

# Summary of Product Characteristics

## 1 NAME OF THE MEDICINAL PRODUCT

Maxolon 10 mg Tablets

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains metoclopramide hydrochloride equivalent to 10 mg of the anhydrous substance.

### Excipient(s) with known effect

Lactose: contains 125.00 mg of lactose (as monohydrate) per tablet

For the full list of excipients, see section 6.1.

## 3 PHARMACEUTICAL FORM

Tablet

White to ivory-white circular double convex tablet with a single break bar on one side

## 4 CLINICAL PARTICULARS

### 4.1 Therapeutic indications

#### Adult population:

Maxolon 10 mg tablets are indicated in adults for:

- Prevention of delayedchemotherapyinduced nausea and vomiting (CINV)
- Prevention of radiotherapyinduced nausea and vomiting (RINV).
- Symptomatic treatment of nausea and vomiting, including acute migraine induced nausea and vomiting.

Metoclopramide can be used in combination with oral analgesics to improve the absorption of analgesics in acute migraine.

#### Paediatric population

Maxolon 10mg tablets are indicated in adolescents aged 15-18years and weighing more than 60kg for:

- Prevention of delayedchemotherapyinduced nausea and vomiting (CINV) as a second line option.

### 4.2 Posology and method of administration

#### Posology:

##### All indications (adult population)

The recommended single dose is 10 mg, repeated up to three times daily.  
The maximum recommended dailydose is 30 mg or 0.5mg/kg bodyweight.  
The maximum recommended treatment duration is 5 days.

#### Paediatric population

##### Adolescents aged 15-18 years and weighing > 60kg.

Prevention of delayedchemotherapyinduced nausea and vomiting (CINV)

The recommended dose is 0.1 to 0.15 mg/kg bodyweight, repeated up to three times daily by oral route. The maximum dose in 24 hours is 0.5 mg/kg bodyweight.

### Body Weight Dose Frequency

Adolescents 15-18 years	Over 60kg	10mg	Up to 3 times daily
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The maximum treatment duration is 5 days for prevention of delayed chemotherapy induced nausea and vomiting (CINV).

Maxolon 10 mg Tablets are not suitable for use in adolescents weighing less than 60 kg or in adolescents/children aged 15 years of age or under.

Metoclopramide is contraindicated in children aged less than 1 year (see section 4.3).

### Special population

#### Elderly

In elderly patients a dose reduction should be considered, based on renal and hepatic function and overall frailty.

#### Renal impairment:

In patients with end stage renal disease (Creatinine clearance  $\leq$  15ml/min), the daily dose should be reduced by 75%.

In patients with moderate to severe renal impairment (Creatinine clearance 15-60 ml/min), the dose should be reduced by 50% (see section 5.2).

#### Hepatic impairment:

In patients with severe hepatic impairment, the dose should be reduced by 50% (see section 5.2).

#### Method of administration:

A minimal interval of 6 hours between two administrations is to be respected, even in case of vomiting or rejection of the dose (see section 4.4).

### 4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1
- Gastrointestinal haemorrhage, mechanical obstruction or gastro-intestinal perforation for which the stimulation of gastrointestinal motility constitutes a risk
- Confirmed or suspected pheochromocytoma, due to the risk of severe hypertension episodes
- History of neuroleptic or metoclopramide-induced tardive dyskinesia
- Epilepsy (increased crises frequency and intensity)
- Parkinson's disease
- Combination with levodopa or dopaminergic agonists (see section 4.5)
- Known history of methaemoglobinemia with metoclopramide or of NADH cytochrome-b5 deficiency.
- Use of Metoclopramide in children less than 1 year of age due to an increased risk of extrapyramidal disorders (see section 4.4)

#### 4.4 Special warnings and precautions for use

##### Neurological Disorders

Extrapyramidal disorders may occur, particularly in children and young adults, and/or when high doses are used. These reactions occur usually at the beginning of the treatment and can occur after a single administration. Metoclopramide should be discontinued immediately in the event of extrapyramidal symptoms. These effects are generally completely reversible after treatment discontinuation, but may require a symptomatic treatment (benzodiazepines in children and/or anticholinergic anti-Parkinsonian medicinal products in adults).

The time interval of at least 6 hours specified in the section 4.2 should be respected between each metoclopramide administration, even in case of vomiting and rejection of the dose, in order to avoid overdose.

Prolonged treatment with metoclopramide may cause tardive dyskinesia, potentially irreversible, especially in the elderly. Treatment should not exceed 3 months because of the risk of tardive dyskinesia (see section 4.8). Treatment must be discontinued if clinical signs of tardive dyskinesia appear.

Neuroleptic malignant syndrome has been reported with metoclopramide in combination with neuroleptics as well as with metoclopramide monotherapy (see section 4.8).

Metoclopramide should be discontinued immediately in the event of symptoms of neuroleptic malignant syndrome and appropriate treatment should be initiated. Maxolon should not be used during the first three to four days following operations such as pyloroplasty or gut anastomosis as vigorous muscular contractions may not help healing.

Special care should be exercised in patients with underlying neurological conditions and in patients being treated with other centrally-acting drugs (see section 4.3)

Symptoms of Parkinson's disease may also be exacerbated by metoclopramide.

##### Methaemoglobinemia

Methemoglobinemia which could be related to NADH cytochrome b5 reductase deficiency has been reported. In such cases, metoclopramide should be immediately, and permanently discontinued and appropriate measures initiated (such as treatment with methylene blue).

##### Cardiac Disorders

There have been reports of serious cardiovascular undesirable effects including cases of circulatory collapse, severe bradycardia, cardiac arrest and QT prolongation following administration of metoclopramide by injection, particularly via the intravenous route (see section 4.8).

Special care should be taken when administering metoclopramide, particularly via the intravenous route to the elderly population, to patients with cardiac conduction disturbances (including QT prolongation), patients with uncorrected electrolyte imbalance, bradycardia and those taking other drugs known to prolong QT interval. Intravenous doses should be administered as a slow bolus (at least over 3 minutes) in order to reduce the risk of adverse effects (e.g. hypotension, akathisia).

##### Renal and Hepatic Impairment

In patients with renal impairment or with severe hepatic impairment, a dose reduction is recommended (see section 4.2).

Metoclopramide should not be used in the immediate post-operative period (up to 3-4 days) following pyloroplasty or gut anastomosis, as vigorous gastrointestinal contractions may adversely affect healing.

Metoclopramide may cause elevation of serum prolactin levels.

Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicine.

Care should be exercised when using Maxolon in patients with a history of atopy (including asthma) or porphyria.

Special care should be taken when administering to patients with "sick sinus syndrome" or other cardiac conduction disturbances.

#### 4.5 Interaction with other medicinal products and other forms of interaction

##### Contraindicated combination

Levodopa or dopaminergic agonists and metoclopramide have a mutual antagonism (see section 4.3).

**Combination to be avoided**

Alcohol potentiates the sedative effect of metoclopramide.

**Combination to be taken into account**

Due to the prokinetic effect of metoclopramide, the absorption of certain drugs may be modified.

**Anticholinergics and morphine derivatives**

Anticholinergics and morphine derivatives may have both a mutual antagonism with metoclopramide on the digestive tract motility.

Central nervous system depressants (morphine derivatives, anxiolytics, sedative H1 antihistamines, sedative antidepressants, barbiturates, clonidine and related) Sedative effects of Central Nervous System depressants and metoclopramide are potentiated.

**Neuroleptics**

Metoclopramide may have an additive effect with other neuroleptics on the occurrence of extrapyramidal disorders.

**Serotonergic drugs**

The use of metoclopramide with serotonergic drugs such as SSRIs may increase the risk of serotonin syndrome.

**Digoxin**

Metoclopramide may decrease digoxin bioavailability. Careful monitoring of digoxin plasma concentration is required.

**Cyclosporine**

Metoclopramide increases cyclosporine bioavailability (C<sub>max</sub> by 46% and exposure by 22%). Careful monitoring of cyclosporine plasma concentration is required. The clinical consequence is uncertain.

**Mivacurium and suxamethonium**

Metoclopramide injection may prolong the duration of neuromuscular block (through inhibition of plasma cholinesterase).

**Strong CYP2D6 inhibitors**

Metoclopramide exposure levels are increased when co-administered with strong CYP2D6 inhibitors such as fluoxetine and paroxetine. Although the clinical significance is uncertain, patients should be monitored for adverse reactions.

**4.6 Fertility, pregnancy and lactation**

Pregnancy

A large amount of data on pregnant women (more than 1000 pregnancy outcomes) indicates no malformative nor fetoneonatal toxicity of Metoclopramide hydrochloride. Metoclopramide can be used during pregnancy if clinically needed. Due to pharmacological properties (as other neuroleptics), in case of metoclopramide administration at the end of pregnancy, extrapyramidal syndrome in newborn cannot be excluded.

Metoclopramide should be avoided at the end of pregnancy. If metoclopramide is used, neonatal monitoring should be undertaken.

Breast-feeding

Metoclopramide is excreted in breast milk at low level. Adverse reactions in the breast-fed baby cannot be excluded. Therefore, metoclopramide is not recommended during breastfeeding. Discontinuation of metoclopramide in breastfeeding women should be considered.

Fertility

No data available.

#### 4.7 Effects on ability to drive and use machines

Maxolon has moderate influence on the ability to drive and use machines.

'Maxolon' may cause drowsiness, dizziness, dyskinesia and dystonias which could affect the vision and also interfere with the ability to drive and operate machinery.

#### 4.8 Undesirable effects

Adverse reactions listed by System Organ Class. Frequencies are defined using the following convention: Very common ( $\geq 1/10$ ), Common ( $\geq 1/100 < 1/10$ ), Uncommon ( $\geq 1/1,000 < 1/100$ ), Rare ( $\geq 1/10,000 < 1/1,000$ ), Very rare ( $< 1/10,000$ ), not known (cannot be estimated from the available data).

System Organ Class	Frequency	Adverse reactions
<b>Blood and lymphatic system disorders</b>		
	Not known	Methaemoglobinaemia, which could be related to NADH cytochrome b5 reductase deficiency, particularly in neonates (see section 4.4); Sulfhaemoglobinaemia, mainly with concomitant administration of high doses of sulphur-releasing medicinal products
<b>Immune system disorders</b>		
	Uncommon	Hypersensitivity
	Not known	Anaphylactic reaction (including anaphylactic shock Skin reactions such as rashes, urticaria, pruritus and angioedema.)
<b>Endocrine disorders*</b>		
	Uncommon	Amenorrhoea, Hyperprolactinaemia,
	Rare	Galactorrhoea
	Not known	Gynaecomastia
<b>Psychiatric disorders</b>		
	Common	Depression
	Uncommon	Hallucination
	Rare	Confusional state, restlessness, agitation
<b>Nervous system disorders</b>		
	Very common	Somnolence
	Common	Extrapyramidal disorders (particularly in children and young adults and/or when the recommended dose is exceeded, even following administration of a single dose of the drug) (see section 4.4), Parkinsonism, Akathisia
	Uncommon	Dystonia, (including visual disturbances and oculogyric crisis), Dyskinesia, Depressed level of consciousness
	Rare	Convulsion especially in epileptic patients
	Not known	Tardive dyskinesia which may be persistent, during or after prolonged treatment, particularly in elderly patients (see section 4.4), Neuroleptic malignant syndrome (see section 4.4)
<b>Eye disorders</b>		
	Not known	Visual disturbance
<b>Cardiac disorders</b>		

	Uncommon	Bradycardia, particularly with intravenous formulation
	Not known	Cardiac arrest, occurring shortly after injectable use, and which can be subsequent to bradycardia (see section 4.4) Atrioventricular block, Sinus arrest particularly with intravenous formulation; Electrocardiogram QT prolonged; Torsade de Pointes
<b>Vascular disorder</b>		
	Common	Hypotension, particularly with intravenous formulation
	Not known	Shock, syncope after injectable use Acute hypertension in patients with pheochromocytoma (see section 4.3), Transient increase in blood pressure  Transient increase in blood pressure Transient increase in blood pressure
<b>Respiratory, thoracic and mediastinal disorders</b>		
	Not known	Dyspnoea
<b>Gastrointestinal disorders</b>		
	Common	Diarrhoea
<b>General disorders and administration site conditions</b>		
	Common	Asthenia
	Rare	Anxiety
	Not known	Oedema

\* Endocrine disorders during prolonged treatment in relation with hyperprolactinaemia (amenorrhoea, galactorrhoea, gynaecomastia).

The following reactions, sometimes associated, occur more frequently when high doses are used:

- Extrapyramidal symptoms: acute dystonia and dyskinesia, parkinsonian syndrome, akathisia, even following administration of a single dose of the medicinal product, particularly in children and young adults (see section 4.4).
- Drowsiness, decreased level of consciousness, confusion, hallucination.

#### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via HPRC Pharmacovigilance Website: [www.hpra.ie](http://www.hpra.ie).

## 4.9 Overdose

### Symptoms

Extrapyramidal disorders, drowsiness, decreased level of consciousness, confusion, hallucination, and cardio-respiratory arrest may occur.

### Management

In case of extrapyramidal symptoms related or not to overdose, the treatment is only symptomatic (benzodiazepines in children and/or anticholinergic anti-parkinsonian medicinal products in adults).

A symptomatic treatment and a continuous monitoring of the cardiovascular and respiratory functions should be carried out according to clinical status.

## 5 PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Agents stimulating gastro-intestinal motility,  
ATC code: A03FA01

#### Mechanism of action

The action of metoclopramide is closely associated with parasympathetic nervous control of the upper gastrointestinal tract, where it has the effect of encouraging normal peristaltic action. Metoclopramide is a benzamide derivative which acts peripherally to enhance cholinergic action at muscarinic synapses and in the central nervous system to antagonise dopamine. This provides for a fundamental approach to the control of those conditions where disturbed gastrointestinal motility is a common underlying factor.

### 5.2 Pharmacokinetic properties

#### Absorption

Absorption from the gastrointestinal tract is rapid.

#### Biotransformation

The drug undergoes significant first-pass hepatic metabolism.

#### Elimination

It is excreted in the urine as unchanged drug and metabolites in both free and conjugated form. The drug is also excreted in breast milk.

#### **Renal impairment**

The clearance of metoclopramide is reduced by up to 70% in patients with severe renal impairment, while the plasma elimination half-life is increased (approximately 10 hours for a creatinine clearance of 10-50 mL/minute and 15 hours for a creatinine clearance <10 mL/minute).

#### **Hepatic impairment**

In patients with cirrhosis of the liver, accumulation of metoclopramide has been observed, associated with a 50% reduction in plasma clearance.

### 5.3 Preclinical safety data

No additional data available.

## 6 PHARMACEUTICAL PARTICULARS

### 6.1 List of excipients

Maize starch (dried)  
Colloidal anhydrous silica  
Magnesium stearate  
Pregelatinised maize starch  
Lactose monohydrate

### 6.2 Incompatibilities

Not applicable.

### **6.3 Shelf life**

5 years.

### **6.4 Special precautions for storage**

Do not store above 30°C.

### **6.5 Nature and contents of container**

Packs of 20, 21, and 84 tablets in PVC aluminium blister strip.

Not all pack sizes may be marketed.

### **6.6 Special precautions for disposal and other handling**

No special requirements for disposal.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

## **7 MARKETING AUTHORISATION HOLDER**

Amdipharm Limited  
Temple Chambers  
3 Burlington Road  
Dublin 4  
Ireland

## **8 MARKETING AUTHORISATION NUMBER**

PA1142/011/003

## **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 01 April 1979

Date of last renewal: 01 April 2009

## **10 DATE OF REVISION OF THE TEXT**

September 2022