eMentalHealth.ca

# Dextroamphetamine (Dexedrine®, Dexedrine® Spansule)

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**Summary:** Dextroamphetamine (Dexedrine®, Dexedrine Spansule®) belongs to a group of medications called stimulants. It is used to various conditions including attention deficit hyperactivity disorder (AD/HD) and narcolepsy.

## What is dextroamphetamine used for?

Dextroamphetamine is used in treating Attention Deficit Hyperactivity Disorder (ADHD) and can help improve problems with short attention span, distractibility, impulsive behaviour, and hyperactivity.

Your doctor may be using this medication for another reason. If you are unclear why this medication is being prescribed, please ask your doctor.

## How does dextroamphetamine work?

Dextroamphetamine works by increasing the activity of the brain chemicals (neurotransmitters) called dopamine, and to a lesser extent, norepinephrine. This medication activates areas of the brain that control attention and body movements, thereby improving symptoms of AD/HD.

## Dextroamphetamine in children and adolescents

Dextroamphetamine is approved by Health Canada for treating AD/HD in adolescents and children age six and over.

Dextroamphetamine does not cure AD/HD, however it does improve functioning by reducing core AD/HD symptoms such as the inability to pay attention, impulsive behaviour, and hyperactivity. Dextroamphetamine improves core AD/HD symptoms in approximately three-quarters of children and adolescents. It can also help with improving frustration tolerance as well as help with social and peer relationships.

Whenever possible, adding behavioral management strategies (for example: rewarding good behaviour, teaching problem-solving techniques) to dextroamphetamine increases the chance for benefit.

If you do not experience a significant improvement with dextroamphetamine at a younger age, it does not mean that dextroamphetamine will not work later on in life.

## How should dextroamphetamine be taken?

Dextroamphetamine comes in tablets (Dexedrine®) and capsules (Dexedrine Spansule®) that are taken by mouth. Your doctor will determine how much you should take, according to your own needs. If you are starting treatment with dextroamphetamine, it should be taken everyday (7 days a week). This lets your body to get used to the medication, and helps to determine if and when the medication is working in different settings and as observed by different people.

Dextroamphetamine comes in two forms: short-acting (Dexedrine®) and intermediate-acting (Dexedrine Spansule®). Generic versions of the short-acting form are also available. Each dose of short-acting dextroamphetamine releases medication right away and lasts for about 4 to 5 hours. Usually, it is taken once or twice daily. Each dose of sustained-release dextroamphetamine releases medication slowly over a longer period of time, and lasts for about 7 to 8 hours. Usually, it is taken once or twice daily.

The intermediate-acting dextroamphetamine capsules should be swallowed whole with liquids, and should never be crushed or chewed. Doing so may result in the medication not being released properly. Contents of the dextroamphetamine intermediate-acting capsule may be sprinkled on soft foods including apple sauce, ice cream or yogurt. However, the beads themselves must also be swallowed whole and not be chewed or crushed.

Do not take dextroamphetamine with acidic fruit juices such as grapefruit or tomato juice, as it can decrease the amount of the medication absorbed by the body.

## When will dextroamphetamine start working?

Your doctor will increase the dose of the medication slowly to find the dose that gives optimal benefit with minimal side effects of the benefits of dextroamphetamine are noticeable within the first couple days of starting the medication. Symptoms will only improve when there is enough medication in the body. Once the medication wears off at the end of the day, symptoms of AD/HD can return. Your doctor will adjust the amount and timing of each dose according to your needs. For example, a dose may be timed so that there is enough medication in your body during key subjects in school (like math), times of day when you have the most difficulty, and transition periods (like recess or driving home). Dexedrine Spansule® (intermediate-acting dextroamphetamine) is a medication in which about one half is released in the morning, with the rest released later in the day.  If your child is not showing a good symptom response in the morning, please inform your doctor.

## How long do I have to take dextroamphetamine?

Different people take dextroamphetamine for different lengths of time. Whether or not you need medication should be reevaluated from time to time. Some people only require it during particular times of their life such as when they are in school, whereas some people continue to benefit from medication for many years.  Your doctor may suggest that you take a “drug holiday” from the medication for a month in the summer to see if you still need it, to optimize growth, and to minimize the body getting too used to the medication.

## Is dextroamphetamine addictive?

When used properly as directed by your doctor, dextroamphetamine is not addictive. In general, people with AD/HD may be at an increased risk to abuse substances over the long run. By effectively treating AD/HD, patients may be less likely to abuse substances than those who do not take medications to help manage AD/HD.

## What are the side effects of dextroamphetamine and what should I do if I get them?

You have been prescribed dextroamphetamine because your doctor has determined that the benefits of this medication are greater than the risks of you taking it. However, as with most medications, side effects may occur. These effects are usually more common when starting a medication or after a dose increase. Most side effects are mild and almost always decrease with time. It is also possible to experience a side effect that you feel is serious or long-lasting. If this occurs, speak to your doctor about ways to manage the side effects at your next appointment. On the next page are some of the more common side effects of taking this medicine. In brackets are suggested ways to lessen these effects.

**Common side effects**

If any of these side effects bother you or are a change from your usual pattern, please discuss them with your doctor, nurse or pharmacist. For more suggestions on managing common side effects, see our handout “Managing stimulant medication in children and adolescents”.

- Loss of appetite, weight loss (take the medication with breakfast, drink a smoothie or high protein drink or Boost at lunch, and have a major meal when the medication wears off)
- Trouble sleeping (try taking the last dose of the day at an earlier time; starting a bedtime routine; or try adding melatonin 3 – 6 mg taken 30 minutes before bedtime)
- Nausea, vomiting, stomach aches (this is often a sign of hunger, try eating something)
- Stuffy nose (try using a saline nasal spray)
- Fast heart rate (discuss this with your doctor)
- Irritability, agitation, energized feelings, nervousness (avoid caffeine from colas, coffee, or tea)
- Dry mouth (try increasing fluid intake; or chewing sugarless gum or sucking on hard sugar-free candies)
- Headaches (this usually decreases after using medication for 1-3 weeks. Try using a pain relieving medication such as acetaminophen (Tylenol®). This may also be a sign of hunger. Try eating or drinking.)

**Potentially serious but uncommon side effects (uncommon side effects occurring in less than 5% of patients)**

There are risks involved with taking any medication. Make sure you have had a conversation with your doctor about the potentially serious effects of dextroamphetamine.

Contact your doctor IMMEDIATELY if you have any of these potentially serious side effects:

- Skin rash
- Persistent head throbbing
- Psychiatric effects such as agitation; prolonged sadness; seeing, hearing, or feeling things that are not there; or other unusual changes in mood (discuss this with your doctor)
- Appearance or worsening of vocal or motor tics, such as shrugging, blinking, head turning, muscle twitches, and throat clearing
- Delay in growth (Your doctor will monitor your growth and may adjust treatment as necessary.)

There have been concerns that dextroamphetamine may increase the risk for heart problems in children and adolescents. However, studies have shown that rates of sudden death (from a heart problem) are similar between children taking stimulant medications and those who did not take the medication. Nevertheless, this may be a concern for children with pre-existing heart conditions, heart defects, or who undergo strenuous exercise. Dextroamphetamine should be used with caution in patients who are at a higher risk for heart problems.

## What precautions should my doctor and I be aware of when taking dextroamphetamine?

Several medications can interact with mixed amphetamine salts, including some cough and cold medications; antacids such as calcium carbonate (Tums®); monoamine oxidase inhibitors such as selegiline (Eldepryl®) or phenelzine (Nardil®); some antidepressants such as nortriptyline (Aventyl®), and several others. If you are (or begin) taking any other prescription or over-the-counter medications, be sure to check with your doctor or pharmacist to see if they are safe to use. Your doctor may need to change the doses of your medication(s) or monitor you carefully for side effects if you are taking certain other medications.

It is important to tell your doctor if you:

- have heart conditions or a family history of early heart disease or sudden death
- have structural heart defects or hardening of blood vessels (atherosclerosis)
- have an overactive thyroid
- have problems with fainting, dizziness, chest pain or irregular heart beat

- have high blood pressure
- have extreme exercise demands
- have a seizure disorder that is not well controlled
- have hallucinations (seeing or hearing things that are not there)
- have psychiatric conditions such as depression or bipolar disorder
- have glaucoma (an eye disease)
- use alcohol to excess or street drugs
- have allergies or bad reactions to dextroamphetamine or any other medications
- are currently pregnant (or plan to become pregnant) or are breast-feeding

## What special instructions should I follow while using dextroamphetamine?

- Keep all appointments with your doctor and the laboratory. Your doctor may order certain assessments and tests (for example: reports from teachers, AD/HD rating scales, height, weight, pulse, blood pressure, electrocardiogram (EKG)) to check how you are responding to dextroamphetamine.
- Do not allow anyone else to use your medication.

## What should I do if I forget to take a dose of dextroamphetamine?

If you take dextroamphetamine regularly and you forget to take it, take it as soon as you remember. If it is more than 4 hours after your regularly scheduled dose, skip the missed dose and continue with your regular schedule. Do NOT double your next dose.

What storage conditions are needed for dextroamphetamine?

- Store this medication at room temperature away from moisture and heat (e.g., not in the bathroom).
- Keep this medication out of reach and sight of children.

## About this document

Special thanks to the Kelty Centre for Mental Health for permission to adapt this document. The original document was developed by health professionals of BC Mental Health and Addiction Services, and reviewed by the staff of the Kelty Mental Health Centre. French translation provided courtesy of the Ontario Centre of Excellence for Child and Youth Mental Health and the Children's Hospital of Eastern Ontario (CHEO).

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## Disclaimer

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