Minds Matter
Ohio Psychotropic Medication Quality Improvement Collaborative

CONTRAINDICATIONS TABLE

Generic Name	Brand Name	Contraindications
Amphetamine Salts	Adderall®, Adderall XR®	Hypersensitivity to amphetamine, dextroamphetamine, or other sympathomimetic amines Advanced arteriosclerosis Agitated state Glaucoma History of drug abuse Hyperthyroidism Moderate to severe hypertension Symptomatic cardiovascular disease Use of an MAO inhibitor (MAOI) within the last 14 days
Aripiprazole	Abilify®, Abilify Discmelt®	Hypersensitivity to aripiprazole
Asenapine	Saphris®	Hypersensitivity to asenapine
Atomoxetine	Strattera®	Hypersensitivity to atomoxetine Cardiovascular disorders severe enough to deteriorate with an increase in blood pressure or heart rate Current or history of pheochromocytoma Narrow-angle glaucoma Use of an MAOI within the last 14 days
Clonidine	Catapres®; Catapres TTS® 1, 2, or 3; Duraclon®, Kapvay®	Hypersensitivity to clonidine Bleeding diathesis Concurrent anticoagulant therapy for epidural use for bleeding issues
Clozapine	Clozaril®, FazaClo®	Hypersensitivity to clozapine History of agranulocytosis or severe granulocytopenia with clozapine Myeloproliferative disorder or concomitant use with other agents with well-known risk of agranulocytosis or bone marrow suppression Paralytic ileus Severe central nervous system depression Uncontrolled epilepsy
Dexmethylphenidate	Focalin®, Focalin XR®	Hypersensitivity to dexmethylphenidate or methylphenidate Glaucoma Marked anxiety, tension, or agitation Use of an MAOI within the last 14 days

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CONTRAINDICATIONS TABLE

Generic Name	Brand Name	Contraindications
Dextroamphetamine	Dexedrine®, Spanule®, ProCentra®	Hypersensitivity to dextramphetamine or other sympathomimetic amines Advanced arteriosclerosis Agitated states Glaucoma History of drug abuse Hyperthyroidism Moderate to severe hypertension Symptomatic cardiovascular disease Use of an MAOI within the last 14 days
Guanfacine	Intuniv®, Tenex®	Hypersensitivity to guanfacine
Iloperidone	Fanapt®	Hypersensitivity to iloperidone
Lisdexamfetamine	Vyvanse®	Hypersensitivity to amphetamine products Use of an MAOI within the last 14 days
Lurasidone	Latuda®	Hypersensitivity to lurasidone Use with strong CYP 3A4 inducers (rifampin) or inhibitors (ketoconazole)

CONTRAINDICATIONS TABLE

Generic Name	Brand Name	Contraindications
Methylphenidate	Concerta®, Daytrana®, Metadate CD®, Metadate ER®, Methylin®, Quillivant XR™, Ritalin LA®, Ritalin SR®, Ritalin®	Hypersensitivity to methylphenidate Glaucoma Marked anxiety, tension, and agitation Use of an MAOI within the last 14 days
Olanzapine	Zyprexa®, Zyprexa IntraMuscular®, Zyprexa Relprevv™, Zyprexa Zydis®	None listed
Paliperidone	Invega®, Invega Sustenna®	Hypersensitivity to paliperidone or risperidone
Quetiapine	Seroquel®, Seroquel XR®	None listed
Risperidone	Risperdal®, Risperdal Consta®, Risperdal M-Tab®	Hypersensitivity to risperidone
Ziprasidone	Geodon®	Hypersensitivity to ziprasidone Concurrent use of other QT prolonging agents (trioxide, chlorpromazine; class Ia antiarrhythmics: disopyramide, quinidine, procainamide; class III antiarrhythmics: amiodarone, dofetilide, ibutilide, sotalol; droperidol; gatifloxacin; moxifloxacin; pimozide; tacrolimus; thioridazine) Congenital long QT interval Current or history of prolonged QT interval Recent myocardial infarction Uncompensated heart failure

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DRUG INTERACTION TABLE

Medication Name	Enzyme Information	Activity of Medication	Toxicity of Medication	Efficacy of Other Medications	Toxicity of Other Medications
Amphetamine salts	SUBSTRATE: CYP 2D6 (minor)	**ENHANCED ACTIVITY:** **Antacids:** Decrease excretion of amphetamines **Proton pump inhibitors:** May increase the rate of absorption of amphetamine salts **Tricyclic antidepressants:** Enhance stimulatory effects of amphetamine salts **DIMINISHED ACTIVITY:** **Antipsychotics, lithium**: Diminish stimulatory effects of amphetamine salts **Multi-vitamins:** May decrease serum concentrations of amphetamine salts	**Atomoxetine, MAOIs, and tricyclic antidepressants:** Enhanced hypertensive and tachycardic effects	**ENHANCED ACTIVITY:** **Opiates**: Enhanced analgesic effect **DIMINISHED ACTIVITY:** **Antihistamines (diphenhydramine):** Decreased sedation **Phenobarbital:** Decreased phenobarbital serum concentrations **Phenytoin:** Decreased phenytoin serum concentrations	
Aripiprazole	SUBSTRATE: CYP 2D6 (major) CYP 3A4 (major)	**ENHANCED ACTIVITY:** **CYP 2D6 inhibitors (fluoxetine, paroxetine):** Increase concentrations of aripiprazole **DIMINISHED ACTIVITY:** **CYP 3A4 inducers (carbamazepine, phenobarbital, phenytoin)**: Decrease serum concentrations of aripiprazole	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**DIMINISHED ACTIVITY:** **Stimulants:** Decreased stimulant activity	**Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome

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DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Asenapine	SUBSTRATE: CYP 1A2 (major) CYP 2D6 (minor) CYP 3A4 (minor) INHIBITS: CYP 2D6 (weak)	**ENHANCED ACTIVITY:** **CYP 1A2 inhibitors (cimetidine, ciprofloxacin, fluoxetine):** Increase serum concentrations of asenapine **DIMINISHED ACTIVITY:** **CYP 1A2 inducers (carbamazepine, phenobarbital):** Decrease serum concentrations of asenapine	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **MAO inhibitors:** May enhance orthostatic hypotensive effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity	**Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome
Atomoxetine	SUBSTRATE: CYP 2D6 (major) CYP 2C19 (minor) INHIBITS: CYP 2D6 (weak) CYP 3A4 (weak)	**ENHANCED ACTIVITY:** **CYP 2D6 inhibitors (fluoxetine, paroxetine):** May increase serum concentrations of atomoxetine	**Beta$_2$ agonists (albuterol):** May enhance tachycardic effects of atomoxetine		**Stimulants:** May enhance hypertensive and tachycardic effects of stimulants
Clonidine		**ENHANCED ACTIVITY:** **Antihypertensives:** Enhance hypotensive effects **DIMINISHED ACTIVITY:** **Alpha2-antagonist antidepressant (mirtazapine):** Diminish	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Beta blockers:** May enhance rebound hypertension with abrupt withdrawal of clonidine	**ENHANCED ACTIVITY:** **Beta blockers, calcium channel blockers, and cardiac glycosides:** Enhanced AV blocking effect and sinus node dysfunction	**SSRIs (citalopram, sertraline):** May have enhanced adverse effects with these antidepressants

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Clonidine (cont.)		antihypertensive effect of clonidine **SSRIs (venlafaxine, duloxetine) and tricyclic antidepressants:** May decrease antihypertensive effects of clonidine **Stimulants (methylphenidate):** May diminish antihypertensive effects of clonidine	**MAO inhibitors:** May enhance orthostatic hypotension with clonidine		
Clozapine	SUBSTRATE: CYP 1A2 (major) CYP 2A6 (minor) CYP 2C19 (minor) CYP 2C9 (minor) CYP 2D6 (minor) CYP 3A4 (Minor) INHIBITS: CYP 2D6 (moderate) CYP 1A2 (weak) CYP 2C19 (weak) CYP 2C9 (weak) CYP 2E1 (weak) CYP 3A4 (weak)	**ENHANCED ACTIVITY:** **CYP 1A2 inhibitors (amlodipine, cimetidine, fluoxetine, nefazodone):** May increase serum concentrations of clozapine **DIMINISHED ACTIVITY:** **CYP 1A2 inducers (aromatic hydrocarbons in cigarette smoke, carbamazepine, phenytoin):** May decrease serum concentrations of clozapine	**CNS depressants (benzodiazepines, hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **MAO inhibitors:** May enhance orthostatic hypotensive effects **Myelosuppressive medications (carbamazepine):** May increase risk for bone marrow suppression **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**ENHANCED ACTIVITY:** **CYP 2D6 substrates (metoprolol, nebivolol, thioridazine):** May have increased serum concentrations **DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity **Tamoxifen:** May have decreased active metabolite due to CYP 2D6 enzyme inhibition	**Anticholinergics (ipratropium, tiotropium):** Enhanced adverse anticholinergic effects (sedation, constipation, dry mouth, urinary retention) **CNS depressants (benzodiazepines):** Increased sedation and CNS depression **Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Dexmethylphenidate		**ENHANCED ACTIVITY:** **Antacids, H2-antagonists, proton pump inhibitors:** Increase absorption of dexmethylphenidate	**Atomoxetine MAO inhibitors:** Enhanced hypertensive effects	**ENHANCED ACTIVITY:** **Phenobarbital**: May increase serum phenobarbital concentrations **Phenytoin:** May increase serum phenytoin concentrations **Vitamin K antagonists (warfarin):** May increase serum concentrations of vitamin K antagonists	**Tricyclic antidepressants:** May have enhanced adverse effects
Dextroamphetamine	SUBSTRATE: CYP 2D6 (minor)	**ENHANCED ACTIVITY:** **Proton pump inhibitors:** May increase the rate of absorption of dextroamphetamine **Tricyclic antidepressants:** Enhance stimulatory effects of dextroamphetamine **DIMINISHED ACTIVITY:** **Antipsychotics Lithium:** Diminish stimulatory effects of dextroamphetamine **Multi-vitamins:** May decrease serum concentrations of dextroamphetamine	**Atomoxetine and tricyclic antidepressants:** Enhanced hypertensive and tachycardic effects **Antacids:** Decrease excretion of amphetamines	**ENHANCED ACTIVITY:** **Opiates:** Enhanced analgesic effect **DIMINISHED ACTIVITY:** **Antihistamines (diphenhydramine):** Decreased sedation **Phenobarbital:** Decreased phenobarbital serum concentrations **Phenytoin:** Decreased phenytoin serum concentrations	
Guanfacine	SUBSTRATE: CYP 3A4 (major)	**ENHANCED ACTIVITY:** **Antihypertensives:** Enhance hypotensive effects of guanfacine **CYP 3A4 inhibitors (diltiazem, fluconazole, indinavir):** Increase	**CNS depressants (hydroxyzine, zolpidem):** Enhance sedation and depressant effects **Beta blockers:** May enhance rebound hypertension with	**ENHANCED ACTIVITY:** **Beta blockers:** Enhanced AV blocking effect and sinus node dysfunction	**Dopamine agonists (pramipexole, ropinirole):** May enhance sedative effects with dopamine agonists **SSRIs (citalopram, sertraline):**

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Guanfacine (cont.)		serum concentrations of guanfacine **DIMINISHED ACTIVITY:** **Alpha$_2$-antagonist antidepressant (mirtazapine):** Diminish antihypertensive effect of guanfacine **CYP 3A4 inducers (carbamazepine, phenobarbital, phenytoin):** Decrease serum concentrations of guanfacine **Serotonin/norepinephrine reuptake inhibitors (venlafaxine, duloxetine) and tricyclic antidepressants:** May decrease antihypertensive effects of guanfacine **Stimulants (methylphenidate):** May diminish antihypertensive effects of guanfacine	abrupt withdrawal of guanfacine **MAO inhibitors:** May enhance orthostatic hypotension of guanfacine	**Divalproex sodium/valproic acid derivatives:** May increase serum concentrations of divalproex sodium or the valproic acid derivative	May have enhanced adverse effects with these antidepressants
Iloperidone	SUBSTRATE: CYP 2D6 (major) CYP 3A4 (minor) INHIBITS: CYP 3A4 (moderate)	**ENHANCED ACTIVITY:** **CYP 2D6 inhibitor (fluoxetine, paroxetine):** Increased serum concentrations of iloperidone **CYP 3A4 inhibitor (diltiazem, fluconazole, indinavir):** Increased serum concentrations of iloperidone **DIMINISHED ACTIVITY:** **CYP 3A4 inducers (carbamazepine, phenobarbital, phenytoin):** Decrease serum concentrations of iloperidone	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**ENHANCED ACTIVITY:** **CYP 3A4 substrates (aripiprazole):** May increase concentrations of these medications **DIMINISHED ACTIVITY:** **Dopamine agonists (ropinirole):** Diminished anti-Parkinson's effects **Stimulants:** Diminished stimulant activity	**Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Lisdexamfetamine		**ENHANCED ACTIVITY:** **Antacids:** Decrease excretion of amphetamines **Proton pump inhibitors:** May increase the rate of absorption of amphetamine salts **Tricyclic antidepressants:** Enhance stimulatory effects of amphetamine salts **DIMINISHED ACTIVITY:** **Antipsychotics, lithium:** Diminish stimulatory effects of amphetamine salts **Multi-vitamins:** May decrease serum concentrations of amphetamine salts	**Atomoxetine, MAOIs, and tricyclic antidepressants:** Enhanced hypertensive and tachycardic effects	**ENHANCED ACTIVITY:** **Opiates:** Enhanced analgesic effect **DIMINISHED ACTIVITY:** **Antihistamines (diphenhydramine):** Decreased sedation **Phenobarbital:** Decreased phenobarbital serum concentrations **Phenytoin:** Decreased phenytoin serum concentrations	
Lurasidone	SUBSTRATE: CYP 3A4 (major) INHIBITS: CYP 3A4 (weak)	**ENHANCED ACTIVITY:** **CYP 3A4 inhibitor (diltiazem, fluconazole, indinavir):** Increased serum concentrations of lurasidone **DIMINISHED ACTIVITY:** **CYP 3A4 inducers (carbamazepine, phenobarbital, phenytoin):** Decrease serum concentrations of lurasidone	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **MAO inhibitors:** May enhance orthostatic hypotension of lurasidone	**DIMINISHED ACTIVITY:** **Dopamine agonists (ropinirole):** Diminished anti-Parkinson's effects **Stimulants:** Diminished stimulant activity	**QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias **Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Methylphenidate	INHIBITS: CYP 2D6 (weak)	**ENHANCED ACTIVITY:** **Antacids, H2-antagonists, proton pump inhibitors:** Increase absorption of methylphenidate and interfere with normal release of the extended release capsules	**Atomoxetine MAO inhibitors:** Enhanced hypertensive effects	**ENHANCED ACTIVITY:** **Phenobarbital:** May increase serum phenobarbital concentrations **Phenytoin:** May increase serum phenytoin concentrations **Vitamin K antagonists (warfarin):** May increase serum concentrations of vitamin K antagonists	**Tricyclic antidepressants:** May have enhanced adverse effects
Olanzapine	SUBSTRATE: CYP 1A2 (major) CYP 2D6 (minor) INHIBITS: CYP1A2 (weak) CYP 2C19 (weak) CYP 2C9 (weak) CYP 2D6 (weak) CYP 3A4 (weak)	**ENHANCED ACTIVITY:** **CYP 1A2 inhibitors (amlodipine, cimetidine, fluoxetine, nefazodone):** May increase serum concentrations of olanzapine **DIMINISHED ACTIVITY:** **CYP 1A2 inducers (aromatic hydrocarbons in cigarette smoke, carbamazepine, phenytoin):** May decrease serum concentrations of olanzapine	**CNS depressants (benzodiazepines, hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **MAO inhibitors:** May enhance orthostatic hypotensive effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity	**Anticholinergics (ipratropium, tiotropium):** Enhanced adverse anticholinergic effects (sedation, constipation, dry mouth, urinary retention) **CNS depressants (hydroxyzine):** Increased sedation and CNS depression **Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome
Paliperidone		**ENHANCED ACTIVITY:** **Divalproex sodium, itraconazole, valproic acid derivatives:** May increase serum concentrations of paliperidone	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression	**DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity	**Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Paliperidone (cont.)		**DIMINISHED ACTIVITY:** **Carbamazepine**: May decrease serum concentrations of paliperidone	**Lithium, metoclopramide, risperidone, stimulants:** May enhance neurotoxic effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias		
Quetiapine	SUBSTRATE: CYP 3A4 (major) CYP 2D6 (minor)	**ENHANCED ACTIVITY:** **CYP 3A4 inhibitor (diltiazem, fluconazole, indinavir):** Increased serum concentrations of quetiapine **DIMINISHED ACTIVITY:** **CYP 3A4 inducers (carbamazepine, phenobarbital, phenytoin):** Decrease serum concentrations of quetiapine	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity	**Anticholinergics (ipratropium, tiotropium):** Enhanced adverse anticholinergic effects (sedation, constipation, dry mouth, urinary retention) **CNS depressants (hydroxyzine):** Increased sedation and CNS depression **Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome
Risperidone	SUBSTRATE: CYP 2D6 (major) CYP 3A4 (minor) INHIBITS: CYP 2D6 (weak) CYP 3A4 (weak)	**ENHANCED ACTIVITY:** **CYP 2D6 inhibitor (fluoxetine, paroxetine):** Increased serum concentrations of risperidone	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects	**DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity	**Anticholinergics (ipratropium, tiotropium):** Enhanced adverse anticholinergic effects (sedation, constipation, dry mouth, urinary retention) **Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome

DRUG INTERACTION TABLE

Medication Name	Enzyme information	Activity of Medication	Toxicity of Medication	Efficacy of other medications	Toxicity of other medications
Risperidone (cont.)			**Loop diuretics (furosemide), paliperidone, valproic acid derivatives:** May increase the adverse effects seen with risperidone **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias		
Ziprasidone	SUBSTRATE: CYP 1A2 (minor) CYP 3A4 (minor) INHIBITS: CYP 2D6 (weak) CYP 3A4 (weak)	**ENHANCED ACTIVITY:** **Azole antifungals (fluconazole):** May increase serum concentrations of ziprasidone **DIMINISHED ACTIVITY:** **Carbamazepine:** May decrease serum concentrations of ziprasidone	**CNS depressants (hydroxyzine, zolpidem):** Increase CNS depression **Lithium, metoclopramide, stimulants:** May enhance neurotoxic effects **QT prolonging medications (amiodarone, antipsychotics, tricyclic antidepressants):** May increase risk of prolonged QTc interval and arrhythmias	**DIMINISHED ACTIVITY:** **Stimulants (methylphenidate):** Decreased stimulant activity	**Serotonergic medications (SSRIs, SNRIs):** May enhance serotonergic effects resulting in more adverse effects and possibly serotonin syndrome