



Using *atomoxetine (Strattera®)* in Children and Adolescents



Overview

Atomoxetine (Strattera®) is a non-stimulant medication used to treat attention deficit/hyperactivity disorder (AD/HD).

What is *atomoxetine* used for?

Atomoxetine is approved by Health Canada for treating AD/HD in adolescents and children age six and over. It is used to improve the mental and behavioral symptoms of AD/HD, which includes short attention span, 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 *atomoxetine* work?

Atomoxetine works by increasing the activity of the brain chemical (neurotransmitter) called norepinephrine. This medication activates areas of the brain that control impulsive actions, and attention thereby improving symptoms of AD/HD.

How well does *atomoxetine* work in children and adolescents?

Atomoxetine does not cure AD/HD. It aims to improve functioning by reducing core AD/HD symptoms such as the inability to pay attention, impulsive behaviour and hyperactivity. Atomoxetine reduces core AD/HD symptoms by 25% in approximately two-thirds of children and adolescents following 3 to 6 weeks of treatment, with full response occurring at about 3 months. It is expected that your overall functioning will improve substantially.

Compared to stimulant medications (e.g. methylphenidate or amphetamine), fewer patients may respond to atomoxetine. Despite this, atomoxetine remains an important treatment option for AD/HD. Patients who do not respond to stimulants may respond to atomoxetine, and vice versa. Atomoxetine appears to be particularly helpful for patients with attention problems, and who may also have anxiety disorders (nervousness, worrying), depression (prolonged sadness) or tics (for example: shrugging, blinking, head turning, muscle twitches, throat clearing).

Atomoxetine can be used in combination with stimulant medications if neither medication alone works well enough for you. Whenever possible, adding behavioral management strategies (e.g. rewarding good behaviour, teaching problem-solving techniques) to atomoxetine increases the chance for benefit.

How should *atomoxetine (Strattera®)* be taken?



Atomoxetine comes in capsules that are taken by mouth. Your doctor will determine how much atomoxetine you should take, according to your body weight and your response to the medication. When starting treatment with atomoxetine, your doctor may start with a lower dose and then slowly increase the dose on a weekly basis for the first few weeks, until the ideal dose is reached or side effects occur.

Usually atomoxetine is taken once or twice daily. Atomoxetine needs to be taken regularly on a daily basis to be effective. Try taking this medication at the same time everyday to help you remember the doses. Atomoxetine capsules should be swallowed whole, and should never be opened, sprinkled, chewed, or crushed. Dust from the powder inside the capsule may irritate your eyes if you open the capsule.



When will *atomoxetine* start working?

Atomoxetine needs to be taken for 3 to 6 weeks before you see an improvement in AD/HD symptoms. Do not increase, decrease, or stop taking the medication if you do not improve in the first 1 to 2 months, as this delay in response is normal.

How long do I have to take *atomoxetine*?

Different people take atomoxetine for different lengths of time. Whether or not you need medication should be reevaluated from time to time. Some people only require this medication during particular times of their life such as when they are in school, while some people continue to benefit from this medication for many years.

Is *atomoxetine* addictive?

Atomoxetine is not addictive. It is not a stimulant and has a low potential for abuse or dependence. In general, people with AD/HD may be at an increased risk of substance abuse 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 *atomoxetine* and what should I do if I get them?

You have been prescribed atomoxetine 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. Many of these side effects such as sleepiness, stomach ache and dizziness are minimized if the medication is taken on a full stomach after supper. Here 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.

- Drowsiness, tiredness (*try taking the dose after dinner; do not drive or operate machinery until you know how atomoxetine affects you*)
- Headaches (*this usually decreases after using medication for 1-3 weeks. Try using a pain relieving medication such as acetaminophen (Tylenol®)*)
- Decreased appetite, mild weight loss (*this usually improves in a few weeks; try taking medication with meal or eating smaller meals more often*)
- Dizziness (*try getting up slowly from a sitting or lying down position*)
- Nausea, vomiting, stomach aches (*try taking the medication following a meal*)
- Constipation (*try drinking more fluids, exercising, or increasing the amount of fiber in your diet*)
- Dry mouth (*try increasing fluid intake; or chewing sugarless gum or sucking on hard sugar-free candies*)
- Fast heart rate (*discuss this with your doctor*)
- Trouble sleeping (*try taking the daily dose at an earlier time; starting a bedtime routine; decreasing intake of caffeinated beverages; or taking a medication for sleep such as melatonin*)

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 a conversation with your doctor about the potentially serious effects of atomoxetine.

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



- Yellowish skin, yellow eyes, significant rash/itchiness, dark colored urine, pain in the upper right part of the abdomen (*This side effect is very rare. Stop this medication and call your doctor if you have any of these signs of liver disease*)
- Increased aggression or hostility (*discuss this with your doctor*)
- Emotional effects: feelings of agitation, anxiety, irritability, moodiness (*discuss this with your doctor. You may be at a higher risk for these effects at the beginning of treatment or after dose increases*)
- Thoughts of suicide or harming oneself (*This effect is very rare. However this is a very serious effect and it is important to report any changes in irritability, mood or thoughts of self harm to your doctor. You may be at higher risk for these effects at the beginning of treatment or after dose increases*)
- Delay in growth (*Your doctor will monitor your growth and may adjust treatment as necessary.*)

There have been concerns that atomoxetine 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 atomoxetine 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, in which case atomoxetine should be used with caution.

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

Several medications can interact with atomoxetine, including some antidepressants such as fluoxetine (Prozac[®]) and paroxetine (Paxil[®]); monoamine oxidase inhibitors such as selegiline (Eldepryl[®]) or phenelzine (Nardil[®]), salbutamol (Ventolin[®]), 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 take certain other medications.

It is important to tell your doctor if you:

- have liver problems
- 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 or street drugs
- have allergies or bad reactions to atomoxetine or any other medications
- are currently pregnant (or plan to become pregnant) or are breast-feeding



Tip: Taking atomoxetine with food can help lessen stomach upset, nausea, and vomiting.

What special instructions should I follow while using *atomoxetine*?

- 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) to check how you are responding to atomoxetine.
- Do not allow anyone else to use your medication.

What should I do if I forget to take a dose of *atomoxetine*?

If you take atomoxetine regularly and you forget to take it, take it as soon as you remember. Continue with your regular schedule the next day. Do NOT double your next dose.



What storage conditions are needed for *atomoxetine*?

- 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.

You may wish to share this information with your family members to help them to understand your treatment options. Since every person's needs are different, it is important that you follow the advice provided to you by your own doctor, nurse and/or pharmacist and speak to them if you have any questions about this medication.

*Developed by the health care professionals of
Child & Adolescent Mental Health Program and reviewed
by the staff of the Kelty Mental Health Resource Centre.*