

**DEXTROAMPHETAMINE SULFATE- dextroamphetamine sulfate solution**  
**Prasco Laboratories**

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**Dextroamphetamine Sulfate Oral Solution, CII**  
**Rx only**

**WARNING**

**WARNING: ABUSE, MISUSE, AND ADDICTION**

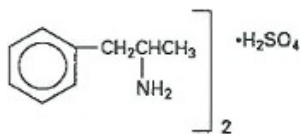
**Dextroamphetamine sulfate has a high potential for abuse and misuse, which can lead to the development of a substance use disorder, including addiction. Misuse and abuse of CNS stimulants, including dextroamphetamine sulfate, can result in overdose and death (see OVERDOSAGE), and this risk is increased with higher doses or unapproved methods of administration, such as snorting or injection.**

**Before prescribing dextroamphetamine sulfate, assess each patient's risk for abuse, misuse, and addiction. Educate patients and their families about these risks, proper storage of the drug, and proper disposal of any unused drug. Throughout dextroamphetamine sulfate treatment, reassess each patient's risk of abuse, misuse, and addiction and frequently monitor for signs and symptoms of abuse, misuse, and addiction (see WARNINGS DRUG ABUSE AND DEPENDENCE).**

**DESCRIPTION**

Dextroamphetamine sulfate is the dextro isomer of the compound *d,l*-amphetamine sulfate, a sympathomimetic amine of the amphetamine group. Chemically, dextroamphetamine is *d*-alpha-methylphenethylamine, and is present in all forms of dextroamphetamine sulfate as the neutral sulfate.

Structural Formula:



Dextroamphetamine Sulfate Oral Solution is a colorless, bubblegum flavored oral solution. Each teaspoonful (5 mL) of Dextroamphetamine Sulfate Oral Solution contains 5 mg of dextroamphetamine sulfate. Inactive ingredients consist of benzoic acid, citric acid anhydrous, purified water, sodium citrate hydrous, sodium saccharin, sorbitol solution, and artificial bubblegum flavor.

**CLINICAL PHARMACOLOGY**

Amphetamines are noncatecholamine, sympathomimetic amines with CNS stimulant activity. Peripheral actions include elevations of systolic and diastolic blood pressures and weak bronchodilator and respiratory stimulant action.

There is neither specific evidence that clearly establishes the mechanism whereby amphetamines produce mental and behavioral effects in children, nor conclusive evidence regarding how these effects relate to the condition of the central nervous

system.

## Pharmacokinetics

Ingestion of 10 mg of dextroamphetamine sulfate in oral solution form by healthy volunteers produced an average peak dextroamphetamine blood level of 33.2 ng/mL. The half-life was 11.75 hours. The average urinary recovery was 38% in 48 hours.

In 12 healthy subjects, the rate and extent of dextroamphetamine absorption were similar following administration of the sustained release capsule formulation in the fed (58 to 75 gm fat) and fasted state.

## INDICATIONS AND USAGE

Dextroamphetamine Sulfate Oral Solution is indicated in:

### Narcolepsy

**Attention Deficit Disorder with Hyperactivity:** As an integral part of a total treatment program that typically includes other remedial measures (psychological, educational, social) for a stabilizing effect in pediatric patients (ages 3 years to 16 years) with a behavioral syndrome characterized by the following group of developmentally inappropriate symptoms: Moderate to severe distractibility, short attention span, hyperactivity, emotionally lability, and impulsivity. The diagnosis of this syndrome should not be made with finality when these symptoms are only of comparatively recent origin. Nonlocalizing (soft) neurological signs, learning disability, and abnormal EEG may or may not be present, and a diagnosis of central nervous system dysfunction may or may not be warranted.

## CONTRAINDICATIONS

Known hypersensitivity to amphetamine products.

During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crisis may result).

## WARNINGS

### Abuse, Misuse, and Addiction

Dextroamphetamine sulfate has a high potential for abuse and misuse. The use of dextroamphetamine sulfate exposes individuals to the risks of abuse and misuse, which can lead to the development of a substance use disorder, including addiction. Dextroamphetamine sulfate can be diverted for non-medical use into illicit channels or distribution (*see DRUG ABUSE and DEPENDENCE*). Misuse and abuse of CNS stimulants, including dextroamphetamine sulfate, can result in overdose and death (*see OVERDOSAGE*), and this risk is increased with higher doses or unapproved methods of administration, such as snorting or injection.

Before prescribing dextroamphetamine sulfate, assess each patient's risk for abuse, misuse, and addiction. Educate patients and their families about these risks and proper disposal of any unused drug. Advise patients to store dextroamphetamine sulfate in a safe place, preferably locked, and instruct patients to not give dextroamphetamine sulfate to anyone else. Throughout dextroamphetamine sulfate treatment, reassess each patient's risk of abuse, misuse, and addiction and frequently monitor for signs and symptoms of abuse, misuse, and addiction.

### Risks to Patients with Serious Cardiac Disease

Sudden death has been reported in patients with structural cardiac abnormalities or other serious cardiac disease who are treated with CNS stimulants at the recommended ADHD dosages.

Avoid Dextroamphetamine Sulfate Oral Solution use in patients with known structural cardiac abnormalities, cardiomyopathy, serious cardiac arrhythmia, coronary artery disease, or other serious cardiac disease.

### **Increased Blood Pressure and Heart Rate**

CNS stimulants cause an increase in blood pressure (mean increase about 2 to 4 mm Hg) and heart rate (mean increase about 3 to 6 bpm). Monitor all patients for potential tachycardia and hypertension.

### **Psychiatric Adverse Reactions**

**Exacerbation of Pre-Existing Psychosis:** CNS stimulants may exacerbate symptoms of behavior disturbance and thought disorder in patients with a pre-existing psychotic disorder.

**Induction of a Manic Episode in Patients with Bipolar Disorder:** CNS stimulants may induce a manic or mixed episode in patients. Prior to initiating treatment, screen patients for risk factors for developing a manic episode (e.g., comorbid or history of depressive symptoms or a family history of suicide, bipolar disorder, or depression).

**New Psychotic or Manic Symptoms:** CNS stimulants, at recommended doses, may cause psychotic or manic symptoms (e.g., hallucinations, delusional thinking, or mania) in patients without a prior history of psychotic illness or mania. In a pooled analysis of multiple short-term, placebo-controlled studies of CNS stimulants, psychotic or manic symptoms occurred in approximately 0.1% of CNS stimulant-treated patients, compared with 0% of placebo-treated patients. If such symptoms occur, consideration discontinuing dextroamphetamine sulfate.

### **Long-Term Suppression of Growth in Pediatric Patients:**

CNS stimulants have been associated with weight loss and slowing of growth rate in pediatric patients, including dextroamphetamine sulfate. Closely monitor growth (weight and height) in Dextroamphetamine Sulfate Oral Solution-treated pediatric patients treated with CNS stimulants.

Pediatric patients who are not growing or gaining height or weight as expected may need to have their treatment interrupted (*see PRECAUTIONS, PEDIATRIC USE*).

**Seizures:** There is some clinical evidence that stimulants may lower the convulsive threshold in patients with prior history of seizures, in patients with prior EEG abnormalities in absence of seizures, and, very rarely, in patients without a history of seizures and no prior EEG evidence of seizures. In the presence of seizures, the drug should be discontinued.

**Peripheral Vasculopathy, Including Raynaud's Phenomenon:** Stimulants, including dextroamphetamine sulfate oral solution, used to treat ADHD are associated with peripheral vasculopathy, including Raynaud's phenomenon. Signs and symptoms are usually intermittent and mild; however, very rare sequelae include digital ulcerations and/or soft tissue breakdown. Effects of peripheral vasculopathy, including Raynaud's phenomenon, were observed in post-marketing reports and at the therapeutic dosages of CNS stimulants in all age groups throughout the course of treatment. Signs and symptoms generally improved after dosage reduction or discontinuation of the CNS stimulant. Careful observation for digital changes is necessary during dextroamphetamine sulfate oral solution-treatment. Further clinical evaluation (e.g., rheumatology referral) may be appropriate for dextroamphetamine sulfate oral solution-treated patients who develop signs or symptoms of peripheral vasculopathy.

**Serotonin Syndrome:** Serotonin syndrome, a potentially life-threatening reaction, may occur when amphetamines are used in combination with other drugs that affect the serotonergic neurotransmitter systems such as monoamine oxidase inhibitors (MAOIs), selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), triptans, tricyclic antidepressants, fentanyl, lithium, tramadol, tryptophan, buspirone, and St. John's Wort [*see Drug Interactions*]. The

coadministration with cytochrome P450 (CYP2D6) inhibitors may also increase the risk with increased exposure to dextroamphetamine sulfate oral solution. In these situations, consider an alternative non-serotonergic drug or an alternative drug that does not inhibit CYP2D6 [see *Drug Interactions*].

Serotonin syndrome symptoms may include mental status changes (e.g., agitation, hallucinations, delirium, and coma), autonomic instability (e.g., tachycardia, labile blood pressure, dizziness, diaphoresis, flushing, hyperthermia), neuromuscular symptoms (e.g., tremor, rigidity, myoclonus, hyperreflexia, incoordination), seizures, and/or gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea).

Concomitant use of dextroamphetamine sulfate oral solution with MAOI drugs is contraindicated [see *CONTRAINDICATIONS*].

Discontinue treatment with dextroamphetamine sulfate oral solution and any concomitant serotonergic agents immediately if the above symptoms occur, and initiate supportive symptomatic treatment. If concomitant use of dextroamphetamine sulfate oral solution with other serotonergic drugs or CYP2D6 inhibitors is clinically warranted, initiate dextroamphetamine sulfate oral solution with lower doses, monitor patients for the emergence of serotonin syndrome during drug initiation or titration, and inform patients of the increased risk for serotonin syndrome.

### **Motor and Verbal Tics, and Worsening of Tourette's Syndrome**

CNS stimulants, including dextroamphetamine sulfate, have been associated with the onset or exacerbation of motor and verbal tics. Worsening of Tourette's syndrome has also been reported. Assess the family history and clinically evaluate patients for tics or Tourette's syndrome before initiating dextroamphetamine sulfate. Regularly monitor patients for the emergence or worsening of tics or Tourette's syndrome with dextroamphetamine sulfate, and discontinue treatment if clinically appropriate.

## **PRECAUTIONS**

### **Information for Patients**

Advise the patient to read the FDA-approved patient labeling (Medication Guide).

#### *Abuse, Misuse, and Addiction*

Educate patients and their families about the risks of abuse, misuse, and addiction of dextroamphetamine sulfate which can lead to overdose and death, and proper disposal of any unused drug (see *WARNINGS, DRUG ABUSE AND DEPENDENCE, and OVERDOSAGE*). Advise patients to store dextroamphetamine sulfate in a safe place, preferably locked, and instruct patients to not give dextroamphetamine sulfate to anyone else.

#### *Risks to Patients with Serious Cardiac Disease*

Advise patients that there are potential risks to patients with serious cardiac disease, including sudden death, with dextroamphetamine sulfate use. Instruct patients to contact a healthcare provider immediately if they develop symptoms such as exertional chest pain, unexplained syncope, or other symptoms suggestive of cardiac disease (see *WARNINGS*).

#### *Increased Blood Pressure and Heart Rate*

Advise patients that dextroamphetamine sulfate can elevate blood pressure and heart rate (see *WARNINGS*).

#### *Psychiatric Adverse Reactions*

Advise patients that dextroamphetamine sulfate, at recommended doses, can cause psychotic or manic symptoms, even in patients without prior history of psychotic symptoms or mania (see *WARNINGS*).

#### *Long-Term Suppression of Growth in Pediatric Patients*

Advise patients that dextroamphetamine sulfate, may cause slowing of growth including weight loss (see *WARNINGS*).

Circulation problems in fingers and toes [Peripheral vasculopathy, including Raynaud's phenomenon]

- Instruct patients beginning treatment with dextroamphetamine sulfate oral solution about the risk of peripheral vasculopathy, including Raynaud's Phenomenon, and associated signs and symptoms: fingers or toes may feel numb, cool, painful, and/or may change color from pale, to blue, to red.
- Instruct patients to report to their physician any new numbness, pain, skin color change, or sensitivity to temperature in fingers or toes.
- **Instruct patients to call their physician immediately with any signs of unexplained wounds appearing on fingers or toes while taking dextroamphetamine oral solution.**
- Further clinical evaluation (e.g., rheumatology referral) may be appropriate for certain patients.

Serotonin Syndrome

Caution patients about the risk of serotonin syndrome with concomitant use of dextroamphetamine sulfate and other serotonergic drugs including SSRIs, SNRIs, triptans, tricyclic antidepressants, fentanyl, lithium, tramadol, tryptophan, buspirone, St. John's Wort, and with drugs that impair metabolism of serotonin (in particular MAOIs, both those intended to treat psychiatric disorders and also others such as linezolid [see **CONTRAINDICATIONS**, **WARNINGS**, and **DRUG INTERACTIONS**]). Advise patients to contact their healthcare provider or report to the emergency room if they experience signs or symptoms of serotonin syndrome.

Motor and Verbal Tics, and Worsening of Tourette's Syndrome

Advise patients that motor and verbal tics and worsening of Tourette's Syndrome may occur during treatment with dextroamphetamine sulfate. Instruct the patients to notify their healthcare provider if emergence or worsening of tics or Tourette's syndrome occurs (see **WARNINGS**).

Amphetamines may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or vehicles; the patient should therefore be cautioned accordingly.

**Drug Interactions**

MAO Inhibitors- MAOI antidepressants, as well as a metabolite of furazolidone, slow amphetamine metabolism. This slowing potentiates amphetamines, increasing their effect on the release of norepinephrine and other monoamines from adrenergic nerve endings; this can cause headaches and other signs of hypertensive crisis. A variety of neurological toxic effects and malignant hyperpyrexia can occur, sometimes with fatal results.

Serotonergic Drugs- The concomitant use of dextroamphetamine sulfate oral solution and serotonergic drugs increases the risk of serotonin syndrome. Initiate with lower doses and monitor patients for signs and symptoms of serotonin syndrome, particularly during dextroamphetamine sulfate oral solution initiation or dosage increase. If serotonin syndrome occurs, discontinue dextroamphetamine sulfate oral solution and the concomitant serotonergic drug(s) [see **WARNINGS**, **PRECAUTIONS**]. Examples of serotonergic drugs include selective serotonin reuptake inhibitors (SSRI), serotonin norepinephrine reuptake inhibitors (SNRI), triptans, tricyclic antidepressants, fentanyl, lithium, tramadol, tryptophan, buspirone, St. John's Wort.

CYP2D6 Inhibitors- The concomitant use of dextroamphetamine sulfate oral solution and CYP2D6 inhibitors may increase the exposure of dextroamphetamine sulfate oral solution compared to the use of the drug alone and increase the risk of serotonin syndrome. Initiate with lower doses and monitor patients for signs and symptoms of serotonin syndrome particularly during dextroamphetamine sulfate oral solution initiation and after a dosage increase. If serotonin syndrome occurs, discontinue dextroamphetamine sulfate oral solution and the CYP2D6 inhibitor [see **WARNINGS**, **OVERDOSAGE**]. Examples of CYP2D6 Inhibitors include paroxetine and

fluoxetine (also serotonergic drugs), quinidine, ritonavir.

Acidifying Agents- Gastrointestinal acidifying reagents (guanethidine, reserpine, glutamic acid HCl, ascorbic acid, fruit juices, etc.) lower absorption of amphetamines. Urinary acidifying agents (ammonium chloride, sodium acid phosphate, etc.) increase the concentration of the ionized species of the amphetamine molecule, thereby increasing urinary excretion. Both groups of agents lower blood levels and efficacy of amphetamines.

Adrenergic Blockers- Adrenergic blockers are inhibited by amphetamines.

Alkalinizing Agents- Gastrointestinal alkalinizing agents (sodium bicarbonate, etc.) increase absorption of amphetamines. Urinary alkalinizing agents (acetazolamide, some thiazides) increase the concentration of the non-ionized species of the amphetamine molecule, thereby decreasing urinary excretion. Both groups of agents increase blood levels and therefore potentiate the actions of amphetamines.

Antidepressants, Tricyclic- Amphetamines may enhance the activity of tricyclic or sympathomimetic agents; d-amphetamine with desipramine or protriptyline and possibly other tricyclics cause striking and sustained increases in the concentration of d-amphetamine in the brain; cardiovascular effects can be potentiated.

Antihistamines- Amphetamines may counteract the sedative effect of antihistamines.

Antihypertensives- Amphetamines may antagonize the hypotensive effects of antihypertensives.

Chlorpromazine- Chlorpromazine blocks dopamine and norepinephrine reuptake, thus inhibiting the central stimulant effects of amphetamines, and can be used to treat amphetamine poisoning.

Ethosuximide- Amphetamines may delay intestinal absorption of ethosuximide.

Haloperidol- Haloperidol blocks dopamine and norepinephrine reuptake, thus inhibiting the central stimulant effects of amphetamines.

Lithium Carbonate- The stimulatory effects of amphetamines may be inhibited by lithium carbonate.

Meperidine- Amphetamines potentiate the analgesic effect of meperidine.

Methenamine Therapy- Urinary excretion of amphetamines is increased, and efficacy is reduced, by acidifying agents used in methenamine therapy.

Norepinephrine- Amphetamines enhance the adrenergic effect of norepinephrine.

Phenobarbital- Amphetamines may delay intestinal absorptions of phenobarbital; co-administration of phenobarbital may produce a synergistic anticonvulsant action.

Phenytoin- Amphetamines may delay intestinal absorption of phenytoin; co-administration of phenytoin may produce a synergistic anticonvulsant action.

Propoxyphene- In cases of propoxyphene overdosage, amphetamine CNS stimulation is potentiated and fatal convulsions can occur.

Veratrum Alkaloids- Amphetamines inhibit the hypotensive effect of veratrum alkaloids.

## **Drug/Laboratory Test Interactions**

Amphetamines can cause a significant elevation in plasma corticosteroid levels. This increase is greatest in the evening.

Amphetamines may interfere with urinary steroid determinations.

## **Carcinogenesis/Mutagenesis**

Mutagenicity studies and long-term studies in animals to determine the carcinogenic potential of dextroamphetamine sulfate have not been performed.

## **Pregnancy**

## Teratogenic Effects

### *Pregnancy Category C*

Dextroamphetamine sulfate has been shown to have embryotoxic and teratogenic effects when administered to A/Jax mice and C57BL mice in doses approximately 41 times the maximum human dose. Embryotoxic effects were not seen in New Zealand white rabbits given the drug in doses 7 times the human dose nor in rats given 12.5 times the maximum human dose. While there are no adequate and well-controlled studies in pregnant women, there has been one report of severe congenital bony deformity, tracheoesophageal fistula, and anal atresia (VATER association) in a baby born to a woman who took dextroamphetamine sulfate with lovastatin during the first trimester of pregnancy. Dextroamphetamine sulfate should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

## Nonteratogenic Effects

Infants born to mothers dependent on amphetamines have an increased risk of premature delivery and low birth weight. Also, these infants may experience symptoms of withdrawal as demonstrated by dysphoria, including agitation, and significant lassitude.

## **Nursing Mothers**

Amphetamines are excreted in human milk. Mothers taking amphetamines should be advised to refrain from nursing.

## **Pediatric Use**

Long-term effects of amphetamines in pediatric patients have not been well established.

Amphetamines are not recommended for use in pediatric patients under 3 years of age with Attention Deficit Disorder with Hyperactivity described under INDICATIONS AND USAGE.

Clinical experience suggests that in psychotic children, administration of amphetamines may exacerbate symptoms of behavior disturbance and thought disorder.

Amphetamines have been reported to exacerbate motor and phonic tics and Tourette's syndrome. Therefore, clinical evaluation for tics and Tourette's syndrome in children and their families should precede use of stimulant medications.

Data are inadequate to determine whether chronic administration of amphetamines may be associated with growth inhibition; therefore, growth should be monitored during treatment.

Drug treatment is not indicated in all cases of Attention Deficit Disorder with Hyperactivity and should be considered only in light of the complete history and evaluation of the child. The decision to prescribe amphetamines should depend on the physician's assessment of the chronicity and severity of the child's symptoms and their appropriateness for his or her age. Prescription should not depend solely on the presence of one or more of the behavioral characteristics.

When these symptoms are associated with acute stress reactions, treatment with amphetamines is usually not indicated.

## **ADVERSE REACTIONS**

**Cardiovascular:** Palpitations, tachycardia, elevation of blood pressure. There have been isolated reports of cardiomyopathy associated with chronic amphetamine use.

**Central Nervous System:** Psychotic episodes at recommended doses (rare), overstimulation, restlessness, dizziness, insomnia, euphoria, dyskinesia, dysphoria, tremor, headache, exacerbation of motor and verbal tics and Tourette's syndrome.

**Gastrointestinal:** Dryness of the mouth, unpleasant taste, diarrhea, constipation, intestinal ischemia and other gastrointestinal disturbances. Anorexia and weight loss may occur as undesirable effects.

**Allergic:** Urticaria.

**Endocrine:** Impotence, changes in libido.

**Musculoskeletal:** Rhabdomyolysis.

## **DRUG ABUSE AND DEPENDENCE**

### **Controlled Substance**

Dextroamphetamine sulfate is a Schedule II controlled substance.

### **Abuse**

Dextroamphetamine sulfate has a high potential for abuse and misuse which can lead to the development of a substance use disorder, including addiction (*see WARNINGS*). Dextroamphetamine sulfate can be diverted for non-medical use into illicit channels or distribution.

Abuse is the intentional non-therapeutic use of a drug, even once, to achieve a desired psychological or physiological effect. Misuse is the intentional use, for therapeutic purposes, of a drug by an individual in a way other than prescribed by a health care provider or for whom it was not prescribed. Drug addiction is a cluster of behavioral, cognitive, and physiological phenomena that may include a strong desire to take the drug, difficulties in controlling drug use (e.g., continuing drug use despite harmful consequences, giving a higher priority to drug use than other activities and obligations), and possible tolerance or physical dependence.

Misuse and abuse of amphetamines may cause increased heart rate, respiratory rate, or blood pressure; sweating; dilated pupils; hyperactivity; restlessness; insomnia; decreased appetite; loss of coordination; tremors; flushed skin; vomiting; and/or abdominal pain. Anxiety, psychosis, hostility, aggression, and suicidal or homicidal ideation have also been observed with CNS stimulants abuse and/or misuse. Misuse and abuse of CNS stimulants, including Dextroamphetamine sulfate, can result in overdose and death (*see OVERDOSAGE*), and this risk is increased with higher doses or unapproved methods of administration, such as snorting or injection.

### **Dependence**

#### Physical Dependence

Dextroamphetamine sulfate may produce physical dependence. Physical dependence is a state that develops as a result of physiological adaptation in response to repeated drug use, manifested by withdrawal signs and symptoms after abrupt discontinuation or a significant dose reduction of a drug.

Withdrawal signs and symptoms after abrupt discontinuation or dose reduction following prolonged use of CNS stimulants including Dextroamphetamine sulfate include dysphoric mood; depression; fatigue; vivid, unpleasant dreams; insomnia or hypersomnia; increased appetite; and psychomotor retardation or agitation.

#### Tolerance

Dextroamphetamine sulfate may produce tolerance. Tolerance is a physiological state characterized by a reduced response to a drug after repeated administration (i.e., a higher dose of a drug is required to produce the same effect that was once obtained at a lower dose).

## **OVERDOSAGE**

### Clinical Effects of Overdose

Overdose of CNS stimulants is characterized by the following sympathomimetic effects:

- Cardiovascular effects including tachyarrhythmias, and hypertension or hypotension. Vasospasm, myocardial infarction, or aortic dissection may precipitate sudden cardiac death. Takotsubo cardiomyopathy may develop.
- CNS effects including psychomotor agitation, confusion, and hallucinations. Serotonin syndrome, seizures, cerebral vascular accidents, and coma may occur.
- Life-threatening hyperthermia (temperatures greater than 104°F) and rhabdomyolysis may develop.

#### Overdose Management

Consider the possibility of multiple drug ingestion. D-amphetamine is not dialyzable. Consider contacting the Poison Help line (1-800-222-1222) or a medical toxicologist for additional overdose management recommendations.

### **DOSAGE AND ADMINISTRATION**

Amphetamines should be administered at the lowest effective dosage and dosage should be individually adjusted. Late evening doses should be avoided because of the resulting insomnia.

**Narcolepsy:** Usual dose is 5 mg to 60 mg per day in divided doses, depending on the individual patient response.

Narcolepsy seldom occurs in children under 12 years of age; however, when it does, Dextroamphetamine Sulfate Oral Solution may be used. The suggested initial dose for patients aged 6 to 12 is 5 mg daily; daily dose may be raised in increments of 5 mg at weekly intervals until optimal response is obtained. In patients 12 years of age and older, start with 10 mg daily; daily dosage may be raised in increments of 10 mg at weekly intervals until optimal response is obtained. If bothersome adverse reactions appear (e.g., insomnia or anorexia), dosage should be reduced. Give first dose on awakening; additional doses (1 or 2) at intervals of 4 to 6 hours.

**Attention Deficit Disorder with Hyperactivity:** Not recommended for pediatric patients under 3 years of age.

**In pediatric patients from 3 to 5 years of age,** start with 2.5 mg daily; daily dosage may be raised in increments of 2.5 mg at weekly intervals until optimal response is obtained.

**In pediatric patients 6 years of age and older,** start with 5 mg once or twice daily; daily dosage may be raised in increments of 5 mg at weekly intervals until optimal response is obtained. Only in rare cases will it be necessary to exceed a total of 40 mg per day.

Give first dose on awakening; additional doses (1 or 2) at intervals of 4 to 6 hours.

Where possible, drug administration should be interrupted occasionally to determine if there is a recurrence of behavioral symptoms sufficient to require continued therapy.

Prior to treating patients with dextroamphetamine sulfate assess:

- for the presence of cardiac disease (i.e., perform a careful history, family history of sudden death or ventricular arrhythmia, and physical exam) (*see WARNINGS*).
- the family history and clinically evaluate patients for motor or verbal tics or Tourette's syndrome (*see WARNINGS*).

### **HOW SUPPLIED**

Dextroamphetamine Sulfate Oral Solution 5 mg/5 mL is a colorless, bubblegum flavored oral solution, available in containers of 16 fluid ounces, NDC 66993-359-57.

Store at 20° to 25°C (68° to 77°F) (See USP Controlled Room Temperature). Dispense in

a tight, light resistant container.

Distributed by:  
Prasco Laboratories  
Mason, OH 45040 USA  
  
Code 983F00  
  
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| <p style="text-align: center;"><b>MEDICATION GUIDE</b><br/><b>Dextroamphetamine Sulfate Oral Solution, CII</b><br/><b>(DEX-tro-am-Fet-uh-meen-SULL-fate)</b></p> <p><b>What is the most important information I should know about Dextroamphetamine Sulfate Oral Solution?</b></p> <p><b>Dextroamphetamine Sulfate Oral Solution may cause serious side effects, including:</b></p> <ul style="list-style-type: none"><li>• <b>Abuse, misuse, and addiction.</b> Dextroamphetamine Sulfate Oral Solution has a high chance for abuse and misuse and may lead to substance use problems, including addiction. Misuse and abuse of Dextroamphetamine Sulfate Oral Solution, other amphetamine containing medicines, and methylphenidate containing medicines, can lead to overdose and death. The risk of overdose and death is increased with higher doses of Dextroamphetamine Sulfate Oral Solution or when it is used in ways that are not approved, such as snorting or injection.<ul style="list-style-type: none"><li>◦ Your healthcare provider should check you or your child's risk for abuse, misuse, and addiction before starting treatment with Dextroamphetamine Sulfate Oral Solution and will monitor you or your child during treatment.</li><li>◦ Dextroamphetamine Sulfate Oral Solution may lead to physical dependence after prolonged use, even if taken as directed by your healthcare provider.</li><li>◦ Do not give Dextroamphetamine Sulfate Oral Solution to anyone else. See <b>“What is Dextroamphetamine Sulfate Oral Solution?”</b> for more information.</li><li>◦ Keep Dextroamphetamine Sulfate Oral Solution in a safe place and properly dispose of any unused medicine. See <b>“How do I store Dextroamphetamine Sulfate Oral Solution?”</b> for more information.</li><li>◦ Tell your healthcare provider if you or your child have ever abused or been dependent on alcohol, prescription medicines, or street drugs.</li></ul></li><li>• <b>Risks for people with serious heart disease:</b> Sudden death has happened in people who have heart defects or other serious heart disease.</li></ul> <p>Your healthcare provider should check you or your child carefully for heart problems before starting treatment with Dextroamphetamine Sulfate Oral Solution. Tell your healthcare provider if you or your child have any heart problems, heart disease, or heart defects.</p> <p><b>Call your healthcare provider right away or go to the nearest hospital emergency room right away if you or your child have any signs of heart problems such as chest pain, shortness of breath, or fainting during treatment with Dextroamphetamine Sulfate Oral Solution.</b></p> <ul style="list-style-type: none"><li>• <b>Increased blood pressure and heart rate.</b><br/>Your healthcare provider should check you or your child’s blood pressure and heart rate regularly during treatment with Dextroamphetamine Sulfate Oral Solution.</li><li>• <b>Mental (psychiatric) problems, including:</b><ul style="list-style-type: none"><li>◦ new or worse behavior or thought problems</li><li>◦ new or worse bipolar illness</li><li>◦ new psychotic symptoms (such as hearing voices, or seeing or believing things that are not real) or new manic symptoms</li></ul></li></ul> <p>Tell your healthcare provider about any mental problems you or your child have, or about a family history</p> |
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of suicide, bipolar illness, or depression.

**Call your healthcare provider right away if you or your child have any new or worsening mental symptoms or problems during treatment with Dextroamphetamine Sulfate Oral Solution, especially hearing voices, seeing or believing things that are not real, or new manic symptoms.**

#### **What is Dextroamphetamine Sulfate Oral Solution?**

Dextroamphetamine Sulfate Oral Solution is a central nervous system (CNS) stimulant prescription medicine used for the treatment of:

- a sleep disorder called narcolepsy.
- Attention-Deficit Hyperactivity Disorder (ADHD) in children 3 to 16 years of age. Dextroamphetamine Sulfate Oral Solution may help increase attention and decrease impulsiveness and hyperactivity in people with ADHD.

It is not known if Dextroamphetamine Sulfate Oral Solution is safe and effective in children under 3 years of age.

**Dextroamphetamine Sulfate Oral Solution is a federally controlled substance (CII) because it contains dextroamphetamine that can be a target for people who abuse prescription medicines or street drugs.**

Keep Dextroamphetamine Sulfate Oral Solution in a safe place to protect it from theft. Never give your Dextroamphetamine Sulfate Oral Solution to anyone else because it may cause death or harm them. Selling or giving away Dextroamphetamine Sulfate Oral Solution may harm others and is against the law.

#### **Do not take Dextroamphetamine Sulfate Oral Solution if you or your child:**

- are allergic to amphetamine products or any of the ingredients in Dextroamphetamine Sulfate Oral Solution. See the end of this Medication Guide for a complete list of ingredients in Dextroamphetamine Sulfate Oral Solution.
- are taking or have taken within the past 14 days, a medicine used to treat depression called a monoamine oxidase inhibitor (MAOI), including the antibiotic linezolid or the intravenous medicine methylene blue.

#### **Before taking Dextroamphetamine Sulfate Oral Solution, tell your healthcare provider about all of your or your child's medical conditions, including if you or your child:**

- have heart problems, heart disease, heart defects, or high blood pressure
- have mental problems including psychosis, mania, bipolar illness, or depression, or have a family history of suicide, bipolar illness, or depression
- have seizures or have had an abnormal brain wave test (EEG)
- have circulation problems in fingers and toes
- have or had repeated movements or sounds (tics) or Tourette's syndrome, or have a family history of tics or Tourette's syndrome
- are pregnant or plan to become pregnant. It is not known if Dextroamphetamine Sulfate Oral Solution will harm the unborn baby. Tell your healthcare provider if you or your child become pregnant during treatment with Dextroamphetamine Sulfate Oral Solution.
- are breastfeeding or plan to breastfeed. Dextroamphetamine Sulfate Oral Solution passes into breast milk. You or your child should not breastfeed during treatment with Dextroamphetamine Sulfate Oral Solution. Talk to your healthcare provider about the best way to feed the baby during treatment with Dextroamphetamine Sulfate Oral Solution.

**Tell your healthcare provider about all of the medicines that you or your child take,** including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Dextroamphetamine Sulfate Oral Solution and some medicines may interact with each other and cause serious side effects. Sometimes the doses of other medicines will need to be changed during treatment with Dextroamphetamine Sulfate Oral Solution. Your healthcare provider will decide if Dextroamphetamine Sulfate Oral Solution can be taken with other medicines.

#### **Especially tell your healthcare provider if you or your child take:**

- selective serotonin reuptake inhibitors (SSRIs)
- serotonin norepinephrine reuptake inhibitors (SNRIs)
- medicines used to treat migraine

- |                 |                             |
|-----------------|-----------------------------|
| headaches       | • tricyclic antidepressants |
| called triptans | • fentanyl                  |
| • lithium       | • tryptophan                |
| • tramadol      | • St. John's Wort           |
| • buspirone     |                             |

Know the medicines that you or your child take. Keep a list of your or your child's medicines with you to show your healthcare provider and pharmacist when you or your child get a new medicine. **Do not start any new medicine during treatment with Dextroamphetamine Sulfate Oral Solution without talking to your healthcare provider first.**

#### **How should Dextroamphetamine Sulfate Oral Solution be taken?**

- Take Dextroamphetamine Sulfate Oral Solution exactly as prescribed by your or your child's healthcare provider.
- Your healthcare provider may change the dose if needed.
- Dextroamphetamine Sulfate Oral Solution is usually taken two to three times a day. The first dose is usually taken in the morning. One or two more doses may be taken during the day, 4 to 6 hours apart.

If you or your child take too much Dextroamphetamine Sulfate Oral Solution, call your healthcare provider or Poison Help line at 1-800-222-1222 or go to the nearest hospital emergency room right away.

#### **What should I avoid while taking Dextroamphetamine Sulfate Oral Solution?**

Do not drive, operate heavy machinery, or do other potentially dangerous activities until you know how Dextroamphetamine Sulfate Oral Solution affects you.

#### **What are possible side effects of Dextroamphetamine Sulfate Oral Solution?**

**Dextroamphetamine Sulfate Oral Solution may cause serious side effects, including:**

- See **"What is the most important information I should know about Dextroamphetamine Sulfate Oral Solution?"**
- **Slowing of growth (height and weight) in children.** Children should have their height and weight checked often during treatment with Dextroamphetamine Sulfate Oral Solution. Your healthcare provider may stop your child's Dextroamphetamine Sulfate Oral Solution treatment if they are not growing or gaining weight as expected.
- **Seizures.** Your healthcare provider may stop treatment with Dextroamphetamine Sulfate Oral Solution if you or your child have a seizure.
- **Circulation problems in fingers and toes (peripheral vasculopathy, including Raynaud's phenomenon). Signs and symptoms may include:**
  - fingers or toes may feel numb, cool, painful
  - fingers or toes may change color from pale, to blue, to red

Tell your healthcare provider if you or your child have numbness, pain, skin color change, or sensitivity to temperature in your fingers or toes.

**Call your healthcare provider right away if you or your child have any signs of unexplained wounds appearing on fingers or toes during treatment with Dextroamphetamine Sulfate Oral Solution.**

- **New or worsening tics or worsening Tourette's syndrome.** Tell your healthcare provider if you or your child get any new or worsening tics or worsening Tourette's syndrome during treatment with Dextroamphetamine Sulfate Oral Solution.
- **Serotonin syndrome.** This problem may happen when Dextroamphetamine Sulfate Oral Solution is taken with certain other medicines and may be life-threatening. Stop taking Dextroamphetamine Sulfate Oral Solution and call your healthcare provider or go to the nearest hospital emergency room right away if you or your child develop any of the following signs and symptoms of serotonin syndrome:
 

|                  |                                               |
|------------------|-----------------------------------------------|
| ◦ agitation      | ◦ confusion                                   |
| ◦ fast heartbeat | ◦ dizziness                                   |
| ◦ flushing       | ◦ tremors, stiff muscles, or muscle twitching |

- seizures
- coma
- sweating
- loss of coordination
- seeing or hearing things that are not real (hallucination)
- changes in blood pressure
- high body temperature (hyperthermia)
- nausea, vomiting, diarrhea

**The most common side effects of Dextroamphetamine Sulfate Oral Solution include:**

- fast heartbeat
- decreased appetite
- tremors
- headache
- trouble sleeping
- dizziness
- stomach upset
- weight loss
- dry mouth

These are not all of the possible side effects of Dextroamphetamine Sulfate Oral Solution. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

**How do I store Dextroamphetamine Sulfate Oral Solution?**

- Store Dextroamphetamine Sulfate Oral Solution at room temperature between 68° to 77°F (20° to 25°C).
- Store Dextroamphetamine Sulfate Oral Solution in a safe place, like a locked cabinet. Protect from light.
- Dispose of remaining, unused, or expired Dextroamphetamine Sulfate Oral Solution by a medicine take back program at a U.S. Drug Enforcement Administration (DEA) authorized collection site. If no take back program or DEA authorized collector is available, mix Dextroamphetamine Sulfate Oral Solution with an undesirable, nontoxic substance such as dirt, cat litter, or used coffee grounds to make it less appealing to children and pets. Place the mixture in a container such as a sealed plastic bag and throw away Dextroamphetamine Sulfate Oral Solution in the household trash. Visit [www.fda.gov/drugdisposal](http://www.fda.gov/drugdisposal) for additional information on disposal of unused medicines.

**Keep Dextroamphetamine Sulfate Oral Solution and all medicines out of the reach of children.**

**General information about the safe and effective use of Dextroamphetamine Sulfate Oral Solution.**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use Dextroamphetamine Sulfate Oral Solution for a condition for which it was not prescribed. Do not give Dextroamphetamine Sulfate Oral Solution to other people, even if they have the same symptoms that you or your child have. It may harm them and it is against the law. You can ask your healthcare provider or pharmacist for information about Dextroamphetamine Sulfate Oral Solution that is written for healthcare professionals.

**What are the ingredients in Dextroamphetamine Sulfate Oral Solution?**

**Active ingredient:** dextroamphetamine sulfate

**Inactive ingredients:** benzoic acid, citric acid anhydrous, purified water, sodium citrate hydrous, sodium saccharin, sorbitol solution, and artificial bubblegum flavor.

Distributed by:  
Prasco Laboratories  
Mason, OH 45040 USA  
Code 983F99

For more information about Dextroamphetamine Sulfate Oral Solution, please contact Prasco Laboratories at 1-866-525-0688.

This Medication Guide has been approved by the U.S. Food and Drug Administration.

Revised:  
05/2025

**Package/Label Display Panel**

NDC 66993-359-57

Rx Only

[Prasco Logo]

**CII**

Dextroamphetamine Sulfate Oral Solution

5 mg/5 ml

PHARMACIST:  
Dispense Medication Guide with the Drug Product

16 fl. oz. (473 mL)

Store at 20° - 25°C  
(68° - 77°F) (See USP Controlled  
Room Temperature).

Dispense in a tight, light-  
resistant container.

**WARNING:** Keep this and all  
medications out of the reach of  
children.

NDC 66993-359-57  
Rx Only

 PRASCO 

Dextroamphetamine  
Sulfate  
Oral Solution

**5 mg/5 mL**

PHARMACIST:  
Dispense Medication Guide  
with the Drug Product

16 fl oz. (473 mL)

**USUAL DOSAGE:** See  
package insert for complete  
dosage recommendations.

**WARNING:** May be habit-  
forming.

Each 5 mL contains  
dextroamphetamine  
sulfate, 5 mg.

Distributed by:  
**Prasco Laboratories**  
Mason, OH 45040 USA



3 66993 359 57 1

Code 983F16

Rev. 09/19

**DEXTROAMPHETAMINE SULFATE**

dextroamphetamine sulfate solution

| Product Information                                                                |                         |                           |               |
|------------------------------------------------------------------------------------|-------------------------|---------------------------|---------------|
| Product Type                                                                       | HUMAN PRESCRIPTION DRUG | Item Code (Source)        | NDC:66993-359 |
| Route of Administration                                                            | ORAL                    | DEA Schedule              | CII           |
| Active Ingredient/Active Moiety                                                    |                         |                           |               |
| Ingredient Name                                                                    |                         | Basis of Strength         | Strength      |
| DEXTROAMPHETAMINE SULFATE (UNII: JJ768O327N) (DEXTROAMPHETAMINE - UNII:TZ47U051FI) |                         | DEXTROAMPHETAMINE SULFATE | 5 mg in 5 mL  |
| Inactive Ingredients                                                               |                         |                           |               |
| Ingredient Name                                                                    |                         |                           | Strength      |
| ANHYDROUS CITRIC ACID (UNII: XF417D3PSL)                                           |                         |                           |               |

|                                            |                  |                                                                |                             |                           |
|--------------------------------------------|------------------|----------------------------------------------------------------|-----------------------------|---------------------------|
| <b>BENZOIC ACID</b> (UNII: 8SKN0B0MIM)     |                  |                                                                |                             |                           |
| <b>SACCHARIN SODIUM</b> (UNII: SB8ZUX40TY) |                  |                                                                |                             |                           |
| <b>SODIUM CITRATE</b> (UNII: 1Q73Q2JULR)   |                  |                                                                |                             |                           |
| <b>SORBITOL</b> (UNII: 506T60A25R)         |                  |                                                                |                             |                           |
| <b>WATER</b> (UNII: 059QF0KO0R)            |                  |                                                                |                             |                           |
|                                            |                  |                                                                |                             |                           |
| <b>Product Characteristics</b>             |                  |                                                                |                             |                           |
| <b>Color</b>                               |                  | <b>Score</b>                                                   |                             |                           |
| <b>Shape</b>                               |                  | <b>Size</b>                                                    |                             |                           |
| <b>Flavor</b>                              | BUBBLE GUM       | <b>Imprint Code</b>                                            |                             |                           |
| <b>Contains</b>                            |                  |                                                                |                             |                           |
|                                            |                  |                                                                |                             |                           |
| <b>Packaging</b>                           |                  |                                                                |                             |                           |
| <b>#</b>                                   | <b>Item Code</b> | <b>Package Description</b>                                     | <b>Marketing Start Date</b> | <b>Marketing End Date</b> |
| 1                                          | NDC:66993-359-57 | 473 mL in 1 BOTTLE, PLASTIC; Type 0: Not a Combination Product | 05/15/2014                  |                           |
|                                            |                  |                                                                |                             |                           |
| <b>Marketing Information</b>               |                  |                                                                |                             |                           |
| <b>Marketing Category</b>                  |                  | <b>Application Number or Monograph Citation</b>                | <b>Marketing Start Date</b> | <b>Marketing End Date</b> |
| ANDA                                       |                  | ANDA040776                                                     | 05/15/2014                  |                           |

**Labeler** - Prasco Laboratories (065969375)