Luvoxine (luv-oks-a-meen)

**Lavix, Lavix CR**

**Classification**
- Antidepressant, antipsychotic agents
- Pharmacologic: Selective serotonin reuptake inhibitors (SSRIs)

**Pregnancy Category C**

**Indications**
- Obsessive-compulsive disorder (OCD).

**Action**
- Inhibits the reuptake of serotonin in the CNS.
- Therapeutic Effects: Decrease in obsessive-compulsive behaviors.

**Pharmacokinetics**
- Absorption: 52% absorbed after oral administration.
- Distribution: Mostly metabolized by the liver (CYP2D6 isoenzyme); enters the CNS. Remainder of distribution not known.
- Metabolism and Excretion: Mostly metabolized by the liver (CYP2D6 isoenzyme); enters the CNS; metabolites are glucuronidated and excreted in urine. Remainder of distribution not known.
- Half-life: 13.6–15.6 hr.

**TIME/ACTION PROFILE (improvement on obsessive-compulsive behaviors)**
- Onset: 2–3 wk; peak: 2–3 mo; duration: unknown.

**Contraindications/Precautions**
- Contraindicated in: Sensitivity to fluvoxamine or other SSRIs.
- Use Cautiously in: Impaired hepatic function; Risk of suicide (may raise risk of suicide attempt/ideation especially during early treatment or dose adjustment); OB: Neonates exposed to SSRIs in third trimester may develop drug discontinuation syndrome including respiratory distress, feeding difficulty, and irritability; Lactation: Discontinue drug or bottle-feed; OB: Pregnancy Category C; Pedi: Safety not established in children >8 yr; Geri: May have depression; recommend lower initial dose and slower dosage titration.

**Adverse Reactions/Side Effects**

<table>
<thead>
<tr>
<th>System</th>
<th>Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV</td>
<td>Postural hypotension, tachycardia, vasodilation.</td>
</tr>
<tr>
<td>GU</td>
<td>Urinary urgency, frequency, nocturia.</td>
</tr>
<tr>
<td>Neuro</td>
<td>Ataxia, dizziness, drowsiness, headache, emotional lability, manic reactions, mental depression, psychotic reactions, syncope.</td>
</tr>
<tr>
<td>EENT</td>
<td>Sinusitis.</td>
</tr>
<tr>
<td>Derm</td>
<td>Libido/sexual dysfunction.</td>
</tr>
<tr>
<td>Resp</td>
<td>Cough, dyspnea, wheezing, sinusitis, hypothermia, hypoxia, dyspnea, tachycardia, cyanosis, QM, constipation, diarrhea, dry mouth, dysuria, nausea, dysphagia.</td>
</tr>
<tr>
<td>Metab</td>
<td>Weight gain, weight loss, MS, hyperkalemia, hyperglycemia, gastritis, hepatic disorders, hyperglycemia, nephrolithiasis, pancreatitis, peripheral edema, hypertension, palpitations, atrial fibrillation, hypokinesia/hyperkinesia, nausea, vomiting.</td>
</tr>
<tr>
<td>Misc</td>
<td>Allergic reactions, chills, flu-like symptoms, mouth sensitivity; recommend lower initial dose and slower dosage titration.</td>
</tr>
</tbody>
</table>

**Interactions**

**Drug-Drug:**
- Concurrent use with MAO inhibitors may result in serious, potentially fatal reactions (MAO inhibitors should be stopped at least 14 days before fluvoxamine therapy). Fluvoxamine should be stopped at least 14 days before MAO inhibitor therapy.
- Concurrent use with MAO inhibitor-like drugs, such as linezolid or methylene blue may raise risk of serotonin syndrome; concurrent use contraindicated; do not start therapy in patients receiving MAO inhibitors or within 14 days of discontinuing fluvoxamine, MAO inhibitor-like drugs (linezolid or methylene blue). Smoking may raise the effectiveness of fluvoxamine. Concurrent use with tricyclic antidepressants (TCA), antipsychotics, SNRIs, buspirone, fentanyl, disulfiram may raise plasma levels of fluvoxamine. Drugs that affect serotonergic neurotransmitter systems, including MAOIs, SNRIs, tramadol, buspi-

**PHARMACODYNAMICS**

**Pharmacology:**
- Selective serotonin reuptake inhibitors (SSRIs) inhibit the reuptake of serotonin in the CNS.
- Antidepressants, antiobsessive agents
- Obsessive-compulsive disorder (OCD)

**Therapeutic:**
- Decrease in obsessive-compulsive behaviors.

**Contraindications/Precautions**
- Contraindicated in: Sensitivity to fluvoxamine or other SSRIs, Concurrent use of MAOIs (or within 14 days of discontinuing fluvoxamine), MAOI-like drugs (linezolid or methylene blue).
- Use Cautiously in: Impaired hepatic function; Risk of suicide (may raise risk of suicide attempt/ideation especially during early treatment or dose adjustment); OB: Neonates exposed to SSRIs in third trimester may develop drug discontinuation syndrome including respiratory distress, feeding difficulty, and irritability; Lactation: Discontinue drug or bottle-feed; OB: Pregnancy Category C; Pedi: Safety not established in children >8 yr; Geri: May have depression; recommend lower initial dose and slower dosage titration.

**Adverse Reactions/Side Effects**

<table>
<thead>
<tr>
<th>System</th>
<th>Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV</td>
<td>Postural hypotension, tachycardia, vasodilation.</td>
</tr>
<tr>
<td>GU</td>
<td>Urinary urgency, frequency, nocturia.</td>
</tr>
<tr>
<td>Neuro</td>
<td>Ataxia, dizziness, drowsiness, headache, emotional lability, manic reactions, mental depression, psychotic reactions, syncope.</td>
</tr>
<tr>
<td>EENT</td>
<td>Sinusitis.</td>
</tr>
<tr>
<td>Derm</td>
<td>Libido/sexual dysfunction.</td>
</tr>
<tr>
<td>Resp</td>
<td>Cough, dyspnea, wheezing, sinusitis, hypothermia, hypoxia, dyspnea, tachycardia, cyanosis, QM, constipation, diarrhea, dry mouth, dysuria, nausea, dysphagia.</td>
</tr>
<tr>
<td>Metab</td>
<td>Weight gain, weight loss, MS, hyperkalemia, hyperglycemia, gastritis, hepatic disorders, hyperglycemia, nephrolithiasis, pancreatitis, peripheral edema, hypertension, palpitations, atrial fibrillation, hypokinesia/hyperkinesia, nausea, vomiting.</td>
</tr>
<tr>
<td>Misc</td>
<td>Allergic reactions, chills, flu-like symptoms, mouth sensitivity; recommend lower initial dose and slower dosage titration.</td>
</tr>
</tbody>
</table>

**Interactions**

**Drug-Drug:**
- Concurrent use with MAO inhibitors may result in serious, potentially fatal reactions (MAO inhibitors should be stopped at least 14 days before fluvoxamine therapy). Fluvoxamine should be stopped at least 14 days before MAO inhibitor therapy.
- Concurrent use with MAO inhibitor-like drugs, such as linezolid or methylene blue may raise risk of serotonin syndrome; concurrent use contraindicated; do not start therapy in patients receiving MAO inhibitors or within 14 days of discontinuing fluvoxamine, MAO inhibitor-like drugs (linezolid or methylene blue). Smoking may raise the effectiveness of fluvoxamine. Concurrent use with tricyclic antidepressants (TCA), antipsychotics, SNRIs, buspirone, fentanyl, disulfiram may raise plasma levels of fluvoxamine. Drugs that affect serotonergic neurotransmitter systems, including MAOIs, SNRIs, tramadol, buspi-

**PHARMACODYNAMICS**

**Pharmacology:**
- Selective serotonin reuptake inhibitors (SSRIs) inhibit the reuptake of serotonin in the CNS.
- Antidepressants, antiobsessive agents
- Obsessive-compulsive disorder (OCD)

**Therapeutic:**
- Decrease in obsessive-compulsive behaviors.

**Contraindications/Precautions**
- Contraindicated in: Sensitivity to fluvoxamine or other SSRIs, Concurrent use of MAOIs (or within 14 days of discontinuing fluvoxamine), MAOI-like drugs (linezolid or methylene blue).
- Use Cautiously in: Impaired hepatic function; Risk of suicide (may raise risk of suicide attempt/ideation especially during early treatment or dose adjustment); OB: Neonates exposed to SSRIs in third trimester may develop drug discontinuation syndrome including respiratory distress, feeding difficulty, and irritability; Lactation: Discontinue drug or bottle-feed; OB: Pregnancy Category C; Pedi: Safety not established in children >8 yr; Geri: May have depression; recommend lower initial dose and slower dosage titration.

**Adverse Reactions/Side Effects**

<table>
<thead>
<tr>
<th>System</th>
<th>Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV</td>
<td>Postural hypotension, tachycardia, vasodilation.</td>
</tr>
<tr>
<td>GU</td>
<td>Urinary urgency, frequency, nocturia.</td>
</tr>
<tr>
<td>Neuro</td>
<td>Ataxia, dizziness, drowsiness, headache, emotional lability, manic reactions, mental depression, psychotic reactions, syncope.</td>
</tr>
<tr>
<td>EENT</td>
<td>Sinusitis.</td>
</tr>
<tr>
<td>Derm</td>
<td>Libido/sexual dysfunction.</td>
</tr>
<tr>
<td>Resp</td>
<td>Cough, dyspnea, wheezing, sinusitis, hypothermia, hypoxia, dyspnea, tachycardia, cyanosis, QM, constipation, diarrhea, dry mouth, dysuria, nausea, dysphagia.</td>
</tr>
<tr>
<td>Metab</td>
<td>Weight gain, weight loss, MS, hyperkalemia, hyperglycemia, gastritis, hepatic disorders, hyperglycemia, nephrolithiasis, pancreatitis, peripheral edema, hypertension, palpitations, atrial fibrillation, hypokinesia/hyperkinesia, nausea, vomiting.</td>
</tr>
<tr>
<td>Misc</td>
<td>Allergic reactions, chills, flu-like symptoms, mouth sensitivity; recommend lower initial dose and slower dosage titration.</td>
</tr>
</tbody>
</table>

**Interactions**

**Drug-Drug:**
- Concurrent use with MAO inhibitors may result in serious, potentially fatal reactions (MAO inhibitors should be stopped at least 14 days before fluvoxamine therapy). Fluvoxamine should be stopped at least 14 days before MAO inhibitor therapy.
- Concurrent use with MAO inhibitor-like drugs, such as linezolid or methylene blue may raise risk of serotonin syndrome; concurrent use contraindicated; do not start therapy in patients receiving MAO inhibitors or within 14 days of discontinuing fluvoxamine, MAO inhibitor-like drugs (linezolid or methylene blue). Smoking may raise the effectiveness of fluvoxamine. Concurrent use with tricyclic antidepressants (TCA), antipsychotics, SNRIs, buspirone, fentanyl, disulfiram may raise plasma levels of fluvoxamine. Drugs that affect serotonergic neurotransmitter systems, including MAOIs, SNRIs, tramadol, buspi-
PO (Children 8–17 yr): Immediate release—25 mg at bedtime; may by 25 mg q 4–7 days (not to exceed 200 mg/day); controlled release—50 mg at bedtime; may by 50 mg q 4–7 days until desired effect is achieved, not to exceed 400 mg/day.

PO (Adults): Immediate release—50 mg daily at bedtime; may by 50 mg q 4–7 days (not to exceed 300 mg/day); controlled release—100 mg at bedtime; may by 50 mg q 7 days until desired effect is achieved, not to exceed 200 mg/day.

PO (Children 8–17 yr): Immediate release—25 mg at bedtime; may by 25 mg q 4–7 days (not to exceed 200 mg/day); daily doses >30 mg should be given in divided doses with a larger dose at bedtime.

Hepatic Impairment

Initial therapy is administered as a single bedtime dose. May be increased every 4–7 days as tolerated.

Fluvoxamine may be given without regard to meals. Do not open, break, crush, or chew controlled-release capsules.

Patient/Family Teaching

• Instruct patient to take fluvoxamine as directed. Do not skip or double up on missed doses. Improvement in symptoms may be noticed in 2–3 wk, but medication should be continued as directed.

• Warn patient to avoid driving and other activities requiring alertness until response to medication is known.

• Advise patient, family, and caregivers to look for suicidality, especially during early therapy or dose changes. Notify health care professional immediately if thoughts about suicide or dying, attempts to commit suicide, new or worse depression or anxiety, agitation or restlessness, panic attacks, insomnia, new or worse irritability, aggressiveness, acting on dangerous impulses, mania, or other changes in mood or behavior or of symptoms of serotonin syndrome occur.

• Advise patient to notify health care professional if rash or hives occur or if headache, nausea, anorexia, anxiety, or insomnia persists.

Assessment

• Monitor mood changes. Assess patient for frequency of obsessive-compulsive behaviors. Note degree to which these thoughts and behaviors interfere with daily functioning. Inform health care professional if patient demonstrates significant increase in anxiety, obsessions, or insomnias.

• Assess for suicidal tendencies, especially during early therapy. Restrict access to drug available to patients. Risk may be increased in children, adolescents, and adults 24 yr. After starting therapy, children, adolescents, and young adults should be seen by health care professional at least weekly for 6 wk, every 3 wk for next 6 wk, and on advice of health care professional thereafter.

• Monitor appetite and nutritional intake. Weight weekly. Report significant changes in weight. Adjust diet as tolerated to support nutritional status.

• Assess for serotonin syndrome (mental changes [agitation, hallucinations, coma], autonomic instability [tachycardia, labile BP, hyperthermia], neuromuscular abnormalities [hyperreflexia, incoordination], and/or GI symptoms [nausea, vomiting, diarrhea]), especially in patients taking other serotonergic drugs (SSRIs, SNRIs, tricyclics).

• Taper to avoid withdrawal effects. Reduce dose by 50% for 3 days, then reduce by 50% for 5 days, then discontinue.

• PO: Initial therapy is administered as a single bedtime dose. May be increased every 4–7 days as tolerated.

• Fluvoxamine may be given without regard to meals. Do not open, break, crush, or chew controlled-release capsules.

Potential Nursing Diagnoses

Ineffective coping (Distress)

Risk for injury (Side Effects)

NURSING IMPLICATIONS

Drug-Natural Products:

• Use with aspirin, clopidogrel, proton pump inhibitors, and benzodiazepines (avoid concurrent use), some beta blockers (propranolol), disulfiram, lithium, methadone, or tricyclics. Risk of bleeding with NSAIDs, aspirin, clozapine, or warfarin.

• Blood levels and risk of toxicity from chlordiazepoxide (dosage adjustments may be necessary).

ROUTE/DOSAGE

PO (Adults): Immediate release—50 mg daily at bedtime; may by 50 mg q 4–7 days until desired effect is achieved. If daily dose not exceeded 100 mg/day, give in two equally divided doses or give a larger dose at bedtime (not to exceed 100 mg/day). Controlled release—100 mg at bedtime; may by 50 mg q 7 days until desired effect is achieved, not to exceed 200 mg/day.

PO (Children 8–17 yr): Immediate release—25 mg at bedtime; may by 25 mg q 4–7 days (not to exceed 200 mg/day); daily doses >30 mg should be given in divided doses with a larger dose at bedtime.

Benzodiazepines

● May cause drowsiness and dizziness. Caution patient to avoid driving and other activities requiring alertness until response to medication is known.

● Instruct patient to take fluvoxamine as directed. Do not skip or double up on missed doses. Improvement in symptoms may be noticed in 2–3 wk, but medication should be continued as directed.

● Warn patient to avoid driving and other activities requiring alertness until response to medication is known.

● Advise patient, family, and caregivers to look for suicidality, especially during early therapy or dose changes. Notify health care professional immediately if thoughts about suicide or dying, attempts to commit suicide, new or worse depression or anxiety, agitation or restlessness, panic attacks, insomnia, new or worse irritability, aggressiveness, acting on dangerous impulses, mania, or other changes in mood or behavior or of symptoms of serotonin syndrome occur.

● Advise patient to notify health care professional if rash or hives occur or if headache, nausea, anorexia, anxiety, or insomnia persists.
Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications, especially St. John’s Wort. Advise patient to avoid taking other CNS depressants or alcohol.

Advise patient to avoid use of caffeine (chocolate, tea, cola).

Instruct female patients to notify health care professional if breast feeding or if pregnancy is planned or suspected.

Emphasize the importance of follow-up exams to monitor progress.

Evaluation/Desired Outcomes

Decrease in symptoms of obsessive-compulsive disorder.

Why was this drug prescribed for your patient?