

COMPOSITION:
Each film coated tablet contains:
Atorvastatin Calcium USP eq. to Atorvastatin ... 10mg, 20mg and 40mg. **[USP Specs.]** 

MODE OF ACTION: Atorvastatin Calcium is a selective, competitive inhibitor of HMG-CoA reductase, the rate limiting enzyme responsible for the conversion of 3-hydroxy3-methyl-glutaryl-coenzyme A to mevalonate, a precursor of sterols including cholesterol. Atorvastatin Calcium lowers plasma cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver and by increasing the number of hepatic LDL receptors on the cell surface for enhanced uptake and catabolism of LDL. Atorvastatin Calcium is effective in reducing LDL in patients with homozygous familial hypercholesterolemia, a population that has not normally responded to lipid lowering medication.

## PHARMACOKINETICS:

Absorption: Atorvastatin Calcium is rapidly absorbed after oral administration; maximum plasma concentrations occur within one to two hours. Atorvastatin Calcium tablets are 95% to 99% bioavailable.

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Metabolism: Atorvastatin Calcium is extensively metabolized to ortho and parahydroxylated derivatives and various beta-oxidation products. In vitro inhibition of HMG-CoA reductase by ortho and parahydroxylated metabolites is equivalent to that of Atorvastatin Calcium. Approximately 70% of circulating inhibitory activity for HMG-CoA reductase is attributed to active metabolites.

Excretion: Atorvastatin Calcium and its metabolites are eliminated primarily in bile following hospitic and/or extrahogatic metabolites.

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INDICATIONS: Atorvastatin Calcium is indicated as an adjunct to diet for the reduction of elevated cholesterol LDL-Cholesterol, apolipoprotein B, and triglycerides and to increase HDL-cholesterol in patients with primary hypercholesterolemia, heterozygous familial and non-familial hypercholesterolemia, and combined (mixed) hyperlipidemia (Fredrickson types IIa and IIb). Atorvastatin Calcium is indicated as an adjunct to diet for the treatment of patients with elevated serum triglyceride levels (Fredrickson type III) who do not respond adequately to diet. Atorvastatin Calcium is also indicated for the reduction of total cholesterol and LDL-cholesterol in patients with homozygous familial hypercholesterolemia when response to diet and other non pharmacological measures are inadequate.

CONTRA-INDICATIONS: Atorvastatin Calcium is contra-indicated in patients who are hypersensitive to any component of this medication.

DOSAGE: The usual starting dose is 10 to 80mg once a day. Dose may be given any time of the day with or without food.

ADVERSE EFFECTS: Atorvastatin Calcium is generally well tolerated. The most frequent adverse effects associated with Atorvastatin Calcium therapy were constipation, flatulence, dyspepsia, abdominal pain, headache, nausea, myalgia, asthenia, diarrhea and insomnia.

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PRECAUTIONS: Hepatic effect: Liver function tests should be performed before the initiation of treatment and periodically thereafter. Patients who develop increased transaminase levels should be monitored until the abnormality resolves. Should an increase in ALT or AST of greater than three times the upper limit of normal persists, reductions of dose or withdrawal of Atorvastatin is recommended. Skeletal Muscle Effects: The risk of myopathy during treatment with drugs in this class increased with concurrent administration of cyclosporine, fibric acid derivatives, erythromycin, niacin, or azole antifungals. As with other drugs in this class, rare cases of rhabdomyolysis with acute renal failure secondary to myoglobinuria has been reported. Atorvastatin Calcium therapy should be temporarily withheld or discontinued in any patient with an acute, serious condition suggestive of a myopathy or having a risk factor predisposing to the development of renal failure secondary to rhabdomyolysis, e.g severe acute infection, hypotension major surgery, trauma, severe metabolic endocrine and electrolyte disorders, and uncontrolled seizures.

Pregnancy and Lactation: It is not known whether this drug is excreted in human milk. Because of the potential for adverse reactions in infants, women taking Atorvastatin Calcium should not breast feed.

Geriatric: No differences in safety, efficacy or lipid-treatment goal attainment were

Calcium should not breast feed.

Geriatric: No differences in safety, efficacy or lipid-treatment goal attainment were observed between elderly patients and the overall population.

Paediatric: Pharmacokinetic studies have not been conducted in the paediatric population.

Gender: There were no clinically significant differences in lipid effects between men and

women. **Renal Insufficiency:** Renal disease has no influence on the plasma concentration or lipid effects of Atorvastatin Calcium. Thus dose adjustment in patients with renal

dysfunction is not necessary.

Hemodialysis: While studies have not been conducted in patients with end-stage renal disease, hemodialysis is not expected to significantly enhance clearance of Atorvastatin Calcium since the drug is extensively bound to plasma proteins.

Hepatic Insufficiency: Plasma concentrations of Atorvastatin Calcium are markedly increased in patients with chronic alcoholic liver disease

Increased in patients with chronic alcoholic liver disease.

DRUG INTERACTIONS: The risk of myopathy during treatment with drugs in this class increased with concurrent administration of cyclosporine, fibric acid derivatives, erythromycin, azole antifungals, or niacin.

Antacids: Coadministration of Atorvastatin Calcium with an oral antacid suspension containing magnesium and aluminium hydroxides, decreased Atorvastatin Calcium plasma concentrations approximately 35% however, LDL-C reduction was not altered.

Antipyrine: Because Atorvastatin does not effect the pharmacokinetic of antipyrine, interactions with other drugs metabolized via the same cytochrome isozymes are not expected.

expected.

Digoxin: When multiple doses of digoxin and 10mg Atorvastatin Calcium were coadministered, steady state plasma digoxin concentrations were unaffected.

Oral contraceptives: Coadministration with an oral contraceptives containing norethindrone and ethinyl estradiol increased AUC values for norethindrone and ethinyl estradiol by approximately 30% and 20%.

Cimetidine: Atorvastatin Calcium interaction studies with cimetidine were conducted, and no discrete the designed interactions were conducted.

clinically significant interactions were seen

and no clinically significant interactions were seen.

Amlodipine: Atorvastatin Calcium pharmacokinetics were not altered by the coadministration of Atorvastatin Calcium 80mg and amlodipine 10mg at steady state.

Protease inhibitors: Coadministration of Atorvastatin Calcium and protease inhibitors (known inhibitors of cytochrome P450 3A4), was associated with increased plasma concentrations of Atorvastatin.

**OVERDOSAGE:** There is no specific treatment for Atorvastatin Calcium overdosage. Should an overdose occur, the patient should be treated symptomatically and supportive measures instituted, as required.

INSTRUCTIONS: Store below 30°C. Protect from heat, light and moisture. Keep out of the reach of children

PRESENTATION: DESCOL tablets 10mg, 20mg & 40mg are supplied in a blister pack

و بسكول وريان

ا جزاءتر کیبی: برفلم کونڈ گولی میں ایٹورواسٹیٹن کیلٹیم ۱۰ ملی گرام ، ۲۰ ملی گرام یا ۲۰ ملی گرام موجود ہے۔

خواص: ایٹورواسٹیٹن کیلئیم جم میں موجود کولیسٹرول اور Lipoprotein کو کم کرتا ہے ایٹورواسٹیٹن کیلئیم کی خصوصیت ہے کہ بیچکر میں موجود انزائم Cholesterol synthesis اور HMG-CoA reductase کوروکتا ہے اور Hepatic LDL Receptors کی تعدادیش اضافہ کرتا ہے اور نیتجا LDL کے نظام میں تیزی آجاتی ہے یوں ایسے مریضوں کے لئے جن میں Lipid کم کرنے والی ادویات اپنااڑ خیبی دکھا تیں ایٹورواشٹیل کیاثیم ایک مؤثر دوائے۔ علاً مات : ایٹورواسٹیٹن کیلئیم مندرجہ ذیل علامات میں استعال ہوتی ہے۔

Primary hypercholesterolemia (r - کے گئے۔ Triglycerides) اور Apolipoprotein B کولیسٹرول ، LDL کولیسٹرول ، LDL کولیسٹرول ، Primary hypercholesterolemia

Heterozygous familial and non-familial hypercholesterolemia (#

Elevated serum triglyceride levels ( $\phi$  Combined (mixed) hyperlipidemia ( $\gamma$ 

Dysbetalipoproteinemia (1

ممنوعات: جن مریضوں کو ایٹورواسٹیٹن کیلٹیم یااس میں شامل دیگر اجزاء ہے حساسیت ہویا دوسری حکر یفحل کے والی تیاریوں میں مبتلا ہوں ان میں ایٹورواسٹیٹن کیلٹیم کااستعال منع ہے

الثرات: عام طورت ایٹورواسٹیٹن کیاشیم ہے ہونے والےالڑات معمولیا ورعارضی ہوتے ہیں تا ہم ایٹورواسٹیٹن کیاشیم ہے ہونے والے مکمنداڑات میں قبض، پیٹ میں ورد، سرورد متلی، اسہال، نیند کی کی Dyspepsia, Flatulence اور Myalgia شامل ہیں۔

خوراک :ایٹورواسٹیٹن کیلیٹیم کی تجویز کردہ خوراک کے استعال ہے پہلے مریض کومعیار کی اور کولیسٹرول ہے پاکٹھنوٹا غذا کا استعال کرائیں۔ ایٹورواسٹیٹن کیلیٹیم کے استعال کے دوران معیاری غذا کا استعال جاری رکھیں۔ ایٹورواسٹیٹن کیاشیم کی تجویز کردہ ابتدائی خوراک والی گرام دن ٹیں ایک مرتبہ۔ پیخوراک معالج کے مشورے

ے ۸ ملی گرام دن میں ایک مرتبہ تک بڑھائی جاسکتی ہے۔ دوادن میں کسی بھی دفت کھانے کے ساتھ یا کھانے کے بغیروی جاسکتی ہے۔ احتماط: ایورواشلین کمیلیم کے استعمال سے پہلے Liver Function Tests نہایت ضروری ہےالیے مریض جن میں ALT اور AST نارال سے زیادہ ہوں ان میں ایٹورواسٹیٹن کیلٹیم کااستعال نہ کریں۔ حالت زیکلی اور دودھ پلانے والی ماؤں میں ایٹورواسٹیٹن نیلٹیم کااستعال منع ہے۔

نو جوان اور بزرگوں میں ایمورواسٹیٹن کیاشیم ہے متعلق تمام مدایات بالکل بکساں ہیں۔ جگر سے متعلق بیار بوں میں مبتلا افراد میں ایمورواسٹیٹن کیاشیم کاستعمال منع ہے۔

تچو بزکر ده خوراک سے تجاوز: ایئورواسٹیٹن کیلٹیم کی تجویز کر دہ خوراک ہے تجاوز کی صورت میں کو کی واضح طریقہ علاج نہیں ہے ایسے مریضوں میں علامات کا جائزہ

لیتے ہوئے ڈاکٹر کے مشورے سے علاج کرائیں۔ ہ ایات : ۱۳۰ وَکری ینٹی کریڈے کم درجہ ترارت پر بھیں۔ گرمی روشی اور نمی سے بچا کیں۔ بچوں کی پیٹی سے دور رکھیں۔

لمریقة فراہمی: ڈیسکول ۱۰ ملی گرام ، ۲۰ ملی گرام اور ۴۰ ملی گرام ۱۰گولیوں کے بلسٹر پیک میں دستیاب ہے۔



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