mirtazapine (meer-taz-a-peen)

Remeron, Remeron Soltabs

Classification

Therapeutic: antidepressants
Pharmacologic: tetracyclic antidepressants

Pregnancy Category C

Indications

Major depressive disorder. **Unlabeled Use:** Panic disorder. Generalized anxiety disorder (GAD). Post-traumatic stress disorder (PTSD).

Action

Potentiates the effects of norepinephrine and serotonin. **Therapeutic Effects:** Antidepressant action, which may develop only after several weeks.

Pharmacokinetics

Absorption: Well absorbed but rapidly metabolized, resulting in 50% bioavailability.
Distribution: Unknown.
Protein Binding: 85%.
Metabolism and Excretion: Extensively metabolized by the liver (P450 2D6, 1A2 and 3A enzymes involved); metabolites excreted in urine (75%) and feces (15%).
Half-life: 20–40 hr.

TIME/ACTION PROFILE (antidepressant effect)

ROUTE	ONSET	PEAK	DURATION
PO	1–2 wk	6 wk or more	unknown

Contraindications/Precautions

Contraindicated in: Hypersensitivity; Concurrent use of MAO inhibitors or MAO-like drugs (linezolid or methylene blue).

Use Cautiously in: History of seizures; History of suicide attempt; May ↑ risk of suicide attempt/ideation especially during early treatment or dose adjustment; History of mania/hypomania; Patients with hepatic or renal impairment; ***OB:*** Safety not established; ***Lactation:*** Discontinue drug or bottle-feed; ***Pedi:*** Safety not established. Suicide risk may be greater in children or adolescents; ***Geri:*** ↑ sensitivity to CNS effects and oversedation. Begin at lower doses and titrate carefully.

Adverse Reactions/Side Effects

CNS: NEUROLEPTIC MALIGNANT SYNDROME, SUICIDAL THOUGHTS, drowsiness, abnormal dreams, abnormal thinking, agitation, akathisia, anxiety, apathy, confusion, dizziness, malaise, weakness. **EENT:** sinusitis. **Resp:** dyspnea, cough. **CV:** edema, hypotension, vasodilation. **GI:** constipation, dry mouth, ↑ appetite, abdominal pain, anorexia, ↑ liver enzymes, nausea, vomiting. **GU:** urinary frequency. **Derm:** pruritus, rash. **F and E:** ↑ thirst. **Hemat:** AGRANULOCYTOSIS. **Metab:** weight gain, hypercholesterolemia, hyponatremia, ↑ triglycerides. **MS:** arthralgia, back pain, myalgia. **Neuro:** hyperkinesia, hypesthesia, twitching. **Misc:** SEROTONIN SYNDROME, flu-like syndrome.

Interactions

Drug-Drug: May cause hypertension, seizures, and death when used with MAO inhibitors; do not use within 14 days of MAO inhibitor therapy. **Concurrent use with MAO-inhibitor like drugs**, such as **linezolid** or **methylene blue** may ↑ risk of serotonin syndrome; concurrent use contraindicated; do not start therapy in patients receiving **linezolid** or **methylene blue**; if **linezolid** or **methylene blue** need to be started in a patient receiving mirtazapine, immediately discontinue mirtazapine and monitor for signs/symptoms of serotonin syndrome for 2 wk or until 24 hr after last dose of linezolid or methylene blue, whichever comes first (may resume mirtazapine therapy 24 hr after last dose of linezolid or methylene blue). Drugs that affect serotonergic neurotransmitter systems, including **tricyclic antidepressants**, **SNRIs**, **fentanyl**, **buspirone**, **tramadol** and **triptans** ↑ risk of serotonin syndrome. ↑ CNS depression with other **CNS depressants**, including **alcohol** and **benzodiazepines**. **Ketoconazole**, **cimetidine**, **clarithromycin**, **erythromycin**, **indinavir**, **itraconazole**, **ketoconazole**, **nefazodone**, **nelfinavir**, **ritonavir**, or **saquinavir** may ↑ levels. **Phenobarbital**, **phenytoin**, **carbamazepine**, **rifampin**, or **rifabutin** may ↓ levels; may need to ↑ mirtazapine dose. May ↑ the effects and risk of bleeding from **warfarin**.

Drug-Natural Products: Concomitant use of **kava-kava**, **valerian**, **skullcap**, **chamomile**, or **hops** can ↑ CNS depression. ↑ risk of serotonin syndrome with **St. John's wort** and **SAMe**.

Route/Dosage

PO (Adults): 15 mg/day as a single bedtime dose initially; may be ↑ q 1–2 wk up to 45 mg/day.

NURSING IMPLICATIONS

Assessment

- Assess mental status (orientation, mood, behavior) frequently. Assess for suicidal tendencies, especially during early therapy. Restrict amount of drug available to patient.
- **Monitor closely for changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression.**
- Assess weight and BMI initially and throughout therapy. For overweight/obese individuals, obtain fasting blood glucose and cholesterol levels. Refer as appropriate for nutritional/weight management and medical management.
- Monitor BP and pulse rate periodically during initial therapy. Report significant changes.
- Monitor for seizure activity in patients with a history of seizures or alcohol abuse. Institute seizure precautions.
- **Assess for serotonin syndrome (mental changes [agitation, hallucinations, coma], autonomic instability [tachycardia, labile BP, hyperthermia], neuromuscular aberations [hyper reflexia, incoordination], and/or GI symptoms [nausea, vomiting, diarrhea]), especially in patients taking other serotonergic drugs (SSRIs, SNRIs, triptans).**
- **Monitor for development of neuroleptic malignant syndrome (fever, respiratory distress, tachycardia, seizures, diaphoresis, hypertension or hypotension, pallor, tiredness). Discontinue mirtazapine and notify health care professional immediately if these symptoms occur.**
- ***Lab Test Considerations:*** **Assess CBC and hepatic function before and periodically during therapy.**

Potential Nursing Diagnoses

Ineffective coping (Indications)
Anxiety (Indications)
Imbalanced nutrition: risk for more than body requirements (Side Effects)

Implementation

- May be given as a single dose at bedtime to minimize excessive drowsiness or dizziness.
- May be taken without regard to food.
- For *orally disintegrating tablets*, do not attempt to push through foil backing; with dry hands, peal back backing and remove tablet. Immediately place tablet on tongue; tablet will dissolve in seconds, then swallow with saliva. Administration with liquid is not necessary.

Patient/Family Teaching

- Instruct patient to take mirtazapine as directed. Take missed doses as soon as remembered; if almost time for next dose, skip missed dose and return to regular schedule. If single bedtime dose regimen is used, do not take missed dose in morning, but consult health care professional. Do not discontinue abruptly; gradual dose reduction may be required.
- May cause drowsiness and dizziness. Caution patient to avoid driving and other activities requiring alertness until response to drug is known.
- **Encourage patient and family to be alert for emergence of anxiety, agitation, panic attacks, insomnia, irritability, hostility, impulsivity, akathisia, hypomania, mania, worsening of depression and suicidal ideation, especially during early antidepressant therapy. Assess symptoms on a day-to-day basis as changes may be abrupt. If these symptoms occur, notify health care professional.**
- Caution patient to change positions slowly to minimize orthostatic hypotension.
- Advise patient to avoid alcohol or other CNS depressant drugs during and for at least 3–7 days after therapy has been discontinued.
- **Instruct patient to notify health care professional of signs and symptoms of serotonin syndrome (mental status changes: agitation, hallucinations, coma; autonomic instability: tachycardia, labile BP, hyperthermia; neuromuscular aberrations: hyperreflexia, incoordination; and/or gastrointestinal symptoms: nausea, vomiting, diarrhea) occur.**
- Advise patient to notify health care professional if dry mouth, urinary retention, or constipation occurs. Frequent rinses, good oral hygiene, and sugarless candy or gum may diminish dry mouth. An increase in fluid intake, fiber, and exercise may prevent constipation.
- Inform patient of need to monitor dietary intake. Increase in appetite may lead to undesired weight gain.
- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications, especially St. John's Wort.

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- Advise patient to notify health care professional of medication regimen before treatment or surgery.
- Therapy for depression may be prolonged. Emphasize the importance of follow-up exam to monitor effectiveness and side effects.

Evaluation/Desired Outcomes

- Resolution of the symptoms of depression.
- Increased sense of well-being.
- Renewed interest in surroundings.
- Increased appetite.
- Improved energy level.
- Improved sleep.
- Therapeutic effects may be seen within 1 wk, although several wk are usually necessary before improvement is observed.

Why was this drug prescribed for your patient?