domperidone (dom-per-i-done)

**Classification**
Therapeutic: gastric stimulant.
Pharmacologic: butyrophenones, dopamine antagonists.

**Indications**
Management of symptoms associated with GI motility disorders including subacute/chronic gastritis and diabetic gastroparesis. Treatment of nausea/vomiting associated with dopamine agonist antiparkinson therapy. *Unlabeled Use:* To stimulate lactation.

**Action**
Acts as a peripheral dopamine receptor blocker. Increases GI motility, peristalsis and lower esophageal sphincter pressure. Facilitates gastric emptying and decreases small bowel transit time. Also increases prolactin levels.

**Pharmacokinetics**
Absorption: Well absorbed following oral administration.
Distribution: Does not cross the blood-brain barrier; enters breast milk in low concentrations.
Metabolism and Excretion: Undergoes extensive first-pass hepatic metabolism, reaching the CYP3A4 enzyme system; 31% excreted in urine; 66% in feces.
Half-life: 7 hr.

**Contraindications/Precautions**
Contraindicated in: Known hypersensitivity/intolerance; Concurrent use of ketoconazole; Prolactinoma; Conditions where GI stimulation is dangerous including GI hemorrhage/mechanical obstruction/perforation; *Lactation:* Breast feeding is not recommended unless potential benefits outweigh potential risks.
Use Caution in: History of breast cancer; Hepatic impairment; Severe renal impairment (dose adjustment may be necessary during chronic therapy); *PEA:* Use only if expected benefit outweighs potential hazard; *Pedi:* Safe and effective use in children has not been established.

**Adverse Reactions/Side Effects**

**Interactions**
Drug-Drug: Ketoconazole*†* Blood levels and the risk of cardiovascular toxicity and is contraindicated; other azole antifungals, macrolide anti-infectives and protease inhibitors may have similar effects. Risk of adverse cardiovascular reactions may be increased by concurrent use of drugs known to prolong the QT interval including other anti-arrhythmics, some fluoroquinolones, antipsychotics, beta-2 adrenergic agonists, antimalarials, SSRIs, tri/tetracyclic antidepressants and nefazodone and should be undertaken cautiously, especially if other risk factors for torsade de pointes exist. Effectiveness may be increased by concurrent use of anti-arrhythmics. Due to effects on gastric motility, absorption of drugs from the small intestine may be accelerated, while absorption of drugs from the stomach may be slowed especially sustained-release or enterico-coated formulations. Concurrent use with MAOIs should be undertaken with caution.
Drug-Food: Grapefruit juice*†* May increase blood levels.

**Route/Dosage**
PO (Adults): Upper GI motility disorders—10 mg three to four times daily; may be increased to 20 mg three to four times daily. Nausea/vomiting due to dopamine agonist antiparkinson agents—20 mg three to four times daily. Highest doses may be required during dose titration.

**TIME/ACTION PROFILE**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>unk</td>
<td>30 min</td>
<td>blood levels</td>
</tr>
<tr>
<td></td>
<td>6–8 hr</td>
<td></td>
<td>6–8 hr</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**
Contraindicated in: Known hypersensitivity/intolerance; Concurrent use of ketoconazole; Prolactinoma; Conditions where GI stimulation is dangerous including GI hemorrhage/mechanical obstruction/perforation; *Lactation:* Breast feeding is not recommended unless potential benefits outweigh potential risks.
Use Caution in: History of breast cancer; Hepatic impairment; Severe renal impairment (dose adjustment may be necessary during chronic therapy); *PEA:* Use only if expected benefit outweighs potential hazard; *Pedi:* Safe and effective use in children has not been established.

**Adverse Reactions/Side Effects**

**Interactions**
Drug-Drug: Ketoconazole*†* Blood levels and the risk of cardiovascular toxicity and is contraindicated; other azole antifungals, macrolide anti-infectives and protease inhibitors may have similar effects. Risk of adverse cardiovascular reactions may be increased by concurrent use of drugs known to prolong the QT interval including other anti-arrhythmics, some fluoroquinolones, antipsychotics, beta-2 adrenergic agonists, antimalarials, SSRIs, tri/tetracyclic antidepressants and nefazodone and should be undertaken cautiously, especially if other risk factors for torsade de pointes exist. Effectiveness may be increased by concurrent use of anti-arrhythmics. Due to effects on gastric motility, absorption of drugs from the small intestine may be accelerated, while absorption of drugs from the stomach may be slowed especially sustained-release or enterico-coated formulations. Concurrent use with MAOIs should be undertaken with caution.
Drug-Food: Grapefruit juice*†* May increase blood levels.
Renal Impairment

**PO (Adults):** Depending on degree of impairment, dosing during chronic therapy should be reduced to once or twice daily.

**NURSING IMPLICATIONS**

**Assessment**
- Assess for nausea, vomiting, abdominal distention, and bowel sounds before and after administration.
- Monitor BP (sitting, standing, lying down) and pulse before and periodically during therapy. May cause prolonged QT interval, tachycardia, and orthostatic hypotension, especially in patients older than 60 years or taking 30 mg/day.
- Monitor for symptoms related to hyperprolactinemia (neurological abnormalities, galactorrhea, sexual dysfunction).
- **Lab Test Considerations:** May cause serum ALT, AST, and cholesterol.
- Monitor serum prolactin prior to and periodically during therapy. May cause serum prolactin levels.

**Potential Nursing Diagnoses**
- Imbalanced nutrition: less than body requirements
- Risk for injury (side effects)

**Implementation**
- Use lowest effective dose.
- Administer 3–4 times daily, 15–30 min before meals and at bedtime.

**Patient/Family Teaching**
- Instruct patient to take as directed. Advise patient to avoid grapefruit juice during therapy.
- Advise patient to notify health care professional of galactorrhea (excessive or spontaneous flow of breast milk), gynecomastia (excessive development of male mammary gland), menstrual irregularities (spotting or delayed periods), palpitations, irregular heart beat (arrhythmia), dizziness, or fainting occur.
- Advise female patient to notify health care professional if pregnancy is planned or suspected or if breast feeding.