

Drugs that can Cause Delirium (anticholinergic / toxic metabolites)

Deliriant (drugs causing delirium)

Prescription drugs

- Central acting agents
 - Sedative hypnotics (e.g., benzodiazepines)
 - Anticonvulsants (e.g., barbiturates)
 - Antiparkinsonian agents (e.g., benztropine, trihexyphenidyl)
- Analgesics
 - Narcotics (NB. meperidine*)
 - Non-steroidal anti-inflammatory drugs*
- Antihistamines (first generation, e.g., hydroxyzine)
- Gastrointestinal agents
 - Antispasmodics
 - H2-blockers*
- Antinauseants
 - Scopolamine
 - Dimenhydrinate
- Antibiotics
 - Fluoroquinolones*
- Psychotropic medications
 - Tricyclic antidepressants
 - Lithium*
- Cardiac medications
 - Antiarrhythmics
 - Digitalis*
 - Antihypertensives (b-blockers, methyldopa)
- Miscellaneous
 - Skeletal muscle relaxants
 - Steroids

Over the counter medications and complementary/alternative medications

- Antihistamines (NB. first generation)
 - diphenhydramine, chlorpheniramine).
- Antinauseants
 - dimenhydrinate, scopolamine
- Liquid medications containing alcohol
- Mandrake
- Henbane
- Jimson weed
- Atropa belladonna extract

* Requires adjustment in renal impairment.

From: K Alagiakrishnan, C A Wiens. (2004). An approach to drug induced delirium in the elderly. *Postgrad Med J*, 80, 388–393.

**Some commonly used medications
with moderate to high anticholinergic properties
and alternative suggestions**

| Type of medication | Alternatives with less deliriogenic risk |
|--|---|
| Antidepressant (e.g., TCA, tertiary) | Trazodone, SSRI, TCA (secondary amine) |
| Antihistamine (e.g., diphenhydramine) | Second generation antihistamine (e.g., loratadine) |
| Antiparkinsonian (e.g., benztropine, trihexyphenidyl) | Levodopa |
| Gastrointestinal agents, e.g., (A) Cimetidine, ranitidine (B) Dimenhydrinate | Proton pump inhibitor |
| Antispasmodic (e.g., oxybutynin) | Domperidone Tolterodine |
| Low potency antipsychotic (e.g., chlorpromazine, thioridazine) | Haloperidol, atypical antipsychotic |
| SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant. | |

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Symptoms of an anticholinergic drug reaction

| Physical Symptoms | Cognitive Symptoms |
|--|---|
| <ul style="list-style-type: none">▪ Blurred vision▪ Hot, dry skin / dehydration▪ Dry mouth▪ Shortness of breath▪ Dilated pupils▪ Increased heart rate▪ Increased / decreased psychomotor activity▪ Anorexia▪ Urinary incontinence▪ Hyperpyrexia | <ul style="list-style-type: none">▪ Confusion / clouding of consciousness▪ Memory impairment▪ Visual hallucinations▪ Sensory illusions▪ Disturbance in sleep-wake cycle▪ Disorientation, especially to time and place▪ Incoherent speech▪ Anxiety, agitation, excitement |