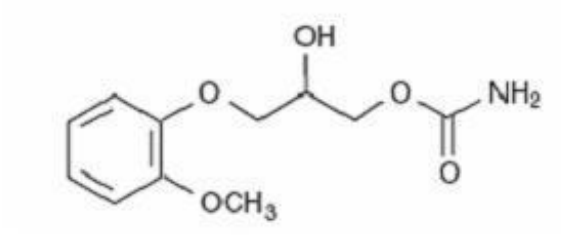
METHOCARBAMOL - methocarbamol tablet
Hetero Drugs Limited Unit III

Rx Only

DESCRIPTION

Methocarbamol tablets USP a carbamate derivative of guaifenesin, is a central nervous system (CNS) depressant with sedative and musculoskeletal relaxant properties.

The chemical name of methocarbamol is 3-(2-methoxyphenoxy)-1,2-propanediol 1-carbamate and has the empirical formula $C_{11}H_{15}NO_5$. Its molecular weight is 241.24. The structural formula is shown below.



Methocarbamol is a white powder, sparingly soluble in water and chloroform, soluble in alcohol (only with heating) and propylene glycol, and insoluble in benzene and n-hexane.

Methocarbamol tablets USP are available as 500 mg and 750 mg tablets for oral administration. Methocarbamol tablets USP 500 mg and 750 mg contain the following inactive ingredients: sodium lauryl sulfate, sodium starch glycolate, povidone K 90, polyethylene glycol, magnesium stearate, colloidal silicon dioxide, low substituted hydroxy propyl cellulose and stearic acid.

CLINICAL PHARMACOLOGY

The mechanism of action of methocarbamol in humans has not been established, but may be due to general central nervous system (CNS) depression. It has no direct action on the contractile mechanism of striated muscle, the motor end plate or the nerve fiber.

Pharmacokinetics

In healthy volunteers, the plasma clearance of methocarbamol ranges between 0.20 and 0.80 L/h/kg, the mean plasma elimination half-life ranges between 1 and 2 hours, and the plasma protein binding ranges between 46% and 50%.

Methocarbamol is metabolized via dealkylation and hydroxylation. Conjugation of methocarbamol also is likely. Essentially all methocarbamol metabolites are eliminated in the urine. Small amounts of unchanged methocarbamol also are excreted in the urine.

Special populations

Elderly

The mean (± SD) elimination half-life of methocarbamol in elderly healthy volunteers

(mean (± SD) age, 69 (± 4) years) was slightly prolonged compared to a younger (mean (± SD) age, 53.3

(± 8.8) years), healthy population (1.5 (± 0.4) hours versus 1.1 (± 0.27) hours, respectively). The fraction of bound methocarbamol was slightly decreased in the elderly versus younger volunteers (41 to 43% versus 46 to 50%, respectively).

Renally impaired

The clearance of methocarbamol in 8 renally-impaired patients on maintenance hemodialysis was reduced about 40% compared to 17 normal subjects, although the mean (± SD) elimination half-life in these two groups was similar: 1.2 (± 0.6) versus 1.1 (± 0.3) hours, respectively

Hepatically impaired

In 8 patients with cirrhosis secondary to alcohol abuse, the mean total clearance of methocarbamol was reduced approximately 70% compared to that obtained in 8 age- and weight-matched normal subjects.The mean (± SD) elimination half-life in the cirrhotic patients and the normal subjects was 3.38 (± 1.62) hours and 1.11 (± 0.27) hours, respectively. The percent of methocarbamol bound to plasma proteins was decreased to approximately 40 to 45% compared to 46 to 50% in the normal subjects.

INDICATIONS AND USAGE

Methocarbamol tablets USP are indicated as an adjunct to rest, physical therapy, and other measures for the relief of discomfort associated with acute, painful musculoskeletal conditions. The mode of action of methocarbamol has not been clearly identified, but may be related to its sedative properties. Methocarbamol does not directly relax tense skeletal muscles in man.

CONTRAINDICATIONS

Methocarbamol tablets USP are contraindicated in patients hypersensitive to methocarbamol or to any of the tablet components.

WARNINGS

Since methocarbamol may possess a general CNS depressant effect, patients receiving methocarbamol tablets USP should be cautioned about combined effects with alcohol and other CNS depressants.

Safe use of methocarbamol tablets USP has not been established with regard to possible adverse effects upon fetal development. There have been reports of fetal and congenital abnormalities following in utero exposure to methocarbamol. Therefore, methocarbamol tablets USP should not be used in women who are or may become pregnant and particularly during early pregnancy unless in the judgment of the physician the potential benefits outweigh the possible hazards (see **PRECAUTIONS, Pregnancy**)

Use In Activities Requiring Mental Alertness

Methocarbamol may impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Patients should be cautioned about operating machinery, including automobiles, until they are reasonably certain that methocarbamol therapy does not adversely affect their ability to engage in such activities.

PRECAUTIONS

Information for Patients

Patients should be cautioned that methocarbamol may cause drowsiness or dizziness, which may impair their ability to operate motor vehicles or machinery.

Because methocarbamol may possess a general CNS-depressant effect, patients should be cautioned

about combined effects with alcohol and other CNS depressants.

Drug Interactions

See **WARNINGS** and **PRECAUTIONS** for interaction with CNS drugs and alcohol.

Methocarbamol may inhibit the effect of pyridostigmine bromide. Therefore, methocarbamol should be used with caution in patients with myasthenia gravis receiving anticholinesterase agents

Drug or Laboratory Test Interactions

Methocarbamol may cause a color interference in certain screening tests for 5-hydroxyindoleacetic acid (5-HIAA) using nitrosonaphthol reagent and in screening tests for urinary vanillylmandelic acid (VMA) using the Gitlow method.

Carcinogenesis,Mutagenesis,Impairment of Fertility

Long-term studies to evaluate the carcinogenic potential of methocarbamol have not been performed. No studies have been conducted to assess the effect of methocarbamol on mutagenesis or its potential to impair fertility.

Pregnancy

Teratogenic effects -Pregnancy Category C

Animal reproduction studies have not been conducted with methocarbamol. It is also not known whether methocarbamol can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Methocarbamol tablets USP should be given to a pregnant woman only if clearly needed.

Safe use of methocarbamol tablets USP has not been established with regard to possible adverse effects upon fetal development. There have been reports of fetal and congenital abnormalities following in utero exposure to methocarbamol. Therefore, methocarbamol tablets USP should not be used in women who are or may become pregnant and particularly during early pregnancy unless in the judgment of the physician the potential benefits outweigh the possible hazards (see**WARNINGS**).

Nursing Mothers

Methocarbamol and/or its metabolites are excreted in the milk of dogs; however, it is not known whether methocarbamol or its metabolites are excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when methocarbamol tablets USP are administered to a nursing woman

Pediatric Use

Safety and effectiveness of methocarbamol tablets USP in pediatric patients below the age of 16 have not been established.

ADVERSE REACTIONS

Adverse reactions reported coincident with the administration of methocarbamol include:

Body as a whole: Anaphylactic reaction, angioneurotic edema, fever, headache

Cardiovascular system: Bradycardia, flushing, hypotension, syncope, thrombophlebitis

Digestive system: Dyspepsia, jaundice (including cholestatic jaundice), nausea and vomiting

Hemic and lymphatic system: Leukopenia

Immune system: Hypersensitivity reactions

Nervous system: Amnesia, confusion, diplopia, dizziness or lightheadedness, drowsiness, insomnia, mild

muscular incoordination, nystagmus, sedation, seizures (including grand mal), vertigo

Skin and special senses: Blurred vision, conjunctivitis, nasal congestion, metallic taste, pruritus, rash, urticaria

OVERDOSAGE

Limited information is available on the acute toxicity of methocarbamol. Overdose of methocarbamol is frequently in conjunction with alcohol or other CNS depressants and includes the following symptoms: nausea, drowsiness, blurred vision, hypotension, seizures, and coma.

In post-marketing experience, deaths have been reported with an overdose of methocarbamol alone or in the presence of other CNS depressants, alcohol or psychotropic drugs.

Treatment

Management of overdose includes symptomatic and supportive treatment. Supportive measures include maintenance of an adequate airway, monitoring urinary output and vital signs, and administration of intravenous fluids if necessary. The usefulness of hemodialysis in managing overdose is unknown

DOSAGE & ADMINISTRATION

Methocarbamol Tablets USP 500 mg – Adults:

Initial dosage: 3 tablets q.i.d.

Maintenance dosage: 2 tablets q.i.d.

Methocarbamol Tablets USP 750 mg – Adults:

Initial dosage: 2 tablets q.i.d.

Maintenance dosage: 1 tablet q.4h. or 2 tablets t.i.d.

Six grams a day are recommended for the first 48 to 72 hours of treatment. (For severe conditions 8 grams a day may be administered). Thereafter, the dosage can usually be reduced to approximately 4 grams a day.

HOW SUPPLIED

Methocarbamol tablets USP 500 mg are white to off white, capsule shaped, tablets debossed with ‘H’ on scored side and ‘114’ on unscored side . They are supplied as follows:

Bottles of 30 NDC 65977-5033-0

Bottles of 60 NDC 65977-5033-1

Bottles of 100 NDC 65977-5033-2

Bottles of 500 NDC 65977-5033-3

Bottles of 1000 NDC 65977-5033-4

Methocarbamol tablets USP 750 mg are white to off white, capsule shaped, tablets debossed with ‘H’ on one side and ‘115’ on other side . They are supplied as follows:

Bottles of 30 NDC 65977-5034-0

Bottles of 60 NDC 65977-5034-1

Bottles of 100 NDC 65977-5034-2

Bottles of 500 NDC 65977-5034-3

Store at 20° to 25°C (68° to 77°F) [see USP Controlled Room Temperature].

Dispense in tight container.

Manufactured by:
HETERO DRUGS LIMITED
22-110, I.D.A., Jeedimetla,
Hyderabad – 500 055, India.

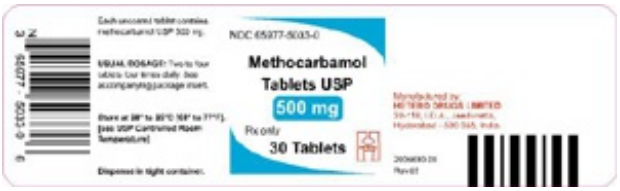
2006699-00

Rev. 02

Bar Code

PACKAGE LABEL.PRINCIPAL DISPLAY PANEL

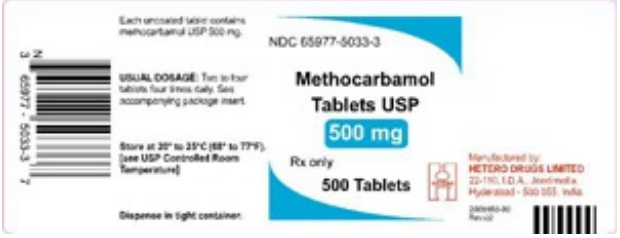
Methocarbamol tablets, USP 500 mg 30 tablets



Methocarbamol tablets, USP 500 mg 60 tablets

Methocarbamol tablets, USP 500 mg 100 tablets

Methocarbamol tablets, USP 500 mg 500 tablets



Methocarbamol tablets, USP 500 mg 1000 tablets

Methocarbamol tablets, USP 750 mg 30 tablets

Methocarbamol tablets, USP 750 mg 60 tablets

Methocarbamol tablets, USP 750 mg 100 tablets

Methocarbamol tablets, USP 750 mg 500 tablets

METHOCARBAMOL

methocarbamol tablet

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:65977-5033
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
Methocarbamol (UNII: 125OD7737X) (Methocarbamol - UNII:125OD7737X)	Methocarbamol	500 mg

Inactive Ingredients	
Ingredient Name	**Strength**
sodium lauryl sulfate (UNII: 368GB5141J)	
Sodium Starch Glycolate Type A Potato (UNII: 5856J3G2A2)	
Povidone K90 (UNII: RDH86HJV5Z)	
polyethylene glycol (UNII: 3WJQ0SDW1A)	
magnesium stearate (UNII: 70097M6I30)	
colloidal silicon dioxide (UNII: ETJ7Z6XBU4)	
Hydroxypropyl Cellulose, Low Substituted (UNII: 2165RE0K14)	
stearic acid (UNII: 4ELV7Z65AP)	

Product Characteristics			
Color	WHITE (White to off White)	**Score**	2 pieces
Shape	CAPSULE (capsule)	**Size**	14mm
Flavor		**Imprint Code**	H;114
Contains			

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:65977-5033-0	30 in 1 BOTTLE		
2	NDC:65977-5033-1	60 in 1 BOTTLE		
3	NDC:65977-5033-2	100 in 1 BOTTLE		
4	NDC:65977-5033-3	500 in 1 BOTTLE		
5	NDC:65977-5033-4	1000 in 1 BOTTLE		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA090200	11/06/2009	

METHOCARBAMOL

methocarbamol tablet

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:65977-5034
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
Methocarbamol (UNII: 125OD7737X) (Methocarbamol - UNII:125OD7737X)	Methocarbamol	750 mg

Inactive Ingredients	
Ingredient Name	**Strength**
sodium lauryl sulfate (UNII: 368GB5141J)	
Sodium Starch Glycolate Type A Potato (UNII: 5856J3G2A2)	
povidone K90 (UNII: RDH86HJV5Z)	
polyethylene glycol (UNII: 3WJQ0SDW1A)	
magnesium stearate (UNII: 70097M6I30)	
colloidal silicon dioxide (UNII: ETJ7Z6XBU4)	
Hydroxypropyl Cellulose, Low Substituted (UNII: 2165RE0K14)	
stearic acid (UNII: 4ELV7Z65AP)	

Product Characteristics			
Color	WHITE (White to off White)	**Score**	no score
Shape	CAPSULE (capsule)	**Size**	19mm
Flavor		**Imprint Code**	H;115
Contains			

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:65977-5034-0	30 in 1 BOTTLE		
2	NDC:65977-5034-1	60 in 1 BOTTLE		
3	NDC:65977-5034-2	100 in 1 BOTTLE		
4	NDC:65977-5034-3	500 in 1 BOTTLE		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA090200	11/06/2009	

Labeler - Hetero Drugs Limited Unit III (650220163)

Establishment

Name	Address	ID/FEI	Business Operations
Hetero Drugs Limited Unit III		650220163	analysis, manufacture