



# Elaxine

(Mirtazapine) USP

TABLETS

## COMPOSITION

Each film-coated tablet of Elaxine 15 mg contains:  
Mirtazapine (USP).....15mg  
Each film-coated tablet of Elaxine 30 mg contains:  
Mirtazapine (USP).....30mg

## PHARMACOLOGICAL PROPERTIES

Elaxine (mirtazapine) is an antidepressant, which can be given as treatment for episodes of major depression. The presence of symptoms such as anhedonia, psychomotor inhibition, sleep disturbances (early wakening) and weight loss, increase the chance of a positive response. Other symptoms are loss of interest, suicidal thoughts and changes in mood (better in the evening than in the morning). Elaxine begins to exert its effect in general after 1-2 weeks of treatment.

## PHARMACODYNAMIC PROPERTIES

Mirtazapine is a centrally active presynaptic  $\alpha_2$ -antagonist, which increases noradrenergic neurotransmission. It also modulates central serotonin function via interaction with 5-HT<sub>2A</sub> and 5-HT<sub>3</sub> receptors. Both enantiomers of mirtazapine are presumed to contribute to the antidepressant activity. The S (+) enantiomer by blocking  $\alpha_2$  and 5-HT<sub>2A</sub> receptors and the R(-) enantiomer by blocking 5-HT<sub>3</sub> receptors. The histamine H<sub>1</sub>-antagonistic activity of mirtazapine is responsible for its sedative properties. Mirtazapine is generally well tolerated. It has practically no anti-cholinergic activity and at therapeutic doses, has practically no effect on the cardiovascular system.

## PHARMACOKINETIC PROPERTIES

After oral administration of Elaxine tablets, the active constituent mirtazapine is rapidly and well absorbed (bioavailability 50%), reaching peak plasma levels after about 2 hours.

Binding of mirtazapine to plasma proteins is approx. 85%. The mean half-life of elimination is 20-40 hours; longer half-lives, up to 65 hours, have occasionally been recorded and shorter half-lives have been seen in young men. The half-life of elimination is sufficient to justify once-a-day dosing. Steady state is reached after 3-4 days, after which there is no further accumulation. Mirtazapine displays linear pharmacokinetics within the recommended dose range.

Mirtazapine is extensively metabolized and eliminated via the urine and faeces within a few days. Major pathways of biotransformation are demethylation and oxidation, followed by conjugation. The demethyl metabolite is pharmacologically active and appears to have the same pharmacokinetic profile as the parent compound. The clearance of mirtazapine may be decreased as a result of renal

or hepatic insufficiency.

## CLINICAL PARTICULARS

### Therapeutic Indications

Episode of major depression

## POSODOLOGY AND METHOD OF ADMINISTRATION

The tablets should be taken orally, if necessary with fluid, and swallowed without chewing.

**Adults:** Treatment should begin with 15mg daily. The dosage generally needs to be increased to obtain an optimal clinical response. The effective daily dose is usually between 15 and 45 mg.

**Elderly:** The recommended dose is the same as that for adults. In elderly patients an increase in dosing should be done under close supervision to elicit satisfactory and safe response.

**Children:** Since safety and efficacy of Elaxine has not been established in children, it is not recommended to treat children with Elaxine. The clearance of mirtazapine may be decreased in patients with renal or hepatic insufficiency. This should be taken into account when prescribing Elaxine to this category of patients. Mirtazapine has a half-life of 20-40 hour, and therefore Elaxine is suitable for once a day administration, it should be taken preferably as a single night-time dose before going to bed.

Elaxine may also be given in sub-doses equally divided over the day (once in the morning and once at night-time). Treatment should preferably be continued until the patient has been completely symptom-free for 4-6 months. After this, treatment can be gradually discontinued. Treatment with an adequate dose should result in a positive response within 2-4 weeks. With an insufficient response, the dose can be increased up to the maximum dose. If there is no response within further 2-4 weeks, then treatment should be stopped.

## CONTRAINDICATIONS

Over-sensitivity to mirtazapine

### Special warnings and special precautions for use

Bone marrow depression, usually presenting as granulocytopenia or agranulocytosis has been reported during treatment with most antidepressants. This mostly appears after 4-6 weeks of treatment and is in general reversible after termination of treatment.

Reversible agranulocytosis has also been reported as a rare occurrence in clinical studies with Elaxine. The Physician should be alert for symptoms like fever, sore throat, stomatitis or other signs of infection; when such symptoms occur. Treatment should be stopped and blood counts taken. Careful dosing as well as regular and close monitoring is necessary in patients with:

- epilepsy and organic brain syndrome; from clinical experience it appears that insults occur rarely in patients treated with Elaxine.
- hepatic or renal insufficiency.
- cardiac diseases like conduction disturbances, angina pectoris and recent-myocardial infarction, where normal precautions should be taken and concomitant medicines carefully administered.

- low blood pressure.

Like with other antidepressants care should be taken in patients with:

- micturition disturbances like prostate hypertrophy (although problems are not to be expected because Elaxine possess only very weak anti-cholinergic activity).
- acute narrow-angle glaucoma and increased intra-ocular pressure (also here little chance of problems with Elaxine because of its very weak anti-cholinergic activity).
- diabetes mellitus.

Treatment should be discontinued if jaundice occurs.

**Moreover, like with other antidepressants. the following should be taken into account:**

worsening of psychotic symptoms can occur when antidepressants are administered to patients with Schizophrenia or other psychotic disturbances; paranoid thoughts can be intensified, when the depressive phase of manic depressive psychosis is being treated, it can transform into the manic phase with regard to the chance of suicide, in particular at the beginning of treatment, only a limited number of Elaxine tablets should be given to the patient.

Although antidepressants are not addictive, the abrupt termination of treatment after long-term administration may result in nausea, headache and malaise. Elderly patients are often more sensitive, especially with regard to the side-effects of antidepressants. During clinical research with Elaxine side-effects have not been reported more often in elderly patients than in other age groups; however, experience until now is limited.

**Interaction with other medicaments and other forms of interaction**

- Mirtazapine may potentiate the central nervous dampening action of alcohol; patients should therefore be advised to avoid alcohol during treatment with Elaxine.
- Elaxine should not be administered concomitantly with MAO inhibitors or within two weeks of cessation of therapy with these agents.
- Mirtazapine may potentiate the sedative effects of benzodiazepines: caution should be taken when these drugs are prescribed together with Elaxine.

**PREGNANCY AND LACTATION**

The safety of Elaxine in human pregnancy has not been established. Elaxine should be used during pregnancy only if it is clearly needed. Women of child bearing potential should employ an adequate method of contraception if taking Elaxine. Although animal experiments show that mirtazapine is excreted only in very small amounts in the milk, the use of Elaxine in nursing mothers is not recommended, since no human data in breast milk is available.

**EFFECTS ON ABILITY TO DRIVE AND USE MACHINES**

Elaxine may impair concentration and alertness. Patients treated

with antidepressants should avoid the performance of potentially dangerous tasks, which require alertness and good concentration, such as driving a motor vehicle or operating machinery.

**UNDESIRABLE EFFECTS**

- Depressed patients display a number of symptoms that are associated with the illness itself. It is therefore sometimes difficult to ascertain which symptoms are a result of the illness itself and which are a result of treatment with Elaxine. The most commonly reported adverse effects during treatment with Elaxine are:
- increase in appetite and weight gain.
- drowsiness/sedation, generally occurring during the first few weeks of treatment (N.B. dose reduction generally does not lead to less sedation but can jeopardize antidepressant efficacy).
- In rare cases the following side-effects may occur:
- (orthostatic) hypotension.
- mania.
- convulsions (insults), tremor, myoclonus.
- oedema and accompanying weight gain.
- acute bone marrow depression (eosinophilia, granulocytopenia, agranulocytosis, aplastic anemia and thrombocytopenia), elevations in serum transaminase activities.
- exanthema.

**OVERDOSE**

The clinical safety of Elaxine after overdosing has not been established. Cases of overdose should be treated by gastric lavage with appropriate, symptomatic and supportive therapy for vital functions.

**INSTRUCTIONS**

Store below 30°C. Protect from heat, light & moisture. Keep all medicines out of the reach of children. To be sold on the prescription of a registered medical practitioner only.

**PRESENTATION**

Elaxine 15mg tablets: Available in Blister Pack of 2x10's  
Elaxine 30mg tablets: Available in Blister Pack of 2x10's

**ایلیگزین ٹیبلٹس**  
**(میرٹازاپین) یو ایس پی**

ہدایات: 30° سینٹی گریڈ سے کم درجہ حرارت پر رکھیں۔ گرمی، روشنی اور نمی سے بچائیں۔  
تمام دوائیں بچوں کی پہنچ سے دُور رکھیں۔ صرف مستند ڈاکٹر کے نسخہ پر فروخت کریں۔



Manufactured by:  
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