



# PHARMOTIL ORAL

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REGISTRATION NUMBER Q – 7972 – 023

## FORMULA:

Metoclopramide (hydrochloride)..... 5 mg

Vehicle q.s. ....1.0 ml

**Injectable antiemetic for dogs and cats.**

**Presentation: Pharmotil Oral** 15 ml dropper bottle.

**DESCRIPTION:** Antiemetic, prokinetic, stimulant of gastric emptying and intestinal gastric emptying and intestinal movement in dogs and cats.

## INDICATIONS:

It is indicated for the prophylactic and therapeutic control of nausea and vomiting of both central and peripheral origin, caused by gastroenteric inflammation of infectious and non-infectious origin (including parvovirus). It is also used in gastroenteric and gastroesophageal dysfunctions, post-operative states, post-anesthesia, and after hematogenous oncological treatments (chemotherapy and/or radiation).

As an adjuvant in esophagitis due to gastric reflux by *Spirocerca lupi*, gastric stasis and gastroenteric dysmotility and in any condition that requires normalization of the emptying of gastric contents (functional gastric retention, pylorus-spasm, regurgitation). It is also recommended as an adjunct in the treatment of hypochloric gastritis and gastric ulcer.

**Metoclopramide:**

## MECHANISM OF ACTION:

The primary effects of metoclopramide are associated with stimulation of the gastrointestinal tract (GIT) such as gastric stimulation, pancreatic and biliary secretions. It seems to sensitize tissues to the action of acetylcholine.

It increases the tone and amplitude of gastric contractions, without increasing gastric secretion, relaxes the duodenal bulb and pyloric sphincter and increases peristalsis of the duodenum and jejunum resulting in increased gastric emptying and intestinal transit also increases the tone of the lower esophageal sphincter. (Cardia).

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Metoclopramide increases peripheral cholinergic activity, either by releasing acetylcholine in postganglionic nerve endings or by increasing the sensitivity of muscarinic receptors on smooth muscle. Vagotomy does not inhibit the effects of metoclopramide on the digestive tract, and paradoxically, while low doses of the drug stimulate the mechanical activity of the digestive tract, high doses inhibit it. The effects of metoclopramide on the tone of the lower esophageal sphincter, together with the increased speed of gastric emptying, reduce gastroesophageal reflux. As a consequence of all these actions, the overall result is a remarkable improvement and coordination of digestive motility.

It blocks dopaminergic receptors, especially those of type D<sub>2</sub> in the excitatory area of chemoreceptors, without showing antipsychotic or tranquilizing activity. Metoclopramide is also less sedative than other dopamine antagonists. Its antiemetic effects result from its central dopaminergic antagonism and its gastrokinetic effects. In addition, it has antagonistic effects on 5-HT<sub>3</sub> receptors, also involved in the mechanisms of nausea and vomiting. Dopamine blockade in the central nervous system produces extrapyramidal effects<sup>1</sup>, and at the pituitary and hypothalamus level it stimulates prolactin secretion. The effects of metoclopramide on the renal glands increase aldosterone secretion.

## **PHARMACOKINETICS:**

The onset of pharmacological action of metoclopramide is 1 to 3 minutes after intravenous administration, 10 to 15 minutes after an oral administration. The pharmacological effects persist for one to two hours. Metoclopramide is well and rapidly absorbed relative to an intravenous dose of 20 mg. The absolute oral bioavailability of metoclopramide is 80%. Peak plasma concentrations occur about 1 to 2 hours after a single oral dose; peak concentrations increase linearly. The average elimination half-life in individuals with normal renal function is 5 to 6 hours. This drug binds only 13 to 22% to plasma proteins; corresponding studies suggest extensive distribution of this drug in body tissues. The bioavailability in IM application is 74 to 96% Distribution It is distributed in all tissues and body fluids including, metoclopramide crosses the placental barrier and is also distributed in all tissues and body fluids including, metoclopramide crosses the placental barrier and is also distributed in all tissues and body fluids. placental barrier and is also distributed in milk.

**Elimination:** Plasma concentrations decline in a biphasic manner. Although data from single dose studies are limited, they suggest that the elimination of metoclopramide is dose-dependent. Its half-life in dogs is 90 minutes. The major metabolite found in urine is 2-[(4-amino-5-chloro-2-methoxybenzoyl) amino] acetic acid. It is not yet known whether this metabolite is pharmacologically active. Metoclopramide is conjugated with sulfuric and/or glucuronic acid. Approximately 20 - 25% of the drug is excreted unchanged in urine and its metabolites are excreted in urine and feces.

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## **Dosage and route of administration:**

### **DOGS:**

As an antiemetic:

- a) 0.2 - 0.5 mg/kg every 8 h, SC or IM; or 1 - 2 mg/kg daily as a continuous intravenous infusion.
- b) To prevent vomiting in patients with laryngeal paralysis and as a result of tracheotomy: 0.05 mg/kg SC or slow IV.

For treatment of gastric motility disorders, or esophageal reflux:

- 0.5 mg/kg SC every/8hs, 30 minutes before feeding and putting the animal to sleep; by IV 0.02 mg/kg

### **CATS:**

- a) 0.2 - 0.5 mg/kg SC every 8 h; administer 30 minutes before feeding and before the animal goes to sleep.
- b) 0.1 - 0.3 mg/kg SC; IV 0.02 mg/kg (Adams 2001).

## **PRACTICAL DOSAGE OF PHARMOTIL ORAL:**

Canines and Felines: 1 ml (20 drops)/10 Kg. of weight. Every 8-12 hours

### **ROUTE OF ADMINISTRATION:**

Oral.

### **Drug interactions:**

Because metoclopramide stimulates upper GIT motility (not including stomach), absorption of other drugs or nutrients may be affected.

- **Antagonize its effect:** atropine, its analogues, and narcotic analgesics.
- **Potentiate their effect:** phenothiazines.
- **They increase the absorption of:** acetaminophen, aspirin, Diazepam and tetracyclines.
- **They decrease the absorption of:** digoxin.

### **WARNINGS:**

Not recommended for use in patients with extrapyramidal signs, intestinal occlusion and perforation, epilepsy and renal insufficiency, in females with mammary neoplasms, in animals treated with neuroleptic drugs or as a prophylactic in patients undergoing anastomotic surgery of the gastrointestinal tract, or as a prophylactic in patients undergoing anastomotic surgery of the Gastrointestinal tract.

### **Consult your veterinarian**

Exclusive literature for veterinarians.

Its sale requires medical prescription.

Responsible for content: Technical Department

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## **Bibliography**

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