**Indications**
Schizophrenia. Depressive episodes with bipolar disorder. Acute manic episodes associated with bipolar I disorder (as monotherapy for adults or adolescents) or with lithium or divalproex. Adjunctive treatment of depression.

**Action**
 Probably acts by serving as an antagonist of dopamine and serotonin. Also antagonizes histamine H1 receptors and alpha1-adrenergic receptors. Therapeutic Effects: Decreased manifestations of psychoses, depression, or acute mania.

**Contraindications/Precautions**
PO-XR unknown unknown unknown
PO unknown unknown 8–12 hr

**Route ONSET PEAK DURATION**
6 hr.

**Half-life:**
Widely distributed.

**Distribution:**
Well absorbed after oral administration.

**Pharmacokinetics**

- **Absorption:** Widely distributed.
- **Metabolism and Excretion:** Extensively metabolized by the liver (mostly by P450 CYP3A4 enzyme system); 1% excreted unchanged in the urine.
- **Elimination:** Slow elimination.

**TIME/ACTION PROFILE (antipsychotic effects)**

**EENT:**
Exophthalmos, conjunctivitis, dry eye

**Resp:**
Cough, dyspnea, bronchial and extrathoracic asthma

**CV:**
Arrhythmias, hypertension, myocardial infarction, syncope, hypotension

**GI:**
Nausea, vomiting, diarrhea, constipation, abdominal distention, ileus, constipation, dry mouth, dyspepsia

**Derm:**
Sweating, STEVENS-JOHNSON SYNDROME, flushing, erythema, pruritus

**MS:**
Sacroiliitis, arthralgia, periarthritis, myalgia, myopathy

**Endo:**
Hyperprolactinemia, hypercholesterolemia

**Hemat:**
Anemia, neutropenia, agranulocytosis, aplastic anemia, thrombocytopenia, eosinophilia, leukocytosis, leukopenia, lymphocytopenia, lysis of transfused RBCs

**Hepatic:**
Liver function test abnormalities

**Otic:**
Hearing loss, tinnitus

**Renal:**
None reported

**Side Effects**

- **CNS:**
Drowsiness, extrapyramidal symptoms, sedation, tardive dyskinesia, cognitive impairment, NEUROLEPTIC MALIGNANT SYNDROME, SEIZURES, dizziness

- **EENT:**
Visual disturbances, cataract, glaucoma

- **Resp:**
Cough, dyspnea, bronchial and extrathoracic asthma

- **CV:**
Arrhythmias, hypertension, myocardial infarction, syncope, hypotension

- **GI:**
Nausea, vomiting, diarrhea, constipation, abdominal distention, ileus, constipation, dry mouth, dyspepsia

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- **Hepatic:**
Liver function test abnormalities

- **Otic:**
Hearing loss, tinnitus

- **Renal:**
None reported

**Interactions**

- **Drug-Drug:**
Concurrent use of macrolide anti-infectives (erythromycin, clarithromycin, azithromycin), deliridilate, setidotidilate, drospirenone, propranolol, isoniazid, valproate, phenytoin, carbamazepine, acetylsalicylic acid, indomethacin, dextrorphan, and famotidine may occur with alcohol, antihistamines, opioid analgesics, and sedative/hypnotics.

**Contraindicated in:**
Hypersensitivity; Lactation; Concurrent use of antihistamines, opioid analgesics, and sedative/hypnotics.

**Pregnancy Category C**
Use Cautiously in:
- Neonates at risk for neonatal abstinence syndrome
- Patients treated for dementia-related psychosis
- Patients with a history of drug or alcohol abuse
- Pre-existing liver disease
- History of seizures, Alzheimer's dementia
- Pregnancy
- Nursing mothers
- Children
- Geriatric patients

**Adverse Reactions/Side Effects**

- **CNS:**
Drowsiness, extrapyramidal symptoms, sedation, tardive dyskinesia, cognitive impairment, NEUROLEPTIC MALIGNANT SYNDROME, SEIZURES, dizziness

- **EENT:**
Visual disturbances, cataract, glaucoma

- **Resp:**
Cough, dyspnea, bronchial and extrathoracic asthma

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- **Hepatic:**
Liver function test abnormalities

- **Otic:**
Hearing loss, tinnitus

- **Renal:**
None reported

**Usage**

- **Doseage:**
- **Adults:** Start at 25 mg/day then increase to 100 mg/day; then increase at increments of 100 mg/day until clinical response or side effects limit further increases. A maximum daily dose of 600 mg/day may be achieved.
- **Children:** Start at 2.5 mg/kg/day then increase to 10 mg/kg/day; then increase at increments of 10 mg/kg/day until clinical response or side effects limit further increases. A maximum daily dose of 15 mg/kg/day may be achieved.

**Preparation**

- **PO:**
Tablets 25 mg, 50 mg, 100 mg, 150 mg, 200 mg, 300 mg, 600 mg, 1000 mg

**Common Side Effects**

- **GI:**
Edema, postural hypotension, dyspepsia

- **Resp:**
Cough, dyspnea, bronchial and extrathoracic asthma

- **Derm:**
Sweating, STEVENS-JOHNSON SYNDROME, flushing, erythema, pruritus

- **MS:**
Sacroiliitis, arthralgia, periarthritis, myalgia, myopathy

- **Endo:**
Hyperprolactinemia, hypercholesterolemia

- **Hemat:**
Anemia, neutropenia, agranulocytosis, aplastic anemia, thrombocytopenia, eosinophilia, leukocytosis, leukopenia, lymphocytopenia, lysis of transfused RBCs

- **Hepatic:**
Liver function test abnormalities

- **Otic:**
Hearing loss, tinnitus

- **Renal:**
None reported

- **Other:**
None reported

**Notes**

- Extensively metabolized by the liver (mostly by P450 CYP3A4 enzyme system); 1% excreted unchanged in the urine.

**Adverse Events/Side Effects**

- **CNS:**
Drowsiness, extrapyramidal symptoms, sedation, tardive dyskinesia, cognitive impairment, NEUROLEPTIC MALIGNANT SYNDROME, SEIZURES, dizziness

- **EENT:**
Visual disturbances, cataract, glaucoma

- **Resp:**
Cough, dyspnea, bronchial and extrathoracic asthma

- **CV:**
Arrhythmias, hypertension, myocardial infarction, syncope, hypotension

- **GI:**
Nausea, vomiting, diarrhea, constipation, abdominal distention, ileus, constipation, dry mouth, dyspepsia

- **Derm:**
Sweating, STEVENS-JOHNSON SYNDROME, flushing, erythema, pruritus

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- **Endo:**
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Anemia, neutropenia, agranulocytosis, aplastic anemia, thrombocytopenia, eosinophilia, leukocytosis, leukopenia, lymphocytopenia, lysis of transfused RBCs

- **Hepatic:**
Liver function test abnormalities

- **Otic:**
Hearing loss, tinnitus

- **Renal:**
None reported

**Usage**

- **Doseage:**
- **Adults:** Start at 25 mg/day then increase to 100 mg/day; then increase at increments of 100 mg/day until clinical response or side effects limit further increases. A maximum daily dose of 600 mg/day may be achieved.
- **Children:** Start at 2.5 mg/kg/day then increase to 10 mg/kg/day; then increase at increments of 10 mg/kg/day until clinical response or side effects limit further increases. A maximum daily dose of 15 mg/kg/day may be achieved.

**Preparation**

- **PO:**
Tablets 25 mg, 50 mg, 100 mg, 150 mg, 200 mg, 300 mg, 600 mg, 1000 mg

**Common Side Effects**

- **GI:**
Edema, postural hypotension, dyspepsia

- **Resp:**
Cough, dyspnea, bronchial and extrathoracic asthma

- **Derm:**
Sweating, STEVENS-JOHNSON SYNDROME, flushing, erythema, pruritus

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Sacroiliitis, arthralgia, periarthritis, myalgia, myopathy

- **Endo:**
Hyperprolactinemia, hypercholesterolemia

- **Hemat:**
Anemia, neutropenia, agranulocytosis, aplastic anemia, thrombocytopenia, eosinophilia, leukocytosis, leukopenia, lymphocytopenia, lysis of transfused RBCs

- **Hepatic:**
Liver function test abnormalities

- **Otic:**
Hearing loss, tinnitus

- **Renal:**
None reported

**Notes**

- Extensively metabolized by the liver (mostly by P450 CYP3A4 enzyme system); 1% excreted unchanged in the urine.
protease inhibitors or erythromycin, as well as by other agents that inhibit the cytochrome P450 CYP3A4 enzyme.

**Route/Dosage**

**Schizophrenia**

- **PO (Adults):** Immediate-release — 25 mg twice daily on Day 1, then increase by 25–50 mg/day to 2–3 times daily on Days 2 and 3, up to 300–600 mg/day in 2–3 divided doses by Day 4 (not to exceed 800 mg/day). Extended-release — 100 mg once daily, then increase by 100 mg/day to 200 mg twice daily on Day 4, then 300–400 mg/day by Day 5 (not to exceed 800 mg/day).
- **Elderly patients or patients with hepatic impairment should be started on immediate-release product and converted to extended-release product once effective dose is reached.**

- **PO (Children 13–17 yr):** Immediate-release — 25 mg twice daily on Day 1, then increase by 25–50 mg/day to 2–3 times daily on Days 2 and 3, then to 100 mg twice daily on Day 4, then to 200 mg twice daily on Day 5, may increase by no more than 100 mg/day (not to exceed 800 mg/day).

**Acute Manic Episodes Associated with Bipolar Disorder**

- **PO (Adults):** Immediate-release — 50 mg twice daily on Day 1, then increase by 50 mg twice daily on Days 2, 3, and 4 to 100 mg twice daily on Day 5; then increase by 50 mg twice daily on Day 6, up to 400 mg/day (not to exceed 800 mg/day). Extended-release — 300 mg once daily on Day 1, then 600 mg once daily on Day 2, then 400–800 mg once daily starting on Day 3.

- **PO (Children 10–17 yr):** Immediate-release — 25 mg twice daily on Day 1, then increase by 25 mg twice daily on Days 2, 3, and 4 to 50 mg twice daily on Day 5; then increase by 50 mg twice daily on Day 6, up to 100 mg/day (not to exceed 500 mg/day).

**Acute Depressive Episodes Associated with Bipolar Disorder**

- **PO (Adults):** Immediate-release or extended-release — 50 mg once daily at bedtime on Day 1, then increase by 50 mg once daily at bedtime on Days 2, 3, and 4 to 100 mg once daily at bedtime on Day 5; then increase by 50 mg once daily at bedtime thereafter.

**Maintenance Treatment of Bipolar Disorder**

- **PO (Adults):** Continue at the dose required to maintain symptom remission (usual dosage: 400–800 mg/day given as once daily dose [extended-release] or in twice divided doses [immediate-release]).

- **PO (Children 10–17 yr):** Continue at the lowest dose required to maintain symptom remission.

**Depression**

- **PO (Adults):** Extended-release — 50 mg once daily on Days 1 and 2, then increase to 150 mg once daily starting on Day 3 (not to exceed 300 mg/day).

**NURSING IMPLICATIONS**

**Assessment**

- **Monitor mental status (mood, orientation, behavior) before and periodically during therapy.**
- **Assess for suicidal tendencies, especially during early therapy. Restrict amount of drug available to patient. Risk may be increased in children, adolescents, and adults 42 yr.**
- **Assess weight and BMI daily and throughout therapy.**
- **Monitor BP (sitting, standing, supine) and pulse before and frequently during initial dose titration. If hypotension occurs during dose titration, return to the previous dose.**
- **Observe patient carefully when administering to ensure medication is swallowed and not hoarded or chewed.**
- **Monitor for onset of extrapyramidal side effects (akathisia—restlessness; dyskinesia—muscle spasms and twisting motions; or pseudoparkinsonism—mask-like faces, rigidity, tremors, drooling, shuffling gait, dysphagia). Report these symptoms; reduction of dose or discontinuation may be necessary. Trihexyphenidyl or benztropine may be used to control these symptoms.**
- **Monitor for tardive dyskinesia (involuntary rhythmic movement of mouth, face, and extremities). Report immediately; may be irreversible.**
- **Monitor for development of neuroleptic malignant syndrome (fever, respiratory distress, tachycardia, seizures, diaphoresis, hypotension or hypertension, pallor, tachypnea). Notify health care professional immediately if these symptoms occur.**
- **Assess for rash periodically during therapy. May cause Stevens-Johnson syndrome. Discontinue therapy if severe or if accompanied with fever, generalized fatigue, muscle or joint aches, blisters, oral lesions, conjunctivitis, hepatitis and/or eosinophilia.**
- **Monitor for signs of pancreatitis (nausea, vomiting, anorexia, persistent severe abdominal pain, sometimes radiating to the back) during therapy.**

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CONTINUED

QUETIAPINE

- Monitor for symptoms related to hyperprolactinemia (menstrual abnormalities, galactorrhea, sexual dysfunction).
- Lab Test Considerations: May cause asymptomatic ↑ in AST and ALT.
- May also cause anemia, thrombocytopenia, leukocytosis, and leukopenia.
- May cause ↑ in bilirubin and cholesterol.
- Obtain fasting blood glucose and cholesterol levels initially and periodically during therapy. May cause ↑ serum prolactin levels.

Potential Nursing Diagnoses

- Risk for self-directed violence (Indications)
- Disturbed thought process (Indications)
- Imbalanced nutrition: risk for more than body requirements (Side Effects)

Implementation

- Do not confuse quetiapine with olanzapine. Do not confuse Seroquel with Seroquel XR, Serzone (nefazodone), or Sinequan (doxepin).
- If therapy is reinstituted after an interval of ≥ 1 wk off, follow initial titration schedule.
- PO: May be administered without regard to food. Extended-release tablets should be swallowed whole, do not break, crush, or chew.

Patient/Family Teaching

- Instruct patient to take medication as directed. Take missed doses as soon as remembered unless almost time for next dose; do not double doses. Consult health care professional prior to stopping quetiapine; should be discontinued gradually.
- Stopping abruptly may cause insomnia, nausea and vomiting.
- Advise patient and family that quetiapine should not be given to elderly patients with dementia-related psychosis; may ↑ risk of death.
- Inform patient of the possibility of extrapyramidal symptoms. Instruct patient to report symptoms immediately to health care professional.

- Advise patient to change positions slowly to minimize orthostatic hypotension.
- May cause dizziness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.
- Advise patient to avoid extremes in temperature; this drug impairs body temperature regulation.
- 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 and alcohol, especially other CNS depressants.
- Advise patient and family to notify health care professional if thoughts about suicide or dying, attempts to commit suicide; new or worse depression; new or worse anxiety; feeling very agitated or restless; panic attacks; trouble sleeping; new or worse irritability; acting aggressively; being angry or violent; acting on dangerous impulses; an extreme increase in activity and talking, other unusual changes in behavior or mood occur.
- Refer patient for nutritional, weight or medical management of dyslipidemia as indicated.
- Advise patient to notify health care professional of medication regimen before treatment or surgery.

- Inform patient of the possibility of extrapyramidal symptoms. Notify health care professional if new or worse depression; new or worse anxiety; feeling very agitated or restless; panic attacks; trouble sleeping; new or worse irritability; acting aggressively; being angry or violent; acting on dangerous impulses; an extreme increase in activity and talking, other unusual changes in behavior or mood occur.
- Advise patient to notify health care professional promptly of sore throat, fever, unusual bleeding or bruising, or rash.
- Advise female patients to notify health care professional of pregnancy if planning or suspected or if they are breast feeding or planning to breast feeding.
- Emphasize importance of routine follow-up exams to monitor side effects and continued participation in psychotherapy as indicated to improve coping skills. Ophthalmologic exams should be performed before and every 6 mo during therapy.

Evaluation/Desired Outcomes

- Decrease in excited, manic, behavior.
- Decrease in signs of depression in patients with bipolar disorder.
- Decrease in manic symptoms in patients with bipolar I disorder.
- Decrease in positive symptoms (delusions, hallucinations) of schizophrenia.
- Decrease in negative symptoms (social withdrawal, flat, blunt affect) of schizophrenia.

Why was this drug prescribed for your patient?