

## Medications that cause hyperprolactinemia

### Medication class

### Frequency of prolactin elevation\*

### Mechanism

#### Antipsychotics, first generation

Chlorpromazine	Moderate	Dopamine D2 receptor blockade within hypothalamic tuberoinfundibular system
Fluphenazine	High	
Haloperidol	High	
Loxapine	Moderate	
Perphenazine	Moderate	
Pimozide	Moderate	
Thiothixene	Moderate	
Trifluoperazine	Moderate	

#### Antipsychotics, second generation

Aripiprazole	None or low	Dopamine D2 receptor blockade
Asenapine	Moderate	
Clozapine	None or low	
Iloperidone	None or low	
Lurasidone	None or low	
Olanzapine	Low	
Paliperidone	High	
Quetiapine	None or low	
Risperidone	High	
Ziprasidone	Low	

#### Antidepressants, cyclic

Amitriptyline	Low	Not well understood. Possibly by GABA stimulation and indirect modulation of prolactin release by serotonin.
Desipramine	Low	
Clomipramine	High	
Nortriptyline	None	

#### Antidepressants, SSRI

Citalopram, fluoxetine, fluvoxamine, paroxetine, sertraline	None or low (rare reports)	Same as for cyclic antidepressants
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#### Antidepressants, other

Bupropion, venlafaxine, mirtazapine, nefazodone, trazodone	None	Not applicable
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#### Antiemetic and gastrointestinal

Metoclopramide	High	
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Domperidone (not available in United States)	High	Dopamine D2 receptor blockade
Prochlorperazine	Low	

### **Antihypertensives**

Verapamil	Low	Not well understood. Specific to verapamil. May involve calcium influx inhibition within tuberoinfundibular dopaminergic neurons.
Methyldopa	Moderate	Decreased conversion of L-dopa to dopamine; suppression of dopamine synthesis
Most other antihypertensives (including other calcium channel blockers)	None	Not applicable

### **Opioid analgesics**

Methadone, morphine, others	Transient increase for several hours following dose	Potentially an indirect effect of mu opiate receptor activation
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dysfunction in men and galactorrhea and amenorrhea in women.

GABA: gamma-aminobutyric acid; SSRI: selective serotonin reuptake inhibitor.

\* Frequency of increase to abnormal prolactin levels with chronic use: high >50 percent; moderate: 25 to 50 percent; low: <25 percent; none or low: case reports. Effect may be dose-dependent.

*Data from:*

*Molitch ME. Drugs and prolactin. Pituitary 2008; 11:209.*

*Molitch ME. Medication induced hyperprolactinemia. Mayo Clin Proc 2005; 80:1050.*

*Coker F, Taylor D. Antidepressant induced hyperprolactinemia. CNS Drugs 2010; 24:563.*

*Drugs for psychiatric disorders. Treat Guidel Med Lett 2013; 11:53.*

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