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**Geodon**

**Schizophrenia**

20 mg PO q12hr with food initially; may be increased every other day PRN; not to exceed 80 mg q12hr

Periodically assess need for maintenance; clinical trials have documented no added benefit with doses above 20 mg q12hr

**Acute Agitation With Schizophrenia**

IM: 10 mg q2hr or 20 mg q4hr; not to exceed 40 mg/day; use IM for up to 3 days, and switch to PO if continuing past this time

**Bipolar I Disorder**

Acute treatment of manic or mixed episodes; maintenance therapy as adjunct to lithium or valproate

Acute treatment: 40 mg PO q12hr with food initially; on day 2, may be increased if necessary to 60-80 mg PO q12hr; adjust dose according to tolerance and efficacy within range of 40-80 mg q12hr

Maintenance: Continue at same dose at which patient was initially stabilized; periodically reassess need for maintenance therapy

**Dosing Modifications**

Renal impairment: Dose adjustment not necessary with PO administration; caution required with IM administration

Hepatic impairment: Use caution; drug undergoes extensive hepatic metabolism, which can increase systemic exposure

## Pharmacology

### Mechanism of Action

Acts as antagonist at dopamine D2 and serotonin type 1 and 2 (5HT1D, 5HT2A) receptors; acts as agonist at serotonin 5HT1A receptor; moderately inhibits reuptake of norepinephrine and serotonin; has alpha-blocking and antihistaminic activity

### Absorption

Bioavailability: 60% (PO); 100% (IM)

Peak plasma time: 6-8 hr (PO); ≤60 min (IM)

### Distribution

Protein bound: 99%

Vd: 1.5 L/kg

### Metabolism

Metabolized in liver by CYP3A4 (major) and CYP1A2 (minor)

### Elimination

Half-life: 7 hr (PO); 2-5 hr (IM)

Total body clearance: 7.5 mL/min/kg

Excretion: Feces (66%), urine (20%)

## Adverse Effects

### >10%

Somnolence (11-15%)

Headache (11%)

Nausea (4-12%)

Extrapyramidal symptoms (2-31%)

Dizziness (3-16%)

### 1-10%

Respiratory disorders (1-8%)

Constipation (2-9%)

Dyspepsia (1-8%)

Rash (4-5%)

Tachycardia (2%)

Hypoesthesia (2%)

Priapism (1%)

Orthostatic hypotension (5%)

Xerostomia (1-5%)

Anorexia (2%)

Myalgia (2%)

Rhinitis (1-4%)

Cough (3%)

### <1%

Syncope

Seizures

### Frequency Not Defined

Prolongation of QT interval

Neuroleptic malignant syndrome (NMS)

Hyperprolactinemia

Drug reaction with eosinophilia and systemic syntoms

### Postmarketing reports

Stevens-Johnson syndrome

### Contraindications

Documented hypersensitivity

Any drugs or conditions that prolong QT interval

Recent acute myocardial infarction

Uncompensated heart failure

### Cautions

Seizure disorders; may cause hypotension, EPS, and somnolence

Atypical antipsychotics have been associated with metabolic changes (eg, hyperglycemia, dyslipidemia, and body weight gain) that may increase cardiovascular/cerebrovascular risk

Hyperglycemia may occur and in some cases may be extreme, resulting in ketoacidosis, hyperosmolar coma, or death; monitor blood glucose of high-risk patients

Neuroleptic malignant syndrome reported with antipsychotic drugs

Tardive dyskinesia, acute dystonic reactions, pseudoparkinsonism, or akathisia may develop acutely or chronically

Discontinue if rash develops without an identified cause

Drug reaction with eosinophilia and systemic symptoms (DRESS) reported; DRESS consists of combination of three or more of the following: cutaneous reaction (such as rash or exfoliative dermatitis), eosinophilia, fever, lymphadenopathy and one or more systemic complications such as hepatitis, nephritis, pneumonitis, myocarditis, and pericarditis; DRESS is sometimes fatal; discontinue therapy if DRESS suspected

Cutaneous adverse reactions, such as Stevens-Johnson syndrome, reported; severe cutaneous adverse reactions are sometimes fatal; discontinue therapy if suspected

Rare cases of priapism reported

FDA warning regarding off-label use for dementia in elderly (see Black Box Warnings)

May cause orthostatic hypotension

Suicide attempt is inherent in psychotic illness or bipolar disorder, close supervision of high-risk patients should accompany drug therapy

Dopamine2 antagonists may elevate prolactin levels; long-standing hyperprolactinemia when associated with hypogonadism may lead to decreased bone density

Leukopenia/neutropenia and agranulocytosis reported; possible risk factors for leukopenia/neutropenia include preexisting low white blood cell (WBC) count and history of drug-induced leukopenia/neutropenia

If patient has history of clinically significant low WBC count or drug-induced leukopenia/neutropenia, monitor complete blood count (CBC) frequently during first few months of therapy; discontinue drug at first sign of clinically significant WBC decline <1000/μL in absence of other causative factors, and continue monitoring WBC count until recovery

Antipsychotic agents have been associated with esophageal dysmotility and aspiration; use caution in patients at risk of pneumonia

May cause QTc prolongation, which has been associated with development of malignant ventricular arrhythmias (torsade de pointes) and sudden death; discontinue therapy in patients with persistent QTc intervals >500 msec; avoid hypokalemia or hypomagnesemia

Moderate to highly sedative; use caution when required to operate heavy machinery

May cause core body temperature regulation impairment; use caution with heat exposure, strenuous exercise, dehydration, or taking medications with anticholinergic effects

Make electrolyte imbalance corrections, especially hypomagnesemia or hypokalemia before and throughout therapy

Use with caution in hepatic impairment

**INTERACTIONS**

#### Contraindicated (21)

* amiodarone
* amoxapine
* arsenic trioxide
* astemizole
* cisapride
* citalopram
* disopyramide
* escitalopram
* goserelin
* ibutilide
* indapamide
* leuprolide
* pentamidine
* pimozide
* procainamide
* quinidine
* saquinavir
* sorafenib
* sotalol
* terfenadine
* toremifene

#### Serious - Use Alternative (70)

* amisulpride
* amitriptyline
* amoxapine
* apomorphine
* artemether/lumefantrine
* bromocriptine
* cabergoline
* chlorpromazine
* citalopram
* clarithromycin
* clomipramine
* desipramine
* dofetilide
* dopamine
* dosulepin
* doxepin
* dronedarone
* droperidol
* epinephrine
* epinephrine racemic
* eribulin
* erythromycin base
* erythromycin ethylsuccinate
* erythromycin lactobionate
* erythromycin stearate
* fluconazole
* fluphenazine
* formoterol
* haloperidol
* histrelin
* hydroxyzine
* imipramine
* itraconazole
* ketoconazole
* levodopa
* lisuride
* lofepramine
* lorcaserin
* lumefantrine
* maprotiline
* mefloquine
* methyldopa
* mianserin
* moxifloxacin
* nafarelin
* nilotinib
* nortriptyline
* octreotide
* octreotide (antidote)
* ondansetron
* panobinostat
* perphenazine
* pimavanserin
* pramipexole
* prochlorperazine
* promazine
* promethazine
* protriptyline
* ropinirole
* sertindole
* sodium oxybate
* thioridazine
* trazodone
* trifluoperazine
* trimipramine
* triptorelin
* umeclidinium bromide/vilanterol inhaled
* vandetanib
* vemurafenib
* vilanterol/fluticasone furoate inhaled

#### Monitor Closely (309)

* abobotulinumtoxina
* acarbose
* aclidinium
* albiglutide
* albuterol
* alfentanil
* alprazolam
* amisulpride
* amitriptyline
* amobarbital
* amoxapine
* anticholinergic/sedative combos
* arformoterol
* aripiprazole
* armodafinil
* atracurium
* atropine
* atropine iv/im
* axitinib
* azelastine
* azithromycin
* baclofen
* bambuterol
* bedaquiline
* belladonna alkaloids
* belladonna and opium
* benazepril
* benperidol
* benzphetamine
* brompheniramine
* buclizine
* buprenorphine
* buprenorphine buccal
* butabarbital
* butalbital
* butorphanol
* caffeine
* carbamazepine
* carbinoxamine
* carisoprodol
* chloral hydrate
* chlordiazepoxide
* chlorpheniramine
* chlorpromazine
* chlorpropamide
* chlorzoxazone
* cimetidine
* cinnarizine
* ciprofloxacin
* cisatracurium
* clarithromycin
* clemastine
* clobazam
* clomethiazole
* clomipramine
* clonazepam
* clonidine
* clorazepate
* clozapine
* codeine
* crizotinib
* cyclizine
* cyclobenzaprine
* cyproheptadine
* dantrolene
* darifenacin
* dasatinib
* desipramine
* dexchlorpheniramine
* dexfenfluramine
* dexmedetomidine
* dexmethylphenidate
* dextroamphetamine
* dextromoramide
* diamorphine
* diazepam
* dichlorphenamide
* dicyclomine
* diethylpropion
* difenoxin hcl
* dimenhydrinate
* diphenhydramine
* diphenoxylate hcl
* dipipanone
* dobutamine
* dolasetron
* dopamine
* dopexamine
* dosulepin
* doxepin
* doxylamine
* droperidol
* enflurane
* ephedrine
* ephedrine (pulmonary)
* epinephrine
* epinephrine racemic
* erythromycin base
* erythromycin ethylsuccinate
* erythromycin lactobionate
* erythromycin stearate
* estazolam
* ethanol
* etomidate
* exenatide injectable solution
* exenatide injectable suspension
* ezogabine
* fenfluramine
* fesoterodine
* flavoxate
* flecainide
* flibanserin
* fluoxetine
* fluphenazine
* flurazepam
* fluvoxamine
* formoterol
* foscarnet
* glimepiride
* glipizide
* glyburide
* glycopyrrolate
* glycopyrrolate inhaled
* guanabenz
* guanfacine
* haloperidol
* henbane
* hexobarbital
* homatropine
* hydrocodone
* hydromorphone
* hydroxyzine
* hyoscyamine
* hyoscyamine spray
* iloperidone
* imipramine
* incobotulinumtoxina
* indacaterol, inhaled
* insulin aspart
* insulin degludec
* insulin degludec/insulin aspart
* insulin detemir
* insulin glargine
* insulin glulisine
* insulin inhaled
* insulin lispro
* insulin nph
* insulin regular human
* ipratropium
* isoproterenol
* itraconazole
* ivacaftor
* ketoconazole
* ketotifen, ophthalmic
* lapatinib
* lenvatinib
* levalbuterol
* levofloxacin
* levorphanol
* liraglutide
* lisdexamfetamine
* lofepramine
* lofexidine
* lomitapide
* loprazolam
* lorazepam
* lormetazepam
* loxapine
* loxapine inhaled
* lurasidone
* maprotiline
* maraviroc
* marijuana
* meclizine
* melatonin
* mepenzolate
* meperidine
* mephobarbital
* meprobamate
* metaproterenol
* metaxalone
* metformin
* methadone
* methamphetamine
* methocarbamol
* methscopolamine
* methylenedioxymethamphetamine
* methylphenidate
* metoclopramide
* mianserin
* midazolam
* midodrine
* mifepristone
* miglitol
* mirtazapine
* modafinil
* morphine
* motherwort
* moxonidine
* nabilone
* nalbuphine
* nateglinide
* nefazodone
* norepinephrine
* nortriptyline
* ofloxacin
* olanzapine
* olodaterol inhaled
* onabotulinumtoxina
* opium tincture
* orphenadrine
* osimertinib
* oxazepam
* oxybutynin
* oxybutynin topical
* oxybutynin transdermal
* oxycodone
* oxymorphone
* paliperidone
* pancuronium
* papaveretum
* papaverine
* paroxetine
* pasireotide
* pazopanib
* pentazocine
* pentobarbital
* perphenazine
* phendimetrazine
* phenobarbital
* phentermine
* phenylephrine
* phenylephrine po
* pholcodine
* pimozide
* pioglitazone
* pirbuterol
* posaconazole
* pralidoxime
* pramlintide
* primidone
* prochlorperazine
* promethazine
* propantheline
* propofol
* propylhexedrine
* protriptyline
* pseudoephedrine
* quazepam
* quetiapine
* quinine
* ramelteon
* ranolazine
* rapacuronium
* repaglinide
* rifabutin
* rifampin
* rilpivirine
* rimabotulinumtoxinb
* risperidone
* rocuronium
* romidepsin
* rosiglitazone
* salmeterol
* saxagliptin
* scopolamine
* scullcap
* secobarbital
* sertindole
* sertraline
* shepherd's purse
* sitagliptin
* solifenacin
* st john's wort
* sufentanil
* sulfamethoxazole
* sulpiride
* tapentadol
* telavancin
* telithromycin
* temazepam
* terbutaline
* terfenadine
* tetrabenazine
* thioridazine
* thiothixene
* tiotropium
* tolazamide
* tolbutamide
* tolterodine
* topiramate
* tramadol
* trazodone
* triazolam
* triclofos
* trifluoperazine
* trimethoprim
* trimipramine
* triprolidine
* tropisetron
* trospium chloride
* tubocurarine
* vecuronium
* venlafaxine
* voriconazole
* xylometazoline
* yohimbine
* ziconotide
* zotepine

#### Minor (77)

* amobarbital
* aprepitant
* armodafinil
* artemether/lumefantrine
* atazanavir
* bosentan
* brimonidine
* budesonide
* butabarbital
* butalbital
* chasteberry
* clobetasone
* conivaptan
* cortisone
* cyclosporine
* darifenacin
* darunavir
* dasatinib
* delavirdine
* dexamethasone
* dhea, herbal
* diltiazem
* efavirenz
* eslicarbazepine acetate
* ethanol
* ethotoin
* etravirine
* eucalyptus
* fluconazole
* fludrocortisone
* fosamprenavir
* fosphenytoin
* grapefruit
* griseofulvin
* hexobarbital
* hydrocortisone
* indinavir
* isoniazid
* lapatinib
* lumefantrine
* marijuana
* mephobarbital
* methylprednisolone
* metronidazole
* mibefradil
* miconazole vaginal
* modafinil
* nafcillin
* nelfinavir
* nevirapine
* nifedipine
* nilotinib
* oxcarbazepine
* oxiconazole
* pentobarbital
* phenobarbital
* phenytoin
* posaconazole
* prednisolone
* prednisone
* primidone
* quinupristin/dalfopristin
* rifapentine
* ritonavir
* rufinamide
* ruxolitinib
* sage
* secobarbital
* sitaxentan
* telithromycin
* topiramate
* triamcinolone
* troglitazone
* troleandomycin
* verapamil
* voriconazole
* zafirlukast