

Selected adverse effects of antipsychotic medications for schizophrenia

| | Weight gain/diabetes mellitus | Hyper-cholesterolemia | EPS/TD | Prolactin elevation | Sedation | Anticholinergic side effects | Orthostatic hypotension | QTc prolongation |
|---------------------------------|-------------------------------|-----------------------|--------|---------------------|----------|------------------------------|-------------------------|------------------|
| First generation agents | | | | | | | | |
| Chlorpromazine | +++ | +++ | + | ++ | +++ | +++ | +++ | + |
| Fluphenazine | + | + | +++ | +++ | + | -/+ | - | ND |
| Haloperidol | + | + | +++ | +++ | ++ | -/+ | - | + |
| Loxapine | ++ | ND | ++ | ++ | ++ | + | + | + |
| Perphenazine | ++ | ND | ++ | ++ | ++ | + | - | ND |
| Pimozide | + | ND | +++ | ++ | + | + | + | ++ |
| Thioridazine* | ++ | ND | + | +++ | +++ | ++++ | ++++ | +++ |
| Thiothixene | ++ | ND | +++ | ++ | + | + | + | + |
| Trifluoperazine | ++ | ND | +++ | ++ | + | + | + | ND |
| Second generation agents | | | | | | | | |
| Aripiprazole | + | - | + | - | + | - | - | -/+ |
| Asenapine | ++ | - | ++ | ++ | ++ | - | + | + |
| Brexpiprazole [¶] | + | + | + | -/+ | + | -/+ | -/+ | -/+ |
| Cariprazine [¶] | + | -/+ | ++ | -/+ | + | -/+ | -/+ | -/+ |
| Clozapine ^Δ | ++++ | ++++ | -/+ | -/+ | +++ | +++ | +++ | + |
| Iloperidone | ++ | ++ | -/+ | -/+ | + | + | +++ | ++ |
| Lurasidone | -/+ | - | ++ | -/+ | ++ | - | + | -/+ |
| Olanzapine | ++++ | ++++ | + | + | ++ | ++ | + | + |
| Paliperidone | +++ | + | +++ | +++ | + | - | ++ | + |
| Quetiapine | +++ | +++ | -/+ | -/+ | ++ | ++ | ++ | + |
| Risperidone | +++ | + | +++ | +++ | + | + | + | + |
| Ziprasidone | -/+ | -/+ | + | + | + | - | + | ++ |

Adverse effects may be dose dependent.

EPS: extrapyramidal symptoms; TD: tardive dyskinesia; ND: no data.

* Thioridazine is also associated with dose-dependent retinitis pigmentosa. Refer to text.

¶ Based upon limited experience.

Δ Clozapine also causes granulocytopenia or agranulocytosis in approximately 1 percent of patients requiring regular blood cell count monitoring. Clozapine has been associated with excess risk of myocarditis and venous thromboembolic events including fatal pulmonary embolism. These issues are addressed in the UpToDate topic review of guidelines for prescribing clozapine section on adverse effects.

References:

1. Lexicomp Online. Copyright © 1978-2016 Lexicomp, Inc. All Rights Reserved.
2. The Medical Letter on Drugs and Therapeutics (April 2016); Some Relative Adverse Effects of Second-Generation Antipsychotics (table 3); Vol. 58 (1493):52. www.medicalletter.org.
3. Rummel-Kluge C, et al. Head-to-head comparisons of metabolic side effects of second generation antipsychotics in the treatment of schizophrenia: a systematic review and meta-analysis. *Schizophr Res* 2010; 123:225.
4. Durán CE, Azermai M, Vander Stichele RH. Systematic review of anticholinergic risk scales in older adults. *Eur J Clin Pharmacol* 2013; 69:1485.

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