For the use of a Registered Medical Practitioner or a Hospital or a Laboratory

# PIOPOD (PIOGLITAZONE HYDROCHLORIDE TABLETS 15mg, 30mg)

# COMPOSITION

# PIOPOD 15

Each uncoated tablet contains: Pioglitazone Hydrochloride I.P. equivalent to Pioglitazone 15mg

# PIOPOD 30

Each uncoated tablet contains: Pioglitazone Hydrochloride I.P. equivalent to Pioglitazone 30mg

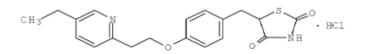
# Advice for healthcare professionals:

- Patients with active bladder cancer or with a history of bladder cancer, and those with uninvestigated haematuria, should not receive pioglitazone
- Prescribers should review the safety and efficacy of pioglitazone in individuals after 3–6 months of treatment to ensure that only patients who are deriving benefit continue to be treated. Pioglitazone should be stopped in patients who do not respond adequately to treatment (eg, reduction in glycosylated haemoglobin, HbA1c).
- Before starting pioglitazone, the following known risk factors for development of bladder cancer should be assessed in individuals: age; current or past history of smoking; exposure to some occupational or chemotherapy agents such as cyclophosphamide; or previous irradiation of the pelvic region.
- Use in elderly patients should be considered carefully before and during treatment because the risk of bladder cancer increases with age. Elderly patients should start on the lowest possible dose and be regularly monitored because of the risks of bladder cancer and heart failure associated with pioglitazone.

#### DESCRIPTION

Pioglitazone hydrochloride is an oral antidiabetic agent that acts primarily by decreasing insulin resistance. Pioglitazone is used in the management of type 2 diabetes mellitus (also known as noninsulin-dependent diabetes mellitus [NIDDM] or adult-onset diabetes). Pharmacological studies indicate that Pioglitazone improves sensitivity to insulin in muscle and adipose tissue and inhibits hepatic gluconeogenesis. Pioglitazone improves glycemic control while reducing circulating insulin levels.

Pioglitazone  $[(\pm)-5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-2,4-]$  thiazolidinedione monohydrochloride belongs to a different chemical class and has a different pharmacological action than the sulfonylureas, metformin, or the  $\alpha$ -glucosidase inhibitors. The molecule contains one asymmetric carbon, and the compound is synthesized and used as the racemic mixture. The two enantiomers of pioglitazone interconvert in vivo. No differences were found in the pharmacologic activity between the two enantiomers. The structural formula is as shown:



Pioglitazone hydrochloride is an odorless white crystalline powder that has a molecular formula of C19H20N2O3S•HCl and a molecular weight of 392.90 daltons. It is soluble in N,N-dimethylformamide, slightly soluble in anhydrous ethanol, very slightly soluble in acetone and acetonitrile, practically insoluble in water, and insoluble in ether. Pioglitazone hydrochloride is available as a tablet for oral administration containing 15 mg or 30 mg of pioglitazone (as the base).

## CLINICAL PHARMACOLOGY

#### **Mechanism of Action**

Pioglitazone hydrochloride is a thiazolidinedione antidiabetic agent that depends on the presence of insulin for its mechanism of action. Pioglitazone hydrochloride decreases insulin resistance in the periphery and in the liver resulting in increased insulin-dependent glucose disposal and decreased hepatic glucose output. Unlike sulfonylureas, pioglitazone is not an insulin secretagogue. Pioglitazone is a potent agonist for peroxisome proliferator-activated receptor gamma (PPAR $\gamma$ ). PPAR receptors are found in tissues important for insulin action such as adipose tissue, skeletal muscle, and liver. Activation of PPAR $\gamma$  nuclear receptors modulates the transcription of a number of insulin responsive genes involved in the control of glucose and lipid metabolism.

In animal models of diabetes, pioglitazone reduces the hyperglycemia, hyperinsulinemia, and hypertriglyceridemia characteristic of insulin-resistant states such as type 2 diabetes. The metabolic changes produced by pioglitazone result in increased responsiveness of insulin dependent tissues and are observed in numerous animal models of insulin resistance.

Since pioglitazone enhances the effects of circulating insulin (by decreasing insulin resistance), it does not lower blood glucose in animal models that lack endogenous insulin.

## Pharmacokinetics and Drug Metabolism

Serum concentrations of total pioglitazone (pioglitazone plus active metabolites) remain elevated 24 hours after once daily dosing. Steady-state serum concentrations of both pioglitazone and total pioglitazone are achieved within 7 days. At steady-state, two of the pharmacologically active metabolites of pioglitazone, Metabolites III (M-III) and IV (M-IV), reach serum concentrations equal to or greater than pioglitazone. In both healthy volunteers and in patients with type 2 diabetes, pioglitazone comprises approximately 30% to 50% of the peak total pioglitazone serum concentrations and 20% to 25% of the total area under the serum concentration-time curve (AUC).

Maximum serum concentration ( $C_{max}$ ), AUC, and trough serum concentrations ( $C_{min}$ ) for both pioglitazone and total pioglitazone increase proportionally at doses of 15 mg and 30 mg per day. There is a slightly less than proportional increase for pioglitazone and total pioglitazone at a dose of 60 mg per day.

**Absorption:** Following oral administration, in the fasting state, pioglitazone is first measurable in serum within 30 minutes, with peak concentrations observed within 2 hours. Food slightly delays the time to peak serum concentration to 3 to 4 hours, but does not alter the extent of absorption.

**Distribution:** The mean apparent volume of distribution (Vd/F) of pioglitazone following single dose administration is  $0.63 \pm 0.41$  (mean  $\pm$  SD) L/kg of body weight. Pioglitazone is extensively protein bound (>99%) in human serum, principally to serum albumin. Pioglitazone also binds to other serum proteins, but with lower affinity. Metabolites M-III and M-IV also are extensively bound (>98%) to serum albumin.

**Metabolism:** Pioglitazone is extensively metabolized by hydroxylation and oxidation; the metabolites also partly convert to glucuronide or sulfate conjugates. Metabolites M-II and M- IV (hydroxy derivatives of pioglitazone) and M-III (keto derivative of pioglitazone) are pharmacologically active in animal models of type 2 diabetes. In addition to pioglitazone, M- III and M-IV are the principal drug-related species found in human serum following multiple dosing. At steady-state, in both healthy volunteers and in patients with type 2 diabetes, pioglitazone comprises approximately 30% to 50% of the total peak serum concentrations and 20% to 25% of the total AUC.

In vitro data demonstrate that multiple CYP isoforms are involved in the metabolism of pioglitazone. The cytochrome P450 isoforms involved are CYP2C8 and, to a lesser degree, CYP3A4 with additional contributions from a variety of other isoforms including the mainly extrahepatic CYP1A1. In vivo drug-drug interaction studies have suggested that pioglitazone may be a weak inducer of CYP 450 isoform 3A4 substrate. Urinary  $6\beta$ - hydroxycortisol/cortisol ratios measured in patients treated with pioglitazone hydrochloride showed that pioglitazone is not a strong CYP3A4 enzyme inducer.

**Excretion and Elimination:** Following oral administration, approximately 15% to 30% of the pioglitazone dose is recovered in the urine. Renal elimination of pioglitazone is negligible, and the drug is excreted primarily as metabolites and their conjugates. It is presumed that most of the oral dose is excreted into the bile either unchanged or as metabolites and eliminated in the feces. The mean serum half-life of pioglitazone and total pioglitazone ranges from 3 to 7 hours and 16 to 24 hours, respectively. Pioglitazone has an apparent clearance, CL/F, calculated to be 5 to 7 L/hr.

#### **Special Populations**

*Renal Insufficiency*: The serum elimination half-life of pioglitazone, M-III, and M-IV remains unchanged in patients with moderate (creatinine clearance 30 to 60 mL/min) to severe

(creatinine clearance < 30 mL/min) renal impairment when compared to normal subjects. No dose adjustment in patients with renal dysfunction is recommended.

*Hepatic Insufficiency*: Compared with normal controls, subjects with impaired hepatic function (Child-Pugh Grade B/C) have an approximate 45% reduction in pioglitazone and total pioglitazone mean peak concentrations but no change in the mean AUC values. Pioglitazone hydrochloride therapy should not be initiated if the patient exhibits clinical evidence of active liver disease or serum transaminase levels (ALT) exceed 2.5 times the upper limit of normal.

*Elderly*: In healthy elderly subjects, peak serum concentrations of pioglitazone and total pioglitazone are not significantly different, but AUC values are slightly higher and the terminal half-life values slightly longer than for younger subjects. These changes were not of a magnitude that would be considered clinically relevant.

Pediatrics: Pharmacokinetic data in the pediatric population are not available.

*Gender*: The mean  $C_{max}$  and AUC values were increased 20% to 60% in females. As monotherapy pioglitazone hydrochloride improved glycemic control in both males and females. In controlled clinical trials, hemoglobin A1C (HbA1C) decreases from baseline were generally greater for females than for males (average mean difference in HbA1C 0.5%). Since therapy should be individualized for each patient to achieve glycemic control, no dose adjustment is recommended based on gender alone.

Ethnicity: Pharmacokinetic data among various ethnic groups are not available.

# **Drug-Drug Interactions**

The following drugs were studied in healthy volunteers with a co-administration of pioglitazone hydrochloride 45 mg once daily. Listed below are the results:

Oral Contraceptives: Co-administration of pioglitazone hydrochloride (45 mg once daily) and an oral contraceptive (1 mg norethindrone plus 0.035 mg ethinyl estradiol once daily) for 21 days, resulted in 11% and 11-14% decrease in ethinyl estradiol AUC (0-24h) and  $C_{max}$  respectively.

There were no significant changes in norethindrone AUC (0-24h) and  $C_{max}$ . In view of the high variability of ethinyl estradiol pharmacokinetics, the clinical significance of this finding is unknown.

Fexofenadine HCI: Co-administration of pioglitazone hydrochloride for 7 days with 60 mg fexofenadine administered orally twice daily resulted in no significant effect on pioglitazone pharmacokinetics. pioglitazone hydrochloride had no significant effect on fexofenadine pharmacokinetics.

Digoxin: Co-administration of pioglitazone hydrochloride with 0.25 mg digoxin administered orally once daily for 7 days did not alter the steady-state pharmacokinetics of digoxin.

Warfarin: Co-administration of pioglitazone hydrochloride for 7 days with warfarin did not alter the steady-state pharmacokinetics of warfarin. Pioglitazone hydrochloride has no clinically significant effect on prothrombin time when administered to patients receiving chronic warfarin therapy.

Midazolam: Administration of pioglitazone hydrochloride for 15 days followed by a single 7.5

mg dose of midazolam syrup resulted in a 26% reduction in midazolam C<sub>max</sub> and AUC.

Ranitidine HCl: Co-administration of pioglitazone hydrochloride for 7 days with ranitidine administered orally twice daily for either 4 or 7 days resulted in no significant effect on pioglitazone pharmacokinetics. Pioglitazone hydrochloride showed no significant effect on ranitidine pharmacokinetics.

Nifedipine ER: Co-administration of pioglitazone hydrochloride for 7 days with 30 mg nifedipine ER administered orally once daily for 4 days to male and female volunteers resulted in least square mean (90% CI) values for unchanged nifedipine of 0.83 (0.73 - 0.95) for  $C_{max}$  and 0.88 (0.80 - 0.96) for AUC. In view of the high variability of nifedipine pharmacokinetics, the clinical significance of this finding is unknown.

Ketoconazole: Co-administration of pioglitazone hydrochloride for 7 days with ketoconazole 200 mg administered twice daily resulted in least square mean (90% CI) values for unchanged pioglitazone of 1.14 (1.06 - 1.23) for  $C_{max}$ , 1.34 (1.26 - 1.41) for AUC and 1.87 (1.71 - 2.04) for  $C_{min}$ .

Atorvastatin Calcium: Co-administration of pioglitazone hydrochloride for 7 days with Atorvastatin calcium 80 mg once daily resulted in least square mean (90% CI) values for unchanged pioglitazone of 0.69 (0.57 - 0.85) for  $C_{max}$ , 0.76 (0.65 - 0.88) for AUC and 0.96 (0.87 - 1.05) for  $C_{min}$ . For unchanged atorvastatin the least square mean (90% CI) values were 0.77 (0.66 - 0.90) for Cmax, 0.86 (0.78 - 0.94) for AUC and 0.92 (0.82 - 1.02) for  $C_{min}$ . Theophylline: Co-administration of pioglitazone hydrochloride for 7 days with theophylline 400mg administered twice daily resulted in no change in the pharmacokinetics of either drug. Gemfibrozil: Concomitant administration of gemfibrozil (oral 600 mg twice daily), an inhibitor of CYP2C8, with pioglitazone (oral 30 mg) in 10 healthy volunteers pre- treated for 2 days prior with gemfibrozil (oral 600 mg twice daily) resulted in pioglitazone exposure (AUC0-24) being 226% of the pioglitazone exposure in the absence of gemfibrozil.

Rifampin: Concomitant administration of rifampin (oral 600 mg once daily), an inducer of CYP2C8 with pioglitazone (oral 30 mg) in 10 healthy volunteers pre-treated for 5 days prior with rifampin (oral 600 mg once daily) resulted in a decrease in the AUC of pioglitazone by 54%.

## **INDICATIONS AND USAGE**

Indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus in multiple clinical settings.

The drug should not be used as first line of therapy for diabetes.

## CONTRAINDICATIONS

Pioglitazone hydrochloride is not recommended in patients with symptomatic heart failure. Initiation of pioglitazone hydrochloride in patients with established New York Heart Association (NYHA) Class III or IV heart failure is contraindicated.

Pioglitazone hydrochloride is not not use pioglitazone in patients with active bladder cancer.

Pioglitazone hydrochloride is contraindicated in patients with known hypersensitivity to this product or any of its components.

#### WARNINGS

#### Cardiac Failure and Other Cardiac Effects

Pioglitazone hydrochloride, like other thiazolidinediones, can cause fluid retention when used alone or in combination with other antidiabetic agents, including insulin. Fluid retention may lead to or exacerbate congestive heart failure. After initiation of pioglitazone, and after dose increases, patients should be observed for signs and symptoms of heart failure (including excessive Rapid weight gain, dyspnea, and/or edema). If these signs and symptoms develop, the heart failure should be managed according to current standards of care. Furthermore, discontinuation or dose reduction of pioglitazone hydrochloride must be considered.

Analysis of data from clinical studies did not identify specific factors that predict increased risk of congestive heart failure on combination therapy with insulin.

#### In type 2 diabetes and congestive heart failure (systolic dysfunction)

Pioglitazone hydrochloride should be initiated at the lowest approved dose if it is prescribed for patients with type 2 diabetes and systolic heart failure (NYHA Class II). If subsequent dose escalation is necessary, the dose should be increased gradually only after several months of treatment with careful monitoring for weight gain, edema, or signs and symptoms of CHF exacerbation. Prospective Pioglitazone Clinical Trial In Macrovascular Events (PROactive). In PROactive, 5238 patients with type 2 diabetes and a prior history of macrovascular disease were treated with pioglitazone hydrochloride (n=2605), force-titrated up to 45 mg once daily, or placebo (n=2633). The percentage of patients who had an event of serious heart failure was higher for patients treated with pioglitazone hydrochloride (5.7%, n=149) than for patients treated with placebo (4.1%, n=108). The incidence of death subsequent to a report of serious heart failure was 1.5% (n=40) in patients treated with pioglitazone hydrochloride and 1.4% (n=37) in placebo-treated patients. In patients treated with an insulin-containing regimen at baseline, the incidence of serious heart failure was 6.3% (n=54/864) with pioglitazone hydrochloride and 5.2% (n=47/896) with placebo. For those patients treated with a sulforylurea-containing regimen at baseline, the incidence of serious heart failure was 5.8% (n=94/1624) with pioglitazone hydrochloride and 4.4% (n=71/1626) with placebo.

#### PRECAUTIONS

#### General

Pioglitazone hydrochloride exerts its antihyperglycemic effect only in the presence of insulin.

Therefore, pioglitazone hydrochloride should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis.

Hypoglycemia: Patients receiving pioglitazone hydrochloride in combination with insulin or oral hypoglycemic agents may be at risk for hypoglycemia, and a reduction in the dose of the concomitant agent may be necessary.

*Cardiovascular*: In the placebo-controlled clinical trials that excluded patients with New York Heart Association (NYHA) Class III and IV cardiac status, the incidence of serious cardiac adverse events related to volume expansion was not increased in patients treated with pioglitazone hydrochloride as monotherapy or in combination with sulfonylureas or metformin vs. placebo-treated patients. In insulin combination studies, a small number of patients with a history of previously existing cardiac disease developed congestive heart failure when treated with pioglitazone hydrochloride in combination with insulin. Pioglitazone hydrochloride is not indicated in patients with NYHA Class III or IV cardiac status.

Cancer: Use pioglitazone with caution in patients with a prior history of bladder cancer

In postmarketing experience with pioglitazone hydrochloride, cases of congestive heart failure have been reported in patients both with and without previously known heart disease.

Edema: Pioglitazone hydrochloride should be used with caution in patients with edema. Weight

*Gain*: Dose related weight gain was seen with pioglitazone hydrochloride alone and in combination with other hypoglycemic agents (Table 1). The mechanism of weight gain is unclear but probably involves a combination of fluid retention and fat accumulation.

Table 1: Weight Changes (Kg) from Baseline during Double-Blind Clinical Trials with pioglitazone Hydrochloride

		Control Group (Placebo)	pioglitazone hydrochlorid e 15mg	pioglitazone hydrochlorid e 30mg	pioglitazone hydrochlorid e 45mg
		Median	Median	Median	Median
		(25th/75th	(25th/75th	(25th/75th	(25th/75th
		percentile)	percentile)	percentile)	percentile)
Monotherapy		-1.4(-2.7/0.0)	0.9(-0.5/3.4)	1.0(-0.9/3.4)	2.6(0.2/5.4)
		N=256	N=79	N=188	N=79
Combination	Sulfonylurea	-0.5(-1.8/0.7)	2.0(0.2/3.2)	3.1(1.1/5.4)	4.1(1.8/7.3)
Therapy		N=187	N=183	N=528	N=333
	Metformin	-1.4(-3.2/0.3)	N/A	0.9(-0.3/3.2)	1.8(-0.9/5.0)
		N=160		N=567	N=407
	Insulin	0.2(-1.4/1.4)	2.3(0.5/4.3)	3.3(0.9/6.3)	4.1(1.4/6.8)
		N=182	N=190	N=522	N=338

*Ovulation*: Therapy with pioglitazone hydrochloride, like other thiazolidinediones, may result in ovulation in some premenopausal anovulatory women. As a result, these patients may be at an increased risk for pregnancy while taking pioglitazone hydrochloride. Thus, adequate contraception in premenopausal women should be recommended. This possible effect has not been investigated in clinical studies so the frequency of this occurrence is not known.

*Hematologic*: Pioglitazone hydrochloride may cause decreases in hemoglobin and hematocrit. Across all clinical studies, mean hemoglobin values declined by 2% to 4% in patients treated with pioglitazone hydrochloride. These changes primarily occurred within the first 4 to 12 weeks of therapy and remained relatively constant thereafter. These changes may be related to increased plasma volume and have rarely been associated with any significant hematologic clinical effects.

*Hepatic Effects*: It is recommended that patients treated with pioglitazone hydrochloride undergo periodic monitoring of liver enzymes.

*Macular Edema*: Macular edema has been reported in post-marketing experience in diabetic patients who were taking pioglitazone or another thiazolidinedione. Some patients presented with blurred vision or decreased visual acuity, but some patients appear to have been diagnosed on routine ophthalmologic examination. Some patients had peripheral edema at the time macular

edema was diagnosed. Some patients had improvement in their macular edema after discontinuation of their thiazolidinedione. It is unknown whether or not there is a causal relationship between pioglitazone and macular edema.

#### Laboratory Tests

FPG and HbA1C measurements should be performed periodically to monitor glycemic control and the therapeutic response to pioglitazone hydrochloride.

Liver enzyme monitoring is recommended prior to initiation of therapy with pioglitazone hydrochloride in all patients and periodically thereafter per the clinical judgment of the health care professional.

#### Pregnancy

**Pregnancy Category C**. There are no adequate and well-controlled studies in pregnant women. Pioglitazone hydrochloride should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

The current information strongly suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital anomalies, as well as increased neonatal morbidity and mortality, most experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

#### Nursing Mothers

Pioglitazone is secreted in the milk of lactating rats. It is not known whether pioglitazone hydrochloride is secreted in human milk. Because many drugs are excreted in human milk, pioglitazone hydrochloride should not be administered to a breastfeeding woman.

## Pediatric Use

Safety and effectiveness of pioglitazone hydrochloride in pediatric patients have not been established.

#### **Elderly Use**

In placebo-controlled clinical trials of pioglitazone hydrochloride, no significant differences in effectiveness and safety were observed between elderly patients and younger patients.

#### **ADVERSE REACTIONS:**

The overall incidence and types of adverse events reported in placebo-controlled clinical trials of pioglitazone hydrochloride monotherapy at doses of 7.5 mg, 15 mg, 30 mg, or 45 mg once daily are shown in Table 2.

Table 2:

% of Patients				
	Placebo	Pioglitazone		
	N=259	Hydrochloride		
		N=606		
Upper Respiratory Tract	8.5	13.2		
Infection				
Headache	6.9	9.1		
Sinusitis	4.6	6.3		
Myalgia	2.7	5.4		
Tooth Disorder	2.3	5.3		
Diabetes Mellitus	8.1	5.1		
Aggravated				
Pharyngitis	0.8	5.1		

For most clinical adverse events the incidence was similar for groups treated with pioglitazone hydrochloride monotherapy and those treated in combination with sulfonylureas, metformin, and insulin. There was an increase in the occurrence of edema in the patients treated with pioglitazone hydrochloride and insulin compared to insulin alone.

In a 16-week, placebo-controlled pioglitazone hydrochloride plus insulin trial (n=379), 10 patients treated with pioglitazone hydrochloride plus insulin developed dyspnea and also, at some point during their therapy, developed either weight change or edema. Seven of these 10 patients received diuretics to treat these symptoms. This was not reported in the insulin plus placebo group.

## Laboratory Abnormalities

*Hematologic*: Pioglitazone hydrochloride may cause decreases in hemoglobin and hematocrit. The fall in hemoglobin and hematocrit with pioglitazone hydrochloride appears to be dose related. Across all clinical studies, mean hemoglobin values declined by 2% to 4% in patients treated with pioglitazone hydrochloride. These changes generally occurred within the first 4 to 12 weeks of therapy and remained relatively stable thereafter. These changes may be related to increased plasma volume associated with pioglitazone hydrochloride therapy and have rarely been associated with any significant hematologic clinical effects.

Serum Transaminase Levels: During all clinical studies 14 of 4780 (0.30%) patients treated with pioglitazone hydrochloride had ALT values  $\geq 3$  times the upper limit of normal during treatment. All patients with follow-up values had reversible elevations in ALT. In the population of patients treated with pioglitazone hydrochloride, mean values for bilirubin, AST, ALT, alkaline phosphatase, and GGT were decreased at the final visit compared with baseline.

## Overdose

During controlled clinical trials, one case of overdose with pioglitazone hydrochloride was reported. A male patient took 120 mg per day for four days, then 180 mg per day for seven days. The patient denied any clinical symptoms during this period.

In the event of overdosage, appropriate supportive treatment should be initiated according to

# patient's clinical signs and symptoms. **DOSAGE AND ADMINISTRATION:**

Pioglitazone hydrochloride should be taken once daily without regard to meals.

The management of antidiabetic therapy should be individualized. Ideally, the response to therapy should be evaluated using HbA1C which is a better indicator of long-term glycemic control than FPG alone. HbA1C reflects glycemia over the past two to three months. In clinical use, it is recommended that patients be treated with pioglitazone hydrochloride for a period of time adequate to evaluate change in HbA1C (three months) unless glycemic control deteriorates. After initiation of pioglitazone hydrochloride or with dose increase, patients should be carefully monitored for adverse events related to fluid retention.

## Monotherapy

Pioglitazone hydrochloride monotherapy in patients not adequately controlled with diet and exercise may be initiated at 15 mg or 30 mg once daily. For patients who respond inadequately to the initial dose of pioglitazone hydrochloride, the dose can be increased in increments up to 45 mg once daily.

#### Maximum Recommended Dose

The dose of pioglitazone hydrochloride should not exceed 45 mg once daily in monotherapy. Dose adjustment in patients with renal insufficiency is not recommended.

Therapy with pioglitazone hydrochloride should not be initiated if the patient exhibits clinical evidence of active liver disease or increased serum transaminase levels (ALT greater than 2.5 times the upper limit of normal) at start of therapy.

*Hepatic Effects*: Liver enzyme monitoring is recommended in all patients prior to initiation of therapy with pioglitazone hydrochloride and periodically thereafter.

There are no data on the use of pioglitazone hydrochloride in patients under 18 years of age; therefore, use of pioglitazone hydrochloride in pediatric patients is not recommended.

# **KEEP MEDICAMENT OUT OF REACH OF CHILDREN**

## Expiry date

Do not use later than the date of expiry.

#### Storage

Store at a temperature not exceeding 30°C, protected from light and moisture

## Caution

It is dangerous to take this preparation except under medical supervision.

# Presentation

PIOPOD is available as strip of 10 tablets

# **MARKETED BY:**



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