chloroquine, dexamethasone, erythromycin, rifampin, glucose, bicarbonate, and grapefruit juice.

Drug-Drug Interactions

Concomitant administration of BILTRICIDE (praziquantel) with strong inducers of Cytochrome P450 such as rifampin is contraindicated because therapeutically effective levels of praziquantel may not be achieved. In patients receiving rifampin who need immediate treatment for schistosomiasis, alternative agents for schistosomiasis should be considered. However, if treatment with praziquantel is necessary, rifampin should be discontinued 4 weeks before administration of praziquantel. Treatment with rifampin can then be restarted one day after completion of praziquantel treatment.

Established and potential drug-drug interactions with praziquantel are presented in Table 3. Other interactions, such as effects upon absorption, among others, may also exist.

Table 3 – Established and Potential Drug-drug Interactions

Proper Name	Ref	Effect
Albendazole	C	Praziquantel has been shown to increase albendazole bioavailability and serum levels.
Anti-convulsants (e.g., phenytoin, fosphenytoin, carbamazepine and phenobarbital)	C	Co-administration of praziquantel with anticonvulsants like phenytoin, fosphenytoin, carbamazepine and phenobarbital has been reported to lower praziquantel bioavailability and serum levels.
Anti-fungal agents (e.g., miconazole, ketoconazole, itraconazole)	C	Anti-fungal agents like miconazole, ketoconazole and itraconazole have been shown to inhibit P450 enzyme mediated metabolism. When co-administered with praziquantel, increased bioavailability and serum levels of praziquantel have been reported.
Cimetidine	C	Cimetidine has been shown to inhibit P450 enzyme mediated metabolism. When co-administered with praziquantel, increased bioavailability and serum levels of praziquantel have been reported.
Chloroquine	CT	Co-administration of praziquantel with chloroquine has been reported to lower praziquantel bioavailability and serum levels.
Dexamethasone	C	Co-administration of praziquantel with dexamethasone has been reported to lower praziquantel bioavailability and serum levels.
Erythromycin	P	Erythromycin has been shown to inhibit P450 enzyme mediated metabolism. When co-administered with praziquantel, erythromycin may increase bioavailability and serum levels of praziquantel and may increase side effects.
Rifampin	CT	Rifampin is contraindicated because therapeutically effective levels of praziquantel may not be achieved.

Legend: C = Case Study; CT = Clinical Trial; P = Potential

Drug-Food Interactions

Biltricide film-coated tablets should be swallowed whole with some liquid, preferably during or after meals.

Glucose and bicarbonate lower praziquantel bioavailability and serum levels.

Grapefruit juice was reported to produce a 1.6-fold increase in the C_{max} and a 1.9-fold increase in the AUC of praziquantel. However, the effect of this exposure increase on the therapeutic effect and safety of praziquantel has not been systematically evaluated.

Drug-Herb Interactions

Praziquantel is metabolized via the CYP450 enzyme system.

Some herbal products, such as St. John's Wort, are known to inhibit or induce CYP450 enzymes, causing an increase or decrease in serum concentration or bioavailability (see **CONTRAINDICATIONS**).

Drug-Laboratory Interactions

Drug-Laboratory Interactions have not been established.

DOSAGE AND ADMINISTRATION

Dosing Considerations

Doses should be individualized depending on the diagnosis.

Recommended Dose and Dosage Adjustment

Adults and children 4 years of age and older

Based on clinical experience, the following dosages are recommended:

The dosage recommended for the treatment of schistosomiasis is: 20 mg/kg bodyweight three times a day as a one day treatment, at intervals of not less than 4 hours and not more than 6 hours.

Table 4 describes the appropriate dosing based on body weight.

Table 4 – BILTRICIDE dosing for Schistosomiasis

Body Weight (kg)	20-25	26-33	34-41	42-48	49-56	57-63	64-70	71-78	79-86
Dose (mg)	450	600	750	900	1050	1200	1350	1500	1650
Number of tablets corresponding to 20 mg/kg [a] (i.e., one dose)	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4

a - Each 600 mg oblong tablet has 3 scores. When broken, each of the four segments contains 150 mg of active ingredient.

The recommended dose for clonorchiasis and opisthorchiasis is: 25 mg/kg bodyweight three times a day as a one day treatment, at intervals of not less than 4 hours and not more than 6 hours.

Table 5 describes appropriate dosing based on body weight.

Table 5 – BILTRICIDE dosing for Clonorchiasis and Opisthorchiasis

Body Weight (kg)	22-26	27-33	34-38	39-44	45-50	51-56	57-62	63-68	69-75
Dose (mg)	600	750	900	1050	1200	1350	1500	1650	1800
Number of tablets corresponding to 25 mg/kg [a] (i.e., one dose)	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3

a - Each 600 mg oblong tablet has 3 scores. When broken, each of the four segments contains 150 mg of active ingredient.

Renal Impairment

No dosage adjustment is required (see **WARNINGS AND PRECAUTIONS**, **Renal**).

Administration

The tablets should be swallowed whole with a little liquid, preferably during or after meals. Keeping the tablets (or segments thereof) in the mouth may reveal a bitter taste which can cause gagging or vomiting.

The interval between administrations should be at least 4 hours and not more than 6 hours.

When broken, each of the four segments contains 150 mg of active ingredient so that the dosage can be easily adjusted to the patient's body weight.

Safety and efficacy in children under 4 years of age have not been established (see **WARNINGS AND PRECAUTIONS**, **Special Populations**, **Pediatrics**).

OVERDOSAGE

Activated charcoal may be administered to aid in the removal of unabsorbed drug. General supportive measures are recommended.

No data is available regarding overdosage in humans. In the event of an overdose, a fast-acting laxative is recommended. In rats and mice the acute oral LD_{50} was approximately 2500 mg/kg and in dogs the oral LD_{50} was less than 200 mg/kg.

For management of a suspected drug overdose, contact your regional Poison Control Centre.

ACTION AND CLINICAL PHARMACOLOGY

Mechanism of Action

BILTRICIDE (praziquantel) induces a rapid contraction of schistosomes by a specific effect on the permeability of the cell membrane. The drug further causes vacuolization and disintegration of the schistosome tegument. The effect is more marked on adult worms compared to young worms. An increased calcium influx may play an important role.

Secondary effects are inhibition of glucose uptake, lowering of glycogen levels and stimulation of lactate release. The action of praziquantel is limited very specifically to trematodes and cestodes; nematodes (including filariae) are not affected.

Pharmacodynamics

See **DETAILED PHARMACOLOGY**, **Animal Pharmacology**, **Pharmacodynamics**.

Pharmacokinetics

After oral administration, praziquantel is rapidly absorbed (approximately 80%), subjected to a first pass effect, metabolized and eliminated by the kidneys. Maximal serum concentration is achieved 1 to 3 hours after dosing. The half-life of praziquantel in serum is 0.8 to 1.5 hours (see **DETAILED PHARMACOLOGY**, **Human Pharmacology**, **Pharmacokinetics**).

STORAGE AND STABILITY

Store at room temperature below 30°C. Protect from light and excessive humidity.

DOSAGE FORMS, COMPOSITION AND PACKAGING

BILTRICIDE (praziquantel) is supplied as a 600 mg white, film-coated, oblong tablet with three scores on both sides. Each tablet is engraved BAYER on one side and LG on the other. When broken each of the four segments contains 150 mg of the active ingredient so that the dosage can be easily adjusted to the patient's body weight.

Segments are broken off by pressing the score (notch) with thumbnails. If one quarter of a tablet is required, this is best achieved by breaking the segment from the outer end.

BILTRICIDE is available in bottles of 6 tablets.

Composition:

Each tablet contains Praziquantel, Corn starch, Magnesium stearate, Microcrystalline cellulose, Polyvidone 25, Sodium lauryl sulphate, Polyethylene glycol 4000, Methylhydroxypropylcellulose, Titanium dioxide.

PART II: SCIENTIFIC INFORMATION

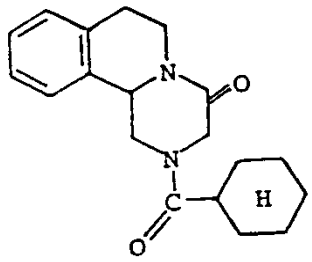
PHARMACEUTICAL INFORMATION

Drug Substance

Proper name: Praziquantel

Chemical name: 2-(cyclohexylcarbonyl)-1, 2, 3, 6, 7,11b-hexahydro4H-pyrazino [2,1-a]isoquinolin-4-one

Molecular formula:



Molecular weight: 312.4

Structural formula: $C_{19}H_{24}N_2O_2$

Physicochemical properties: Praziquantel is a colourless crystalline powder of bitter taste. The compound is stable under normal conditions and melts at 136°C-140°C with decomposition. The active substance is hygroscopic. Praziquantel is easily soluble in chloroform and dimethylsulfoxide, soluble in ethanol and very slightly soluble in water.

DETAILED PHARMACOLOGY

Animal Pharmacology

Pharmacodynamics

In vitro studies on trematodes and cestodes (tapeworms) have shown that BILTRICIDE (praziquantel) induces a rapid contraction of schistosomas by a specific effect on the permeability of the cell membrane. The drug further causes vacuolization and disintegration of the schistosome tegument. The effect is more marked on adult worms compared to young worms. An increased Ca^{2+}-influx may play an important role.

Secondary effects are inhibition of glucose uptake, lowering of glycogen levels and stimulation of lactate release. The action of praziquantel is specific to trematodes and cestodes; nematodes (including filariae) are not affected.

Kinetic examinations were carried out with radiolabelled praziquantel in different animal species (rat, dog, rhesus monkey and sheep). A rapid absorption, distribution and elimination after oral application, independent of the animal species, was observed.

Human Pharmacology

Pharmacokinetics

Absorption

After oral administration, praziquantel is rapidly and completely absorbed. Maximal plasma concentrations are achieved within 1-2 hours.

Distribution

The drug's concentration is 0.05 to 5.0 mg/L in peripheral blood after administration of 5 to 50 mg/kg; the concentration in the mesenteric vein is 3 to 4 times higher compared to peripheral blood. Unchanged praziquantel passes the blood-brain barrier; its concentration in cerebrospinal fluid is estimated to be 10% to 20% of the plasma concentration.

Metabolism and Excretion

The half-life of unchanged praziquantel is 1-2.5 hours. The half-life of total radioactivity (praziquantel plus metabolites) after administration of ^{14}C-praziquantel is 4 hours.

Praziquantel is rapidly metabolized by a first pass effect. Both the unchanged drug and the metabolites are eliminated predominantly via the kidneys. More than 80% of the dose administered is eliminated renally within 4 days, 90% of this amount within the first 24 hours. Main metabolites are hydroxylated degradation product of praziquantel.

Based on animal and human studies at the plasma level of 0.6 µmol/L (0.19 mg/L), a therapeutic effect is achieved for 4-6 hours, and in some cases may last as long as 10 hours.

Special Populations

Hepatic Impairment

The pharmacokinetics of praziquantel were studied in 40 patients with Schistosoma mansoni infections with varying degrees of hepatic dysfunction (see Table 6). In patients with schistosomiasis, the pharmacokinetic parameters did not differ significantly between those with normal hepatic function (Group 1) and those with mild (Child-Pugh class A) hepatic impairment. However, in patients with moderate-to-severe hepatic dysfunction (Child-Pugh class B and C), praziquantel half-life, C_{max}, and AUC increased progressively with the degree of hepatic impairment. In Child-Pugh class B, the increases in mean half-life, C_{max}, and AUC relative to Group 1 were 1.58-fold, 1.76-fold, and 3.55-fold, respectively. The corresponding increases in Child-Pugh class C patients were 2.82-fold, 4.29-fold, and 15-fold for half-life, C_{max}, and AUC.

Table 6 – Pharmacokinetic parameters of praziquantel in four groups of patients with varying degrees of liver function following administration of 40 mg/kg under fasting conditions

Patient Group	Half-life (hr)	T_{max} (hr)	C_{max} (µg/mL)	AUC (µg/mL*hr)
Normal hepatic function (Group 1)	2.99 ± 1.28	1.48 ± 0.74	0.83 ± 0.52	3.02 ± 0.59
Child-Pugh A (Group 2)	4.66 ± 2.77	1.37 ± 0.61	0.93 ± 0.58	3.87 ± 2.44
Child-Pugh B (Group 3)	4.74 ± 2.16[a]	2.21 ± 0.78[a,b]	1.47 ± 0.74[a,b]	10.72 ± 5.53[a,b]
Child-Pugh C (Group 4)	8.45 ± 2.62[a,b,c]	3.2 ± 1.05[a,b,c]	3.57 ± 1.30[a,b,c]	45.35 ± 17.50[a,b,c]

a) p<0.05 compared to Group 1
b) p<0.05 compared to Group 2
c) p<0.05 compared to Group 3

MICROBIOLOGY

The effect of praziquantel on all species of schistosoma pathogenic to man, such as *S. haematobium, S. mekongi, S. mansoni and S. japonicum* was proven by extensive animal experiments in mice, mastomys, hamsters, and different primates.

Table 7 – ED_{95}-values of praziquantel (total dose in mg/kg) against schistosome species in 3 different rodent hosts

Host Animal	**Mouse**	**Mastomys**	**Syrian Hamster**				
Schistosoma Species	*S. mansoni*	*S. mansoni*	*S. mansoni*	*S. haematobium*	*S. japonicum*	*S. intercalatum*	*S. mattheei*
Route, duration of treatment							
5 x p.o., 1 day	479	411	469	500[a]	250[a]	--	--
3 x p.o., 1 day	796	251	194	>300[a]	<100[a]	<300[a]	<150[a]
2 x p.o., 1 day	1059	308	197	>200[a]	<100[a]	--	<200[a]
1 x p.o., 1 day	685	278	249	>250[a]	100[a]	--	--
3-10 x p.o., 1 day	200	187	63	150[a]	--	>150[a]	--

a - estimated values

Praziquantel proved to be equally effective against all tested *Schistosoma mansoni* strains from different geographical areas and also against other trematode species such as the liver flukes *Clonorchis sinensis* and *Opisthorchis viverrini*.

Published data have demonstrated that the migrating juvenile stages of *S. mansoni* and *S. japonicum*, (schistosomulae) were less susceptible to treatment with praziquantel than adult forms (12-16).

TOXICOLOGY

Acute Toxicity

The acute toxicity of BILTRICIDE (praziquantel) is low as demonstrated in uninfected mice, rats, and rabbits after oral application and in mice and rats after subcutaneous, intraperitoneal, and intramuscular injection. The acute toxicity for dogs could not be evaluated owing to the emetic effect of higher doses of the compound in this species.

Table 8 – Acute toxicity of praziquantel

Route of Administration	Species	LD_{50} in mg/kg	
		1 Day	7 and 14 Days
p.o.	Mouse	2454	2454
	Rat	2976	2840
	Rabbit	1100	1050
	Dog	> 200	> 200
s.c.	Mouse	7268	7172
	Rat	> 16000	> 16000
i.m.	Mouse	> 2000	> 2000
	Rat	> 1000	> 1000
i.p.	Rat	796	796

In mice infected with *Schistosoma mansoni*, the acute toxicity of praziquantel was within the same range as found in healthy animals.

Praziquantel proved to be well tolerated in tests carried out in rabbits for primary skin tolerance and for mucosal tolerance in the eye. Furthermore, the substance showed no sensitizing effect in intracutaneous tests in guinea-pigs and in epicutaneous tests in man.

Long-Term Toxicity

In the four-week study in rats and dogs and a three-month study in dogs, the only consistent toxicities observed were enlarged liver and thyroid glands in rats (at 300 mg/kg/day and above), enlarged liver in dogs (180 mg/kg/day after 4 weeks of exposure) and increased absolute and relative liver weight (180 mg/kg/day after 3 months of exposure). These changes were not associated with abnormal findings in clinical chemistry or histopathological examination.

Carcinogenicity

Long-term carcinogenicity studies were conducted in Sprague-Dawley rats and golden hamsters. Praziquantel was not considered to be carcinogenic in rats. In hamsters, praziquantel might be considered to be a weak carcinogen based on a slight increase in percent malignant tumours in the female.

Reproductive Toxicology

In reproduction tests with doses up to 40 times the human dose (300 mg/kg body weight/day), praziquantel had no effect either on the fertility of male and female rats or on the embryonal and fetal development of the offspring. Even with daily oral administration during organogenesis, praziquantel did not show any embryotoxic or teratogenic effects. An increase in the abortion rate was found in rats receiving three times the single human therapeutic dose.

Reproduction studies in rabbits at doses up to 40 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to praziquantel.

Mutagenesis

Extensive studies in various test systems (both in vitro and in vivo) have yielded no evidence of mutagenicity. Mutagenic effects in Salmonella tests observed by one laboratory have not been confirmed in the same tested strain by other laboratories.

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PART III: CONSUMER INFORMATION

PrBILTRICIDE®

(Praziquantel) Tablets

This leaflet is Part 3 of a three-part "Product Monograph" designed specifically for Consumers. This leaflet is a summary and will not tell you everything about BILTRICIDE. Contact your doctor or pharmacist if you have any questions about the drug.

ABOUT THIS MEDICATION

What the medication is used for:

BILTRICIDE (praziquantel) can only be obtained with a prescription from your doctor. This drug has been prescribed by your doctor to treat the infection you have that is caused by worms and/or liver flukes. Do not give this medicine to other people.

What it does:

BILTRICIDE interferes with the action of the cell membrane, leading to parasite death and reduction of the infection.

When it should not be used:

Do not use BILTRICIDE if you:

- took it before and had an allergic reaction to it (see "What the nonmedicinal ingredients are")
- have a parasitic worm infection of the eye (ocular cysticercosis)
- are taking rifampin at the same time because the amount of BILTRICIDE in your body may be lowered below the level required to treat your infection.

What the medicinal ingredient is:

praziquantel

What the nonmedicinal ingredients are:

Corn starch, Magnesium stearate, Microcrystalline cellulose, Polyvidone 25, Sodium lauryl sulphate, Polyethylene glycol 4000, Methylhydroxypropyl-cellulose, Titanium dioxide

What dosage forms it comes in:

BILTRICIDE is supplied as a 600 mg white, oblong tablet with three notches. It is marked BAYER on one side and LG on the other. When broken, each of the four pieces that result contains 150 mg of active ingredient (praziquantel). This allows your doctor to easily adjust the dose depending on your weight.

Pieces are broken off by pressing the notch with your thumbnails. If only one quarter of a tablet is required, this is best achieved by breaking the tablet from the outer end.

WARNINGS AND PRECAUTIONS

Tell your doctor about all the medications you are taking, including prescription, non-prescription drugs and natural health products.

BEFORE you use BILTRICIDE talk to your doctor or pharmacist if you have or have had any of the following conditions:

- you are pregnant or planning to become pregnant
- you are breastfeeding or planning to breastfeed. BILTRICIDE is excreted in human breast milk. Discuss with you doctor if breastfeeding is right for your infant.
- you have a history of epilepsy
- you have problems with your kidney or liver function
- you have problems with your heart

The safety and effectiveness of BILTRICIDE in children under 4 years of age has not been established.

You should not drive or operate machinery on the day of your treatment and during the next 24 hours as your reflexes may be impaired.

INTERACTIONS WITH THIS MEDICATION

Talk to your doctor before using any of the following drugs which may interact with BILTRICIDE. Your doctor may suggest alternate medications or a change in dosage:

- Albendazole
- Anticonvulsants (phenytoin, fosphenytoin, carbamazepine and phenobarbital)
- Anti-fungal agents (miconazole, ketoconazole, itraconazole)
- Cimetidine
- Chloroquine
- Dexamethasone
- Erythromycin

Glucose and bicarbonate can cause a decrease in BILTRICIDE levels in your blood.

Avoid eating grapefruit or drinking grapefruit juice while you are using this medicine.

Tell your doctor or pharmacist if you are taking or have recently taken any other medication, including medications obtained without a prescription as well as vitamins and herbal supplements, such as St. John's Wort (*Hypericum perforatum*).

PROPER USE OF THIS MEDICATION

Usual dose

The dose depends on your weight. You must take the medicine exactly as it is prescribed by your doctor, as a one day treatment. If you are not sure how many tablets to take or how often to take them, consult your doctor or pharmacist.

You should not change the dose prescribed by your doctor.

The tablets should be swallowed whole with some liquid, preferably during or after meals. Keeping the tablets (and pieces of the tablets) in your mouth may release a bitter taste which can cause you to gag or vomit.

The time between doses should be at least 4 hours and not more than 6 hours.

Overdose

In case of drug overdose, contact your healthcare professional, hospital emergency department or regional poison control centre, even if there are no symptoms.

SIDE EFFECTS AND WHAT TO DO ABOUT THEM

After taking your medicine you may experience some side effects. These vary according to the dose and duration of your treatment. They also depend on the type of infection you have, how long you have had the infection, and where in your body the infection is. The side effects, if there are any, are most often one or more of the following:

- abdominal pain
- dizziness
- drowsiness
- diarrhea
- fever
- headache
- hives (urticaria)
- loss of appetite
- muscle pain
- nausea
- rash
- tiredness
- vomiting
- weakness

Often it is hard to tell if the side effects are due to the medicine or the infection itself. If you are concerned about how you are feeling after you take the medicine, or if you feel noticeably worse, contact your doctor or pharmacist as soon as possible.

SERIOUS SIDE EFFECTS, HOW OFTEN THEY HAPPEN AND WHAT TO DO ABOUT THEM

Frequency	Symptom/ Effect	Talk with your doctor or pharmacist		Stop taking drug and call your doctor or pharmacist
		Only if severe	In all cases	
Very Rare	**Allergic Reaction:** rash, hives, swelling of the face, lips, tongue or throat, difficulty swallowing or breathing,			✓
	Irregular or rapid heartbeat			✓
	Seizures			✓
	Bloody diarrhea	✓		

This is not a complete list of side effects. For any unexpected effects while taking BILTRICIDE, contact your doctor or pharmacist.

HOW TO STORE IT

Store this medicine at room temperature below 30°C. Keep this and all medicine in a safe place out of the reach and sight of children. Do not store in a damp place and keep away from light.

REPORTING SUSPECTED SIDE EFFECTS

You can report any suspected adverse reactions associated with the use of health products to the Canada Vigilance Program by one of the following 3 ways:

- Report online at www.healthcanada.gc.ca/medeffect
- Call toll-free at 1-866-234-2345
- Complete a Canada Vigilance Reporting Form and:
  - Fax toll-free to 1-866-678-6789, or
  - Mail to:
    Canada Vigilance Program
    Health Canada
    Postal Locator 1908C
    Ottawa, Ontario
    K1A 0K9

  Postage paid labels, Canada Vigilance Reporting Form and the adverse reaction reporting guidelines are available on the MedEffect™ Canada Website at www.healthcanada.gc.ca/medeffect.

Note: Should you require information related to the management of side effects, contact your health professional. The Canada Vigilance Program does not provide medical advice.

MORE INFORMATION

For more information, please contact your health professional or pharmacist first, or Bayer Medical Information at 1-800-265-7382 or canada.medinfo@bayer.com.

This document plus the full Product Monograph, prepared for health professionals can be found at: http://www.bayer.ca or by contacting the manufacturer at the above-mentioned phone number and e-mail address.

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Bayer