



Cyproheptadine

Updated: January 16, 2017.

OVERVIEW

Introduction

Cyproheptadine is a first generation antihistamine used in the treatment of allergic rhinitis and urticaria and as an appetite stimulant. Cyproheptadine has been linked to rare instances of clinically apparent liver injury.

Background

Cyproheptadine (syeh' proe hep' da deen) is a first generation antihistamine which also has anticholinergic and antiserotonergic activities that is used to treat allergic conditions including seasonal rhinitis, conjunctivitis, dermatitis and urticaria. Cyproheptadine belongs to the piperidine class of antihistamines. Its antiserotonergic properties have led to its use to treat side effects of the serotonin reuptake inhibitors and the serotonin syndrome. Cyproheptadine has also been used off-label as an appetite stimulant and to treat cyclic vomiting. Cyproheptadine is available by prescription only. Formulations include tablets, oral solutions and syrups in multiple generic forms and under the trade name Periactin. The usual adult oral dose is 4 mg three to four times daily. Common side effects include excessive sedation, impairment of motor function, confusion, dizziness, blurred vision, dry mouth and throat, palpitations, tachycardia, abdominal distress, constipation and headache. Antihistamines can worsen urinary retention and precipitate acute narrow angle glaucoma.

Hepatotoxicity

Unlike most first generation antihistamines, cyproheptadine has been associated with several instances of clinically apparent liver injury. The few cases that have been described had a time to onset of 1 to 6 weeks and a cholestatic or mixed pattern of liver enzyme elevations. Immunoallergic and autoimmune features were not present and most patients recovered rapidly without residual. Acute liver failure due to cyproheptadine has not been described.

Likelihood score: C (probable rare cause of clinically apparent liver injury).

Mechanism of Injury

The cause of liver injury due to cyproheptadine is not known, but is clearly idiosyncratic and perhaps due to its hepatic metabolism to a toxic intermediate.

Outcome and Management

Most instances of acute liver injury due to cyproheptadine have been mild-to-moderate in severity and self-limited in course and outcome. In one case report, there was recurrence of injury when cyproheptadine was

restarted. There is no information on cross sensitivity to hepatic injury among the various antihistamines, but use of an antihistamine of another class after clinically apparent liver injury due to cyproheptadine is likely to be safe.

References on the safety and potential hepatotoxicity of antihistamines are given together after the Overview section on Antihistamines.

Drug Class: [Antihistamines](#)

PRODUCT INFORMATION

REPRESENTATIVE TRADE NAMES

Cyproheptadine – Generic, Periactin®

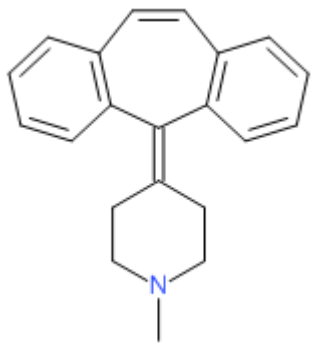
DRUG CLASS

Antihistamines

COMPLETE LABELING

Product labeling at DailyMed, National Library of Medicine, NIH

CHEMICAL FORMULA AND STRUCTURE

DRUG	CAS REGISTRY NUMBER	MOLECULAR FORMULA	STRUCTURE
Cyproheptadine	129-03-3	C ₂₁ -H ₂₁ -N	 The chemical structure of Cyproheptadine consists of a central carbon atom double-bonded to a piperidine ring (a six-membered ring with one nitrogen atom and a methyl group attached to the nitrogen). This central carbon is also bonded to two phenyl rings and a seven-membered ring system that includes a double bond and is fused to another phenyl ring.