**Risperidone (ris-per-i-done)**

**Risperdal, Risperdal M-TAB, Risperdal Consta**

**Classification**

Antipsychotics, mood stabilizers

**Pharmacologic**

Benztropine analogues

**Pregnancy Category C**

**Indications**

Schizophrenia in adults and adolescents age 13–17 yr. Short-term treatment of acute manic or mixed episodes associated with Bipolar I Disorder (oral only) in adults, and children and adolescents aged 10–17 yr. maintenance treatment of Bipolar I Disorder (oral only) in adults; can be used with lithium or valproate (adults only). Irritability associated with autistic disorder in children.

**Action**

May act by antagonizing dopamine and serotonin in the CNS.

**Therapeutic Effects:**

Decreased symptoms of psychoses, bipolar mania, or autism.

**Pharmacokinetics**

**Absorption:** 70% after administration of tablets, solution or orally disintegrating tablets. Following IM administration, small initial release of drug, followed by 3–wk lag; the rest of release starts at 3 wk and lasts 4–6 wk.

**Distribution:** Unknown.

**Metabolism and Excretion:** Extensively metabolized by the liver. Metabolism is genetically determined; extensive metabolizers (most patients) convert risperidone to 9-hydroxyrisperidone rapidly. Poor metabolizers (6–8% of Whites) convert it more slowly. The 9-hydroxyrisperidone is an antipsychotic compound. Risperidone and its active metabolite are renally eliminated.

**Half-life:** Extensive metabolizers—3 hr for risperidone, 21 hr for 9-hydroxyrisperidone. Poor metabolizers—20 hr for risperidone and 50 hr for 9-hydroxyrisperidone.

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

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>1–2 wk</td>
<td>unknown</td>
<td>up to 6 wk†</td>
</tr>
<tr>
<td>IM</td>
<td>3 wk</td>
<td>4–6 wk</td>
<td>up to 6 wk†</td>
</tr>
</tbody>
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**†After discontinuation**

**Contraindications/Precautions**

**Contraindicated in:**

Hypersensitivity; Lactation: Discontinue drug or bottle feed.

Use Cautiously in:

Debilitated patients, patients with renal or hepatic impairment (initial dose reduction recommended); Underlying cardiovascular disease (risk of arrhythmias and hypotension); History of suicide attempt or drug abuse; Diabetes or risk factors for diabetes (may worsen glucose control); Patients at risk for aspiration; OR, Pedi: Safety not established; Geri: Initial dose = recommended. Risk of mortality in elderly patients treated for dementia-related psychosis.

**Adverse Reactions/Side Effects**

**CNS:** NEUROLEPTIC MALIGNANT SYNDROME, SUICIDAL THOUGHTS, aggressive behavior, dizziness, extrapyramidal reactions, headache, dreams, delusions, depression.

**EENT:** Pharyngitis, rhinitis, visual disturbances.

**Resp:** Cough, dyspnea.

**CV:** Arrhythmias, orthostatic hypotension, tachycardia.

**GI:** Constipation, diarrhea, dry mouth, nausea, weight gain, abdominal pain, anorexia, dyspepsia, polydipsia, salivation, vomiting, weight loss.

**GU:** Libido, dysmenorrhea/menorrhagia, difficulty urinating, polyuria, priapism.

**Derm:** Itching/skin rash, dry skin, pigmentation, sweating, photosensitivity, seborrhea.

**Endo:** Dyslipidemia, galactorrhea, hyperglycemia.

**Hemat:** Agranulocytosis, leukopenia, neutropenia.

**MS:** Arthralgia, back pain.

**Interactions**

**Drug-Drug:** May ↑ the antiparkinsonian effects of levodopa or other dopamine agonists. Carbamazepine, phenytoin, rifampin, phenobarbital, and other enzyme inducers ↓ metabolism and may ↓ effectiveness. Dose adjustments may be necessary. Fluoxetine and paroxetine ↓ metabolism and may ↓ effects of risperidone.

**Other:** None known.
CNS depression may occur with other CNS depressants, including alcohol, antihistamines, sedatives/hypnotics, or opioid analgesics.

Drug-Natural Products: Kava, valerian, or chamomile can cause CNS depression.

### Route/Dosage

#### Schizophrenia

**PO (Adults):** 1 mg twice daily; by 1–2 mg/day no more frequently than every 24 hr to 4–8 mg daily. May administer half the daily dose twice daily if drowsiness persists.

**PH (Adults):** 25 mg every 2 wk; some patients may benefit from a higher dose of 50 mg every 4 wk.

#### Acute Manic or Mixed Episodes Associated with Bipolar I Disorder

**PO (Adults):** 2–3 mg once daily, by 2 mg/day no more frequently than every 24 hr to 15 mg daily. May administer half the daily dose twice daily if drowsiness persists.

**PO (Children 13–17 yr):** 0.5 mg once daily; by 0.5–1 mg no more frequently than every 24 hr to 12 mg daily. May administer half the daily dose twice daily if drowsiness persists.

**PO (Geriatric Patients or Debilitated Patients):** Start with 0.5 mg twice daily; by 0.5 mg twice daily, up to 1.5 mg twice daily; then by at weekly intervals if necessary. May also be given as a single daily dose after initial titration.

#### Maintenance Treatment of Bipolar I Disorder

**IM (Adults):** 25 mg every 2 wk; some patients may benefit from a higher dose of 37.5 or 50 mg every 2 wk.

#### Irritability Associated with Autistic Disorder

**PO (Children 5–16 yr weighing 20 kg):** 0.25 mg/day initially. After at least 4 days of therapy, may be increased by 0.5 mg/day to 1 mg/day. Dose may be increased at 2-wk intervals to a maximum of 15 mg daily. May be administered as a single daily dose or divided dose.

**PO (Adults):** 2–3 mg once daily, by 2 mg/day no more frequently than every 24 hr to 15 mg daily. May administer half the daily dose twice daily if drowsiness persists.

### Renal Impairment

**PO (Adults):** Start with 0.5 mg twice daily; by 0.5 mg twice daily no more frequently than every 24 hr to 5 mg daily, then by at weekly intervals if necessary. May also be given as a single daily dose after initial titration.

### Hepatic Impairment

**PO (Adults):** Start with 0.5 mg twice daily; by 0.5 mg twice daily no more frequently than every 24 hr to 5 mg daily, then by at weekly intervals if necessary. May also be given as a single daily dose after initial titration.

### Nursing Implications

**Assessment**

- Monitor patient's mental status (orientation, mood, behavior) and mood before and during therapy.
- Monitor closely for notable changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression, especially during early therapy. If substance added, duration of drug administration must be increased.
- Assess weight and BMI initially and throughout therapy. Monitor for symptoms of hyperglycemia, polydipsia, polyuria, polyphagia, weakness periodically during therapy.
- Monitor BP (sitting, standing, lying down) and pulse before and during therapy. May cause prolonged QT interval, tachycardia, and orthostatic hypotension. If hypotension occurs, dose may need to be reduced.
- Observe patient when administering medication to ensure medication is swallowed and not hoarded or chewed.
- Monitor for onset of extrapyramidal side effects (akathisia—restlessness; dystonia—muscle spasms and twisting motions; or pseudoparkinsonism—mask-like face, 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 symptoms.
- Monitor for tardive dyskinesia (involuntary rhythmic movements of mouth, face, and extremities). Notify health care professional immediately if these symptoms occur.
- Monitor for development of neuroleptic malignant syndrome (fever, respiratory distress, tachycardia, seizures, diaphoresis, hypertension or hypotension, pupil, diarrhea). Notify health care professional immediately if these symptoms occur.

**Lab Test Considerations:** May cause an increase in serum prolactin levels.

- May cause increase in AST and ALT.
- May also cause anemia, thrombocytopenia, leukocytosis, and leukopenia.

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CONTINUED
Obtain fasting blood glucose and cholesterol levels initially and periodically during therapy.

- Monitor CBC frequently during initial months of therapy in patients with pre-existing or history of low WBC. May cause leukopenia, neutropenia, or agranulocytosis. Discontinue therapy if this occurs.

**Potential Nursing Diagnoses**

- Risk for self-directed violence (Indications)
- Disturbed thought process (Indications)
- Risk for injury (Side Effects)

**Implementation**

- Do not confuse risperidone with reserpine.
- When switching from other antipsychotics, discontinue previous agents when starting risperidone and minimize the period of overlapping antipsychotic agents.
- If therapy is discontinued after an interval off risperidone, follow initial titration schedule.
- For IM use, establish tolerance with oral dosing before IM use and continue oral dosing for 1 wk following initial IM injection. Do not increase dose more frequently than every 4 wk.
- PO: Daily dose can be taken in the morning or evening.
- For orally disintegrating tablets, open blister pack by pealing back foil to expose tablet; do not try to push tablet through foil. Use dry hands to remove tablet from blister and immediately place entire tablet on tongue. Tablets disintegrate in mouth within seconds and can be swallowed with or without liquid. Do not attempt to split or chew tablet. Do not cut or score tablets once removed from blister.
- Oral solutions can be mixed with water, coffee, orange juice, or low fat milk; do not mix with cola or tea.
- IM: Reconstitute with 2 mL of diluent provided by manufacturer. Administer via deep IM injection (1-inch needle) or gluteal (2-inch needle) injection using enclosed safety needle; alternate arms or buttocks with each injection. Allow solution to warm to room temperature prior to injection. Administer immediately after mixed with diluent; shake well to mix suspension. Must be administered within 6 hr of reconstitution. Store dose pack in refrigerator.

**Patient/Family Teaching**

- Instruct patient to take medication as directed.
- Inform patient of the possibility of extrapyramidal symptoms. Instruct patient to report these symptoms immediately to health care professional.
- Advise patients to change positions slowly to minimize orthostatic hypotension.
- Male: Caution patients to avoid driving or other activities requiring alertness until response to medication is known.
- 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 aggressive; 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 use sunscreen and protective clothing when exposed to the sun to prevent photosensitivity reactions. Extreme temperatures should also be avoided; this drug impairs body temperature regulation.
- Instruct patient to notify health care professional of any laser or UV light exposure.
- Advise patient and family to notify health care professional if pregnancy is planned or suspected, or if breast feeding or planning to breast feed.
- Advise patient to inform health care professional if treatment or surgery is planned.
- Instruct patient to notify health care professional if sore throat, fever, unusual bleeding or bruising, rash, tinnitus, or symptoms of hyperglycemia occur.
- Emphasize the importance of routine follow up exams to monitor side effects and continued participation in psychotherapy to improve coping skills.

- **Genetic Implication.** CAPI TALS indicate life-threatening, underline indicate most frequent, strikethrough indicate discontinued.
Evaluation/Desired Outcomes

- Decrease in excitable, manic behavior.
- Decrease in positive symptoms (delusions, hallucinations) of schizophrenia.
- Decrease in agitation toward others, deliberate self-injury, temper tantrums, and mood changes in children with autism.
- Decrease in negative symptoms (social withdrawal, flat, blunted affects) of schizophrenia.
- Decrease in autism symptoms.

Why was this drug prescribed for your patient?