bromocriptine (brom-o-krip-teen)
Cycloset, Parlodel

Classification
Therapeutic: antiparkinson agents, antidiabetics
Pharmacologic: dopamine agonists

Pregnancy Category B

Indications
Parkinsonism (as adjunct to levodopa) (Parlodel only). Hyperprolactinemia (amenorrhea/galactorrhea), including associated female infertility (Parlodel only). Prolactin-secreting adenomas (Parlodel only). Acromegaly (Parlodel only). Type 2 diabetes (as adjunct to diet and exercise) (Cycloset only).

Unlabeled Use: Neuroleptic malignant syndrome.

Action
Activates dopamine receptors in the CNS. Decreases prolactin secretion.

Therapeutic Effects:

Pharmacokinetics
Absorption: Parlodel is poorly absorbed (30%) from the GI tract; 65–95% of Cycloset dose is absorbed (undergoes extensive first-pass metabolism; only 7% of dose reaches systemic circulation).

Distribution: 90–96% protein bound.

Metabolism and Excretion: Completely metabolized by the liver (metabolized by CYP3A4); primarily excreted in bile (2–6% excreted unchanged in urine).

Half-life: Biphasic—initial phase 4–4.5 hr, terminal phase 8–20 hr.

TIME/ACTION PROFILE (suppression of various parameters)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
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<tbody>
<tr>
<td>PO†</td>
<td>30–90min</td>
<td>1–2hr</td>
<td>8–12hr</td>
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<tr>
<td>PO‡</td>
<td>2 hr</td>
<td>8 hr</td>
<td>24 hr</td>
</tr>
<tr>
<td>PO§</td>
<td>1–2hr</td>
<td>4–8wk</td>
<td>4–8hr</td>
</tr>
<tr>
<td>PO‡‡</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
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</tbody>
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†Effect on parkinsonian symptoms
‡Effect on serum prolactin levels
§Effect on growth hormone
‡‡Effect on blood glucose levels

Contraindications/Precautions
Contraindicated in:
Hypersensitivity to bromocriptine, ergot alkaloids, or bisulfites; Severe cardiovascular disease or peripheral vascular disease; History of syncope with ergot derivatives († risk of syncope) (Cycloset only); Lactation; Concurrent use of dopamine agonists (e.g., clonidine, olanzapine, ziprasidone) or other dopamine agonists (e.g., ropinirole); Type 1 diabetes (Cycloset only); Diabetic ketoacidosis (Cycloset only).

Use Cautiously in:
Cardiac disease; Mental disturbances; May restore fertility (additional contraception may be required if pregnancy is undesirable); Hepatic impairment; Concurrent antihypertensive therapy (‡ risk of hypotension); OB, Pedi: Safety not established.

Adverse Reactions/Side Effects
CNS: dizziness, drowsiness, confusion, hallucinations, headache, insomnia, nightmares, agitation, anxiety, depression.

EENT: burning eyes, nasal stuffiness, visual disturbances.

Resp: PULMONARY FIBROSIS, effusions, pulmonary infiltrates.

CV: MI, orthostatic hypotension.

GI: nausea, abdominal pain, anorexia, dry mouth, metallic taste, vomiting.

Derm: melanoma, urticaria.

MS: leg cramps.

Misc: digital vasospasm (acromegaly only).

Interactions
Drug-Drug: additive hypotension with antihypertensives. Additive CNS depression with antihistamines, alcohol, opioid analgesics, and sedatives/hypnotics. Additive neurologic effects with levodopa. Effects may be antagonized by phenothiazines, haloperidol, clonidine, olanzapine, aripiprazole, and aripiprazole.

Canadian drug name.
Genetic Implication. CAPI TALS indicate l ife-threatening, u nderlines indicate most frequent. Strikethrough Discontinued.
**Route/Dosage**

**Parkinsonism**
PO (Adults): 1.25 mg 1–2 times daily, by 2.5 mg/day in 2–4 wk intervals (range is 2.5–100 mg/day in divided doses, up to 60 mg/day have been used).

**Hyperprolactinemia**
PO (Adults): 1.25–2.5 mg/day initially, may be gradually increased q 3–7 days up to 2.5 mg 2–3 times daily.

**Acromegaly**
PO (Adults): 1.25–2.5 mg/day for 3 days, by 1.25–2.5 mg/q 3–7 days until optimal response is obtained (usual range 0.1–30 mg/day, up to 100 mg/day).

**Pituitary Adenomas**
PO (Adults): 1.25 mg 2–3 times daily, may be increased q 3–7 days (range 2.5–20 mg/day).

**Type 2 Diabetes (Cycloset only)**
PO (Adults): 0.8 mg once daily (within 2 hr of arising in morning), may be increased to 0.8 mg/q 7 days (range 1.6–4.8 mg/day).

**Neuroleptic Malignant Syndrome (Unlabeled)**
PO (Adults): 5 mg once daily initially, dose increased as required up to 20 mg/day.

**NURSING IMPLICATIONS**

**Assessment**
- Assess patient for allergies to ergot derivatives.
- Monitor BP before and frequently during drug therapy. Urinary patients to remain supine during and for several hours after 1st dose; severe hypotension may occur. Superimposed anaphylaxis and transfer during initial dosing to prevent injury from hypotension.

**Potential Nursing Diagnoses**
- Impaired physical mobility (Indications)
- Risk for injury (Indications) (Side Effects)

**Implementation**
- This medication is often given concurrently with levodopa or a levodopa-carbidopa combination in the treatment of Parkinson’s disease.
- PO: Administer with food or milk to minimize gastric distress. Tablets may be crushed if patient has difficulty swallowing. Taking at bedtime may decrease nausea.

**Type 2 Diabetes:** Take with food within 2 hr of waking in the morning.
CONTINUED
bromocriptine

Patient/Family Teaching

- Instruct patient to take medication as directed. Take missed doses within 4 hr of the scheduled dose or omit. Do not double doses. Advise patient to read the Patient Package Insert before taking and with each Rx refill, in case of changes.
- May cause drowsiness and dizziness. Caution patients to avoid driving and other activities requiring alertness until response to medication is known.
- Caution patient to change positions slowly to minimize orthostatic hypotension. Health care professional should be notified if orthostatic hypotension occurs.
- Caution patient to avoid concurrent use of alcohol during the course of therapy.
- Instruct patient to inform health care professional immediately if signs of MI (severe chest pain, fainting, fast heartbeat, increased sweating, continuing or severe nausea and vomiting, nervousness, shortness of breath, weakness) or increasing shortness of breath is noted; pulmonary infiltrates and pleural effusions may occur with long-term therapy.
- Advise patient to read the Patient Package Insert before taking and with each Rx refill, in case of changes.
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Evaluation/Desired Outcomes

- Decrease in tremor, rigidity, and bradykinesia.
- Improvement in balance and gait in patients with Parkinson’s disease.
- Decrease in galactorrhea in patients with hyperprolactinemia.
- Improvement of normal ovulatory menstrual cycles with restoration of fertility (in patients with amenorrhea and galactorrhea, menses usually resume within 6–8 wk, and galactorrhea subsides within 6–12 wk).
- Decrease in serum levels of growth hormone in patients with acromegaly.
- Decrease in the symptoms of neuroleptic malignant syndrome.
- Lowering of blood sugar in diabetic patients.

Why was this drug prescribed for your patient?