

# The Carlat Psychiatry Report

## VIAGRA (sildenafil) Fact Sheet

**Manufacturer:** Pfizer; patent expiration 2012

**Indications:**

- Erectile dysfunction

**Mechanism:** Inhibits the enzyme phosphodiesterase type 5 (PDE5), enhancing the effects of nitric oxide (NO) in initiating and maintaining erection by keeping muscles of the corpus cavernosum relaxed, thereby increasing blood flow into the penis.

**Dosing:**

- Supplied as 25 mg, 50 mg, and 100 mg blue tablets (breakable).
- Manufacturer recommends starting at 50 mg about one hour before sexual activity.
- Many physicians start patients at 25 mg and have them increase to 50 mg if the lower dose is ineffective. In fixed dose studies, 25 mg is almost as effective as higher doses.
- Maximum plasma concentration 30 minutes to 2 hours after ingestion. But if taken after a “high fat meal,” absorption is delayed by an hour, and peak plasma levels are decreased by 30%.
- In patients over 65, and in patients with hepatic impairment or severe renal insufficiency, starting dose should be no higher than 25 mg.

**Side effects:**

- Common: Headache, flushing, dyspepsia, nasal congestion, abnormal vision, diarrhea. Priapism very rare.
- Cardiovascular issues: Princeton Consensus Panel concluded PDE5 inhibitors are safe for patients with controlled hypertension; mild, stable angina; history of MI; mild valvular disease. Should not be given to patients with more severe cardiovascular disease.

**Drug-drug interactions:**

- Contraindicated in combination with nitrate drugs, because it potentiates the hypotensive effect. The most commonly prescribed nitrates are sublingual nitroglycerin and Isordil (isosorbide). Can be safely combined with any non-nitrate antihypertensive.
- Use with caution in combination with alpha-blockers, such as doxazosin (used for benign prostatic hypertrophy).
- Metabolized by the CYP3A4 enzyme system, so CYP3A4 inhibitors such as cimetidine and erythromycin increase blood levels.
- Viagra does not affect blood levels of other drugs.

**Pharmacokinetics:** Half-life is 4 hours. Duration of action about 6 hours.

**Pearls:** To save money, prescribe 100 mg tablets and have patients split them in half or in quarters as needed. Patients may find Viagra more tolerable if they have available: Tylenol for headache, Sudafed for nasal congestion, and Pepto-bismol for GI distress.