

MELATONIN HAMA PHARMA



Melatonin Hama Pharma prolonged-release tablets 2 mg

Melatonin Hama Pharma Timed release dual action bi-layered tablets 10 mg

Composition :

Each prolonged-release tablet contain 2 mg melatonin.

Each Timed release dual action bi-layered tablet contain 10 mg melatonin (5mg melatonin immediate release and 5 mg melatonin prolonged release).

Excipients:

Amelatonin Hama Pharma prolonged-release tablets 2 mg:

Ammonio methacrylate copolymer type B, Calcium hydrogen phosphate dehydrate, Lactose monohydrate, Silica, colloidal anhydrous, Tale, Magnesium stearate.

Melatonin Hama Pharma Timed release dual action bi-layered tablets 10 mg:

Immediate release layer: cellulose, dicalcium phosphate, water-soluble cellulose, vegetable stearic acid, vegetable magnesium stearate. Prolonged release layer: cellulose, dicalcium phosphate, water-soluble cellulose, vegetable stearic acid, vegetable magnesium stearate, modified cellulose gum, sodium copper chlorophyllin, silica, Hydroxypropyl cellulose.

Mechanism of action and Pharmacodynamic properties:

Melatonin is a naturally occurring hormone produced by the pineal gland and is structurally related to serotonin. Physiologically, melatonin secretion increases soon after the onset of darkness, peaks at 2-4 am and diminishes during the second half of the night. Melatonin is associated with the control of circadian rhythms and entrainment to the light-dark cycle. It is also associated with a hypnotic effect and increased propensity for sleep.

The activity of melatonin at the MT₁, MT₂ and MT₃ receptors is believed to contribute to its sleep-promoting properties, as these receptors (mainly MT₁ and MT₂) are involved in the regulation of circadian rhythms and sleep regulation.

Because of the role of melatonin in sleep and circadian rhythm regulation, and the age related decrease in endogenous melatonin production, melatonin may effectively improve sleep quality particularly in patients who are over 55 with primary insomnia.

Pharmacokinetic properties:

Absorption

The absorption of orally ingested melatonin is complete in adults and may be decreased by up to 50% in the elderly. The kinetics of melatonin are linear over the range of 2-8 mg.

Bioavailability is in the order of 15%. There is a significant first pass effect with an estimated first pass metabolism of 85%. T_{max} occurs after 3 hours in a fed state. The rate of melatonin absorption and C_{max} following Melatonin 2 mg oral administration is affected by food. The presence of food delayed the absorption of the melatonin resulting in a later (T_{max}=3.0 h versus T_{max}=0.75 h) and lower peak plasma concentration in the fed state (C_{max}=1020 pg/ml versus C_{max}= 1176 pg/ml).

Distribution

The *in vitro* plasma protein binding of melatonin is approximately 60%. Melatonin is mainly bound to albumin, alpha-acid glycoprotein and high density lipoprotein.

Biotransformation

Experimental data suggest that isoenzymes CYP1A1, CYP1A2 and possibly CYP2C19 of the cytochrome P450 system are involved in melatonin metabolism. The principal metabolite is 6-sulphatoxy-melatonin (6-S-MT), which is inactive. The site of biotransformation is the liver. The excretion of the metabolite is completed within 12 hours after ingestion.

Elimination

Terminal half life (t_{1/2}) is 3.5-4 hours. Elimination is by renal excretion of metabolites, 89% as sulphated and glucuronide conjugates of 6-hydroxymelatonin and 2% is excreted as melatonin (unchanged active substance).

Indications:

Melatonin 2 mg is indicated as monotherapy for the short-term treatment of primary insomnia characterized by poor quality of sleep in patients who are aged 55 or over.

TIMED RELEASE DUAL ACTION:

Helps improve sleep quality.

Timed-release technology helps increase the total sleep time (aspect of sleep quality) in people suffering from sleep restriction or altered sleep schedule, e.g. shift-work and jetlag.

Contraindication:

Hypersensitivity to the active substance or to any of the excipients.

Posology and administration:

The recommended starting dose is 2 mg of Melatonin. If an inadequate response has been observed, the dose should be increased to 5 mg, with a maximal dose of 10 mg.

Melatonin should be taken once daily, 0.5-1 hour before bedtime and with or after food.

Data are available for up to 2 years' treatment. The patient should be monitored at regular intervals (at least every 6 months) to check that Melatonin is still the most appropriate treatment. After at least 3 months of treatment, the physician should evaluate the treatment effect and consider stopping treatment if no clinically relevant treatment effect is seen. If a lower treatment effect is seen after titration to a higher dose, the prescriber should first consider a down-titration to a lower dose before deciding on the complete discontinuation of treatment.

If a tablet is forgotten, it could be taken before the patient goes to sleep that night, but after this time, no other tablet should be given before the next scheduled dose.

TIMED RELEASE DUAL ACTION:

Take one tablet daily at or before bedtime.

Renal impairment:

The effect of any stage of renal impairment on melatonin pharmacokinetics has not been studied. Caution should be used when melatonin is administered to patients with renal impairment.

Hepatic impairment :

There is no experience of the use of melatonin in patients with liver impairment. Therefore, melatonin is not recommended for use in patients with hepatic impairment.

Method of administration :

Oral use. Tablets should be swallowed whole. The tablet should not be broken, crushed or chewed.

Warnings and precautions:

Melatonin may cause drowsiness. Therefore the product should be used with caution if the effects of drowsiness are likely to be associated with a risk to safety.

No clinical data exist concerning the use of Melatonin in individuals with autoimmune diseases. Therefore, Melatonin is not recommended for use in patients with autoimmune diseases.

Melatonin contains lactose. Patients with rare hereditary problems of galactose intolerance, the lactase deficiency or glucose-galactose

malabsorption should not take this medicine.

Drug interactions:

Pharmacokinetic interactions:

Melatonin has been observed to induce CYP3A in vitro at supra-therapeutic concentrations. The clinical relevance of the finding is unknown. If induction occurs, this can give rise to reduced plasma concentrations of concomitantly administered medicinal products.

Melatonin does not induce CYP1A enzymes in vitro at supra-therapeutic concentrations. Therefore, interactions between melatonin and other active substances as a consequence of melatonin's effect on CYP1A enzymes are not likely to be significant.

Melatonin's metabolism is mainly mediated by CYP1A enzymes. Therefore, interactions between melatonin and other active substances as a consequence of their effect on CYP1A enzymes is possible.

Caution should be exercised in patients on fluvoxamine, which increases melatonin levels (by 17-fold higher AUC and a 12-fold higher serum C_{max}) by inhibiting its metabolism by hepatic cytochrome P450 (CYP) isozymes CYP1A2 and CYP2C19. The combination should be avoided.

Caution should be exercised in patients on 5- or 8- methoxypsoralen (5 and 8-MOP), which increases melatonin levels by inhibiting its metabolism.

Caution should be exercised in patients on cimetidine a CYP2D inhibitor, which increases plasma melatonin levels, by inhibiting its metabolism.

Cigarette smoking may decrease melatonin levels due to induction of CYP1A2.

Caution should be exercised in patients on estrogens (e.g. contraceptive or hormone replacement therapy), which increase melatonin levels by inhibiting its metabolism by CYP1A1 and CYP1A2.

CYP1A2 inhibitors such as quinolones may give rise to increased melatonin exposure.

CYP1A2 inducers such as carbamazepine and rifampicin may give rise to reduced plasma concentrations of melatonin.

There is a large amount of data in the literature regarding the effect of adrenergic agonists/antagonists, opiate agonists/antagonists, antidepressant medicinal products, benzodiazepines, tryptophan and alcohol, on endogenous melatonin secretion. Whether or not these active substances interfere with the dynamic or kinetic effects of Melatonin or vice versa has not been studied.

Pharmacodynamic interactions:

Alcohol should not be taken with melatonin, because it reduces the effectiveness of Melatonin on sleep.

Melatonin may enhance the sedative properties of benzodiazepines and non-benzodiazepine hypnotics, such as zaleplon, zolpidem and zopiclone. There was clear evidence for a transitory pharmacodynamic interaction between Melatonin and zolpidem one hour following co-dosing. Concomitant administration resulted in increased impairment of attention, memory and co-ordination compared to zolpidem alone.

Melatonin has been co-administered in studies with thioridazine and imipramine, active substances which affect the central nervous system. No clinically significant pharmacokinetic interactions were found in each case. However, Melatonin co-administration resulted in increased feelings of tranquility and difficulty in performing tasks compared to imipramine alone, and increased feelings of "muzzy- headedness" compared to thioridazole alone.

Pregnancy:

In view of the lack of clinical data, use in pregnant women and by women intending to become pregnant is not recommended.

Breastfeeding:

Endogenous melatonin was measured in human breast milk thus exogenous melatonin is probably secreted into human milk. Therefore, breast-feeding is not recommended in women under treatment with melatonin.

Effects on ability to drive and use machines:

Melatonin has moderate influence on the ability to drive and use machines. Melatonin may cause drowsiness, therefore the product should be used with caution if the effects of drowsiness are likely to be associated with a risk to safety.

Side effects:

There are no common side effects. However, uncommon side effects include: Irritability, nervousness, restlessness, insomnia, abnormal dreams, nightmares, anxiety, migraine, headache, lethargy, psychomotor hyperactivity, dizziness, somnolence, hypertension, abdominal pain, dyspepsia, mouth ulcration, dry mouth, nausea, hyperbilirubinaemia, night sweats, pruritus, rash, pruritus generalised, dry skin, pain in extremity, glycosuria, proteinuria, menopausal symptoms.

Overdose:

Administration of daily doses of up to 300 mg of melatonin without causing clinically significant adverse reactions have been reported.

If overdose occurs, drowsiness is to be expected. Clearance of the active substance is expected within 12 hours after ingestion. No special treatment is required.

Packaging:

Melatonin hama pharma 2mg: 2 blisters, each contains 10 prolonged-release tablets/carton box.

Melatonin hama pharma 10mg: 2 blisters, each contains 10 timed release dual action bi-layered tablet /carton box.

Storage condition: Keep below 25 °C away from light.

THIS IS A MEDICATION

- A medication is a product but unlike any other products.
- A medication is a product which affects your health, and its consumption contrary to instructions is dangerous for you.
- Follow strictly the doctor's prescription, the method of use and the instructions of the pharmacist who sold the medication. The doctor and the pharmacist are experts in medicine, its benefits and risks.
- Do not by yourself interrupt the period of treatment prescribed for you.
- Do not repeat the same prescription without consulting your doctor.

KEEP MEDICATIONS OUT OF REACH OF CHILDREN
(Council of Arab Health Ministers) (Arab Pharmacists Association)

Manufactured by:

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