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## Professional Information

### SCHEDULING STATUS

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#### 1. NAME OF THE MEDICINE

**NEXIPRAZ OTC** gastro-resistant tablets

#### 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

##### **NEXIPRAZ OTC:**

Each gastric-resistant tablet contains esomeprazole magnesium 20,7 mg equivalent to esomeprazole 20 mg.

Contains 30 mg sugar per tablet

For the full list of excipients, see **section 6.1**.

#### 3. PHARMACEUTICAL FORM

Gastric-resistant tablets

##### **NEXIPRAZ OTC**

A light brick red to brown coloured, oval, biconvex, film coated tablets with 'E5' debossed on one side and plain on the other side.

#### 4. CLINICAL PARTICULARS

##### **4.1 Therapeutic indications**

Short-term treatment of reflux symptoms such as heartburn and regurgitation in adults.

##### **4.2 Posology and method of administration**

###### **Posology**

The recommended dose is 20 mg esomeprazole (one tablet) per day.

It might be necessary to take the tablets for 2-3 consecutive days to achieve improvement of symptoms. The duration of treatment is up to 2 weeks. Once complete relief of symptoms has occurred, treatment should be discontinued.

If no symptom relief is obtained within 2 weeks of continuous treatment, the patient should consult a doctor.

###### **Special populations**

###### ***Patients with renal impairment***

Dose adjustment is not required in patients with impaired renal function. Due to limited experience in patients with severe renal insufficiency, such patients should be treated with caution (see **section 5.2**).

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### ***Patients with hepatic impairment***

Dose adjustment is not required in patients with mild to moderate liver impairment. However, patients with severe liver impairment should be advised by a doctor before taking **NEXIPRAZ OTC** (see **sections 4.4 and 5.2**).

### ***Elderly patients (≥65 years old)***

Dose adjustment is not required in elderly patients

### ***Paediatric population***

There is no relevant use of **NEXIPRAZ OTC** in the paediatric population below 18 years of age for the indication of “short-term treatment of reflux symptoms (e.g., heartburn and acid regurgitation)”.

### **Method of administration**

The tablets should be swallowed whole with liquid. The tablets should not be chewed or crushed.

The tablets can also be dispersed in half a glass of non-carbonated water. No other liquids should be used. Stir until the tablets disintegrate and drink the liquid with the pellets immediately or within 30 minutes. Rinse the glass with half a glass of water and drink. The pellets must not be chewed or crushed.

### **4.3 Contraindications**

- Known hypersensitivity to esomeprazole, substituted benzimidazoles or any other constituents of **NEXIPRAZ OTC** (see **section 6.1**).
- Co-administration with atazanavir and nelfinavir (see **section 4.5**).

### **4.4 Special warnings and precautions for use**

#### ***General***

Patients should be instructed to consult a doctor if:

- They have significant unintentional weight loss, recurrent vomiting, dysphagia, haematemesis or melaena and when gastric ulcer is suspected or present, malignancy should be excluded as treatment with esomeprazole may alleviate symptoms and delay diagnosis.
- They have had previous gastric ulcer or gastrointestinal surgery.
- They have been on continuous symptomatic treatment of indigestion or heartburn for 4 or more weeks.
- They have jaundice or severe liver disease.
- They are aged over 55 years with new or recently changed symptoms.

Patients with long-term recurrent symptoms of indigestion or heartburn should see their doctor at regular intervals. Patients over 55 years taking any non-prescription

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indigestion or heartburn remedy on a daily basis should inform their pharmacist or doctor.

Patients should not take **NEXIPRAZ OTC** as a long term preventive medicinal product.

Treatment with proton pump inhibitors (PPIs) may lead to a slightly increased risk of gastrointestinal infections such as Salmonella and Campylobacter and in hospitalised patients, also possibly Clostridium difficile (see **section 5.1**).

Patients should consult their doctor before taking this medicinal product if they are due to have an endoscopy or urea breath test.

***Combination with other medicinal products***

Co-administration of esomeprazole with atazanavir and nelfinavir is contraindicated (see **section 4.3**).

Esomeprazole is a CYP2C19 inhibitor. When starting or ending treatment with esomeprazole, the potential for interactions with medicinal products metabolised through CYP2C19 should be considered. An interaction is observed between clopidogrel and esomeprazole. The clinical relevance of this interaction is uncertain. The use of esomeprazole with clopidogrel should be discouraged (see **section 4.5**). Patients should not take another PPI or H2 antagonist concomitantly.

***Interference with laboratory tests***

Increased Chromogranin A (CgA) level may interfere with investigations for neuroendocrine tumours. To avoid this interference, **NEXIPRAZ OTC** treatment should be stopped for at least 5 days before CgA measurements (see section 5.1). If CgA and gastrin levels have not returned to reference range after initial measurement, measurements should be repeated 14 days after cessation of proton pump inhibitor treatment.

***Subacute cutaneous lupus erythematosus (SCLE)***

Proton pump inhibitors are associated with very infrequent cases of SCLE. If lesions occur, especially in sun-exposed areas of the skin, and if accompanied by arthralgia, the patient should seek medical help promptly and the health care professional should consider stopping **NEXIPRAZ OTC**. SCLE after previous treatment with a proton pump inhibitor may increase the risk of SCLE with other proton pump inhibitors.

***Sucrose***

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This medicinal product contains sugar spheres (sucrose). Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicinal product.

#### **4.5 Interaction with other medicines and other forms of interaction**

Interaction studies have only been performed in adults.

##### ***Effects of esomeprazole on the pharmacokinetics of other medicinal products***

As esomeprazole is one enantiomer of omeprazole it is reasonable to advise about interactions reported with omeprazole.

##### ***Protease inhibitors***

Omeprazole has been reported to interact with some protease inhibitors. The clinical importance and the mechanisms behind these reported interactions are not always known. Increased gastric pH during omeprazole treatment may change the absorption of the protease inhibitors. Other possible interaction mechanisms are via inhibition of CYP2C19.

##### ***Atazanavir & nelfinavir***

Esomeprazole decreases the concentration of atazanavir and nelfinavir. Co-administration of esomeprazole and atazanavir or nelfinavir is contra-indicated (see **section 4.3**).

Co-administration of omeprazole (40 mg once daily) with atazanavir 300 mg/ritonavir 100 mg to healthy volunteers resulted in a substantial reduction in atazanavir exposure (approximately 75 % decrease in AUC,  $C_{max}$  and  $C_{min}$ ). Increasing the atazanavir dose to 400 mg did not compensate for the impact of omeprazole on atazanavir exposure. The co-administration of omeprazole (20 mg once a day) with atazanavir 400 mg/ritonavir 100 mg to healthy volunteers resulted in a decrease of approximately 30 % in the atazanavir exposure as compared with the exposure observed with atazanavir 300 mg/ritonavir 100 mg once a day without omeprazole 20 mg once a day. Co-administration of omeprazole (40 mg once a day) reduced mean nelfinavir AUC,  $C_{max}$  and  $C_{min}$  by 36–39 % and mean AUC,  $C_{max}$  and  $C_{min}$  for the pharmacologically active metabolite M8 was reduced by 75–92 %. Due to the similar pharmacodynamic effects and pharmacokinetic properties of omeprazole and esomeprazole, concomitant administration with esomeprazole and atazanavir and nelfinavir is contraindicated (see sections 4.3 and 4.4). For saquinavir (with concomitant ritonavir), increased serum levels (80-100 %) have been reported during concomitant omeprazole treatment (40 mg once a day).

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Treatment with omeprazole 20 mg once a day had no effect on the exposure of darunavir (with concomitant ritonavir) and amprenavir (with concomitant ritonavir). Treatment with esomeprazole 20 mg once a day had no effect on the exposure of amprenavir (with and without concomitant ritonavir). Treatment with omeprazole 40 mg once a day had no effect on the exposure of lopinavir (with concomitant ritonavir).

***Methotrexate***

When given together with PPIs, methotrexate levels have been reported to increase in some patients. In high-dose methotrexate administration a temporary withdrawal of esomeprazole may need to be considered.

***Tacrolimus***

Concomitant administration of esomeprazole has been reported to increase the serum levels of tacrolimus. A reinforced monitoring of tacrolimus concentrations as well as renal function (creatinine clearance) should be performed, and the dose of tacrolimus adjusted if needed.

***Medicinal products with pH dependent absorption***

Gastric acid suppression during treatment with esomeprazole and other PPIs might decrease or increase the absorption of medicinal products with a gastric pH dependent absorption. The absorption of medicinal products taken orally such as ketoconazole, itraconazole and erlotinib can decrease during treatment with esomeprazole and the absorption of digoxin can increase during treatment with esomeprazole.

Concomitant treatment with omeprazole (20 mg daily) and digoxin in healthy subjects increased the bioavailability of digoxin by 10 % (up to 30 % in two out of ten subjects). Digoxin toxicity has been rarely reported. However, caution should be exercised when esomeprazole is given at high doses in elderly patients.

Therapeutic monitoring of digoxin should then be reinforced.

***Medicinal products metabolised by CYP2C19***

Esomeprazole inhibits CYP2C19, the major esomeprazole metabolising enzyme. Thus, when esomeprazole is combined with medicinal products metabolised by CYP2C19, such as warfarin, phenytoin, citalopram, imipramine, clomipramine, diazepam, etc., the plasma concentrations of these medicinal products may be increased and a dose reduction could be needed. In case of clopidogrel, a prodrug which is transformed into its active metabolite via CYP2C19, the plasma concentrations of the active metabolite may be decreased.

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**Warfarin**

Concomitant administration of 40 mg esomeprazole to warfarin-treated patients in a clinical study showed that coagulation times were within the accepted range. However, post-marketing, a few isolated cases of elevated INR of clinical significance have been reported during concomitant treatment. Monitoring is recommended when initiating and ending concomitant esomeprazole treatment during treatment with warfarin or other coumarine derivatives.

**Clopidogrel**

Results from studies in healthy subjects have shown a pharmacokinetic (PK)/pharmacodynamic (PD) interaction between clopidogrel (300 mg loading dose/75 mg daily maintenance dose) and esomeprazole (40 mg orally daily) resulting in decreased exposure to the active metabolite of clopidogrel by an average of 40 %, and resulting in decreased maximum inhibition of (ADP induced) platelet aggregation by an average of 14 %.

In a study in healthy subjects, there was a decreased exposure by almost 40 % of the active metabolite of clopidogrel when a fixed dose combination of esomeprazole 20 mg + acetylsalicylic acid 81 mg was given with clopidogrel compared to clopidogrel alone. However, the maximum levels of inhibition of (ADP induced) platelet aggregation in these subjects were the same in both groups. Inconsistent data on the clinical implications of this PK/PD interaction in terms of major cardiovascular events have been reported from both observational and clinical studies. As a precaution, concomitant use of esomeprazole and clopidogrel should be discouraged.

**Phenytoin**

Concomitant administration of 40 mg esomeprazole resulted in a 13 % increase in trough plasma levels of phenytoin in epileptic patients. It is recommended to monitor the plasma concentrations of phenytoin when treatment with esomeprazole is introduced or withdrawn.

**Voriconazole**

Omeprazole (40 mg once daily) increased voriconazole (a CYP2C19 substrate)  $C_{max}$  and  $AUC_T$  by 15 % and 41 %, respectively.

**Cilostazol**

Omeprazole as well as esomeprazole act as inhibitors of CYP2C19. Omeprazole, given in doses of 40 mg to healthy subjects in a cross-over study, increased  $C_{max}$

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and AUC for cilostazol by 18 % and 26 % respectively, and one of its active metabolites by 29 % and 69 % respectively.

#### ***Cisapride***

In healthy volunteers, concomitant administration of 40 mg esomeprazole resulted in a 32 % increase in area under the plasma concentration-time curve (AUC) and a 31 % prolongation of elimination half-life ( $t_{1/2}$ ) but no significant increase in peak plasma levels of cisapride. The slightly prolonged QTc interval observed after administration of cisapride alone, was not further prolonged when cisapride was given in combination with esomeprazole.

#### ***Diazepam***

Concomitant administration of 30 mg esomeprazole resulted in a 45 % decrease in clearance of the CYP2C19 substrate diazepam.

#### **Investigated medicinal products with no clinically relevant interactions**

##### ***Amoxicillin and quinidine***

Esomeprazole has been shown to have no clinically relevant effects on the pharmacokinetics of amoxicillin and quinidine.

##### ***Naproxen or rofecoxib***

Studies evaluating concomitant administration of esomeprazole and either naproxen or rofecoxib did not identify any clinically relevant pharmacokinetic interactions during short-term studies.

#### **Effects of other medicinal products on the pharmacokinetics of esomeprazole**

##### ***Medicinal products which inhibit CYP2C19 and/or CYP3A4***

Esomeprazole is metabolised by CYP2C19 and CYP3A4. Concomitant administration of esomeprazole and a CYP3A4 inhibitor, clarithromycin (500 mg twice a day (b.i.d.)), resulted in a doubling of the exposure (AUC) to esomeprazole. Concomitant administration of esomeprazole and a combined inhibitor of CYP2C19 and CYP 3A4 may result in more than doubling of the esomeprazole exposure. The CYP2C19 and CYP3A4 inhibitor voriconazole increased omeprazole AUC<sub>t</sub> by 280 %. A dose adjustment of esomeprazole is not regularly required in either of these situations. However, dose adjustment should be considered in patients with severe hepatic impairment and if long-term treatment is indicated.

#### **4.6 Fertility, pregnancy and lactation**

##### **Pregnancy**

A moderate amount of data on pregnant women (between 300-1,000 pregnancy outcomes) indicate no malformative or feto/ neonatal toxicity of esomeprazole. Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity (see **section 5.3**).

As a precautionary measure, it is preferable to avoid the use of **NEXIPRAZ OTC** during pregnancy.

#### **Breast-feeding**

It is unknown whether esomeprazole/metabolites are excreted in human milk. There is insufficient information on the effects of esomeprazole in newborns/infants. Esomeprazole should not be used during breast-feeding.

#### **Fertility**

Animal studies with the racemic mixture omeprazole, given by oral administration do not indicate effects with respect to fertility.

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

**NEXIPRAZ OTC** may cause somnolence, dizziness and blurred vision. As concentration may be impaired, patients should be advised to exercise caution when driving or operating machinery (see **section 4.8**).

#### **4.8 Undesirable effects**

##### **Summary of the safety profile**

Headache, abdominal pain, diarrhoea and nausea are among those adverse reactions that have been most commonly reported in clinical trials (and also from post-marketing use). In addition, the safety profile is similar for different formulations, treatment indications, age groups and patient populations. No dose-related adverse reactions have been identified.

##### **Tabulated list of adverse reactions**

**Table 1**

<b>System Organ Class</b>	<b>Frequent</b>	<b>Less Frequent</b>	<b>Frequency Unknown</b>
<b>Infections and infestations</b>		<i>Clostridium difficile</i> associated diarrhoea.	
<b>Blood and the lymphatic system disorders</b>		Leucopenia, thrombocytopenia	Agranulocytosis, pancytopenia

<b>Immune system disorders</b>		Hypersensitivity reactions e.g. fever, angioedema, anaphylactic reaction.	
<b>Metabolism and nutrition disorders</b>		Hyponatraemia, peripheral oedema.	Hypomagnesaemia (see section 4.4) severe hypomagnesaemia can correlate with hypocalcaemia. Hypomagnesaemia may also be associated with hypokalaemia.
<b>Nervous system disorders</b>	Headache	Dizziness, somnolence paraesthesia	Taste disturbance
<b>Psychiatric disorders</b>		Insomnia, reversible confusional state, agitation, depression	Aggression, hallucinations
<b>Eye disorders</b>		Blurred vision	
<b>Ear and labyrinth disorders</b>		Vertigo	
<b>Respiratory, thoracic and mediastinal disorders</b>		Bronchospasm	
<b>Gastro-intestinal disorders</b>	Abdominal pain, diarrhoea, flatulence, nausea / vomiting, constipation	Dry mouth, stomatitis, taste disturbances, gastric-intestinal <i>candidiasis</i>	Microscopic colitis
<b>Hepato-biliary disorders</b>		Increased liver enzymes, hepatitis with or without jaundice.	Hepatic encephalopathy in patients with pre-existing liver disease, hepatic failure
<b>Skin and subcutaneous tissue disorders</b>	Skin rashes	Dermatitis, pruritus, urticaria, alopecia, bullous eruption, erythema multiforme, Stevens-Johnson syndrome, toxic	Subacute cutaneous lupus erythematosus (see section 4.4).

		epidermal necrolysis (TEN), photosensitivity	
<b>Musculoskeletal, connective tissue and bone disorders</b>		Arthralgia, myalgia, muscular weakness.	
<b>Renal and urinary disorders</b>		Interstitial nephritis	Renal failure
<b>Reproductive system and breast disorders</b>		Gynaecomastia	
<b>General disorders and administration site condition</b>		Fatigue, increased sweating, malaise	

#### **Reporting of suspected adverse reactions:**

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Health care providers are asked to report any suspected adverse reactions to SAHPRA via the '6.04 Adverse Drug Reaction Reporting form', found online under SAHPRA's publications:

<https://www.sahpra.org.za/Publications/index/8>

#### **4.9 Overdose**

Esomeprazole is extensively plasma protein bound and is, therefore, not readily dialysable. As in any case of overdose, treatment should be symptomatic and general supportive measures should be utilised.

### **5 PHARMACOLOGICAL PROPERTIES**

#### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Drugs for acid-related disorders proton pump inhibitors.

ATC code: A02B C05

Pharmacological classification: A 11.4.3 Medicines acting on gastric-intestinal tract. Other.

Esomeprazole is the S-isomer of omeprazole and reduces gastric acid secretion through a specific targeted mechanism of action. It is a specific inhibitor of the acid

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pump in the parietal cell. Both the R- and S-isomer of omeprazole have similar pharmacodynamic activity.

***Mechanism of action***

Esomeprazole is a weak base and is concentrated and converted to the active form in the highly acidic environment of the secretory canaliculi of the parietal cell, where it inhibits the enzyme H<sup>+</sup>K<sup>+</sup>-ATPase (the acid pump) and inhibits both basal and stimulated acid secretion.

***Pharmacodynamic effects***

After oral dosing with esomeprazole 20 mg and 40 mg the onset of effect occurs within one hour. After repeated administration with 20 mg esomeprazole once daily for five days, mean peak acid output after pentagastrin stimulation is decreased 90 % when measured 6-7 hours after dosing on day five.

After five days of oral dosing with 20 mg and 40 mg of esomeprazole, intragastric pH above 4 was maintained for a mean time of 13 hours and 17 hours, respectively over 24 hours in symptomatic gastroesophageal reflux disease (GORD) patients. The proportion of patients maintaining an intragastric pH above 4 for at least 8, 12 and 16 hours respectively were for esomeprazole 20 mg 76 %, 54 % and 24 %. Corresponding proportions for esomeprazole 40 mg were 97 %, 92 % and 56 %. Using AUC as a surrogate parameter for plasma concentration, a relationship between inhibition of acid secretion and exposure has been shown.

During treatment with antisecretory medicinal products, serum gastrin increases in response to the decreased acid secretion. Also CgA increases due to decreased gastric acidity. The increased CgA level may interfere with investigations for neuroendocrine tumours.

Available published evidence suggests that proton pump inhibitors should be discontinued between 5 days and 2 weeks prior to CgA measurements. This is to allow CgA levels that might be spuriously elevated following PPI treatment to return to reference range.

An increased number of ECL cells possibly related to the increased serum gastrin levels, have been observed in some patients during long-term treatment with esomeprazole. Decreased gastric acidity due to any means including PPIs, increases gastric counts of bacteria normally present in the gastrointestinal tract. Treatment with PPIs may lead to slightly increased risk of gastrointestinal infections such as *Salmonella* and *Campylobacter* and in hospitalised patients, also possibly *Clostridium difficile*.

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**Clinical efficacy**

Esomeprazole 20 mg has been demonstrated to effectively treat frequent heartburn in subjects receiving one dose per 24 hours over 2 weeks. In two multicenter, randomized, double-blind, placebo-controlled pivotal studies 234 subjects with a recent history of frequent heartburn were treated with 20 mg esomeprazole for 4 weeks. Symptoms associated with acid reflux (such as heartburn and acid regurgitation) were evaluated retrospectively over a 24 hour period. In both studies esomeprazole 20 mg was significantly better compared to placebo for the primary endpoint, complete resolution of heartburn, defined as no heartburn episodes during the last 7 days prior to the final visit (33.9 % - 41.6 % vs. placebo 11.9 – 13.7 %, ( $p < 0.001$ ). The secondary endpoint of complete resolution of heartburn, defined as no heartburn on the patient's diary card for 7 consecutive days, was statistically significant at both week 1 (10.0 % - 15.2 % vs placebo 0.9 % - 2.4 %,  $p = 0.014$ ,  $p < 0.001$ ) and week 2 (25.2 % - 35.7 % vs placebo 3.4 % - 9.0 %,  $p < 0.001$ ).

Other secondary endpoints were supportive of the primary endpoint, including relief of heartburn at week 1 and week 2, percentage of 24 hour days without heartburn at week 1 and week 2, mean heartburn severity at week 1 and week 2, and time to initial and sustained resolution of heartburn over a 24 hour period and during the night compared to placebo. Approximately 78 % of the subjects on 20 mg esomeprazole reported first resolution of heartburn within the first week of treatment compared to 52 – 58 % for placebo. Time to sustained resolution of heartburn, defined as when 7 consecutive days of no heartburn was first recorded, was significantly shorter in the esomeprazole 20 mg group (39.7 % - 48.7 % by day 14 vs placebo 11.0 % - 20.2 %). The median time to first resolution of night-time heartburn was 1 day, statistically significant compared to placebo in one study ( $p = 0.048$ ) and approaching significance in the other ( $p = 0.069$ ). About 80 % of nights were heartburn free during all time periods and 90% of nights were heartburn free by week 2 of each clinical study, compared to 72.4 – 78.3 % for placebo. The investigators' assessments of heartburn resolution were consistent with the subjects' assessments, showing statistically significant differences between esomeprazole (34.7 % - 41.8 %) compared to placebo (8.0 % - 11.4 %). The investigators also found esomeprazole to be significantly more effective than placebo in resolving acid regurgitation (58.5 % - 63.6 % vs placebo 28.3 % - 37.4 %) during the week 2 evaluation.

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Following Overall Treatment Evaluation (OTE) of patients at week 2, 78.0-80.7 % of patients on esomeprazole 20 mg, compared to 72.4 – 78.3 % for placebo, reported their condition as improved.

The majority of these rated the importance of this change to be Important to Extremely Important in performing their activities of daily living (79 – 86 % at week 2).

## **5.2 Pharmacokinetic properties**

### ***Absorption***

Esomeprazole is acid labile and is administered orally as enteric-coated granules. *In vivo* conversion to the R-isomer is negligible. Absorption of esomeprazole is rapid, with peak plasma levels occurring approximately 1-2 hours after dose. The absolute bioavailability is 64 % after a single dose of 40 mg and increases to 89% after repeated once-daily administration. For 20 mg esomeprazole the corresponding values are 50 % and 68 % respectively. Food intake both delays and decreases the absorption of esomeprazole although this has no significant influence on the effect of esomeprazole on intragastric acidity.

### ***Distribution***

The apparent volume of distribution at steady state in healthy subjects is approximately 0.22 L/kg body weight. Esomeprazole is 97 % plasma protein bound.

### ***Biotransformation***

Esomeprazole is completely metabolised by the cytochrome P450 system (CYP). The major part of the metabolism of esomeprazole is dependent on the polymorphic CYP2C19, responsible for the formation of the hydroxy- and desmethyl metabolites of esomeprazole. The remaining part is dependent on another specific isoform, CYP3A4, responsible for the formation of esomeprazole sulphone, the main metabolite in plasma.

### ***Elimination***

The parameters below reflect mainly the pharmacokinetics in individuals with a functional CYP2C19 enzyme, extensive metabolisers.

Total plasma clearance is about 17 l/h after a single dose and about 9 l/h after repeated administration. The plasma elimination half-life is about 1.3 hours after repeated once-daily dosing. Esomeprazole is completely eliminated from plasma between doses, with no tendency for accumulation during once-daily administration. The major metabolites of esomeprazole have no effect on gastric

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acid secretion. Almost 80% of an oral dose of esomeprazole is excreted as metabolites in the urine, the remainder in the faeces. Less than 1% of the parent compound is found in urine.

***Linearity/non-linearity***

The pharmacokinetics of esomeprazole has been studied in doses up to 40 mg twice a day. The area under the plasma concentration-time curve increases with repeated administration of esomeprazole. This increase is dose-dependent and results in a more than dose proportional increase in AUC after repeated administration. This time and dose-dependency is due to a decrease of first pass metabolism and systemic clearance probably caused by an inhibition of the CYP2C19 enzyme by esomeprazole and/or its sulphone metabolite.

**Special patient populations**

***Poor metabolisers***

Approximately  $2.9 \pm 1.5$  % of the population lack a functional CYP2C19 enzyme and are called poor metabolisers. In these individuals the metabolism of esomeprazole is probably mainly catalysed by CYP3A4. After repeated once-daily administration of 40 mg esomeprazole, the mean area under the plasma concentration-time curve was approximately 100% higher in poor metabolisers than in subjects having a functional CYP2C19 enzyme (extensive metabolisers). Mean peak plasma concentrations were 60% higher.

These findings have no implications for the posology of esomeprazole.

***Gender***

Following a single dose of 40 mg esomeprazole the mean area under the plasma concentration-time curve is approximately 30% higher in females than in males. No gender difference is seen after repeated once-daily administration. These findings have no implications for the posology of esomeprazole.

***Hepatic impairment***

The metabolism of esomeprazole in patients with mild to moderate liver dysfunction may be impaired. The metabolic rate is decreased in patients with severe liver dysfunction resulting in a doubling of the area under the plasma concentration-time curve of esomeprazole. Therefore, a maximum of 20 mg should not be exceeded in patients with severe dysfunction. Esomeprazole or its major metabolites do not show any tendency to accumulate with once-daily dosing.

***Renal impairment***

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No studies have been performed in patients with decreased renal function. Since the kidney is responsible for the excretion of the metabolites of esomeprazole but not for the elimination of the parent compound, the metabolism of esomeprazole is not expected to be changed in patients with impaired renal function.

***Elderly patients (≥ 65 years old)***

The metabolism of esomeprazole is not significantly changed in elderly patients (71-80 years of age).

**6 PHARMACEUTICAL PARTICULARS**

**6.1 List of excipients**

The active substance is esomeprazole magnesium 20,7 mg equivalent to esomeprazole 20 mg.

The other ingredients are sugar spheres, crospovidone, diethylphthalate, hydroxypropyl cellulose, hypromellose phthalate, polyethylene glycol, purified talc, microcrystalline cellulose, povidone and sodium stearyl fumarate. Film coating material: Opadry brown, polyethylene glycol.

**6.2 Incompatibilities**

Not applicable

**6.3 Shelf life**

24 Months

**6.4 Special precautions for storage**

Store at or below 25 °C, protect from moisture.

Do not remove the blisters from the carton until required for use.

**KEEP OUT OF REACH OF CHILDREN.**

**6.5 Nature and contents of container**

Carton contains 7 and 14 tablets packed in cold form blister strips or desiccant embedded cold form blister strips. Each blister strip contains 7 tablets.

***Description of desiccant embedded cold form blister pack***

Cold forming laminate composed of aluminium foil of one side bright, soft tempered, plain, dull side lacquer laminated to oriented polyamide film; other side extrusion coated with desiccant embedded polyethylene and further having an outer layer of HDPE with lidding foil.

***Description of cold form blister pack***

Cold form Blister pack comprise of cold form blister laminate composed of aluminium foil (one side bright, soft tempered, plain; dull side lacquer laminated to

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oriented polyamide film; bright side lacquer laminated to PVC film), PVC and polyamide with a backing of aluminium foil coated with heat seal lacquer.

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

No special requirements.

**7 HOLDER OF CERTIFICATE OF REGISTRATION**

Ranbaxy Pharmaceuticals (Pty) Ltd

14 Lautre Road

Stormill Ext.1

Roodepoort, 1724

South Africa

**8 REGISTRATION NUMBER(S)**

**NEXIPRAZ OTC:** 45/11.4.3/0121

**9 DATE OF FIRST AUTHORISATION**

11 August 2022

**10 DATE OF REVISION OF THE TEXT**

31 August 2022