

# BUPROPION (Wellbutrin, others) Fact Sheet [G]

## Bottom Line:

May be particularly useful for individuals whose depression is associated with fatigue and poor concentration. Absence of sexual side effects and weight gain make this an appealing option for many depressed patients. Although not effective for anxiety disorders, it is effective for the anxiety that often accompanies depression. The seizure risk is not a concern for most patients when dosed appropriately.

## FDA Indications:

**Major depression; seasonal affective disorder; smoking cessation** (as Zyban).

## Off-Label Uses:

ADHD; sexual dysfunction; bipolar depression.

## Dosage Forms:

- **Tablets (G):** 75 mg, 100 mg.
- **SR tablets (G):** 100 mg, 150 mg, 200 mg.
- **ER tablets (G):** 150 mg, 300 mg; **Forfivo XL:** 450 mg.
- **ER tablets, hydrobromide salt formulation (Aplenzin):** 174 mg, 348 mg, 522 mg (equivalent to 150 mg, 300 mg, 450 mg, respectively).

## Dosage Guidance:

- General comment: Timing of the dose can be tricky, because taking too much at once increases seizure risk (the risk increases from 300 mg on up). But splitting the dose BID can cause insomnia. For this reason, some clinicians choose to start all patients on the ER formulation, which is released slowly and minimizes peak serum levels—single doses of up to 450 mg are safe.
  - IR: Start 100 mg BID, ↑ to 100 mg TID after >3 days; max dose 450 mg/day, 150 mg/dose; separate doses by at least six hours to minimize seizure risk.
  - SR: Start 150 mg QAM, ↑ to 150 mg BID (usual target dose) as early as fourth day; max dose 400 mg/day, 200 mg/dose; separate doses by at least eight hours to minimize seizure risk.
  - ER: Start 150 mg QAM, ↑ to 300 mg QAM as early as fourth day; max dose 450 mg QAM.
- Seasonal affective disorder: Start 150 mg XR QAM, ↑ to 300 mg XR QAM after seven days (fall through spring). Taper to 150 mg XR QAM for two weeks to discontinue.
- Smoking cessation: Start 150 mg SR QAM for three days, ↑ to 150 mg BID for seven to 12 weeks. Stop smoking after five to seven days of treatment.

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

**Cost:** IR/SR/ER: \$; Forfivo: \$\$\$; Aplenzin: \$\$\$\$

## Side Effects:

- Most common: Agitation, insomnia, headache, nausea, vomiting, tremor, tachycardia, dry mouth, weight loss.
- Serious but rare: Seizures; risk higher with rapid and large dose increases and in patients at risk for seizures, including those with a seizure history and patients with eating disorders (mainly those with purging-type bulimia). Risk of seizure depends on dose and formulation: IR: 300–450 mg/day (0.4%) vs 450–600 mg/day (4%). SR/ER: 100–300 mg/day (0.1%) vs 400 mg/day (0.4%).
- Pregnancy/breastfeeding: Considered relatively safe.

## Mechanism, Pharmacokinetics, and Drug Interactions:

- Dopamine and norepinephrine receptor uptake inhibitor.
- Metabolized primarily through CYP2B6; inhibits CYP2D6;  $t_{1/2}$ : 21 hours.
- Avoid use with MAOIs.

## Clinical Pearls:

- Before prescribing bupropion, ask patients if they've ever had a seizure or if they've had bulimia—both of which are relative contraindications.
- Forfivo XL offers ease of use (one pill a day) for patients taking 450 mg/day, but it is more expensive.
- Aplenzin brand could also be a one-pill-a-day solution (the 522 mg is equivalent to 450 mg Wellbutrin) but otherwise doesn't offer any real clinical advantage as a different salt (hydrobromide) formulation.
- Give ER dose as early in the morning as possible to minimize insomnia.
- Bupropion can cause false-positive urine test results for amphetamines.

## Not-So-Fun Fact:

There have been case reports of teenagers, prisoners, and others snorting crushed tablets of bupropion (believing it to be a stimulant), with subsequent seizures.