



## Using *Clozapine* in Children and Adolescents

This information explains how **clozapine** can be used as part of a treatment plan with children and adolescents. 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 questions about this medication.



### Overview

Clozapine (Clozaril<sup>®</sup>, Apo-clozapine, Gen-clozapine) belongs to a group of medications called "atypical antipsychotics".



### What is clozapine used for?

Clozapine is used to reduce the symptoms of schizophrenia or psychosis (thought disorders) in those who have not responded well to other antipsychotic medications. Clozapine has specifically been shown to be helpful when other antipsychotics have not worked. In adults, clozapine has been found to reduce symptoms of schizophrenia to a greater extent than other antipsychotics. Clozapine may also be helpful to treat other medical and psychiatric conditions such as:

- Bipolar Disorder
- Impulsive/Aggressive behaviours (associated with psychotic disorders)
- Obsessive Compulsive Disorder (OCD)

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

### How does clozapine work?

Like other atypical antipsychotics, clozapine adjusts the functioning of certain chemicals in the brain called dopamine and serotonin. It also affects several other chemicals in the brain. It is believed that some chemicals, like dopamine, are produced in excess in people who have disorders like schizophrenia. The exact way that antipsychotics improve the symptoms of schizophrenia and bipolar disorder is not fully known.

### How should clozapine be taken?

Clozapine is usually taken once or twice a day with or without food. This medication should be taken at the same time each day as directed by your doctor. Try to connect it with something you do each day (like eating breakfast or brushing your teeth) so that you don't forget. Usually, your doctor will start with a low dose of clozapine. This dose will be gradually increased over several days or weeks based on how well it works and any side effects that may occur. You and your doctor can then discuss the best dosage to stay on. Do not take any antacids (like Maalox) within 2 hours of taking the clozapine dose.

You can take this medication with milk, water, orange or apple juice. Avoid taking it with grapefruit juice (as it interacts with clozapine) and high calorie drinks like colas.

### When will clozapine start working?

When treating the symptoms of schizophrenia (such as hallucinations or delusions), it usually takes 3 to 6 weeks or longer before the benefits of clozapine are noticeable. When clozapine is working well for those with schizophrenia some people notice that their thoughts are clearer and more organized. Agitation may be decreased and hallucinations (for example, hearing voices or seeing things no one else sees) may stop completely or be much less. Your mood may be more settled and you may see a reduction of intense fears and worries. Some people begin to feel less agitated

within the first week of starting. Clozapine does not work in everyone. If a noticeable improvement is not seen within a couple months or if the side effects are too troublesome, the doctor will discuss other options with you.

### How long do I have to take clozapine?



This will depend on your symptoms and how well this medication works for you. Those who have had symptoms of schizophrenia (on and off) for several years may be asked to take clozapine indefinitely (if they tolerate it well).

**As it takes several months to see the full benefits of taking clozapine, you should NOT decrease, increase the dose or stop taking this medication (even if you feel better) without discussing it with your doctor.**

### Is clozapine addictive?

No, clozapine is not addictive and you will not have “cravings” for this medication like you might with nicotine or street drugs. If you and your doctor decide it is best to stop, your doctor will explain how to safely come off this medication so you don’t feel negative effects as your body adjusts to being without it.

### Why do I have to have a blood test every week while I am taking clozapine?

Clozapine has been known to cause a reversible and rare side effect called “agranulocytosis”. This side effect occurs in less than 1 out of every 100 people who take clozapine. This side effect results in a decrease in the white blood cells. Without enough white blood cells, your body can not fight an infection very well. When your doctor orders weekly blood tests, he/she will be checking the amount of white cells in a portion of your blood. If your white cell count is dropping, you may be asked to take blood tests twice a week or stop using clozapine. Stopping clozapine allows for the body to make more white blood cells so you can fight an infection.

After taking clozapine for 6 months, the risk for this side effect is further decreased. At this point, the bloodwork is required every 2 weeks (instead of every week).

### What are some other side effects from clozapine and what should I do if I get them?

Side effects can occur when taking clozapine. Sometimes the side effects occur before any of the beneficial effects. Most of these side effects disappear 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. Here are some of the more common side effects of taking this medication. In brackets are suggested ways to lessen these effects.

### Common side effects

Should any of these side effects be too troublesome for you, please discuss them with your doctor, nurse or pharmacist.

- Blurred vision (*this usually disappears in 1-2 weeks; you may need to use bright lights when reading or a magnifying glass*)
- Constipation (*increase exercise, fluids, fruits and fibre*)
- Drowsiness (*try taking the dose at bedtime*)
- Dry mouth (*try chewing sugarless gum, sour candies, ice chips, or popsicles*)
- Excessive drooling (*other medications may help this; talk to your doctor*)
- Headache (*try using a pain reliever like acetaminophen*)
- Increase in hunger (*avoid high calorie foods*)
- Stomach ache (*try taking the medication with food*)
- Weight gain (*monitor your food intake, increase your exercise*)

**Uncommon side effects** (e.g., those that occur in less than 5% of patients)

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

- Uncontrollable or unusual movements
- Fast or irregular heart beat
- Fever
- Mouth soreness
- Increase in cholesterol
- Stiff muscles
- Fainting
- Agranulocytosis (low white blood cell count)
- Seizures
- Confusion
- Difficulty urinating
- High blood sugars



Your doctor will be checking with you and doing some blood tests to see if you are having any of these side effects. If you believe you have one of these side effects, please discuss it with your doctor as soon as possible. Also, please tell your doctor if you start having a fever, flu-like symptoms such as weakness, runny nose, or any other signs of an infection

**What precautions should my doctor and I be aware of when taking this medication?**

Tell your doctor or pharmacist if you:

- have any allergies or have had bad reactions to other medications.
- are (or start) taking any other prescription or non-prescription medications. A few medications can interact with clozapine, such as some sedatives, blood pressure medications, some antibiotics and several others. Your doctor may need to change the doses of your medications or monitor you carefully for side effects if you are taking medications that interact with clozapine.
- have a history of heart disease, seizures, kidney or liver disease, a bowel obstruction, diabetes (or a family history of diabetes) or glaucoma.
- are pregnant (or are planning to become pregnant) or are breast-feeding.
- are currently using alcohol or street drugs as these substances can decrease how well clozapine works for you and/or make you feel drowsy.



**Tip:** When taking this medication, your body may have difficulty regulating your temperature. You need to drink lots of fluids and water to avoid becoming dehydrated. You should avoid doing lots of physical activities on hot days.

**Tip:** Clozapine can make some individuals feel drowsy, dizzy or slowed down. If you experience these temporary side effects, it is important to avoid operating heavy machinery or driving a car.



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

- Keep all appointments with your doctor and the laboratory. Your doctor may order certain lab tests (like glucose or prolactin levels, or liver tests) to check how you are responding to clozapine.
- Do not allow anyone else to use your medication.
- Try to keep a healthy and well balanced diet. Many individuals taking clozapine gain weight due to an increase in appetite.
- If you experience any abnormal movements in your arms body or face, tell your doctor as soon a possible.

Tip: Use the Antipsychotic Monitoring Form for Children and Adolescents to help measure your progress on this medication

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

If you take clozapine only at bedtime and you forget to take it, skip the missed dose and continue with your schedule the next day. Do NOT double your next dose. If you take it more than once a day, take the missed dose as soon as possible. However, if it is almost time for your next dose (e.g., within 4 hours), do not take the missed dose or double up on next dose. Instead, continue your regular dosing schedule.



## What storage conditions are needed for clozapine?

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