

Summary of Product Characteristics for Pharmaceutical Products

1. Name of the medicinal product:

Pilot 40 (Pantoprazole Sodium Delayed Release Tablets USP 40mg)

2. Qualitative and quantitative composition

Each enteric coated tablet contains:

Pantoprazole Sodium USP

Eq. to

Pantoprazole..... 40 mg

Excipient(s) with known effect:

Lactose

For full list of excipients, see section 6.1.

3. Pharmaceutical form

Tablet

4. Clinical particulars

4.1 Therapeutic indications

PILOT 40 are selective “proton pump inhibitors”, which are medicines that reduce the

amount of acid produced in your stomach. They are used for treating acid-related diseases of the stomach and intestine. PILOT 40 are used for treating:

Adults and adolescents 12 years of age and above:

- Reflux oesophagitis Adults:
- Eradication of *Helicobacter pylori* (*H. pylori*) in combination with appropriate antibiotic therapy in patients with *H. pylori* associated ulcers.
- Gastric and duodenal ulcer.
- Zollinger-Ellison-Syndrome and other pathological hypersecretory conditions.

4.2 Posology and method of administration

Take the tablets 1 hour before a meal without chewing or breaking them and swallow them whole with some water. Unless told otherwise by your doctor, the usual dose is:

Adults and adolescents 12 years of age and above:

To treat reflux oesophagitis

The usual dose is one tablet a day. Your doctor may tell you to increase to 2 tablets daily. The treatment period for reflux oesophagitis is usually between 4 and 8 weeks. Your doctor will tell you how long to take your medicine.

Adults:

For the treatment of an infection with a bacterium called *Helicobacter pylori* in patients with duodenal ulcers and stomach ulcers in combination with two antibiotics (Eradication therapy). One tablet twice a day plus two antibiotic tablets of either amoxicillin, clarithromycin and metronidazole (tinidazole), each to be taken twice a day with your pantoprazole tablet. Take the first pantoprazole tablet 1 hour before breakfast and the second pantoprazole tablet 1 hour before your evening meal. Follow your doctor's instructions and make sure you read the package leaflets for these antibiotics. The usual treatment period is one to two weeks.

For treatment of stomach and duodenal ulcers.

The usual dose is one tablet a day. After consultation with your doctor, the dose may be doubled. Your doctor will tell you how long to take your medicine. The treatment period for stomach ulcers is usually between 4 and 8 weeks. The treatment period for duodenal ulcers is usually between 2 and 4 weeks.

For the long-term treatment of Zollinger-Ellison-Syndrome and of other conditions in which too much stomach acid is produced.

The recommended starting dose is usually two tablets a day.

Take the two tablets 1 hour before a meal. Your doctor may later adjust the dose, depending on the amount of stomach acid you produce. If prescribed more than two tablets a day, the tablets should be taken twice daily.

If your doctor prescribes a daily dose of more than four tablets a day, you will be told exactly when to stop taking the medicine.

Patients with kidney problems

If you have kidney problems, moderate or severe liver problems, you should not take Pantoprazole Tablets for eradication of *Helicobacter pylori*.

Patients with liver problems

If you suffer from severe liver problems, you should not take more than one tablet 20 mg pantoprazole a day (for this purpose tablets containing 20 mg pantoprazole are available). If you suffer from moderate or severe liver problems, you should not take Pantoprazole for eradication of *Helicobacter pylori*.

Use in children and adolescents

These tablets are not recommended for use in children below 12 years.

Method of administration

Oral

4.3 Contraindications

Hypersensitivity to enalapril, to any of the excipients or any other ACE inhibitor

- History of angioedema associated with previous ACE-inhibitor therapy
- Hereditary or idiopathic angioedema
- Second and third trimesters of pregnancy
- Enalapril tablets should not be administered with aliskiren containing products in patients with diabetes or renal impairment (GFR < 60 ml/min/1.73 m²)
- Concomitant use with sacubitril/valsartan therapy. Enalapril must not be initiated earlier than 36 hours after the last dose of sacubitril/valsartan

4.4 Special warnings and precautions for use

Talk to your doctor or pharmacist before taking PILOT 40:

- If you have severe liver problems. Please tell your doctor if you ever had problems with your liver in the past. He will check your liver enzymes more frequently, especially when you are taking PILOT 40 as a long-term treatment. In the case of a rise of liver enzymes the treatment should be stopped.

- If you have reduced body stores or risk factors for reduced vitamin B12 and receive Pantoprazole Tablets as a long-term treatment. As with all acid reducing agents, pantoprazole may lead to a reduced absorption of vitamin B12.
- If you are taking HIV protease inhibitors such as atazanavir (for the treatment of HIV-infection) at the same time as pantoprazole, ask your doctor for specific advice.
- Taking a proton pump inhibitor like pantoprazole, especially over a period of more than one year, may slightly increase your risk of fracture in the hip, wrist or spine. Tell your doctor if you have osteoporosis or if you are taking corticosteroids (which can increase the risk of osteoporosis).
- If you are on Pantoprazole for more than three months it is possible that the levels of magnesium

Tell your doctor immediately if you notice any of the following symptoms:

- an unintentional loss of weight
- repeated vomiting
- difficulty in swallowing or pain when swallowing
- vomiting blood; this may appear as dark coffee grounds in your vomit
- you look pale and feel weak (anaemia)
- you notice blood in your stools; which may appear be black or tarry in appearance
- chest pain
- stomach pain
- severe and/or persistent diarrhoea, as PILOT 40 have been associated with a small
- increase in infectious diarrhoea.

Your doctor may decide that you need some tests to rule out malignant disease because

pantoprazole also alleviates the symptoms of cancer and could cause delay in diagnosing it. If your symptoms continue in spite of your treatment; further investigations will be considered.

If you take PILOT 40 on a long-term basis (longer than 1 year) your doctor will probably

keep you under regular surveillance. You should report any new and exceptional symptoms and circumstances whenever you see your doctor.

Children and adolescents

Pantoprazole is not recommended for use in children as it has not been proven to work in children below 12 years of age.

Interaction with other medicinal products and other forms of interaction

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines, including medicines obtained without a prescription.

PILOT 40 may influence the effectiveness of other medicines, so tell your doctor if you are taking

- Medicines such as ketoconazole, itraconazole and posaconazole (used to treat fungal infections) or erlotinib (used for certain types of cancer) because pantoprazole may stop these and other medicines from working properly.
- Warfarin and phenprocoumon, which affect the thickening, or thinning of the blood. You may need further checks.
- Medicines used to treat HIV-infection, such as atazanavir.
- Methotrexate (used to treat rheumatoid arthritis, psoriasis, and cancer) – if you are taking methotrexate your doctor may temporarily stop your Pantoprazole treatment because pantoprazole can increase levels of methotrexate in the blood.
- Fluvoxamine (used to treat depression and other psychiatric diseases) – if you are taking fluvoxamine your doctor may reduce the dose.
- Rifampicin (used to treat infections).
- St John's wort (*Hypericum perforatum*) (used to treat mild depression).

4.6 Pregnancy and lactation

There are no adequate data from the use of pantoprazole in pregnant women. Excretion into human milk has been reported. If you are pregnant or breast-feeding, think you may be pregnant, or are planning

to have a baby, ask your doctor or pharmacist for advice before taking this medicine. You should use this medicine, only if your doctor considers the benefit for you greater than the potential risk for your unborn child or baby.

4.7 Effects on ability to drive and use machines

Pantoprazole has no or negligible influence on the ability to drive and use machines. Adverse drug reactions such as dizziness and visual disturbances may occur (see section 4.8). If affected, patients should not drive or operate machines.

4.8 Undesirable effects

Like all medicines, this medicine can cause side effects, although not everybody gets them. If you get any of the following side effects, stop taking these tablets and tell your doctor immediately, or contact the casualty department at your nearest hospital:

- Serious allergic reactions (frequency rare: may affect up to 1 in 1,000 people): swelling of the tongue and/or throat, difficulty in swallowing, hives (nettle rash), difficulties in breathing, allergic facial swelling (Quincke's oedema / angioedema), severe dizziness with very fast heartbeat and heavy sweating.
- Serious skin conditions (frequency not known: frequency cannot be estimated from available data): blistering of the skin and rapid deterioration of your general condition, erosion (including slight bleeding) of eyes, nose, mouth/lips or genitals (Stevens-Johnson- Syndrome, Lyell Syndrome, Erythema multiforme) and sensitivity to light.
- Other serious conditions (frequency not known: frequency cannot be estimated from the available data): yellowing of the skin or whites of the eyes (severe damage to liver cells, jaundice) or fever, rash, and enlarged kidneys sometimes with painful urination and lower back pain (serious inflammation of the kidneys).

Other side effects are:

- Common (may affect up to 1 in 10 people): Benign polyps in the stomach
- Uncommon (may affect up to 1 in 100 people): headache; dizziness; diarrhoea; feeling sick, vomiting; bloating and flatulence (wind); constipation; dry mouth; abdominal pain and discomfort; skin rash, exanthema, eruption; itching; feeling weak, exhausted or generally unwell; sleep disorders; fractures of the hip, wrist or spine.

- Rare (may affect up to 1 in 1,000 people): Distortion or complete lack of the sense of taste; disturbances in vision such as blurred vision; hives; pain in the joints; muscle pains; weight changes; raised body temperature; swelling of the extremities (peripheral oedema); allergic reactions; depression; breast enlargement in males.
- Very Rare (may affect up to 1 in 10,000 people): disorientation.
- Not known (frequency cannot be estimated from available data): hallucination, confusion (especially in patients with a history of these symptoms); decreased sodium level in blood; rash, possibly with pain in the joints.

Side effects identified through blood tests:

- Uncommon (may affect up to 1 in 100 people): an increase in liver enzymes.
- Rare (may affect up to 1 in 1,000 people) an increase in bilirubin; increased fats in the blood; sharp drop in circulating granular white blood cells, associated with high fever.
- Very Rare (may affect up to 1 in 10,000 people): a reduction in the number of blood platelets, which may cause you to bleed or bruise more than normal; a reduction in the number of white blood cells, which may lead to more frequent infections; coexisting abnormal reduction in the number of red and white blood cells, as well as platelets.

Reporting of suspected adverse reactions

Reporting of suspected adverse reactions: Healthcare professionals are requested to report any suspected adverse reactions via pharmacy and poisons board, Pharmacovigilance Electronic Reporting System (PvERS) <https://pv.pharmacyboardkenya.org>.

4.9 Overdose

There are no known symptoms of overdose in man.

Systemic exposure with up to 240 mg administered intravenously over 2 minutes were well tolerated. As pantoprazole is extensively protein bound, it is not readily dialysable.

In the case of overdose with clinical signs of intoxication, apart from symptomatic and supportive treatment, no specific therapeutic recommendations can be made.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Proton pump inhibitors ATC Code: A02BC02

Mechanism of action

Pantoprazole is a substituted benzimidazole which inhibits the secretion of hydrochloric acid in the stomach by specific blockade on the proton pumps of the parietal cells. Pantoprazole is converted to its active form in the acidic environment in the parietal cells where it inhibits the H⁺, K⁺-ATPase enzyme, i. e. the final stage

in the production of hydrochloric acid in the stomach. The inhibition is dose-dependent and affects both basal and stimulated acid secretion. In most patients, freedom from symptoms is achieved in 2 weeks. As with other proton pump inhibitors and H₂ receptor inhibitors, treatment with pantoprazole reduces acidity in the stomach and thereby increases gastrin in proportion to the reduction in acidity. The increase in gastrin is reversible. Since pantoprazole binds to the enzyme distal to the cell receptor level, it can inhibit hydrochloric acid secretion independently of stimulation by other substances (acetylcholine, histamine, gastrin). The effect is the same whether the product is given orally or intravenously.

Pharmacodynamic effects: The fasting gastrin values increase under pantoprazole. On short-term use, in most cases they do not exceed the upper limit of normal. During long-term treatment, gastrin levels double in most cases. An excessive increase, however, occurs only in isolated cases. As a result, a mild to moderate increase in the number of specific endocrine (ECL) cells in the stomach is observed in a minority of cases during long-term treatment (simple to adenomatoid hyperplasia). However, according to the studies conducted so far, the formation of carcinoid precursors (atypical hyperplasia) or gastric carcinoids as were found in animal experiments (see Section 5.3) were not observed in humans. An influence of a long-term treatment with pantoprazole exceeding one year cannot be completely ruled out on endocrine parameters of the thyroid and liver enzymes according to results in animal studies. 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.

5.2 Pharmacokinetic properties

Absorption

Pantoprazole is rapidly absorbed and the maximal plasma concentration is achieved even after one single 20 mg oral dose. On average at about 2.0 h - 2.5 h p.a. the maximum serum concentrations of about 1-1.5 micrograms/ml are achieved, and these values remain constant after multiple administration.

Pharmacokinetics do not vary after single or repeated administration. In the dose range of 10 to 80 mg, the plasma kinetics of pantoprazole are linear after both oral and intravenous administration. The absolute bioavailability from the tablet was found to be about 77%. Concomitant intake of food had no influence on AUC, maximum serum concentration and thus bioavailability. Only the variability of the lag-time will be increased by concomitant food intake.

Distribution

Pantoprazole's serum protein binding is about 98 %. Volume of distribution is about 0.15 l/kg.

Biotransformation

The substance is almost exclusively metabolized in the liver. The main metabolic pathway is demethylation by CYP2C19 with subsequent sulphate conjugation, another metabolic pathway include oxidation by CYP3A4. Elimination

Terminal half-life is about 1 hour and clearance is about 0.1 l/h/kg. There were a few cases of subjects with delayed elimination. Because of the specific binding of pantoprazole to the proton pumps of the parietal cell the elimination half-life does not correlate with the much longer duration of action (inhibition of acid secretion). Renal elimination represents the major route of excretion (about 80 %) for the metabolites of pantoprazole, the rest is excreted with the faeces. The main metabolite in both the serum and urine is desmethylpantoprazole which is conjugated with sulphate. The half-life of the main metabolite (about 1.5 hours) is not much longer than that of pantoprazole.

Characteristics in patients/special groups of subjects

Approximately 3 % of the European population lack a functional CYP2C19 enzyme and are called poor metabolisers. In these individuals the metabolism of pantoprazole is probably mainly catalysed by CYP3A4. After a single-dose administration of 40 mg pantoprazole, the mean area under the plasma concentration-

time curve was approximately 6 times higher in poor metabolisers than in subjects having a functional CYP2C19 enzyme (extensive metabolisers). Mean peak plasma concentrations were increased by about 60 %. These findings have no implications for the posology of pantoprazole.

No dose reduction is recommended when pantoprazole is administered to patients with impaired renal function (including dialysis patients). As with healthy subjects, pantoprazole's half-life is short. Only very small amounts of pantoprazole can be dialyzed. Although the main metabolite has a moderately delayed half-life (2 - 3h), excretion is still rapid and thus accumulation does not occur.

Although for patients with liver cirrhosis (classes A and B according to Child) the half-life values increased to between 3 and 6 h and the AUC values increased by a factor of 3 - 5, the maximum serum concentration only increased slightly by a factor of 1.3 compared with healthy subjects.

A slight increase in AUC and Cmax in elderly volunteers compared with younger counterparts is also not clinically relevant.

Children

Following administration of single oral doses of 20 or 40 mg pantoprazole to children aged 5–16 years, AUC and Cmax were in the range of corresponding values in adults.

5.3 Preclinical safety data

Preclinical data reveal no special hazard to humans based on conventional studies of safety pharmacology, repeated dose toxicity and genotoxicity. In the 2-year carcinogenicity studies in rats neuroendocrine neoplasms were found. In addition, squamous cell papillomas were found in the forestomach of rats. The mechanism leading to the formation of gastric carcinoids by substituted benzimidazoles has been carefully investigated and allows the conclusion that it is a secondary reaction to the massively elevated serum gastrin levels occurring in the rat during chronic high-dose treatment. In the two-year rodent studies an increased number of liver tumors was observed in rats and in female mice and was interpreted as being due to pantoprazole's high metabolic rate in the

liver. A slight increase of neoplastic changes of the thyroid was observed in the group of rats receiving the highest dose (200 mg/kg). The occurrence of these neoplasms is associated with the pantoprazole-induced changes in the breakdown of thyroxine in the rat liver. As the therapeutic dose in man is low, no harmful effects on the thyroid glands are expected. In animal reproduction studies, signs of slight fetotoxicity were observed at doses above 5 mg/kg. Investigations revealed no evidence of impaired fertility or teratogenic effects. Penetration of the placenta was investigated in the rat and was found to increase with advanced gestation. As a result, concentration of pantoprazole in the fetus is increased shortly before birth.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Lactose BP

Microcrystalline Cellulose BP

Maize Starch BP

PVPK-30 BP

Isopropyl alcohol BP

Purified Talc BP

Magnesium Stearate BP

Colloidal anhydrous silica BP

Crospovidone BP

Solvent Based Seal Coat (Plain) IH

Solvent Based Colour Coat (Iron Oxide Brown) IH

6.2 Incompatibilities

Not known.

6.3 Shelf life

36 months

6.4. Special precautions for storage

Store below 30°C. Protect from light and moisture.

6.5 Nature and contents of container

10 tablets are packed in ALU-ALU blister, such 3 blisters packed in one carton with insert coded with batch number, manufacturing date and expiry date packed in an inner carton.

6.6 Special precautions for disposal and other handling

Not applicable

7. Marketing Authorization Holder

National Pharmacy Ltd,

P.O. Box 17843-00500,

Nairobi, Kenya

8. Marketing Authorization Number:

H2026/CTD12246/26050

9. Date of first authorization/renewal of the authorization

25/03/2026

10. Date of Revision of the Text:

25/03/2026