**Modafinil**

**(m-o-daf-i-nil)**

*Alert:* Provigil

**Classification**

Therapeutic: central nervous system stimulants

**Pregnancy Category C**

**Indications**

To improve wakefulness in patients with excessive daytime drowsiness due to narcolepsy, obstructive sleep apnea, or shift work sleep disorder.

**Action**

Produces CNS stimulation. **Therapeutic Effects:** Decreased daytime drowsiness in patients with narcolepsy and obstructive sleep apnea. Decreased drowsiness during work in patients with shift work sleep disorder.

**Pharmacokinetics**

**Absorption:** Rapidly absorbed; bioavailability unknown.

**Distribution:** Well distributed; moderately (60%) bound to plasma proteins.

**Metabolism and Excretion:** Highly (90%) metabolized by the liver; 10% eliminated unchanged.

**Half-life:** 15 hr.

**TIME/ACTION PROFILE (blood levels)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>rapid</td>
<td>2–4 hr</td>
<td>24 hr</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

**Contraindicated in:** Hypersensitivity; History of left ventricular hypertrophy or ischemic ECG changes, chest pain, arrhythmia, or other significant manifestations of mitral valve prolapse in association with CNS stimulant use.

**Use Cautiously in:** History of MI or unstable angina; Severe hepatic impairment with or without cirrhosis (dosage recommended); Concurrent use of MAO inhibitors; OB, Lactation, Pedi: Safety not established; Geri: Lower doses may be necessary due to Q sensitivity to drug effects.

**Adverse Reactions/Side Effects**

**CNS:** Suicidal ideation, headache, aggression, amnesia, anxiety, agitation, confusion, delusions, hallucinations, insomnia, mania, nervousness, seizures. **EENT:** Rhinitis, abnormal vision, amblyopia, epistaxis, paresthesia. **Resp:** Dyspnea, lung disorder. **CV:** Arrhythmias, chest pain, hypertension, hypotension, syncope, vasodilation. **GI:** Diarrhea, anorexia, diaphoresis, gingivitis, mouth ulcers, thirst, vomiting. **GU:** Dysuria, albuminuria. **Derm:** Stevens-Johnson syndrome, dry skin, hyperpigmentation. **Endo:** Hyperglycemia. **Hemat:** Neutropenia. **MS:** Joint disorder, neck pain. **Neuro:** Ataxia, dysarthria, hypertonia, parosmia, tremor. **Misc:** Infection.

**Interactions**

**Drug-Drug:** May **p** the metabolism and **q** the effects of diazepam, phenytoin, propranolol, or tricyclic antidepressants (dosage adjustments may be necessary). May **q** the metabolism and **p** the effects of hormonal contraceptives, cyclosporine, and theophylline (dosage adjustments or additional methods of contraception may be necessary).

**Drug-Natural Products:** Use with caffeine-containing herbs (cola nut, guarana, mate, tea, coffee) may **q** stimulant effect.

**Route/Dosage**

**PO (Adults):** 200 mg/day as a single dose.

**Hepatic Impairment**

**PO (Adults):** Severe hepatic impairment—100 mg/day as a single dose.

**NURSING IMPLICATIONS**

**Assessment**

- Observe and document frequency of narcoleptic episodes.
- Monitor closely for changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression.
- Assess for liver periodically during therapy. May cause elevated liver enzymes.
- Monitor for signs and symptoms of angioedema or anaphylaxis (rash, swelling of face, eyes, lips, tongue or larynx; difficulty in swallowing or breathing; hoarseness).
- **Lab Test Considerations:** May cause elevated liver enzymes.

**Contraindications/Precautions**

- Use with caution in children due to risk of behavior or mood changes.
- **Adverse Reactions/Side Effects**
- **CNS:** Headache, aggression, anxiety, agitation, confusion, delusions, hallucinations, insomnia, mania, nervousness, seizures. **EENT:** Rhinitis, abnormal vision, amblyopia, epistaxis, paresthesia. **Resp:** Dyspnea, lung disorder. **CV:** Arrhythmias, chest pain, hypertension, hypotension, syncope, vasodilation. **GI:** Diarrhea, anorexia, diaphoresis, gingivitis, mouth ulcers, thirst, vomiting. **GU:** Dysuria, albuminuria. **Derm:** Stevens-Johnson syndrome, dry skin, hyperpigmentation. **Endo:** Hyperglycemia. **Hemat:** Neutropenia. **MS:** Joint disorder, neck pain. **Neuro:** Ataxia, dysarthria, hypertonia, parosmia, tremor. **Misc:** Infection.
Potential Nursing Diagnoses

Disturbed thought process (Side Effects)

Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation

- PO: Administer as a single dose in the morning for patients with narcolepsy or obstructive sleep apnea. Administer 1 hour before the start of work shift for patients with shift work sleep disorder.

Patient/Family Teaching

- Instruct patient to take medication as directed. Advise patient to read the Medication Guide prior to starting therapy and with each Rx refill, in case of changes.
- Medication may impair judgment. Advise patient to use caution when driving or during other activities requiring alertness.
- Encourage patient and family to be alert for emergence of anxiety, agitation, panic attacks, insomnia, irritability, hostility, hypomania, mania, worsening of depression and suicidal ideation, especially during early antidepressant therapy. Assess symptoms on a day-to-day basis as changes may be abrupt. If these symptoms occur, notify health care professional.
- Advise patient to notify health care professional immediately if rash or symptoms of anaphylaxis occur.
- Advise patient to notify health care professional if symptoms suggestive of a lupus-like syndrome occur.
- Advise patient to notify health care professional if rash or symptoms of anaphylaxis occur.
- 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.
- If alcohol is used during therapy, intake should be limited to moderate amounts.
- Nonhormonal methods of contraception should be used during and for 1 mo following discontinuation of therapy. Instruct patient to notify health care professional promptly if pregnancy is planned or suspected or if breast feeding.

Evaluation/Desired Outcomes

- Decrease in narcoleptic symptoms and an enhanced ability to stay awake.
- Decrease in narcoleptic symptoms and an enhanced ability to stay awake.

Why was this drug prescribed for your patient?