

Albenza - General Information

A benzimidazole broad-spectrum anthelmintic structurally related to mebendazole that is effective against many diseases. (From Martindale, The Extra Pharmacopoeia, 30th ed, p38)

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Generic Albenza (Albendazole) - 400mg 30 pills for \$52.65
Albenza (Albendazole) is used to treat infections caused by worms. Albendazole works by keeping the worm from absorbing sugar (glucose), so that the worm loses energy and dies.

Pharmacology

Albenza is a broad-spectrum anthelmintic. The principal mode of action for albendazole is by its inhibitory effect on tubulin polymerization which results in the loss of cytoplasmic microtubules.

Albenza for patients

Albenza Interactions

Dexamethasone: Steady-state trough concentrations of albendazole sulfoxide were about 56% higher when 8 mg dexamethasone was coadministered with each dose of albendazole (15 mg/kg/day) in eight neurocysticercosis patients.

Praziquantel: In the fed state, praziquantel (40 mg/kg) increased mean maximum plasma concentration and area under the curve of albendazole sulfoxide by about 50% in healthy subjects (n=10) compared with a separate group of subjects (n=6) given albendazole alone. Mean T_{max} and mean plasma elimination half-life of albendazole sulfoxide were unchanged. The pharmacokinetics of praziquantel were unchanged following coadministration with albendazole (400 mg).

Cimetidine: Albendazole sulfoxide concentrations in bile and cystic fluid were increased (about 2-fold) in hydatid cyst patients treated with cimetidine (10 mg/kg/day) (n=7) compared with albendazole (20 mg/kg/day) alone (n=12). Albendazole sulfoxide plasma concentrations were unchanged 4 hours after dosing.

Theophylline: The pharmacokinetics of theophylline (aminophylline 5.8 mg/kg infused over 20 minutes) were unchanged following a single oral dose of albendazole (400 mg) in 6 healthy subjects.

Albenza Contraindications

Albenza (albendazole) is contraindicated in patients with known hypersensitivity to the benzimidazole class of compounds or any components of Albenza.

Additional information about Albenza

Albenza Indication: For the treatment of parenchymal neurocysticercosis due to active lesions caused by larval forms of the pork tapeworm, *Taenia solium* and for the treatment of cystic hydatid disease of the liver, lung, and peritoneum, caused by the larval form of the dog tapeworm, *Echinococcus granulosus*.

Mechanism Of Action: Albenza causes degenerative alterations in the tegument and intestinal cells of the worm by binding to the colchicine-sensitive site of tubulin, thus inhibiting its polymerization or assembly into microtubules. The loss of the cytoplasmic microtubules leads to impaired uptake of glucose by the larval and adult stages of the susceptible parasites, and depletes their glycogen stores. Degenerative changes in the endoplasmic reticulum, the mitochondria of the germinal layer, and the subsequent release of lysosomes result in decreased production of adenosine triphosphate (ATP), which is the energy required for the survival of the helminth. Due to diminished energy production, the parasite is immobilized and eventually dies.

Drug Interactions: Not Available

Food Interactions: Not Available

Generic Name: Albendazole

Synonyms: Not Available

Drug Category: Anthelmintics; Anticestodal Agents; Antiprotozoal Agents; Tubulin Modulators

Drug Type: Small Molecule; Approved

Other Brand Names containing Albendazole: Albenza; Valbazen; Eskazole; Zentel;

Absorption: Poorly absorbed from the gastrointestinal tract due to its low aqueous solubility. Oral bioavailability appears to be enhanced when coadministered with a fatty meal (estimated fat content 40 g)

Toxicity (Overdose): Symptoms of overdose include elevated liver enzymes, headaches, hair loss, low levels of white blood cells (neutropenia), fever, and itching.

Protein Binding: 70% bound to plasma protein

Biotransformation: Hepatic. Rapidly converted in the liver to the primary metabolite, albendazole sulfoxide, which is further metabolized to albendazole sulfone and other primary oxidative metabolites that have been identified in human urine.

Half Life: Terminal elimination half-life ranges from 8 to 12 hours (single dose, 400mg).

Dosage Forms of Albenza: Tablet, film coated Oral

Chemical IUPAC Name: methyl N-(6-propylsulfanyl-1H-benzimidazol-2-yl)carbamate

Chemical Formula: C₁₂H₁₅N₃O₂S

Albendazole on Wikipedia: <http://en.wikipedia.org/wiki/Albendazole>

Organisms Affected: Helminthic Microorganisms