

## SUMMARY OF PRODUCT CHARACTERISTICS

### 1 NAME OF THE MEDICINAL PRODUCT

Doxazosin 0.4 mg/ml Oral Suspension

### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml of oral suspension contains 0.4 mg of Doxazosin (as mesilate).

Excipient with known effect

Each ml of oral solution contains 1.8 mg methyl parahydroxybenzoate (E218), 0.2 mg propyl parahydroxybenzoate (E216) and 0.99 mg propylene glycol (E1520), 0.011 mg benzoic acid and 0.1574 mg sodium.

For the full list of excipients, see section 6.1.

### 3 PHARMACEUTICAL FORM

Oral suspension

Lemon flavoured white to off-white coloured suspension

### 4 CLINICAL PARTICULARS

#### 4.1 Therapeutic indications

**Hypertension:** Doxazosin is indicated for the treatment of hypertension and can be used as a sole agent to control blood pressure in hypertensive patients.

In patients inadequately controlled on single antihypertensive therapy, Doxazosin may be used in combination with a thiazide diuretic, beta-adrenoceptor blocking agent, calcium antagonist or an angiotensin-converting enzyme inhibitor.

**Benign Prostatic Hyperplasia:** Doxazosin is indicated for the treatment of urinary outflow obstruction and symptoms associated with benign prostatic

hyperplasia (BPH). Doxazosin may be used in BPH patients who are either hypertensive or normotensive.

## 4.2 Posology and method of administration

### Posology

Doxazosin may be administered in the morning or evening.

**Hypertension:** Doxazosin is used in a once daily regimen: initial dose is 1mg (2.5 ml) to minimise the potential for postural hypotension and/or syncope (see section 4.4). Dosage may then be increased to 2 mg (5 ml) after an additional one or two weeks of therapy and thereafter, if necessary to 4 mg (10 ml). The majority of patients who respond to Doxazosin will do so at a dose of 4mg (10 ml) or less. Dosage can be further increased if necessary to 8 mg (20 ml) or the maximum recommended dose of 16 mg (40 ml).

**Benign prostatic hyperplasia:** The recommended initial dosage of Doxazosin is 1 mg (2.5 ml) given once daily to minimise the potential for postural hypotension and/or syncope (see section 4.4). Depending on the individual patient's urodynamics and BPH symptomatology, dosage may then be increased to 2 mg (5 ml) and thereafter to 4 mg (10 ml) and up to the maximum recommended dose of 8 mg (20 ml). The recommended titration interval is 1-2 weeks. The usual recommended dose is 2-4 mg (5-10 ml) once daily.

**Paediatric population:** The safety and efficacy of Doxazosin in children and adolescents have not been established.

**Elderly patients:** Normal adult dosage.

Hepatic/Renal impairment

**Patients with renal impairment:** Since there is no change in pharmacokinetics in patients with impaired renal function, the usual adult dose of Doxazosin is recommended.

Doxazosin is not dialysable.

**Patients with hepatic impairment:** There are only limited data in patients with liver impairment and on the effect of drugs known to influence hepatic metabolism (e.g. cimetidine). As with any drug wholly metabolised by the liver, Doxazosin should be administered with caution to patients with evidence of impaired liver function (see section 4.4 and section 5.2).

### **Method of Administration**

Oral administration.

Shake the suspension at least 30 seconds prior to prepare the dose.

Doses of 10 ml or below should be administered using the 10ml syringe. For doses greater than 10ml, the 20 ml syringe should be used.

Wash the syringe with water.

### 4.3 Contraindications

Doxazosin is contraindicated in:

- 1) Hypersensitivity to the active substance, other types of quinazolines (e.g. prazosin, terazosin), or to any of the excipients listed in section 6.1
- 2) Patients with a history of orthostatic hypotension
- 3) Patients with benign prostatic hyperplasia and concomitant congestion of the upper urinary tract, chronic urinary tract infection or bladder stones
- 4) Patients with hypotension (for benign prostatic hyperplasia indication only)

Doxazosin is contraindicated as monotherapy in patients with either overflow bladder or anuria with or without progressive renal insufficiency.

### 4.4 Special warnings and precautions for use

#### ***Postural Hypotension/Syncope:***

*Initiation of Therapy* – In relation with the alpha-blocking properties of doxazosin, patients may experience postural hypotension evidenced by dizziness and weakness, or rarely loss of consciousness (syncope), particularly with the commencement of therapy (see section 4.2). Therefore, it is prudent medical practice to monitor blood pressure on initiation of therapy to minimise the potential for postural effects.

When instituting therapy with any effective alpha-blocker, the patient should be advised how to avoid symptoms resulting from postural hypotension and what measures to take should they develop. The patient should be cautioned to avoid situations where injury could result, should dizziness or weakness occur during the initiation of Doxazosin therapy.

#### ***Use in patients with Acute Cardiac Conditions:***

As with any other vasodilatory anti-hypertensive agent it is prudent medical practice to advise caution when administering doxazosin to patients with the following acute cardiac conditions:

- pulmonary oedema due to aortic or mitral stenosis
- heart failure at high output
- right-sided heart failure due to pulmonary embolism or pericardial effusion
- left ventricular heart failure with low filling pressure.

#### ***Use in Hepatically Impaired Patients:***

As with any drug wholly metabolised by the liver, Doxazosin should be administered with particular caution to patients with evidence of impaired hepatic function (see section 4.2). Since there is no clinical experience in patients with severe hepatic impairment use in these patients is not recommended

***Use with PDE-5 Inhibitors:***

Concomitant administration of doxazosin with phosphodiesterase-5-inhibitors (e.g. sildenafil, tadalafil, and vardenafil) should be done with caution as both drugs have vasodilating effects and may lead to symptomatic hypotension in some patients. To reduce the risk of orthostatic hypotension it is recommended to initiate the treatment with phosphodiesterase-5-inhibitors only if the patient is hemodynamically stabilized on alpha-blocker therapy. Furthermore, it is recommended to initiate phosphodiesterase-5-inhibitor treatment with the lowest possible dose and to respect a 6-hour time interval from intake of doxazosin. No studies have been conducted with doxazosin prolonged release formulations.

***Use in patients undergoing cataract surgery:***

The 'Intraoperative Floppy Iris Syndrome' (IFIS, a variant of small pupil syndrome) has been observed during cataract surgery in some patients on or previously treated with tamsulosin. Isolated reports have also been received with other alpha-1 blockers and the possibility of a class effect cannot be excluded. As IFIS may lead to increased procedural complications during the cataract operation current or past use of alpha-1 blockers should be made known to the ophthalmic surgeon in advance of surgery.

***Priapism:***

Prolonged erections and priapism have been reported with alpha-1 blockers including doxazosin in post marketing experience. If priapism is not treated immediately, it could result in penile tissue damage and permanent loss of potency, therefore the patient should seek immediate medical assistance.

***Screening for Prostate Cancer:***

Carcinoma of the prostate causes many of the symptoms associated with BPH and the two disorders can co-exist. Carcinoma of the prostate should therefore be ruled out prior to commencing therapy with doxazosin for treatment of BPH symptoms.

**Excipient warning:**

**Sodium:** This medicinal product contains less than 1 mmol (23 mg) sodium per 5 ml, that is to say essentially 'sodium free'.

**Methyl parahydroxybenzoate (E218) and Propyl parahydroxybenzoate (E216):** may cause allergic reactions (possibly delayed).

**Propylene glycol (E1520):** This medicine contains 4.95 mg propylene glycol in each 5 ml dose which is equivalent to 0.99 mg/ml

**Benzoic acid (E210):** This medicinal product contains 0.055 mg benzoic acid in each 5 ml dose which is equivalent to 0.011 mg/ml.

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

Phosphodiesterase-5-inhibitors (e.g. sildenafil, tadalafil, vardenafil):

Concomitant administration of an alpha blocker with a PDE-5 inhibitor may lead to symptomatic hypotension in some patients (see section 4.4). No studies have been conducted with doxazosin prolonged release formulations.

Doxazosin is highly bound to plasma proteins (98%). *In vitro* data in human plasma indicates that doxazosin has no effect on protein binding of the drugs tested (digoxin, phenytoin, warfarin or indometacin).

Conventional doxazosin has been administered without any adverse drug interaction in clinical experience with thiazide diuretics, furosemide, beta-blockers, non-steroidal anti-inflammatory drugs, antibiotics, oral hypoglycaemic drugs, uricosuric agents, and anticoagulants. However, data from formal drug/drug interaction studies are not present.

*In vitro* studies suggest that doxazosin is a substrate of cytochrome P450 3A4 (CYP 3A4). Caution should be exercised when concomitantly administering doxazosin with a strong CYP 3A4 inhibitor, such as clarithromycin, indinavir, itraconazole, ketoconazole, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin, or voriconazole (see section 5.2).

Doxazosin potentiates the blood pressure lowering activity of other alpha-blockers and other antihypertensives.

In an open-label, randomized, placebo-controlled trial in 22 healthy male volunteers, the administration of a single 1 mg dose of doxazosin on day 1 of a four-day regimen of oral cimetidine (400 mg twice daily) resulted in a 10% increase in mean AUC of doxazosin, and no statistically significant changes in mean C<sub>max</sub> and mean half-life of doxazosin. The 10% increase in the mean AUC for doxazosin with cimetidine is within intersubject variation (27%) of the mean AUC for doxazosin with placebo.

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

For the hypertension indication:

**Pregnancy**

As there are no adequate and well-controlled studies in pregnant women, the safety of Doxazosin during pregnancy has not yet been established. Accordingly, during pregnancy, Doxazosin should be used only when, in the opinion of the physician, the potential benefit outweighs the potential risk. Although no teratogenic effects were seen in animal testing, reduced foetal survival was observed in animals at extremely high doses (see section 5.3).

#### **Breast-feeding**

The excretion of doxazosin in breast milk was demonstrated to be very low (with the relative infant dose less than 1%) however human data is very limited. A risk to the newborn or infant cannot be excluded and therefore doxazosin should be used only when in the opinion of the physician, the potential benefit outweighs the potential risk.

For the benign prostatic hyperplasia indication:

This section is not applicable

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

The ability to drive or use machinery may be impaired, especially when initiating therapy.

#### **4.8 Undesirable effects**

**Hypotension:** In clinical trials involving patients with hypertension, the most common reactions associated with Doxazosin therapy were of a postural type (rarely associated with fainting) or non-specific.

**Benign prostatic hyperplasia:** Experience in controlled clinical trials in BPH indicates a similar adverse event profile to that seen in hypertension.

The following undesirable effects have been observed and reported during treatment with Doxazosin with the following frequencies: Very common ( $\geq 1/10$ ); common ( $\geq 1/100$  to  $< 1/10$ ); uncommon ( $\geq 1/1,000$  to  $< 1/100$ ); rare ( $\geq 1/10,000$  to  $< 1/1,000$ ); very rare ( $< 1/10,000$ ).

<b>System Organ Class</b>	<b>Very Common (<math>\geq 1/10</math>)</b>	<b>Common (<math>\geq 1/100</math> to <math>&lt; 1/10</math>)</b>	<b>Uncommon (<math>\geq 1/1,000</math> to <math>&lt; 1/100</math>)</b>	<b>Rare (<math>\geq 1/10,000</math> to <math>&lt; 1/1,000</math>)</b>	<b>Very Rare (<math>&lt; 1/10,000</math>)</b>	<b>Unknown</b>
<b>Infections and</b>		Respiratory tract				

<b>infestations</b>		infection, urinary tract infection				
<b>Blood and the lymphatic system disorders</b>					Leukope nia, thrombo cytopeni a	
<b>Immune system disorders</b>			Allergic drug reaction			
<b>Metabolism and nutrition disorders</b>			Gout, increased appetite, anorexia			
<b>Psychiatric disorders</b>			Agitation, depression, anxiety, insomnia, nervousness			
<b>Nervous system disorders</b>		Somnolence , dizziness, headache	Cerebrovascul ar accident, hypoesthesia, syncope, tremor		Dizzines s postural, paraesthe sia	
<b>Eye disorders</b>					Blurred vision	Intraoper ative floppy iris syndrom e (see section 4.4)
<b>Ear and labyrinth disorders</b>		Vertigo	Tinnitus			
<b>Cardiac disorders</b>		Palpitation, tachycardia	Angina pectoris, myocardial infarction		Bradycar dia, cardiac arrhythm ias	
<b>Vascular disorders</b>		Hypotensio n, postural hypotension			Hot flushes	
<b>Respiratory, thoracic and mediastinal disorders</b>		Bronchitis, cough, dyspnoea, rhinitis	Epistaxis		Broncho spasm	

<b>Gastrointestinal disorders</b>		Abdominal pain, dyspepsia, dry mouth, nausea	Constipation, flatulence, vomiting, gastroenteritis, diarrhoea			
<b>Hepato-biliary disorders</b>			Abnormal liver function tests		Cholestasis, hepatitis, jaundice	
<b>Skin and subcutaneous tissue disorders</b>		Pruritus	Skin rash		Urticaria, alopecia, purpura	
<b>Musculoskeletal, connective tissue and bone disorders</b>		Back pain, myalgia	Arthralgia	Muscle cramps, muscle weakness		
<b>Renal and Urinary disorders</b>		Cystitis, Urinary incontinence	Dysuria, micturition frequency, haematuria	Polyuria	Increased diuresis, Micturition disorder, nocturia	
<b>Reproductive system and breast disorders</b>			Impotence		Gynecomastia, priapism	Retrograde ejaculation
<b>General disorders and administration site conditions</b>		Asthenia, chest pain, influenza-like symptoms, peripheral oedema	Pain, facial oedema		Fatigue, malaise	
<b>Investigations</b>			Weight increase			

### 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 the Yellow Card Scheme at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or search for MHRA Yellow Card in the Google Play or Apple.

## **4.9 Overdose**

Should overdosage lead to hypotension, the patient should be immediately placed in a supine, head down position. Other supportive measures should be performed if thought appropriate in individual cases.

If this measure is inadequate, shock should first be treated with volume expanders. If necessary, vasopressor should then be used. Renal function should be monitored and supported as needed.

Since doxazosin is highly protein bound, dialysis is not indicated.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotheapeutic group: Alpha-adrenoreceptor antagonists, ATC code: C02CA04

#### Mechanism of action

Doxazosin is a potent and selective post-junctional alpha-1-adrenoceptor antagonist.

This action results in a decrease in systemic blood pressure. Doxazosin is appropriate for oral administration in a once daily regimen in patients with essential hypertension.

#### Pharmacodynamic effects

Doxazosin has been shown to be free of adverse metabolic effects and is suitable for use in patients with coexistent diabetes mellitus, gout and insulin resistance.

Doxazosin is suitable for use in patients with co-existent asthma, left ventricular hypertrophy and in elderly patients. Treatment with Doxazosin has been shown to result in regression of left ventricular hypertrophy, inhibition of platelet aggregation and enhanced activity of tissue plasminogen activator. Additionally, Doxazosin improves insulin sensitivity in patients with impairment.

Doxazosin, in addition to its antihypertensive effect, has in long term studies produced a modest reduction in plasma total cholesterol, LDL-cholesterol and triglyceride concentrations and therefore may be of

particular benefit to hypertensive patients with concomitant hyperlipidaemia.

Administration of Doxazosin to patients with symptomatic BPH results in a significant improvement in urodynamics and symptoms. The effect in BPH is thought to result from selective blockade of the alpha-adrenoceptors located in the muscular stroma and capsule of the prostate, and in the bladder neck.

## 5.2 Pharmacokinetic properties

**Absorption:** Following oral administration in humans (young male adults or the elderly of either sex), doxazosin is well absorbed and approximately two thirds of the dose is bioavailable.

**Biotransformation/Elimination:** Approximately 98% of doxazosin is protein-bound in plasma.

Doxazosin is extensively metabolised in man and in the animal species tested, with the faeces being the predominant route of excretion.

The mean plasma elimination half-life is 22 hours thus making the drug suitable for once daily administration.

After oral administration of doxazosin the plasma concentrations of the metabolites are low. The most active (6' hydroxy) metabolite is present in man at one fortieth of the plasma concentration of the parent compound, which suggests that the antihypertensive activity is in the main due to doxazosin.

There are only limited data in patients with liver impairment and on the effects of drugs known to influence hepatic metabolism (e.g. cimetidine). In a clinical study in 12 subjects with moderate hepatic impairment, single dose administration of doxazosin resulted in an increase in AUC of 43% and a decrease in apparent oral clearance of 40%. As with any drug wholly metabolised by the liver, doxazosin should be administered with caution to patients with impaired liver function (see section 4.4).

Doxazosin is extensively metabolized in the liver. *In vitro* studies suggest that the primary pathway for elimination is via CYP 3A4; however, CYP 2D6 and CYP 2C9 metabolic pathways are also involved for elimination, but to a lesser extent.

## 5.3 Preclinical safety data

Preclinical data reveal no special hazard for humans based on conventional animal studies in safety pharmacology, repeated dose toxicity, genotoxicity and carcinogenicity.

Although no teratogenic effects were seen in animal testing, reduced foetal survival was observed in animals at doses approximately 300 times greater than the maximum human recommended dose.

Studies in lactating rats given a single oral dose of radioactive doxazosin indicate that doxazosin accumulates in rat milk with a maximum of concentration about 20 times greater than the maternal plasma concentration.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Methyl Parahydroxybenzoate (E218)  
Propyl Parahydroxybenzoate (E216)  
Simethicone Emulsion 30% (contains, benzoic acid (E210), low volatile simethicone intermediate, polyoxyethylene sorbitan tristearate, methylcellulose, poly (ethylene oxide), stearate, glyceryl stearate, xanthan gum, sorbic acid, sulfuric acid 98% & purified water)  
Microcrystalline Cellulose and Carmellose Sodium  
Glycerol (E422)  
Sucralose (E955)  
Citric acid anhydrous (E 330)  
Lemon flavour (contains propylene glycol (E1520))  
Purified water

### **6.2 Incompatibilities**

Not applicable.

### **6.3 Shelf life**

24 months  
Discard 30 days after first opening.

#### 6.4 Special precautions for storage

Do not store above 25°C

#### 6.5 Nature and contents of container

Container: Type III amber colour glass bottle

Closure: Child resistant, tamper evident plastic (polyethylene/polypropylene) cap with EPE liner

Measuring device: A 20 ml oral syringe with 0.5 ml graduation marks, 10 ml oral syringe with 0.25 ml graduation marks, and a syringe adaptor.

Pack size: 150 ml.

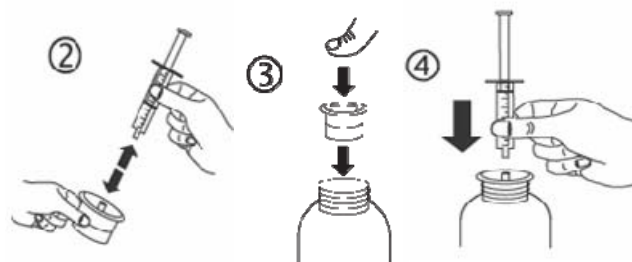
#### 6.6 Special precautions for disposal

Instructions for the use of syringe:

a) Open the bottle: press the cap and turn it anticlockwise (figure 1).

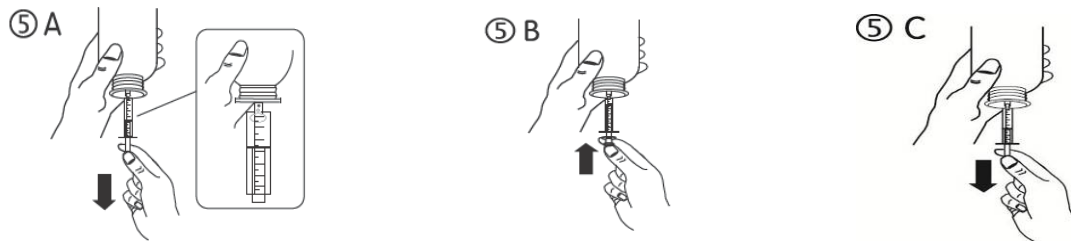


b) Separate the adaptor from the syringe (figure 2). Insert the adaptor into the bottle neck (figure 3). Ensure it is properly fixed. Take the syringe and put it in the adaptor opening (figure 4).



c) Turn the bottle upside down. Fill the syringe with a small amount of suspension by pulling the piston down (figure 5A), then push the piston

upwards in order to remove any possible bubble (figure 5B). Pull the piston down to the graduation mark corresponding to the quantity in millilitres (ml) prescribed by your doctor (figure 5C).



d) Turn the bottle the right way up (figure 6A). Remove the syringe from the adaptor (figure 6B).



e) Empty the contents of the syringe into the patient's mouth by pushing the piston to the bottom of the syringe (figure 7). The contents of the syringe should be emptied into the side cheek of the patient's mouth to avoid a choking hazard. Close the bottle with the plastic cap. Wash the syringe with water (figure 8).



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

## 7 MARKETING AUTHORISATION HOLDER

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**8      MARKETING AUTHORISATION NUMBER(S)**

PL 39307/0149

**9      DATE OF FIRST AUTHORISATION/RENEWAL OF THE  
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06/01/2026

**10     DATE OF REVISION OF THE TEXT**

06/01/2026