

# The Carlat Psychiatry Report

## CIALIS (tadalafil) Fact Sheet

**Manufacturers:** Lilly/ICOS

**Indications:**

- Erectile dysfunction.

**Mechanism:** Inhibits the enzyme phosphodiesterase type 5 (PDE5), enhancing the effects of nitric oxide (NO), which initiates and maintains erection by keeping muscles of the corpus cavernosum relaxed, thereby increasing blood flow into the penis. Unlike Viagra and Levitra, has little effect on PDE6 (thus no visual side effects), but does have an effect on PDE11 (causing backache in some patients).

**Dosing:**

- Supplied as 5 mg, 10 mg, and 20 mg almond-shaped tablets (breakable).
- Manufacturer recommends starting at 10 mg prior to sexual activity.
- Many physicians start patients at 5 mg and increase to 10 mg if the lower dose is ineffective.
- Maximum plasma concentration is reached about 2 hours after ingestion. No impairment in absorption if taken after a meal.
- In patients with moderate renal insufficiency, starting dose is 5 mg; in patients with mild-to-moderate hepatic impairment, dose should not exceed 10 mg.

**Side effects:**

- Common: Headache, dyspepsia, back pain, myalgia, nasal congestion, flushing. Flushing may be less common than with Viagra and Levitra. 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.
- Cialis does not affect blood levels of other drugs.

**Pharmacokinetics:** Half-life is 17 hours. Duration of action 36 hours.

**Pearls:** Relative to other drugs in class, long duration of action improves spontaneity, and the lack of interaction with meals is a convenience advantage.