**dexamphetamine** (dex-meth-il-fen-i-date)

Focalin, Focalin XR

**Classification**

Therapeutic: central nervous system stimulants

Schedule II

Pregnancy Category C

**Indications**

Adjunctive treatment of ADHD.

**Action**

Produces CNS and respiratory stimulation with weak sympathomimetic activity.

**Therapeutic Effects:**

Increased attention span in ADHD.

**Pharmacokinetics**

**Absorption:**

Readily absorbed following oral administration.

**Distribution:**

Unknown.

**Metabolism and Excretion:**

Mostly metabolized by the liver; inactive metabolites are renally excreted.

**Half-life:**

2.2 hr.

**TIME/ACTION PROFILE (improvement in symptoms)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>PO</td>
<td>? days</td>
<td>1 mo</td>
<td>unknown</td>
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**Contraindications/Precautions**

Contraindicated in:

- Hypersensitivity; Hyperexcitable states (marked anxiety, agitation, or tension);
- Hyperthyroidism; Psychotic personalities, suicidal or homicidal tendencies; Glaucoma; Motor tics, family history or diagnosis of Tourette's syndrome; Concurrent use of MAO inhibitors; Should not be used to treat depression or prevent/treat normal fatigue; Psychoses (may exacerbate symptoms).

Use Cautiously in:

- Cardiovascular disease (sudden death has occurred in children with structural cardiac abnormalities or other serious heart problems);
- Hyperthyroidism; Diabetes mellitus; Geri: Geriatric/debilitated patients; Continual use (may result in psychological or physical dependence); Severe disorders (may lower seizure threshold); Gastrointestinal: Pediatrics; Lactation: Pregnancy, lactation, or children 6 yr (safety not established; use in pregnancy only if clearly needed).

**Adverse Reactions/Side Effects**

**CNS:**

- Behavioral disturbances, hallucinations, insomnia, mania, nervousness, thought disorders

**EENT:**

- Visual disturbances

**CV:**

- Sudden death, peripheral vascular disease, tachycardia

**GI:**

- Abdominal pain, anorexia, nausea

**Metab:**

- Growth suppression, weight loss (may occur with prolonged use)

**Neuro:**

- Twitching

**Misc:**

- Anaphylaxis, angioedema, fever

**Interactions**

**Drug-Drug:**

- Concurrent use with or use within 14 days following discontinuation of MAO inhibitors may result in hypertensive crisis and is contraindicated. May elevate effects of antihypertensives. May elevate effects of vasopressors. May elevate effects of warfarin, phenobarbital, phenytoin, some antidepressants; dose adjustment may be necessary.

**Route/Dosage**

**Tablets**

**PO (Adults and Children ≤ 6 yr):**

- Patients not previously taking methylphenidate—2.5 mg twice daily, may be increased q weekly as needed up to 10 mg twice daily;
- Patients currently taking methylphenidate—starting dose is 1/2 of the methylphenidate dose, up to 10 mg twice daily.

**Extended-release capsules**

**PO (Adults):**

- Patients not previously taking methylphenidate—10 mg once daily, may be increased to 40 mg/day;
- Patients currently taking methylphenidate—starting dose is 1/2 of the methylphenidate dose, given as a single daily dose.

**PO (Children ≤ 6 yr):**

- Patients not previously taking methylphenidate—10 mg once daily, may be increased to 40 mg/day;
- Patients currently taking methylphenidate—starting dose is 1/2 of the methylphenidate dose, up to 40 mg/day; given as a single daily dose.

**PO (Children > 6 yr):**

- Patients not previously taking methylphenidate—5 mg once daily, may be increased to 50 mg/day; Patients currently taking methylphenidate—starting dose is 1/2 of the methylphenidate dose, up to 30 mg/day, given as a single daily dose; Patients currently taking dextroamphetamine—give same daily dose as a single dose.
NURSING IMPLICATIONS

Assessment
- Assess child's attention span, impulse control, and interactions with others. Therapy may be interrupted at intervals to determine whether symptoms are sufficient to continue therapy.
- Monitor BP, pulse, and respiration before administering and periodically during therapy. Obtain a history (including assessment of family history of sudden death or ventricular arrhythmia), physical exam to assess for cardiac disease, and further evaluation (EKG and echocardiogram), if indicated. If exertional chest pain, unexplained syncope, or other cardiac symptoms occur, evaluate promptly.
- Monitor closely for behavior change.
- Dexmethylphenidate has the potential for dependence and abuse. Prolonged use may result in tolerance.
- Monitor for signs of anaphylaxis (wheezing, shortness or breath, rash) during therapy.
- Lab Test Considerations: Monitor CBC, differential, and platelet count periodically in patients receiving prolonged therapy.

Potential Nursing Diagnoses
Disturbed thought process (Side Effects)

Implementation
- Do not confuse dexmethylphenidate with methadone.
- PO: Administer twice daily at least 4 hr apart without regard to meals.
- Administer XR tablets once daily in the morning. Capsules should be swallowed whole. For patients with difficulty swallowing, capsules can be opened and sprinkled on a spoonful of applesauce. Mixture should be consumed immediately; do not store for future use.

Patient/Family Teaching
- Instruct patient to take medication as directed. If more than prescribed amount is taken, notify health care professional immediately. If a dose is missed, take the remaining dose for that day at regularly spaced intervals, do not double doses. Take the last dose before 6PM to minimize the risk of insomnia. Instruct patient not to alter dose without consulting health care professional. Abrupt cessation with high doses may cause extreme fatigue and mental depression. Advise patient and parents to read the Medication Guide prior to starting therapy and with each Rx refill.
- Instruct patient that sharing this medication may be dangerous.
- Instruct patients starting therapy of risk of peripheral vasculopathy. Instruct patients to notify health care professional of any new numbness, pain, skin color change from pale, to blue, to red, or cyanosis or sensitivity to temperature in fingers or toes, and call if unexplained wounds appear on fingers or toes. May require dermatologic consultation.
- Advise patient to check weight 2-5 times weekly and report weight loss to health care professional.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult health care professional before taking other Rx, OTC, or herbal products.
- May rarely cause dizziness or drowsiness. Caution patient to avoid driving or activities requiring alertness until response to medication is known.
- Advise patient to notify health care professional of any new numbness, pain, skin color change from pale, to blue, to red, or cyanosis or sensitivity to temperature in fingers or toes, and call if unexplained wounds appear on fingers or toes. May require dermatologic consultation.
- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult health care professional before taking other Rx, OTC, or herbal products.
- Advise patient to notify health care professional if pregnancy is planned or suspected, or if breast feeding.

Evaluation/Desired Outcomes
- Improved attention span, decreased impulsiveness and hyperactivity in ADHD. If improvement is not seen within 1 mo, discontinue dexmethylphenidate.