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## MODAFINIL (Provigil) Fact Sheet [G]

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### Bottom Line:

While modafinil can be helpful for many causes of excessive sleepiness, realize that many people end up using it off-label for lifestyle enhancement, such as working, studying, and partying.

### FDA Indications:

**Excessive sleepiness associated with obstructive sleep apnea, narcolepsy, or shift-work sleep disorder.**

### Off-Label Uses:

ADHD; fatigue; treatment-resistant depression.

### Dosage Forms:

**Tablets (G):** 100 mg, 200 mg.

### Dosage Guidance:

- Obstructive sleep apnea or narcolepsy: 100–400 mg QAM (usually 200 mg QAM).
- Shift-work sleep disorder: 100–400 mg QD (usually 200 mg QAM), one hour before start of work shift.
- ADHD (off-label): 100–400 mg QAM.
- Treatment-resistant depression, bipolar or unipolar (off-label): 100–400 mg QAM added to antidepressant.

**Monitoring:** No routine monitoring recommended unless clinical picture warrants.

**Cost:** \$

### Side Effects:

- Most common: Increased heart rate and blood pressure, headache, nausea, jitteriness, rhinitis, diarrhea, back pain, and insomnia.
- Serious but rare: Serious rash, including Stevens-Johnson syndrome, multi-organ hypersensitivity reaction, angioedema, and anaphylaxis reported rarely. Rare cases of mania, psychosis, and agitation reported.
- Pregnancy/breastfeeding: Risk for major malformations, not recommended in pregnancy; not enough data in breastfeeding to recommend.

### Mechanism, Pharmacokinetics, and Drug Interactions:

- Dopamine reuptake inhibitor.
- Metabolized primarily by non-CYP450 liver pathways, but also to some degree by CYP3A4;  $t_{1/2}$ : 15 hours.
- Duration of action about six hours.
- Potentially induces CYP1A2 and 3A4 and inhibits 2C19. Avoid concomitant use with steroidal contraceptives (hormone levels may be decreased due to 3A4 induction) and with CYP2C9/19 substrates (eg, omeprazole, phenytoin, diazepam); levels of these medications may be increased.

### Clinical Pearls:

- Schedule IV controlled substance.
- Increased heart rate and blood pressure may occur, particularly in patients who don't suffer from excessive sedation or fatigue and at higher doses.

### Fun Fact:

An ADHD indication was rejected by the FDA because of modafinil's possible association with Stevens-Johnson syndrome.