

Dr / Zehab Taha

Alzaxonex
Extended release Hard gelatin capsules

FULL PRESCRIBING INFORMATION

INDICATIONS AND USAGE

ALZAXONEX is indicated for the treatment of moderate to severe dementia of the Alzheimer's type.

DOSAGE AND ADMINISTRATION

Recommended Dosing

The dosage of ALZAXONEX shown to be effective in a controlled clinical trial is 28 mg once daily.

The recommended starting dose of ALZAXONEX is 7 mg once daily. The dose should be increased in 7 mg increments to the recommended maintenance dose of 28 mg once daily. The minimum recommended interval between dose increases is one week. The dose should only be increased if the previous dose has been well tolerated. The maximum recommended dose is 28 mg once daily.

ALZAXONEX can be taken with or without food. ALZAXONEX capsules can be taken intact or may be opened, sprinkled on applesauce, and thereby swallowed. The entire contents of each ALZAXONEX capsule should be consumed; the dose should not be divided.

Except when opened and sprinkled on applesauce, as described above, ALZAXONEX should be swallowed whole. ALZAXONEX XR capsules should not be divided, chewed, or crushed.

If a patient misses a single dose of ALZAXONEX, that patient should not double up on the next dose. The next dose should be taken as scheduled. If a patient fails to take ALZAXONEX for several days, dosing may need to be resumed at lower doses and retitrated as described above.

Switching to Alzaxonex Capsules

Patients treated with memantine may be switched to Alzaxonex capsules as follows:

It is recommended that a patient who is on a regimen of 10 mg twice daily of memantine be switched to Alzaxonex 28 mg once daily capsules the day following the last dose of 10 mg memantine. There is no study addressing the comparative efficacy of these 2 regimens.

Dosing in Patients with Renal Impairment

In patients with severe renal impairment (creatinine clearance of 5 – 29 mL/min, based on the Cockcroft-Gault equation), the recommended maintenance dose (and maximum recommended dose) is 14 mg/day [see *Clinical Pharmacology*].

DOSAGE FORMS AND STRENGTHS

Dosage form: Extended release hard gelatin capsules with opaque white cap and opaque white body, each capsule contains 10 % SR memantine hydrochloride pellets 280 mg containing 28 mg memantine hydrochloride

Strength : 28 mg

CONTRAINDICATIONS

ALZAXONEX is contraindicated in patients with known hypersensitivity to memantine

hydrochloride or to any excipients used in the formulation.

WARNINGS AND PRECAUTIONS

Genitourinary Conditions

Conditions that raise urine pH may decrease the urinary elimination of memantine resulting in increased plasma levels of memantine [see *Drug Interactions* (7.1)]. The most common adverse reaction that led to treatment discontinuation in ALZAXONEX group was dizziness

Adverse Reaction :

Gastrointestinal Disorders: Diarrhea, Constipation, Abdominal pain, Vomiting.

Infections and Infestations: Influenza

Investigations : Weight, Increased

Musculoskeletal and Connective Tissue Disorders: Back pain

Nervous System Disorders : Headache, Dizziness, Somnolence

Psychiatric Disorders: Anxiety, Depression, Aggression

Renal and Urinary Disorders : Urinary incontinence

Vascular Disorders : Hypertension, Hypotension

ADVERSE REACTIONS

Postmarketing Experience

The following adverse reactions have been identified during post-approval use of memantine. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure. These reactions include:

Blood and Lymphatic System Disorders: agranulocytosis, leukopenia (including neutropenia), pancytopenia, thrombocytopenia, thrombotic thrombocytopenic purpura.

Cardiac Disorders: cardiac failure congestive.

Gastrointestinal Disorders: pancreatitis.

Hepatobiliary Disorders: hepatitis.

Psychiatric Disorders: suicidal ideation.

Renal and Urinary Disorders: acute renal failure (including increased creatinine and renal insufficiency).

Skin Disorders: Stevens Johnson syndrome.

DRUG INTERACTIONS

Drugs That Make Urine Alkaline

The clearance of memantine was reduced by about 80% under alkaline urine conditions at pH 8. Therefore, alterations of urine pH towards the alkaline condition may lead to an accumulation of the drug with a possible increase in adverse effects. Urine pH is altered by diet, drugs (e.g. carbonic anhydrase inhibitors, sodium bicarbonate) and clinical state of the patient (e.g. renal tubular acidosis or severe infections of the urinary tract). Hence, memantine should be used with caution under these conditions.

Use with Other N-methyl-D-aspartate (NMDA) Antagonists

The combined use of ALZAXONEX with other NMDA antagonists (amantadine, ketamine, and dextromethorphan) has not been systematically evaluated and such use should be approached with caution.

USE IN SPECIFIC POPULATIONS

Pregnancy

Risk Summary

There are no adequate data on the developmental risk associated with the use of ALZAZONEX in pregnant women.

Adverse developmental effects (decreased body weight and skeletal ossification) were observed in the offspring of rats administered memantine during pregnancy at doses associated with minimal maternal toxicity. These doses are higher than those used in humans at the maximum recommended daily dose of ALZAZONEX [see Data].

In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively. The background risk of major birth defects and miscarriage for the indicated population is unknown.

Data

Lactation

Risk Summary

There are no data on the presence of memantine in human milk, the effects on the breastfed infant, or the effects of ALZAZONEX on milk production.

The developmental and health benefits of breastfeeding should be considered along with the mothers clinical need for ALZAZONEX and any potential adverse effects on the breastfed infant from ALZAZONEX or from the underlying maternal condition.

Pediatric Use

Safety and effectiveness in pediatric patients have not been established

Geriatric Use

The majority of people with Alzheimer's disease are 65 years of age and older. In the clinical study of memantine hydrochloride extended-release, the mean age of patients was approximately 77 years; over 91% of patients were 65 years and older, 67% were 75 years and older, and 14% were at or above 85 years of age. The efficacy and safety data presented in the clinical trial sections were obtained from these patients. There were no clinically meaningful differences in most adverse reactions reported by patient groups \geq 65 years old and < 65 years old

Renal Impairment

No dosage adjustment is needed in patients with mild or moderate renal impairment. A dosage reduction is recommended in patients with severe renal impairment [see Dosage and Administration (2.3) and Clinical Pharmacology (12.3)].

Hepatic Impairment

No dosage adjustment is needed in patients with mild or moderate hepatic impairment. Alazone was not studied in patients with severe hepatic impairment [see Clinical Pharmacology (12.3)].

OVERDOSAGE

Signs and symptoms most often accompanying overdosage with other formulations of memantine in clinical trials and from worldwide marketing experience, alone or in combination with other drugs and/or alcohol, include agitation, asthenia, bradycardia, confusion, coma, dizziness, ECG changes, increased blood pressure, lethargy, loss of consciousness, psychosis, restlessness, slowed movement, somnolence, stupor, unsteady gait, visual hallucinations, vertigo, vomiting, and weakness. The largest known ingestion

of memantine worldwide was 2 grams in a patient who took memantine in conjunction with unspecified antidiabetic medications. This patient experienced coma, diplopia, and agitation, but subsequently recovered.

Fatal outcome has been very rarely reported with memantine, and the relationship to memantine was unclear.

Because strategies for the management of overdose are continually evolving, it is advisable to contact a poison control center to determine the latest recommendations for the management of an overdose of any drug. As in any cases of overdose, general supportive measures should be utilized, and treatment should be symptomatic.

Elimination of memantine can be enhanced by acidification of urine

DESCRIPTION

ALZAZONEX (memantine hydrochloride) is an orally active NMDA receptor antagonist.

ALZAZONEX capsules are supplied for oral administration 28 mg capsules.

Each E.R.H.G. Caps contains 10% SR memantine hydrochloride pellets 280 mg containing memantine hydrochloride 28 mg

Inactive ingredients: NP seeds (Non pariet seeds)

Polyvinyl pyrrolidone K30

Polysorbate 80

Diethyl phthalate

Hypromellose 5cp

Isopropyl alcohol

Methylene chloride

N.B: NP seeds contain: Pharma grade sugar, starch, Hypromellose 5 cp, Povidone K30

Each capsule shell contain

Gelatin

Methyl paraben

Propyl Paraben

Sodium lauryl sulphate

Aerosol

Titanium dioxide

Red iron oxide

CLINICAL PHARMACOLOGY

Mechanism of Action

Persistent activation of central nervous system N-methyl-D-aspartate (NMDA) receptors by the excitatory amino acid glutamate has been hypothesized to contribute to the symptomatology of Alzheimer's disease. Memantine is postulated to exert its therapeutic effect through its action as a low to moderate affinity uncompetitive (open-channel) NMDA receptor antagonist which binds preferentially to the NMDA receptor-operated cation channels. There is no evidence that memantine prevents or slows neurodegeneration in patients with Alzheimer's disease.

Pharmacodynamics

Memantine showed low to negligible affinity for GABA, benzodiazepine, dopamine, adrenergic, histamine and glycine receptors and for voltage-dependent Ca^{2+} , Na^{+} , or K^{+}

channels. Memantine also showed antagonistic effects at the 5HT₃ receptor with a potency similar to that for the NMDA receptor and blocked nicotinic acetylcholine receptors with one-sixth to one-tenth the potency. *In vitro* studies have shown that memantine does not affect the reversible inhibition of acetylcholinesterase by donepezil, galantamine, or tacrine.

Pharmacokinetics

Memantine is well absorbed after oral administration and has linear pharmacokinetics over the therapeutic dose range. It is excreted predominantly unchanged in urine and has a terminal elimination half-life of about 60-80 hours. In a study comparing 28 mg once daily ALZAZONEX XR to 10 mg twice daily ALZAZONEX, the C_{max} and AUC₀₋₂₄ values were 48% and 33% higher for the XR dosage regimen, respectively.

Absorption

After multiple dose administration of ALZAZONEX XR, memantine peak concentrations occur around 9-12 hours post-dose. There is no difference in the absorption of ALZAZONEX XR when the capsule is taken intact or when the contents are sprinkled on applesauce.

There is no difference in memantine exposure, based on C_{max} or AUC, for ALZAZONEX XR whether that drug product is administered with food or on an empty stomach.

However, peak plasma concentrations are achieved about 18 hours after administration with food versus approximately 25 hours after administration on an empty stomach.

Distribution

The mean volume of distribution of memantine is 9-11 L/kg and the plasma protein binding is low (45%).

Elimination

Metabolism

Memantine undergoes partial hepatic metabolism. The hepatic microsomal CYP450 enzyme system does not play a significant role in the metabolism of memantine.

Excretion

Memantine is excreted predominantly unchanged in the urine and has a terminal elimination half-life of about 60-80 hours. About 48% of administered drug is excreted unchanged in urine; the remainder is converted primarily to three polar metabolites which possess minimal NMDA receptor antagonistic activity: the N-glucuronide conjugate, 6-hydroxy-memantine, and 1-nitroso-deaminated memantine. A total of 74% of the administered dose is excreted as the sum of the parent drug and the N-glucuronide conjugate. Renal clearance involves active tubular secretion moderated by pH dependent tubular reabsorption.

Specific Populations

Elderly

The pharmacokinetics of memantine in young and elderly subjects are similar.

Gender

Following multiple dose administration of memantine hydrochloride 20 mg daily, females had about 45% higher exposure than males, but there was no difference in exposure when body weight was taken into account.

Renal Impairment

Memantine pharmacokinetics were evaluated following single oral administration of 20

mg memantine hydrochloride in 8 subjects with mild renal impairment (creatinine clearance, Cl_{cr} > 50 – 80 mL/min), 8 subjects with moderate renal impairment (Cl_{cr} 30 – 49 mL/min), 7 subjects with severe renal impairment (Cl_{cr} 5 – 29 mL/min) and 8 healthy subjects (Cl_{cr} > 80 mL/min) matched as closely as possible by age, weight and gender to the subjects with renal impairment. Mean AUC₀₋₂₄ increased by 4%, 60%, and 115% in subjects with mild, moderate, and severe renal impairment, respectively, compared to healthy subjects. The terminal elimination half-life increased by 18%, 41%, and 95% in subjects with mild, moderate, and severe renal impairment, respectively, compared to healthy subjects.

Hepatic Impairment

Memantine pharmacokinetics were evaluated following the administration of single oral doses of 20 mg in 8 subjects with moderate hepatic impairment (Child-Pugh Class B, score 7-9) and 8 subjects who were age-, gender-, and weight-matched to the hepatically impaired subjects. There was no change in memantine exposure (based on C_{max} and AUC) in subjects with moderate hepatic impairment as compared with healthy subjects. However, terminal elimination half-life increased by about 16% in subjects with moderate hepatic impairment as compared with healthy subjects.

Drug-Drug Interactions

Use with Cholinesterase Inhibitors

Coadministration of memantine with the AChE inhibitor donepezil did not affect the pharmacokinetics of either compound. Furthermore, memantine did not affect AChE inhibition by donepezil. In a 24-week controlled clinical study in patients with moderate to severe Alzheimer's disease, the adverse reaction profile observed with a combination of memantine immediate-release and donepezil was similar to that of donepezil alone.

Effect of Memantine on the Metabolism of Other Drugs

In vitro studies conducted with marker substrates of CYP450 enzymes (CYP1A2, -2A6, -2C9, -2D6, -2E1, -3A4) showed minimal inhibition of these enzymes by memantine. In addition, *in vitro* studies indicate that at concentrations exceeding those associated with efficacy, memantine does not induce the cytochrome P450 isozymes CYP1A2, -2C9, -2E1 and -3A4/5. No pharmacokinetic interactions with drugs metabolized by these enzymes are expected.

Pharmacokinetic studies evaluated the potential of memantine for interaction with warfarin and bupropion. Memantine did not affect the pharmacokinetics of the CYP2B6 substrate bupropion or its metabolite hydroxybupropion. Furthermore, memantine did not affect the pharmacokinetics or pharmacodynamics of warfarin as assessed by the prothrombin INR.

Effect of Other Drugs on Memantine

Memantine is predominantly renally eliminated, and drugs that are substrates and/or inhibitors of the CYP450 system are not expected to alter the metabolism of memantine.

Drugs Eliminated via Renal Mechanisms

Because memantine is eliminated in part by tubular secretion, coadministration of drugs that use the same renal cationic system, including hydrochlorothiazide (HCTZ),

trametere (TA), metformin, cimetidine, ranitidine, quinine, and nicotine, could potentially result in altered plasma levels of both agents. However, coadministration of memantine and HCTZ/TA did not affect the bioavailability of either memantine or TA, and the bioavailability of HCTZ decreased by 20%. In addition, coadministration of memantine with the antihypertensive drug Glucocort - (glyburide and metformin hydrochloride) did not affect the pharmacokinetics of memantine, metformin and glyburide. Furthermore, memantine did not modify the serum glucose lowering effect of Glucocort, indicating the absence of a pharmacodynamic interaction.

Drugs Highly Bound to Plasma Proteins

Because the plasma protein binding of memantine is low (45%), an interaction with drugs that are highly bound to plasma proteins, such as warfarin and digoxin, is unlikely.

HOW SUPPLIED/STORAGE AND HANDLING

Physical characters : hard gelatin capsules of opaque white cap & opaque white body containing white to off white pellets

Carton box containing 1,2 or 3 (A) / transparent PVC) strips each of 10 extended release hard gelatin capsules

Storage

Store at temperature not exceeding 30 °C, in dry place

Shelf life : 24 months

PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information).

- To assure safe and effective use of ALZAZONEX, the information and instructions provided in the patient information section should be discussed with patients and caregivers.
- Instruct patients and caregivers to take ALZAZONEX only once per day, as prescribed.
- Instruct patients and caregivers that ALZAZONEX capsules be swallowed whole. Alternatively, ALZAZONEX capsules may be opened and sprinkled on applesauce and the entire contents should be consumed. The capsules should not be divided, chewed or crushed.
- Warn patients not to use any capsules of ALZAZONEX that are damaged or show signs of tampering.
- If a patient misses a single dose of ALZAZONEX, that patient should not double up on the next dose. The next dose should be taken as scheduled. If a patient fails to take ALZAZONEX for several days, dosing should not be resumed without consulting that patient's healthcare professional.
- Advise patients and caregivers that ALZAZONEX XR may cause headache, diarrhea, and dizziness.

Manufactured by: DBK Pharma for Pharmaceutical Industries (DBK Pharma) for Zeta Pharma for Pharmaceutical Industries

الآثار الجانبية المحتملة

أولاً نشير الدواء الذي يتلقى مع الأزرينيكس قبل البدء في تناول الدواء وفي كل مرة تحصل على الدواء قد تكون هناك معلومات جديدة.

قد تظهر بعض الآثار الجانبية مع تناول الدواء. قد تكون هناك معلومات جديدة.

ما هو الأزرينيكس ؟

يستخدم الأزرينيكس لعلاج حالات الخرف المتوسطة إلى الشديدة عند المرضى المسنين بمرض آلزهايمر. الأزرينيكس ينتمي إلى مجموعة الأدوية تسمى مثبطات (NMDA) N-methyl-D-aspartate.

من غير المعروف إذا كان الأزرينيكس آمن وفعال في الأطفال

من لا ينبغي أن يأخذ الأزرينيكس ؟

لا ينبغي أن تتناول الأزرينيكس إذا كان لديك حساسية من مكونات الدواء الأخرى (انظر نهاية النشرة للحصول على قائمة كاملة من مكونات الأزرينيكس)

مما يجب أن أخبر الطبيب قبل أخذ الأزرينيكس ؟

قبل أن تأخذ الأزرينيكس

أخبر طبيبك إذا :

• كان لديك أو كنت تعاني من نوبات

• كان لديك أو كنت تعاني من مشاكل في التبول

• كان لديك أو كنت تعاني من مشاكل في المثانة أو الكلى

• لديك مشاكل في الكبد

• لديك أي حالات طبية أخرى

• إذا كنت حاملاً أو تخططين للحمل من غير المعروف إذا كان الأزرينيكس سوف يؤثر على جنينك الذي لم يولد بعد أم لا

• إذا كنت مرضعاً أو تخططين للرضاعة من غير المعروف إذا كان الأزرينيكس ينتقل إلى حليب الثدي أو لا

• تحدث إلى طبيبك حول أفضل طريقة لإعطاء طفلك الدواء إذا كنت تتناول الأزرينيكس

أخبر طبيبك عن جميع الأدوية التي تتناولها ، بما في ذلك الوصفات الطبية وغير الوصفات

الأدوية والتأثيرات والكافيين والمشروبات

قد يؤثر تناول الأزرينيكس مع بعض الأدوية الأخرى على بعضها البعض مع الأخذ أنه من الممكن أن يسبب آثار جانبية خطيرة مع الأدوية الأخرى

أخبر طبيبك بشكل خاص إذا كنت تتناول :

مشتقات ketamine, amantadine, dextromethorphan

الأدوية التي تجعل البول قواماً مثل مثبطات الأستيراز الكاربوني و بيكربونات الصوديوم

أسهل طبيبك أو الطبيب عن قدمة هذه الأدوية ، إذا لم تكن متأكداً

تدرب على الأدوية التي تتناولها. احتفظ بقائمة بها لمرضها على طبيبك والصيادلة

عندما تحصل على دواء جديد

كيف يجب أن تتناول الأزرينيكس ؟

قد يخبر الطبيب الجرعة إذا كان يتناولها وعلى تأخذها

يمكن تناول الأزرينيكس مع الطعام أو بدون

يمكن فتح كبسولات الأزرينيكس ورشها على عصير التفاح قبل البدء على عصير التفاح

تجنبها قبل التفاح والرش على عصير التفاح

يجب إبلاغ كسولات الأزرينيكس كاملة وضم سحقها أو قسمها

لا تستخدم كمسولات الازونكس نائلة أو تظهر عليها علامات الحث

إذا كانت تتحول حالاً فحالاً لدرجة أخرى من ميوثنتين فحدث إلى مسئول رصايك المسحوق حول كيفية التبديل إلى الازونكس
إذا نسبت جرعة واحدة من الازونكس فلا تصاعف الجرعة التالية ويجب أن تأخذ الجرعة التالية كما هو مقرر
إذا نسبته تتحول الازونكس لمدة أيام فلا يجب تناول الجرعة التالية حتى تتحدث مع طبيبك
إذا كنت تتناول الكثير من الازونكس فقمنا بطبيبك أو أقرب مركز مسود أو أذهب إلى أقرب غرفة مستشفى طوارئ على الفور

ماهى الآثار الجانبية المحتملة للازونكس ؟

- قد يسبب الازونكس آثاراً جانبية بما فى ذلك
- تشمال الآثار الجانبية الأكثر شيوعاً للازونكس ما لى :
- صداع الرأس
- إسهال
- دوار

هذه ليست كل الآثار الجانبية المحتملة للازونكس ، لمزيد من المعلومات اسأل طبيبك أو الصيدلي ، يمكنك استشارة الطبيب للحصول

على المشورة الطبية حول الآثار الجانبية عن طريق البريد الإلكتروني Py@zeta-pharma.com أو عن طريق الموقع الإلكتروني

www.zetapharma.net

كيف يمكن تخزين الازونكس ؟

يتم التكرين فى درجة حرارة لا تتجاوز 30 درجة مئوية ، فى مكان جاف ، يحفظ بعيداً عن متناول الأطفال
مدة الصلاحية 24 شهر

ماهى مكونات الازونكس ؟

المواد الفعالة : ميوثنتين هيدروكلوريد كل كسولة جيلاتينية صلبة تحتوي على جزيئات ميوثنتين هيدروكلوريد (10 %) ويكافئ 28 مجم
من ميوثنتين هيدروكلوريد
المواد الغير فعالة : بوتر غير باريك (سكر نشا ، هير ميلور ، بوفون K30) ، بولى سوريات 80 ، دى إيثيل فالات ،
هير ميلور ، كحول ، ميثيلين كلوريد
مكونات الكسولة : جلوتين ، ميثيل باريك ، بريدنيل باريك ، كريتات لوريل الصوديوم ، إيوسيل ،
تيتانيوم دى أوكسيد (CI 77891) ، أوكسيد الحديد الأحمر (Al/ transparent PVC) كل شريط يحتوي على 10 كبسولات جيلاتينية صلبة متقدمة
عينة كرون تحتوي على 1 ، 2 ، أو 3 شرائط
الغشوة
معلومات عامة عن الإستخدام والأمن والفعل للازونكس

توصف الأدوية أحياناً لأغراض أخرى غير تلك المدرجة فى نشرة معلومات المريض لا تأخذ الازونكس لحالة غير مضمون عليها فى
نشرة معلومات المريض لا تعطى الازونكس لأشخاص آخرين حتى لو كان لديهم نفس الشيء لأنه قد يضرهم

تخلص نشرة معلومات المريض أهم المعلومات حول الازونكس إذا كنت ترغب فى مزيد من المعلومات تحدث إلى طبيبك أو الصيدلي
للحصول على معلومات حول الازونكس التى تمت كتابتها عن طريق متخصص الرعاية الصحية

لمزيد من المعلومات حول الازونكس انتقل إلى www.zetapharma.net أو اتصل على 022715582

تم التصنيع بواسطة شركة دى كى فارما للصناعات الدوائية لصناعة شركة زيتا فارما للصناعات الدوائية