NAME OF THE MEDICINE

Perindopril Arginine.

Chemical Name: L-arginine (2S,3aS,7aS)-1-N-[(S)-1-ethoxycarbonyl butyl]-L-alanyl perhydroindole-2-carboxylate

Structural Formula:

![Structural Formula Image]

Molecular Formula: C_{19}H_{32}N_{2}O_{5}, C_{6}H_{14}N_{4}O_{2}

Molecular Weight: 542.669

CAS Registry Number: 612548-45-5

DESCRIPTION

Perindopril is a dipeptide monoacid monoester with a perhydroindole group and no sulphydryl radical. Perindopril arginine is a white powder, readily soluble in purified water, slightly soluble in 95% ethanol and practically insoluble in chloroform. Perindopril has five asymmetric centres and is synthesised stereoselectively so that it is a single enantiomer (all S stereochemistry).

Each tablet contains the active ingredient perindopril arginine and following inactive ingredients: isomalt, colloidal anhydrous silica, magnesium stearate, hypromellose, hyprolose, macrogol 8000 and titanium dioxide.

5 mg and 10 mg tablets contain brilliant blue FCF aluminium lake and yellow iron oxide.

PHARMACOLOGY

Pharmacological Action

Perindopril (prodrug), following hydrolysis to perindoprilat, inhibits angiotensin converting enzyme (ACE) both in vitro and in vivo. It is thought that ACE inhibitors reduce blood pressure by inhibiting the enzyme which catalyses the conversion of angiotensin I to angiotensin II. Decreased plasma angiotensin II leads to increased plasma renin activity and a decrease in aldosterone. In addition to its effects on circulating ACE, perindopril binds to and inhibits tissue converting enzyme, predominantly in the kidney and vascular wall. The contribution of this mechanism to the overall antihypertensive effect of perindopril arginine is unknown. Animal studies have demonstrated reversal of vascular hypertrophy and an improvement in the ratio of elastin to collagen in the vessel wall. Studies in man have demonstrated an improvement in the visco-elastic properties of large vessels and in compliance. Studies in animals and humans suggest that specific and competitive suppression of the renin-angiotensin-aldosterone system (RAAS) is the main mechanism by which blood pressure is reduced. However, antihypertensive activity has also been observed in patients with low renin activity. Perindopril arginine may also inhibit the degradation of the potent vasodepressor peptide, bradykinin, and this action may contribute to its antihypertensive action. Perindopril arginine appears to reduce peripheral resistance and may influence arterial compliance.
Studies carried out in animal models of hypertension have shown that perindopril arginine is a specific competitive angiotensin I converting enzyme inhibitor. The administration of perindopril arginine to patients with essential hypertension results in a reduction in supine and standing blood pressure without any significant effect on heart rate. Abrupt withdrawal of perindopril arginine has not been associated with a rebound rise in blood pressure. Single dose studies have demonstrated that peak inhibition of ACE activity and peak reduction in blood pressure occurs 4-6 hours after administration. The durations of these effects are dose related and at the recommended dose range, both effects have been shown to be maintained over a 24-hour period.

In haemodynamic studies carried out in animal models of hypertension, blood pressure reduction after perindopril arginine administration was accompanied by a reduction in peripheral arterial resistance and improved arterial wall compliance. In studies carried out in patients with essential hypertension the reduction in blood pressure was accompanied by a reduction in peripheral resistance with no change, or a small increase in renal blood flow and no change in glomerular filtration rate. An increase in the compliance of large arteries was also observed. When perindopril arginine is administered together with a thiazide-type diuretic, the antihypertensive activity of perindopril arginine may be potentiated in some patients, and this effect is evident after four weeks of treatment. Perindopril arginine, like other ACE inhibitors, may compensate for thiazide-induced hypokalaemia.

In one study of 48 patients where low-dose perindopril, equivalent to perindopril arginine 2.5 mg, was compared with correspondingly low doses of enalapril (2.5 mg) or captopril (6.25 mg) in patients with congestive heart failure, significantly different blood pressure responses were noted. Blood pressure fell significantly with captopril and enalapril following the first dose. However, whilst perindopril inhibited plasma ACE comparably with enalapril, the blood pressure changes were insignificant and similar to placebo for up to 10 hours of regular observation. The possibility of a late hypotensive response are not available for perindopril.

**Pharmacokinetics**

**Absorption**
Following oral administration, perindopril arginine is rapidly absorbed with bioavailability of 24%. Elimination is rapid, occurring predominantly via the urine. Plasma half-life is approximately 1 hour. Bioavailability of the active metabolite perindoprilat is approximately 27%.

**Distribution**
Peak plasma concentrations of perindoprilat occur 3 to 4 hours after oral administration of perindopril arginine. Protein binding of perindoprilat is 20%, principally to angiotensin converting enzyme. When perindopril arginine is administered chronically, steady state of perindoprilat is reached within 4 days, and perindoprilat does not accumulate.

**Metabolism**
Apart from perindoprilat, the administration of perindopril leads to the formation of 5 other metabolites, all of which are inactive and exist in very low quantities. One of these is the glucurononconjugate of perindoprilat, which is formed by a hepatic first-pass effect. This effect does not appear to have any influence on the kinetics of perindoprilat. Food intake may reduce hepatic biotransformation to perindoprilat.

**Elimination**
Perindoprilat binds to plasma and tissue ACE, and free perindoprilat is eliminated through the urine. The terminal half-life of the unbound fraction is approximately 17 hours.

The elimination of perindoprilat is reduced in elderly patients and in patients with cardiac and renal failure (see **DOSAGE AND ADMINISTRATION**).

In a study comparing this product with the reference product, the two products were shown to be bioequivalent. The 90% confidence intervals for the ratio of AUC0-t and Cmax were found to be between 0.98-1.06 and 0.93-1.15 respectively for perindopril; 0.96-1.02 (AUC72) and 0.91-1.04 per perindoprilat.

**CLINICAL TRIALS**

**Patients with stable coronary artery disease:**
The effects of perindopril were compared to placebo in patients with stable coronary artery disease with no clinical signs of heart failure. The EUROPA (European trial on Reduction Of cardiac events with Perindopril in stable coronary Artery disease) study was a multicentre, international, randomised, double blind, placebo-controlled clinical trial lasting 4 years. 12,218 patients aged over 18 were randomised: 6110 patients to high dose perindopril, equivalent to perindopril arginine 10 mg and 6108 patients to placebo.

The primary endpoint was the composite of cardiovascular mortality, non-fatal myocardial infarction, and/or cardiac arrest with successful resuscitation.

The trial population had evidence of coronary artery disease documented by previous myocardial infarction at least 3 months before screening, coronary revascularisation at least 6 months before screening, angiographic evidence of stenosis (at least 70% narrowing of one or more major coronary arteries), or positive stress test in men with a history of chest pain.

Study medication was added to conventional treatment, including medication used for the management of hyperlipidaemia, hypertension and diabetes mellitus. Patients randomised to perindopril were initiated on doses of perindopril equivalent to perindopril arginine 2.5 mg or perindopril arginine 5 mg for 2 weeks, and then titrated up to a dose of perindopril equivalent to perindopril arginine 10 mg during the 2 following weeks. A dose of perindopril equivalent to perindopril arginine 10 mg was then maintained for the whole duration of the study. If this dose was not well tolerated, it could be reduced to a dose of perindopril equivalent to perindopril arginine 5 mg once daily.

Most of the patients also received platelet inhibitors, lipid-lowering agents and beta-blockers. At the end of the study, the proportions of patients treated with a combination of these medications were 91%, 69% and 63% respectively.

The results of the EUROPA study, specifically the primary endpoint and its components (cardiovascular mortality, non-fatal myocardial infarction or resuscitated cardiac arrest) for the intention-to-treat (ITT) population are presented in the following table.

### EUROPA Study Results (ITT population) Note 1

<table>
<thead>
<tr>
<th></th>
<th>Perindopril (n=6110)</th>
<th>Placebo (n=6108)</th>
<th>Absolute Risk Reduction [95% CI]</th>
<th>NNT Note 2 over 4.2 yr trial period (per year)</th>
<th>Relative Risk Reduction [95% CI]</th>
<th>p (log-rank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular events (Primary composite endpoint)</td>
<td>488 (8.0%)</td>
<td>603 (9.9%)</td>
<td>1.9% [0.87; 2.90]</td>
<td>54 (227)</td>
<td>20% [9; 29]</td>
<td>0.0003</td>
</tr>
<tr>
<td>Primary Endpoint Component:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Cardiovascular mortality</td>
<td>215 (3.5%)</td>
<td>249 (4.1%)</td>
<td>non-significant</td>
<td>-</td>
<td>14% [-3; 28]</td>
<td>0.107</td>
</tr>
<tr>
<td>– Non-fatal MI Note 3</td>
<td>295 (4.8%)</td>
<td>378 (6.2%)</td>
<td>1.4% [0.55; 2.17]</td>
<td>74 (311)</td>
<td>22% [10; 33]</td>
<td>0.001</td>
</tr>
<tr>
<td>– Cardiac arrest with successful resuscitation</td>
<td>6 (0.1%)</td>
<td>11 (0.2%)</td>
<td>non-significant</td>
<td>-</td>
<td>46% [-47; 80]</td>
<td>0.223</td>
</tr>
<tr>
<td>Secondary Endpoints: Total mortality</td>
<td>375 (6.1%)</td>
<td>420 (6.9%)</td>
<td>non-significant</td>
<td>-</td>
<td>11% [-2; 23]</td>
<td>0.101</td>
</tr>
<tr>
<td>Non-fatal and fatal MI</td>
<td>320 (5.2%)</td>
<td>418 (6.8%)</td>
<td>1.6% [0.76; 2.44]</td>
<td>63 (265)</td>
<td>23.9% [12, 34]</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Notes:
1. The EUROPA study was designed to have adequate statistical power to detect a treatment effect on the composite primary endpoint, and not for the individual components.
2. NNT = Number of patients needed to be treated to prevent one event.
3. MI = Myocardial Infarction.
The reduction in the primary composite endpoint was mainly due to a reduction in the number of non-fatal myocardial infarctions. There was no significant reduction in the rate of cardiovascular mortality or total mortality in patients taking perindopril compared to those taking placebo.

After a mean follow-up of 4.2 years, treatment with a dose of perindopril equivalent to perindopril arginine 10 mg once daily resulted in a significant relative risk reduction of 20% (95%CI: 9-29) in the primary combined endpoint: 488 patients (8.0%) reported events in the perindopril group compared to 603 patients (9.9%) in the placebo group (p = 0.0003). Improvements in the primary composite endpoint achieved statistical significance after 3 years of continuous treatment on perindopril.

INDICATIONS

- The treatment of hypertension;
- The treatment of heart failure. In such patients it is recommended that perindopril arginine be given with a diuretic and/or digoxin under close medical supervision. (The safety and efficacy of perindopril arginine has not been demonstrated for New York Heart Association Category IV patients); and
- Patients with established coronary artery disease (See Clinical Trials) who are stable on concomitant therapy and have no heart failure, to reduce the risk of non-fatal myocardial infarction or cardiac arrest.

CONTRAINDICATIONS

Perindopril arginine tablets are contraindicated

- in patients with a history of previous hypersensitivity to the active ingredient perindopril or any of the excipient ingredients present in this product;
- during pregnancy and for lactating women;
- in patients with bilateral or unilateral renal artery stenosis;
- in patients with a history of hereditary and/or idiopathic angioedema or angioedema associated with previous ACE-inhibitor treatment;
- in patients haemodialysed using high-flux polyacrylonitrile ("AN69") membranes who are highly likely to experience anaphylactoid reactions if they are treated with ACE inhibitors. This combination should therefore be avoided, either by use of alternative antihypertensive drugs or alternative membranes (e.g. cuprophane or polysulphone PSF);
- combined use with aliskiren-containing products in patients with diabetes or renal impairment (GFR < 60 mL/min/1.73 m²) (see INTERACTIONS WITH OTHER MEDICINES and PRECAUTIONS).

PRECAUTIONS

Hyperkalaemia

Since ACE inhibitors reduce angiotensin II formation resulting in decreased production of aldosterone, increases in serum potassium have been observed in some patients treated with ACE inhibitors including perindopril. Serum electrolytes (including sodium potassium and urea) should be measured from time to time when ACE inhibitors are given and especially in combination with diuretics.

Hyperkalaemia can cause serious, sometimes fatal, arrhythmias. Risk factors for the development of hyperkalaemia include those with renal insufficiency, worsening of renal function, age (> 70 years), diabetes, intercurrent events, in particular dehydration, acute cardiac decompensation, metabolic acidosis and combined use of potassium-sparing diuretics (e.g. spironolactone, eplerenone, triamterene, or amiloride), potassium supplements or potassium-containing salt substitutes; or those patients taking other medicines associated with increases in serum potassium (e.g. heparin). Combined use of the above-mentioned medicines should be used with caution in combination with ACE inhibitors. Frequent monitoring of serum potassium is needed (see INTERACTIONS WITH OTHER MEDICINES).

Diabetes
Glycaemic control should be closely monitored during the first month of treatment with an ACE inhibitor in patients with diabetes treated with oral medicines or insulin (see INTERACTIONS WITH OTHER MEDICINES).

Angioedema
Patients with a history of angioedema unrelated to ACE inhibitor treatment may be at increased risk of angioedema while treated with an ACE inhibitor.

Life-threatening angioedema has been reported with most ACE inhibitors. The overall incidence is approximately 0.1-0.2%. The aetiology is thought to be non-immunogenic and may be related to accentuated bradykinin activity. Usually the angioedema is non-pitting oedema of the skin mucous membrane and subcutaneous tissue.

Angioedema of the face, extremities, lips, tongue, mucous membranes, glottis and/or larynx has been reported in patients treated with ACE inhibitors and has been reported uncommonly with perindopril arginine (see ADVERSE EFFECTS). This may occur at any time during treatment. In such cases perindopril arginine should be promptly discontinued and the patient carefully observed until the swelling disappears.

Where such cases have been described with other ACE inhibitors and swelling has been confined to the face and lips, the condition has generally resolved without treatment although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal oedema may be fatal or near fatal. In most cases symptoms occurred during the first week of treatment and the incidence appears to be similar in both sexes or those with heart failure or hypertension.

Where there is involvement of the tongue, glottis or larynx likely to cause airway obstruction, appropriate treatment (e.g. adrenaline and oxygen) should be given promptly. Treatment of progressive angioedema should be aggressive and failing a rapid response to medical treatment, mechanical methods to secure an airway should be undertaken before massive oedema complicates oral or nasal intubation.

Patients who respond to medical treatment should be observed carefully for a possible rebound phenomenon.

The onset of angioedema associated with use of ACE inhibitors may be delayed for weeks or months.

Patients may have multiple episodes of angioedema with long symptom-free intervals.

Angioedema may occur with or without urticaria.

Intestinal angioedema has been reported rarely in patients treated with ACE inhibitors. These patients presented with abdominal pain (with or without nausea or vomiting); in some cases there was no prior facial angioedema and C-1 esterase levels were normal. The angioedema was diagnosed by procedures including abdominal CT scan, or ultrasound or at surgery and symptoms resolved after stopping the ACE inhibitor. Intestinal angioedema should be included in the differential diagnosis of patients on ACE inhibitors presenting with abdominal pain.

ACE inhibitors should not be reintroduced in patients who have a history of angioedema due to rare reports of recurrence.

Anaphylactoid reactions during low-density lipoproteins (LDL) apheresis and haemodialysis
Rarely, patients treated with ACE inhibitors during low-density lipoprotein (LDL) apheresis with dextran sulphate have experienced life-threatening anaphylactoid reactions. These reactions were avoided by temporarily withholding ACE inhibitor therapy prior to each apheresis.

Anaphylactoid reactions have been reported in patients dialysed with high flux membranes, who are treated with an ACE inhibitor. In these patients consider using a different type of dialysis membrane or a different class of antihypertensive medicines (see CONTRAINDICATIONS).

Anaphylactic reactions during desensitisation
Patients receiving ACE inhibitors during desensitisation treatment (e.g. hymenoptera venom) have experienced anaphylactoid reactions. In the same patients, these reactions have been avoided when the ACE inhibitors were temporarily withheld, but they reappeared upon inadvertent rechallenge.

**Hypotension**

Hypotension has been reported in patients commencing treatment with ACE inhibitors. Symptomatic hypotension is rarely seen in uncomplicated hypertension but is a potential consequence of perindopril arginine use in salt/volume-depletion, for example, in patients vigorously treated with diuretics, in patients on dialysis, with impaired renal function, following severe diarrhoea or vomiting, in patients on dietary restrictions or those with severe renin-dependent hypertension (see PRECAUTIONS and ADVERSE EFFECTS).

Administration of a dose of perindopril equivalent to perindopril arginine 2.5 mg to patients with mild-moderate heart failure was not associated with any significant reduction in blood pressure. In patients with symptomatic heart failure, with or without associated renal insufficiency, symptomatic hypotension has been observed. This is more likely to occur in those patients with severe heart failure, as reflected by the use of high doses of loop diuretics, hyponatraemia or functional renal impairment. This may be associated with syncope, neurological deficits, oliguria and/or progressive increase in blood nitrogen, and rarely with acute renal failure and/or death. Because of the potential fall in blood pressure in these patients, treatment should be started at low doses under very close supervision. Such patients should be followed closely for the first two weeks of treatment and whenever the dose is increased, or the diuretic treatment is commenced or increased.

Patients with ischaemic heart or cerebrovascular disease in whom an excessive fall in blood pressure could result in myocardial infarction or cerebrovascular accident should be closely followed for the first two weeks of treatment and whenever the dose of perindopril arginine and/or diuretic is increased. In all high-risk patients it is advisable to initiate treatment with one perindopril arginine 2.5 mg tablet once daily.

In some patients with congestive heart failure who have normal or low blood pressure, additional lowering of systemic blood pressure may occur with perindopril. This is anticipated and is usually not a reason to discontinue treatment. If symptomatic hypotension occurs, a reduction of dose or discontinuation of perindopril may be necessary.

If hypotension occurs the patient should be placed in a supine position and if necessary infused with normal saline. A transient hypotensive response is not a contraindication to further doses, which can usually be given without difficulty when blood pressure has increased following volume expansion.

**Renal Impairment**

As a consequence of inhibiting the RAAS, changes in renal function may be anticipated in susceptible individuals. In patients with severe congestive heart failure whose renal function may depend on RAAS activity, treatment with ACE inhibitors may be associated with oliguria and/or progressive increase in blood nitrogen, and rarely with acute renal failure and/or death.

In patients with symptomatic heart failure, hypotension following the initiation of treatment with ACE inhibitors may lead to further impairment in renal function. Acute renal failure, usually reversible, has been reported in this situation.

ACE inhibitors should be avoided in patients with known or suspected renal artery stenosis (see CONTRAINDICATIONS section).

In clinical studies in patients with hypertension and unilateral or bilateral renal artery stenosis, increases in blood urea, nitrogen and serum creatinine were observed in 20% of patients. These increases are usually reversible upon discontinuation. When an ACE inhibitor is given to a patient with stenosis of the renal artery supplying a solitary kidney, or bilateral renal artery stenosis, acute renal insufficiency may occur. ACE inhibition Renal function may also be reduced in patients with stenosis of the artery supplying a transplanted kidney. It is believed that renal artery stenosis reduces the pressure in the afferent glomerular arteriole, and transglomerular hydrostatic pressure is then maintained by angiotensin II-induced constriction of the efferent arteriole. When an ACE inhibitor is given, the efferent arteriole relaxes, glomerular filtration pressure falls, and renal failure may result. ACE inhibitors can lead to the thrombotic occlusion of a stenosed renal artery.
If renovascular hypertension is also present, treatment should be started under close medical supervision with low doses and careful dose titration. There is an increased risk of severe hypotension and renal insufficiency. Since treatment with diuretics may be a contributory factor to the above, they should be discontinued and renal function should be monitored during the first weeks of perindopril treatment.

Some patients with hypertension and no apparent pre-existing renovascular disease have developed increases in blood urea, nitrogen and serum creatinine, which are usually minor and transient, particularly when perindopril has been given in combination with a diuretic. However, increases in blood urea, nitrogen and serum creatinine are more likely to occur in patients with pre-existing renal impairment or in those on diuretics. Dose reduction of the ACE inhibitor and/or discontinuation of the diuretic may be required.

Renal function should always be assessed (see DOSAGE AND ADMINISTRATION). In the case of renal impairment, the initial perindopril dose should be adjusted according to the patient’s creatinine clearance (see DOSAGE AND ADMINISTRATION). Routine monitoring of potassium and creatinine are part of normal medical practice for these patients (see ADVERSE EFFECTS). If a deterioration in renal function has occurred after treatment with one ACE inhibitor, then it is likely to be precipitated by another and in these patients use of another class of antihypertensive agent would be preferable. Patients with unilateral renal artery disease present a special problem as deterioration of function may not be apparent from measurement of blood urea and serum creatinine.

Some ACE inhibitors have been associated with the occurrence of proteinuria (up to 0.7%) and/or decline in renal function in patients with one or more of the following characteristics: old age, pre-existing renal disease, concomitant treatment with potassium-sparing diuretics or high doses of other diuretics, limited cardiac reserve, or treatment with a non-steroidal anti-inflammatory drug (NSAID).

Perindopril is dialysable with a clearance of 70 mL/min.

**Kidney transplantation**
There is no experience regarding the administration of perindopril in patients with a recent kidney transplantation.

**Hepatic failure**
Rarely, ACE inhibitors have been associated with a syndrome that starts with cholestatic jaundice and progresses to fulminant hepatic necrosis and sometimes death. The mechanism of this syndrome is not understood. Patients treated with ACE inhibitors who develop jaundice or marked elevations of hepatic enzymes should discontinue the ACE inhibitor and receive appropriate medical follow-up (see ADVERSE EFFECTS).

**Hepatic Impairment**
Biotransformation of perindopril to perindoprilat mainly occurs in the liver. Studies in patients with hepatic impairment have shown that kinetic parameters of perindopril were not modified by hepatic failure. With the exception of bioavailability, which was increased, kinetic parameters of perindoprilat (including T_max) were also unchanged. The increase in bioavailability could be due to inhibition of the formation of perindopril metabolites other than perindoprilat (see PHARMACOLOGY, Pharmacokinetics). The administration of perindopril leads to the formation of a glucuronon conjugate derivative of perindoprilat by a hepatic first-pass effect. The kinetic parameters of perindoprilat glucuronide are not modified by hepatic failure. The small changes in the kinetics of perindoprilat do not justify the need to change the usual dose in most patients with hepatic failure.

**Ethnicity**
ACE inhibitors cause a higher rate of angioedema in patients of indigenous African origin than in patients of other racial origin. As with other ACE inhibitors, perindopril may be less effective in lowering blood pressure in people of indigenous African origin than in people of other racial origin, possibly because of a higher prevalence of low-renin states in this population. It is unknown if the same observations have been made in patients of indigenous Australian origin.

**Cough**
A persistent dry (non-productive) irritating cough has been reported with most of the ACE inhibitors. The frequency of reports has been increasing since cough was first recognised as a class-effect of
ACE inhibitor treatment with the incidence of cough varying between 2-15% depending upon the drug, dose and duration of use.

The cough is often worse when lying down or at night, and has been reported more frequently in women (who account for two-thirds of the reported cases). Patients who cough may have increased bronchial reactivity compared with those who do not. The observed higher frequency of this side-effect in non-smokers may be due to a higher level of tolerance of smokers to cough.

The cough is most likely due to stimulation of the pulmonary cough reflex by kinins (bradykinin) and/or prostaglandins, which accumulate because of ACE inhibition. Once a patient has developed intolerable cough, an attempt may be made to switch the patient to another ACE inhibitor; the reaction may recur but this is not invariably the case. A change to another class of drugs may be required in severe cases.

Proteinuria
Perindopril arginine treatment has occasionally been associated with mild or transient proteinuria (<1 gram/per 24 hours). However in the majority of patients with pre-existing proteinuria treated with perindopril arginine, proteinuria disappeared or remained stable. ACE inhibitors have potential to delay the progression of nephropathy in patients with diabetes, or hypertension.

Neutropenia/Agranulocytosis/Thrombocytopenia/Anaemia
Neutropenia/agranulocytosis, thrombocytopenia and anaemia have been reported in patients treated with ACE inhibitors. In patients with normal renal function and no other complicating factors, neutropaenia occurs rarely. Perindopril arginine should be used with extreme caution in patients with collagen vascular disease, immunosuppressant therapy, treatment with allopurinol or procainamide, or a combination of these complicating factors, especially if there is pre-existing impaired renal function. Some of these patients developed serious infections, which in a few instances did not respond to intensive antibiotic treatment. If perindopril arginine is used in such patients, periodic monitoring of white blood cell counts is advised and patients should be instructed to report any sign of infection (e.g. sore throat, fever).

Dermatological Reactions
Dermatological reactions characterised by maculo-papular pruritic rashes and sometimes photosensitivity has been reported with another ACE inhibitor. Rare and sometimes severe skin reactions (lichenoid eruptions, psoriasis, pemphigus like rash, rosacea, Stevens-Johnson syndrome etc). A causal relationship is difficult to assess.

Patients who develop a cutaneous reaction with one ACE inhibitor might not when switched to another drug of the same class, but there are reports of cross-reactivity.

Taste Disturbances (dysgeusia)
Taste disturbances were reported to be common (prevalence up to 12.5%) with high doses of one ACE inhibitor. The actual incidence of taste disturbance is probably low (<0.5%) but data are scarce and difficult to interpret.

Taste disturbances with ACE inhibitors have been described as suppression of taste or a metallic sensation in the mouth. Dysgeusia usually occurs in the first weeks of treatment and may disappear in most cases within 1-3 months.

Agents Causing Renin Release
The effects of perindopril may be enhanced by concomitant administration of antihypertensive agents which cause renin release.

Dual blockade of the renin-angiotensin-aldosterone system (RAAS)
As a consequence of inhibiting the RAAS, hypotension, syncope, stroke, hyperkalaemia, and changes in renal function (including acute renal failure) have been reported in susceptible individuals, especially if combining medicines that affect this system. Dual blockade of the RAAS through the combined use of ACE-inhibitors, angiotensin II receptor blockers or aliskiren is therefore not recommended (see CONTRAINDICATIONS and INTERACTIONS WITH OTHER MEDICINES). If dual blockade therapy is considered absolutely necessary, this should be limited to individually defined cases under specialist supervision with frequent close monitoring of renal function, electrolytes and blood pressure.
The combination of perindopril with aliskiren is contraindicated in patients with diabetes or renal impairment (GFR < 60 mL/min/1.73 m²) (see CONTRAINDICATIONS and INTERACTIONS WITH OTHER MEDICINES).

ACE inhibitors and angiotensin receptor blockers should not be used in combination in patients with diabetic nephropathy.

**Surgery and Anaesthesia**

Perindopril may block angiotensin II formation secondary to compensatory renin release in patients undergoing major surgery during anaesthesia with agents that produce hypotension, and cause further reduction in blood pressure. Treatment should be discontinued one day prior to the surgery. Perioperative hypotension can be corrected with volume expansion.

**Aortic or Mitral Valve Stenosis / Hypertrophic Cardiomyopathy**

There has been some concern on theoretical grounds that patients with mitral valve stenosis and obstruction in the outflow of the left ventricle such as aortic stenosis or with hypertrophic cardiomyopathy might be at particular risk of decreased coronary perfusion when treated with vasodilators, including ACE inhibitors. Vasodilators may tend to drop diastolic pressure, and hence coronary perfusion pressure, without producing the concomitant reduction in myocardial oxygen demand that normally accompanies vasodilatation. The true clinical importance of this concern is uncertain.

**Stable Coronary Artery Disease**

If an episode of unstable angina pectoris, regardless of severity, occurs during the first month of perindopril treatment, a careful appraisal of the benefits/risks of continuing treatment should be performed.

**Effects on Fertility**

The effects of perindopril arginine on fertility have not been investigated. Studies in rats showed no impairment of male or female fertility at oral perindopril erbumine doses up to 10mg/kg/day.

**Use in Pregnancy (Category D)**

The use of ACE inhibitors is contraindicated during pregnancy (see CONTRAINDICATIONS).

As with all ACE inhibitors, perindopril arginine should not be taken during pregnancy. Pregnancy should be excluded before starting treatment with perindopril arginine and avoided during the treatment. Unless continued treatment with an ACE inhibitor is considered essential, patients planning pregnancy should be changed to alternative anti-hypertensive treatments which have an established safety profile for use in pregnancy. If a patient intends to become pregnant, treatment with ACE inhibitors must be discontinued and replaced by another form of treatment. If a patient becomes pregnant while on ACE inhibitors, she must immediately inform her doctor to discuss a change in medication and further management.

Perindopril or its metabolites have been shown to cross the placenta and distribute to the foetus in pregnant animals. There are no adequate and well-controlled studies of ACE inhibitors in pregnant women, but foetotoxicity is well documented in animal models. Data, however, show that ACE inhibitors cross the human placenta. Post marketing experience with all ACE inhibitors suggests that exposure in utero may be associated with hypotension and decreased renal perfusion in the foetus. ACE inhibitors have also been associated with foetal death in utero.

Epidemiological evidence regarding the risk of teratogenicity following exposure to ACE inhibitors during the first trimester of pregnancy has not been conclusive; however a small increase in risk cannot be excluded.

A historical cohort study in over 29,000 infants born to non-diabetic mothers has shown 2.7 times higher risk for congenital malformations in infants exposed to ACE inhibitors during the first trimester compared to no exposure. The risk ratios for cardiovascular and central nervous system malformations were 3.7 times (95% confidence interval 1.89 to 7.3) and 4.4 times (95% confidence interval 1.37 to 14.02) respectively, compared to no exposure.
When ACE inhibitors have been used during the second and third trimesters of pregnancy, there have been reports of foetal and neonatal toxicity, hypotension, hyperkalaemia, renal failure, skull hypoplasia, oligohydramnios and death.

Oligohydramnios has been reported, presumably resulting from decreased foetal renal function; oligohydramnios has been associated with foetal limb contractures, craniofacial deformities, hypoplastic lung development and intra-uterine growth retardation. Prematurity and patent ductus arteriosus have been reported, however it is not clear whether these events were due to ACE inhibitor exposure or to the mother's underlying disease.

Infants exposed in utero to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalaemia. Should exposure to ACE inhibitors have occurred from the second trimester of pregnancy, ultrasound check of renal function and skull is recommended. If such complications arise, appropriate medical treatment should be initiated to support blood pressure and renal perfusion.

Use in Lactation
Animal studies have shown that perindopril and its metabolites are excreted in milk during lactation, but there are no human data. It is therefore recommended that perindopril arginine should not be given to lactating women as the possible effect on the newborn is unknown. Alternative treatments with better established safety profiles during breastfeeding are preferable, especially while nursing a newborn or preterm infant.

Paediatric Use
Use of perindopril arginine in children is not recommended as no data establishing safety or effectiveness in children are available.

Use in the Elderly
Renal insufficiency is commonly observed in elderly people. Care should therefore be taken when prescribing perindopril arginine to elderly patients. The initial dose in the elderly should always be one perindopril arginine 2.5 mg tablet once daily and patients should be monitored closely during the initial stages of treatment (see DOSAGE AND ADMINISTRATION).

In a study of 91 elderly patients with a mean age of 71.9 years, a 6% increase in serum potassium occurred in the first month of treatment and subsequently remained stable. There was no change in the group in blood urea, creatinine or creatinine clearance.

Particular care should be taken in elderly patients with congestive heart failure who have renal and/or hepatic insufficiency.

Genotoxicity
Results from a broad set of assays for gene mutation and chromosomal damage with perindopril arginine suggest no genotoxic potential at clinical doses.

Carcinogenicity
Carcinogenicity studies have not been conducted with perindopril arginine.

No evidence of carcinogenic activity was observed in mice and rats when perindopril erbumine was administered via drinking water at levels up to 7.5mg/kg/day for 2 years. At least one ACE inhibitor has caused an increase in the incidence of oxyphilic renal tubular cells and oncocytomas in rats. The potential of ACE inhibitors to cause this effect in man is unknown. Moreover, the progression of oxyphilic cells to oncocytomas is rare in humans and when it does occur, it is considered to be benign.

Effects on Ability to Drive or Operate Machinery
When driving or operating machines it should be taken into account that occasionally dizziness or weariness related to low blood pressure may occur in some patients, particularly at the start of treatment or in combination with another antihypertensive medication.

Effects on Laboratory Tests
Increases in blood urea and plasma creatinine, hyperkalaemia reversible on discontinuation may occur, especially in the presence of renal insufficiency, severe heart failure and renovascular hypertension. Elevation of liver enzymes and serum bilirubin have been reported rarely.
INTERACTIONS WITH OTHER MEDICINES

Clinical trial data has shown that dual blockade of the renin-angiotensin-aldosterone-system (RAAS) through the combined use of ACE-inhibitors, angiotensin II receptor blockers or aliskiren is associated with higher frequency of adverse events such as hypotension, hyperkalaemia and decreased renal function (including acute heart failure) compared to the use of a single RAAS-acting agent (see CONTRAINDICATIONS, PRECAUTIONS and CLINICAL TRIALS).

Medicines Inducing Hyperkalaemia:

ACE inhibitors can attenuate potassium loss caused by thiazide diuretics and increase serum potassium when used alone. Although serum potassium usually remains within normal limits, hyperkalaemia may occur in some patients treated with an ACE inhibitor. The combined use of an ACE inhibitor with a potassium-sparing diuretic (e.g. spironolactone, triamterene, or amiloride), immunosuppressant (e.g. cyclosporin), angiotensin receptor blocker, NSAID, heparin, potassium supplement, or potassium-containing salt substitute can increase the risk of hyperkalaemia. The combination of perindopril arginine with the above mentioned medicines is not recommended (see PRECAUTIONS). If combined use is indicated they should be used with caution and the patient's serum potassium monitored frequently.

Combined use which is contraindicated (see CONTRAINDICATIONS and PRECAUTIONS):

Aliskiren
Patients with diabetes or renal impairment (GFR < 60 mL/min/1.73 m²), may be at risk of hypotension, syncope, stroke, hyperkalaemia and changes in renal function (including acute renal failure).

Combined use not recommended (see PRECAUTIONS section):

Aliskiren
Patients other than those with diabetes or renal impairment may be at risk of hyperkalaemia, worsening of renal function and cardiovascular morbidity, and an increase in mortality (see CONTRAINDICATIONS).

Combined use with ACE inhibitor and angiotensin-receptor blocker

It is reported in the literature that in patients with established atherosclerosis, heart failure, or diabetes with end organ damage, combined use with an ACE inhibitor and an angiotensin-receptor blocker is associated with a higher frequency of hypotension, syncope, hyperkalaemia, and worsening renal function (including acute renal failure) as compared to use of a single RAAS agent. Dual blockade (e.g., by combining an ACE-inhibitor with an angiotensin receptor blocker) should be limited to individually defined cases with close monitoring of renal function, serum potassium, and blood pressure.

Lithium
Reversible increases in serum lithium concentrations and toxicity have been reported during concomitant administration of lithium with ACE inhibitors. Concomitant use of thiazide diuretics may increase the risk of lithium toxicity and enhance the already increased risk of lithium toxicity with ACE inhibitors. Use of perindopril with lithium is not recommended, but if the combination is necessary, careful monitoring of serum lithium levels should be performed.

Potassium Sparing Diuretics (e.g. triamterene, amiloride, potassium salts)

The combined use of perindopril arginine and potassium sparing diuretics may result in potentially lethal hyperkalaemia especially in patients with renal impairment (additive hyperkalaemic effects). The combination of perindopril with the above-mentioned medicines is not recommended (see PRECAUTIONS). If the combination is required, it should be used with caution and with frequent monitoring of serum potassium. For use of spironolactone and eplerenone in heart failure, see paragraph under ‘combined medicines which require special care’.

Combined use which requires special care:

Medicines to treat diabetes (e.g. insulin, oral hypoglycaemic medicines)

ACE inhibitors may add to the glucose lowering effect, with risk of hypoglycaemia, in patients with diabetes who are treated with insulin or with oral hypoglycaemic medicines. Hypoglycaemia is very
rare and appears to be more likely to occur during the first weeks of combined treatment, and in patients with renal impairment.

**Baclofen**

Baclofen may increase the antihypertensive effect of perindopril arginine. Monitor blood pressure and adjust the dose of perindopril arginine if necessary.

**Non-potassium-sparing Diuretics**

Patients treated with diuretics, especially those who are volume and/or salt depleted, may experience excessive reduction in blood pressure after initiation of treatment with an ACE inhibitor. The possibility of hypotensive effects can be reduced by discontinuation of the diuretic or by increasing volume or salt intake prior to commencing treatment with low and progressive doses of perindopril arginine. If it is not possible to discontinue the diuretic, the starting dose of the ACE inhibitor should be reduced. The patient should be closely observed for several hours following the initial dose of the ACE inhibitor and until the blood pressure has stabilised. In arterial hypertension, when prior diuretic treatment has caused salt/volume depletion, the diuretic must be discontinued before commencing treatment with the ACE inhibitor. A non-potassium-sparing diuretic can then be reintroduced, or the ACE inhibitor can be commenced at a low dose and progressively increased. In diuretic-treated congestive heart failure, the ACE inhibitor should be initiated at a very low dose, possibly after reducing the dose of the associated non-potassium-sparing diuretic.

In all cases, renal function (creatinine levels) must be monitored during the first few weeks of ACE inhibitor treatment.

**Potassium-sparing diuretics (eplerenone, spironolactone)**

As the combination of perindopril and potassium sparing medicines (e.g. eplerenone and spironolactone), potassium supplements or potassium-containing salt substitutes is general not recommended:

- Ensure patients do not have hyperkalaemia or renal impairment before commencing treatment with this combination.
- There is a risk of potentially lethal hyperkalaemia with this combination in patients treated for NYHA Class II-IV heart failure with a reduced ejection fraction, who have been previously treated with ACE inhibitors and loop diuretics. This risk is particularly high when recommendations for use of this combination have not been followed.
- Weekly monitoring of serum potassium and creatinine levels is recommended in the first month of the treatment and, monthly thereafter.

**Non-steroidal anti-inflammatory medicinal products (NSAIDs) including aspirin > 3 g/day**

Medicines with prostaglandin synthetase inhibitor properties (e.g. indomethacin) or an NSAID (i.e. acetylsalicylic acid at anti-inflammatory dose regimens, non-selective NSAIDs or COX-2 inhibitors) may diminish the antihypertensive efficacy of concomitantly administered ACE inhibitors. However, clinical studies have not demonstrated any interaction between perindopril arginine and indomethacin or other NSAIDs. Combination use of ACE inhibitors and NSAIDs may lead to an increased risk of worsening of renal function, including possible acute renal failure, and an increase in serum potassium, especially in patients with poor pre-existing renal function. The combination should be administered with caution, especially in the elderly. Patients should be adequately hydrated and consideration should be given to monitoring renal function after commencing treatment with the combination, and periodically thereafter.

**Combination use of ACE inhibitors, anti-inflammatory drugs and thiazide diuretics**

The combined use of an ACE inhibiting drug (ACE-inhibitor or angiotensin receptor antagonist), an anti-inflammatory drug (NSAID or COX-2 inhibitor) and a thiazide diuretic at the same time increases the risk of renal impairment. This includes use in fixed-combination products. The combination of drugs from these three classes should be used with caution particularly in elderly patients or those with pre-existing renal impairment. Combined use of these medications should be accompanied by increased monitoring of serum creatinine, particularly at initiation.

**Combined use which requires some care:**

**Gold**
Nitritoid reactions (symptoms include facial flushing, nausea, vomiting and hypotension) have been reported rarely in patients treated with injectable gold (sodium aurothiomalate) and concomitant ACE inhibitor therapy including perindopril.

**Antihypertensive agents and vasodilators**
Concomitant use of these agents may increase the hypotensive effects of perindopril. Concomitant use with nitroglycerin and other nitrates, or other vasodilators, may further reduce blood pressure.

**Gliptins (e.g. linagliptin, saxagliptin, sitagliptin, vildagliptin)**
When an ACE inhibitor and a gliptin are used in combination, there is an increased risk of angioedema due to the decreased activity of the dipeptidyl peptidase IV (DPP-IV).

**Tetracycline and other drugs that interact with magnesium**
The simultaneous administration of tetracycline with an ACE inhibitor may significantly reduce the absorption of tetracycline, possibly due to the magnesium content in the ACE inhibitor tablets. This interaction should be considered if co-prescribing an ACE inhibitor and tetracycline or other drugs that interact with magnesium.

**Agents Affecting Sympathetic Activity**
As the sympathetic nervous system plays an important part in physiological blood pressure regulation, caution should be exercised with concomitant administration of a drug with sympathetic activity and perindopril arginine. Sympathomimetics may reduce the antihypertensive effects of ACE inhibitors.

**Tricyclic antidepressants/Antipsychotics/Anaesthetics**
Combined use of certain anaesthetics, tricyclic antidepressants and antipsychotics with ACE inhibitors may result in further reduction of blood pressure (see PRECAUTIONS section).

**ADVERSE EFFECTS**
The safety profile of perindopril is consistent with the safety profile of ACE inhibitors. The most frequent adverse events reported in clinical trials and observed with perindopril are: dizziness, headache, paraesthesia, vertigo, visual disturbances, tinnitus, hypotension, cough, dyspnoea, abdominal pain, constipation, diarrhoea, dysgeusia, dyspepsia, nausea, vomiting, pruritus, rash, muscle cramps, and asthenia.

Adverse events that have been observed during clinical trials and/or post-marketing use of perindopril and ranked under the following frequency: Very common (>1/10); common (>1/100, <1/10); uncommon (>1/1000, <1/100); rare (>1/10000, <1/1000); very rare (<1/10000 and including isolated reports).

**Blood and the lymphatic system disorders**
Uncommon: Eosinophilia
Very rare: Decreases in haemoglobin and haematocrit, thrombocytopenia, leucopenia/neutropenia, agranulocytosis or pancytopenia. An unexplained change in prothrombin ratio was reported in one patient. Haemolytic anaemia has been reported in patients with congenital G-6PDH deficiency (see PRECAUTIONS).

**Metabolism and nutrition disorders**
Uncommon: Hypoglycaemia (see PRECAUTIONS and INTERACTIONS WITH OTHER MEDICINES), hyperkalaemia, reversible on discontinuation (see PRECAUTIONS), hyponatraemia

**Psychiatric Disorders**
Uncommon: Mood or sleep disturbances (insomnia, dream abnormality), somnolence
Very rare: Depression, confusion, hallucinations

**Nervous system disorders**
Common: Headache, dizziness, drowsiness, vertigo, paresthesia
Uncommon: Syncope
Eye disorders
Common: Vision disturbance

Ear disorders
Common: Tinnitus

Cardiac disorders
Common: Palpitations
Uncommon: Tachycardia
Very rare: Arrhythmia, angina pectoris, myocardial infarction - possibly secondary to excessive hypotension in high-risk patients (see PRECAUTIONS)

Vascular disorders
Common: Hypotension (and effects related to hypotension), vasculitis, flushing, impaired peripheral circulation
Very rare: Stroke - possibly secondary to excessive hypotension in high risk patients (see PRECAUTIONS)

Respiratory, thoracic and mediastinal disorders
Common: Cough, dyspnoea, epistaxis, discomfort on exertion
Uncommon: Bronchospasm
Very rare: Eosinophilic pneumonia, rhinitis

Gastrointestinal disorders
Common: Nausea, vomiting, abdominal pain, dysgeusia, diarrhoea, dyspepsia, constipation
Uncommon: Dry mouth
Very rare: Pancreatitis

Hepatobiliary disorders
Very rare: Hepatitis, either cytolytic or cholestatic (see PRECAUTIONS)

Skin and subcutaneous tissue disorders
Common: Rash, pruritus
Uncommon: Urticaria (see PRECAUTIONS), angioedema of face, extremities, lips, mucous membranes, tongue, glottis and/or larynx (see PRECAUTIONS), hyperhidrosis, photosensitivity reactions, pemphigoid, eczema
Very rare: Erythema multiforme

Musculoskeletal, connective tissue and bone disorders
Common: Muscle cramps
Uncommon: Arthralgia, myalgia

Renal and urinary disorders
Uncommon: Renal insufficiency
Very rare: Acute renal failure

Reproductive system and breast disorders
Uncommon: Erectile dysfunction

General disorders
Common: Asthenia
Uncommon: Sweating, chest pain, atypical chest pain, malaise, oedema peripheral, pyrexia

Investigations
Uncommon: Blood urea increased, blood creatinine increased
Rare: Blood bilirubin elevation, hepatic enzyme increases

Injury, poisoning and procedural complications
Uncommon: Fall
# Frequency of these adverse events detected from spontaneous reports is calculated from clinical trial data.

**Withdrawals**
In total, 56 of 1275 patients studied (4.4%) stopped treatment because of adverse reactions. In a specific study of 632 patients, in which 36 patients (5.7%) withdrew because of adverse events, a plausible or probable relationship with perindopril treatment was considered to exist in 19 cases (3%).

**DOSAGE AND ADMINISTRATION**

Food intake may reduce hepatic biotransformation of perindopril to perindoprilat. Whilst this effect has not been shown to be clinically significant, it is recommended that perindopril arginine should be taken before meals.

**Renal Impairment**
In patients with renal failure, treatment should begin with one perindopril arginine 2.5 mg tablet daily. Dosage should be adjusted as indicated below according to creatinine clearance. Creatinine and potassium levels should be closely monitored.

<table>
<thead>
<tr>
<th>CREATININE CLEARANCE (mL/min)</th>
<th>DOSAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 30 and 60</td>
<td>One 2.5 mg tablet daily</td>
</tr>
<tr>
<td>Between 15 and 30</td>
<td>One 2.5 mg tablet every 2 days</td>
</tr>
<tr>
<td>Below 15</td>
<td>One 2.5 mg tablet on day of dialysis</td>
</tr>
<tr>
<td></td>
<td>[Perindopril is dialysable (70 mL/min)].</td>
</tr>
</tbody>
</table>

**Hypertension**
The usual starting dose is one perindopril arginine 5 mg tablet once daily, taken in the morning.

Optimum control of blood pressure is achieved by increasing the dose, titrating it against the blood pressure to a maximum of one perindopril arginine 10 mg tablet once daily.

A starting dose of one perindopril arginine 2.5 mg tablet per day is recommended in the following patients who may be at risk of ACE inhibitor-induced hypotension:

**Combination with a Diuretic**
The administration of perindopril arginine to patients currently treated with a diuretic may induce hypotension and sometimes, but more rarely, acute renal failure, at the beginning of the treatment. Monitoring of plasma creatinine is recommended during the first month of treatment.

**Elderly Patients**
Elderly patients with hypertension should start treatment with one perindopril arginine 2.5 mg tablet daily, with titration to one perindopril arginine 5 mg tablet if necessary. It is recommended that renal function be assessed before starting treatment.

**Other patients who may be at risk of ACE inhibitor-induced hypotension**
Patients with renovascular hypertension, salt and/or volume depletion, or cardiac decompensation may have a strongly activated RAAS. These patients may experience an excessive drop in blood pressure following the first dose of an ACE inhibitor.

**Congestive Heart Failure**
Treatment of congestive heart failure with perindopril arginine should be initiated under close medical supervision.

The usual starting dose of perindopril arginine is one perindopril arginine 2.5 mg tablet once daily, which should be given with a diuretic and/or digitalis. This is increased to one perindopril arginine 5 mg tablet once daily for maintenance.
Patients with severe hepatic or renal impairment and/or severe salt/volume depletion are particularly sensitive to ACE inhibitors. Doses in these patients should be carefully titrated as no pharmacokinetic and dose titration studies have been conducted.

**Reduction of risk of cardiovascular events**

For stable coronary artery disease, perindopril arginine should be introduced at a dose of one perindopril arginine 5 mg tablet once daily for two weeks, and then increased to one perindopril arginine 10 mg tablet once daily, depending on tolerance and renal function.

Elderly patients should receive one perindopril arginine 2.5 mg tablet once daily for one week, then one perindopril arginine 5 mg tablet once daily the next week, before increasing the dose up to one perindopril arginine 10 mg tablet once daily depending on tolerance and renal function (see table under **DOSAGE AND ADMINISTRATION, Renal Impairment**).

**OVERDOSAGE**

Limited data are available for overdose in humans. Symptoms associated with overdose of ACE inhibitors may include hypotension, circulatory shock, electrolyte disturbances, renal failure, hyperventilation, tachycardia, palpitations, bradycardia, dizziness, anxiety, and cough. The recommended treatment of overdose is intravenous infusion of normal saline solution. If hypotension occurs, the patient should be placed in the shock position. If available, treatment with intravenous catecholamines may also be considered. Perindopril may be removed from the general circulation by haemodialysis (see **PRECAUTIONS**). Vital signs, serum electrolytes and creatinine concentrations should be monitored continuously.

For information on the management of overdose, contact the Poisons Information Centre on 13 11 26 (Australia).

**PRESENTATION AND STORAGE CONDITIONS**

APO-Perindopril Arginine tablets are intended for oral administration.

Each tablet contains 2.5 mg, 5 mg or 10 mg perindopril arginine, as the active ingredient.

**2.5 mg tablets:**

White coloured, round shaped, biconvex, film coated tablets, with engraved “APO” on one side and “2.5” on the other side.

Blister packs (Aluminium/Aluminium silver foil) of 10, 30 and 100 tablets (AUST R 184819).

Bottles (white, round HDPE bottle with child-resistant cap and desiccant) of 30 and 100 tablets (AUST R 184808).

**5 mg tablets:**

Light green coloured, capsule-shaped, biconvex, film coated tablets, with notch and engraved “APO” on one side and “P 5” on the other side.

Blister packs (Aluminium/Aluminium silver foil) of 10, 30 and 100 tablets (AUST R 184814).

Bottle (white, round HDPE bottle with child-resistant cap and desiccant) of 30 and 100 tablets (AUST R 184806).

**10 mg tablets:**

Green coloured, round shaped, biconvex, film coated tablets, with engraved “APO” on one side and “P 10” on the other side.

Blister packs (Aluminium/Aluminium silver foil) of 10, 30 and 100 tablets (AUST R 184809).

Bottles (white, round HDPE bottle with child-resistant cap and desiccant) of 30 and 100 tablets (AUST R 184812).

Not all strengths, pack types and/or pack sizes may be available.
Storage
Store below 25°C. Protect from moisture.

NAME AND ADDRESS OF THE SPONSOR
Apotex Pty Ltd
16 Giffnock Avenue
Macquarie Park NSW 2113

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POISON SCHEDULE OF THE MEDICINE
S4 – Prescription Only Medicine.

DATE OF FIRST INCLUSION IN THE AUSTRALIAN REGISTER OF THERAPEUTIC GOODS (THE ARTG):
26 April 2012

DATE OF MOST RECENT AMENDMENT:
23 February 2017