

# Clozapine

In the recent decade, clozapine has helped over 225,000 people with schizophrenia, schizoaffective disorder, and severe bipolar disorder. Thanks to clozapine, a great many people whose lives were once seriously affected by mental illness are now leading more independent and productive lives.

Clozapine is the only antipsychotic that is proven to work better than the other medications in this class. So why don't we use it first? Clozapine has several serious risks associated with it, particularly a life-threatening drop in the white blood cells that protect you from infection, which can happen to 1 in 100 people. Fortunately, we can prevent this by catching the drop early, but that means we'll need to check your labs regularly while on clozapine.

Despite its health risks, people actually live longer on clozapine. In a dozen large studies, people who took clozapine lived 10 years longer on average than those who took other antipsychotics. Why? One reason is suicide. Clozapine is one of few medications that reduces the risk of suicide (the other is lithium). But that is only part of the reason. People also lived longer because they had fewer health problems. Your brain controls your body, and you can't have a healthy body without a healthy brain.

Clozapine has another benefit over other antipsychotics. It is the only one that does not have a significant risk of tardive dyskinesia, a potentially permanent side effect involving twitching of the mouth, hands, or feet. People who have developed that problem on other medications usually see improvement while taking clozapine.

Here are some of the positive effects patients have reported while taking clozapine:

- Ability to concentrate and communicate improves
- Ability to enjoy previous activity returns
- Motivation is higher
- Improved relationships
- Ability to participate in counseling, vocational training, or other activities of daily life improves
- Ability to live independently
- A decrease in suicidal thinking and behavior

## Key Points

1. Clozapine requires regular blood checks because of a serious risk of low white blood cells on it (1 in 100 people). Your pharmacist cannot release the medicine without recent labwork (weekly for 6 months, every 2 weeks for 6 months, then every 4 weeks).
2. Contact us if you have fever, signs of infection, or significant constipation on it.
3. It may make you dizzy when standing, especially when starting it.
4. There are other rare but serious side effects with this medication (diabetes, high cholesterol, seizures,

## How should I take it?

Most people take clozapine all at night because it can be sedating, but some do better by spreading it out throughout the day (especially if it makes them dizzy). Clozapine comes as a tablet to take by mouth. It usually is taken one to three times a day. Follow the directions on your prescription label carefully, and ask us or pharmacist to explain any part you do not understand.

The amount of clozapine you take may need to be adjusted, especially during the first few weeks. You will have weekly blood tests while taking clozapine and for 4 weeks after stopping it. Initially, you will receive only a 1-week supply of this medication at a time.

Continue to take clozapine even if you feel well. Do not stop taking clozapine without talking to us, especially if you have taken large doses for a long time. Clozapine must be taken regularly for a few weeks before its full effect is felt.

### **What special precautions should I follow?**

Before taking clozapine, tell us

- If you are taking these meds that interact with clozapine: anticoagulants ('blood thinners') such as warfarin (Coumadin), benztropine (Cogentin), carbamazepine (Tegretol), cimetidine (Tagamet), dicyclomine (Bentyl), erythromycin (E.E.S., E-Mycin, others), medication for high blood pressure, phenytoin (Dilantin), pain relievers such as codeine, selective serotonin reuptake inhibitors (SSRIs) such as fluoxetine (Prozac) and fluvoxamine (Luvox), trihexyphenidyl (Artane).
- If you ever had blood disorders; heart, kidney, or liver disease; depression; epilepsy; problems with your urinary system or prostate; glaucoma; irregular heartbeat; problems with your blood pressure; or blood problems caused by clozapine.
- If you are pregnant, plan to become pregnant, or are breast-feeding. If you become pregnant while taking clozapine, call us.

- If you are having surgery, including dental surgery, tell the doctor or dentist that you are taking clozapine.
- If smoke cigarettes (we may need to adjust your dose if you do).

### **What should I do if I forget a dose?**

If you take clozapine several times a day, take the missed dose as soon as you remember it and take any remaining doses for that day at evenly spaced intervals. However, if you remember a missed dose when it is almost time for your next scheduled dose, skip the missed dose.

If you take clozapine once a day at bedtime and do not remember it until the next morning, skip the missed dose. Do not take a double dose to make up for a missed one.

### **Signs of Dangerous Constipation**

Clozapine can slow your bowel movements, which can become serious if they slow too much. Follow the *First Aid* steps on the next page, and contact us if you have any of these signs along with constipation:

- Significant stomach pain for more than an hour
- Nausea or vomiting
- Swelling or bloating in your abdomen
- Blood in diarrhea

### **What side effects can I expect?**

In addition to agranulocytosis (low white blood count), clozapine is associated with several rare but serious side effects:

- Seizures: This is more common at higher doses or in people with a history of seizures, convulsions, or epilepsy.

- Fast or irregular heartbeat: If this happens, the dosage may be reduced, or this side effect may be treated with another medication.
- Myocarditis (an inflammation of a muscle in the heart): The risk is greatest during the first month of clozapine therapy.
- Falls from drop in blood pressure can happen, especially when starting or raise the dose (see side-bar for prevention).
- Constipation, which can be severe (see side bar for prevention).
- Increased risk of diabetes, high cholesterol and other lipids.

Less dangerous side effects include drowsiness, weight gain, drooling, dry mouth, headache, nausea, diarrhea, restlessness, thirst, flushing, dry skin, frequent urination, trouble breathing, sexual dysfunction, changes in menstruation.

### What storage conditions are needed for this medicine?

Keep this medication in the container it came in, tightly closed, and out of reach of children. Store it at room temperature and away from excess heat and moisture (not in the bathroom). Throw away any medication that is outdated or no longer needed. Talk to your pharmacist about the proper disposal of your medication.

## First Aid for Side Effects

**Dizziness.** Divide the dose 2-3 times throughout the day. To prevent falls, take care when standing up after laying down or sitting for a while. First move from lying to sitting and sit for a few minutes, then stand carefully with something firm to hold onto.

**Constipation.** Docusate (50-100 mg) with senna (sennosides 8.6mg) every 6-12 hours (combo "pericolace" tab at moodtreatmentcenter.com/products).

**Diarrhea.** Loperamide 2-4mg every 6 hours as needed.

**Drooling at night.** Get a pillow protector (search for "waterproof", "vinyl", or "fluid-resistant" pillow, eg McKesson, SureGuard, Cosy House).

**Dry mouth.** Avoid caffeine and drink lemon or citrus water. Chew xylitol or sorbitol gum for 20 minutes every 4 hours. Use Biotene rinses and pastes to protect your teeth, as dry mouth is bad for dental health.

**Nausea.** Take after a large meal. Take ginger capsules just before that meal (moodtreatmentcenter.com/ginger).

**Tremor.** Avoid caffeine. If severe, we may need to adjust your dose or add an antidote or vitamin to treat it.

**Dry or itchy skin.** Aveeno oatmeal bath, Sarna lotion.

**Weight gain.** Remove all processed, sugary, and fatty foods and drinks from your home. Avoid fried and fast-foods. Drink plain or flavored water or unsweet tea. Eat a handful of nuts, a protein shake, or protein bar 30-60 minutes before each meal. Follow the antidepressant diet at moodtreatmentcenter.com/lifestyle/life-style-101

### In case of emergency/overdose

In case of overdose, call your local poison control center at 1-800-222-1222. If the victim has collapsed or is not breathing, call local emergency services at 911.

## Clozapine Consent Form

In signing below, I, \_\_\_\_\_ (*print name*), acknowledge that my clinician has reviewed the risks and benefits of clozapine and consent to treatment with this medication. I understand that clozapine has potentially serious side effects, including:

1) *Agranulocytosis*: this potentially life-threatening condition happens when the body cannot make white blood cells to fight infection. Agranulocytosis occurs in approximately 1 out of every 100-200 people who take clozapine, and I will need to have my white blood cell count checked regularly to help prevent it.

In order for my pharmacist to dispense clozapine, I need to check my white blood cell count every week for the first six months and then every two weeks. While taking clozapine, I should also report any signs of infection or fever (temperature > 100.4°) to my doctor.

2) *Myocarditis and cardiomyopathy*: rarely, clozapine can cause inflammation of the heart muscle. The following symptoms can be a sign that this is happening and should be reported to my doctor: fever, chest pain, palpitations or unusual heart beats, racing heart (above 100 beats in a minute), and swelling in my legs.

3) *Seizures*: these can occur in approximately 2 out of every 100 people who take clozapine.

4) *Other significant side effects that can occur include*: constipation (which can be serious), weight gain, diabetes, elevations of cholesterol and lipids, fatigue, drooling at night, low blood pressure, and increased heart rate. *Neuroleptic Malignant Syndrome*, a dangerous condition of fever and muscle rigidity that can happen with any antipsychotic medication, occurs rarely with clozapine.

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SIGNATURE

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DATE

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WITNESS

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