

**MUFLEX** Capsule & Syrup  
(Carbocisteine)

**MUFLEX PRO** Syrup  
(Carbocisteine + Promethazine HCl)

کیپسول / شربت  
میولیکس (کاربوسٹین)

میولیکس پرو شربت  
(کاربوسٹین + پرومیتھازین ہائیڈروکلورائیڈ)

#### COMPOSITION:

MUFLEX 375mg Capsules : Each capsule contains 375mg of Carbocisteine B.P.  
MUFLEX 250mg/5ml Adult syrup : Each 5 ml contains 250mg of Carbocisteine B.P.  
MUFLEX 100mg/5ml Children & infants syrup : Each 5 ml contains 100mg of Carbocisteine B.P.  
MUFLEX PRO syrup : Each 5 ml contains 100mg of Carbocisteine B.P and 2.5mg of Promethazine HCl B.P.

#### PHARMACOLOGICAL PROPERTIES:

##### Pharmacodynamic properties:

Carbocisteine (S-Carboxymethyl L-cysteine) has been shown in normal and bronchitic animal models to affect the nature and amount of mucus glycoprotein which is secreted by the respiratory tract. An increase in the acid: neutral glycoprotein ratio of the mucus and a transformation of serous cells to mucus cells are known to be the initial response to irritation and will normally be followed by hypersecretion. The administration of Carbocisteine to animals exposed to irritants indicates that the glycoprotein that is secreted remains normal; administration after exposure indicates that return to the normal state is accelerated. Studies in humans have demonstrated that Carbocisteine reduces goblet cell hyperplasia. Carbocisteine can therefore be demonstrated to have a role in the management of disorders characterized by abnormal mucus.

##### Pharmacokinetic properties:

Carbocisteine is rapidly absorbed from the GI tract. In an 'in-house' study, at steady state (7 days), MUFLEX capsules 375mg given as 2 capsules tds. to healthy volunteers gave the following pharmacokinetic parameters:

Plasma Determinations	Mean	Range
T Max (Hr)	2.0	1.0-3.0
T <sub>1/2</sub> (Hr)	1.87	1.4-2.5
KEL (Hr-1)	0.387	0.28-0.50
AUCO-7.5 (mcg.Hr.ml-1)	39.26	26.0-62.4

##### Derived Pharmacokinetic Parameters

\*CLS (L.Hr-1) 20.2 -

CLS (ml.min-1) 331-

VD (L) 105.2 -

VD (L.Kg-1) 1/75 -

\*Calculated from dose for day 7 of study

##### Therapeutic indications:

Capsules and Syrup: Carbocisteine is a mucolytic agent for the adjunctive therapy of respiratory tract disorders characterized by excessive, viscous mucus, including suppurative otitis media (glue ear) and chronic obstructive airways disease. Pediatric Syrup: Carbocisteine is a mucolytic agent for the adjunctive therapy of respiratory tract disorders characterized by excessive or viscous mucus.

#### DOSAGE AND ADMINISTRATION:

##### Adults including elderly:

Dosage is based upon an initial daily dosage of 2250mg Carbocisteine in divided doses, reducing to 1500mg daily in divided doses when a satisfactory response is obtained.

##### MUFLEX Capsules:

Two capsules three times a day reducing to one capsule four times a day.

##### MUFLEX 250mg/5ml Syrup:

For adults and over age of 15 years: 15 ml (3 measuring spoonful) 3 times in a day reducing to 10 ml (2 measuring spoonful) 3 times in a day or as prescribed by physician.

##### MUFLEX 100mg/5ml Syrup:

Dosage should be adjusted in accordance with the child's weight.

##### Children:

Dosage should be adjusted in accordance with the child's weight.

**Infants and children aged 1 month to 2 years:** 20 to 30 mg/kg/day in 1 or 2 divided doses up to a maximum of 100mg i.e one 5ml measuring spoon per dose. (One 5ml measuring spoon contains 100mg of Carbocisteine.

**Children aged 2 to 5 years:** 5ml (1 measuring spoonful) two times in a day.

**Children aged 5 to 15 years:** 5ml (1 measuring spoonful) three times in a day or as prescribed by physician.

##### MUFLEX PRO Syrup:

**For Adults and children aged over 1 year only.**

For children comply with your doctor's prescription. Use 5 ml measuring spoon.

**From 12 to 30 months:** 3 to 4 measuring spoons per day.

**From 30 months to 12 years:** 4 to 6 measuring spoons per day.

**From 12 years to 15 years:** 6 to 9 measuring spoons per day.

**For Adults:** 3 to 4 table spoons (1 tablespoon = 15 ml) per day.

**Contraindications:** Active peptic ulceration.

**Special warnings and precautions for use:** Not yet reported.

**Interaction with other medicinal products and other forms of Interaction:** Not yet reported.

**Pregnancy and lactation:** Although tests in mammalian species have revealed no teratogenic effects, MUFLEX is not recommended during the first trimester of pregnancy.

**Use in lactation:** Effects not known.

**Effects on ability to drive and use machines:** Not yet reported.

**Undesirable effects:** There have been rare reports of skin rashes or gastrointestinal bleeding occurring during treatment with MUFLEX.

**Overdose:** Gastric lavage may be beneficial, followed by observation. Gastrointestinal disturbance is the most likely symptom of MUFLEX Over dosage.

**Shelf-life:** Do not use later than date of expiry.

Dosage as directed by physician. To be dispensed on the prescription of a registered medical practitioner only. Store below 30°C in a dry place, protect from light. Keep out of the reach of children. Keep bottle tightly closed.

##### Presentation:

MUFLEX Capsules 375 mg: Pack of 30's Capsules

MUFLEX 250mg/5ml for Adult syrup: Pack of 120ml Bottle

MUFLEX 100mg/5ml Children & Infants Syrup: Pack of 120ml Bottle

MUFLEX PRO Syrup: Pack of 120ml Bottle

- خوراک: ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
- دو ماہ کو 3 ڈگری سے کم درجہ حرارت پر روشنی سے بچا کر خشک جگہ پر رکھیں۔
- صرف ریسرڈ ڈاکٹر کے نسخے پر ہی فروخت کریں۔
- بچوں کی پہنچ سے دور رکھیں۔
- ڈیکن کو اچھی طرح بند رکھیں۔

##### Manufactured by:

**Kaizen Pharmaceuticals (Pvt.) Ltd.**

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