

If you have any questions, please talk with your healthcare clinician.

Ketamine Treatment for Mental Health

Ketamine is a medication that has been used for anesthesia. In some people, smaller doses of ketamine can improve some psychiatric symptoms, such as depression and thoughts of suicide.

The clinician gives ketamine as an infusion through an IV (into the vein) line. The effects of this therapy may not last long. The antidepressant effects of the initial infusions may only last 1 to 10 days. After the initial 6 to 8 doses (induction phase), doses usually last for 3 weeks (maintenance phase).

Talk with your physician

Before you decide to start taking ketamine for psychiatric care, you need to know what it will involve. The Food and Drug Administration (FDA) has approved IV ketamine for anesthesia, but has not approved IV ketamine therapy for depression or other mental health conditions. Talk with your clinician to see if ketamine therapy is right for you.

When ketamine therapy cannot be used

Tell your clinician if you have any of these conditions.

Ketamine therapy cannot be used if you have any of the following conditions:

- Moderate to severe hypertension (high blood pressure) that is not controlled
- Pregnancy
- Porphyria, a rare genetic disorder that causes a buildup of blood chemicals for iron binding
- Dementia or delirium that is current, chronic or happened within the past week
- Schizophrenia, schizoaffective disorder or mania that is current or has happened in the past month
- Uncontrolled active substance use disorder, such as uncontrolled use of cocaine, alcohol or opioids
- History of ketamine abuse
- Allergy or history of serious side effects from ketamine or esketamine

You may need clearance from a cardiologist or neurologist if you have any of these conditions:

- Intracranial (brain) bleeding in the past
- Increased intracranial pressure in the past
- Major vascular (blood vessel) disease

You may need clearance from a cardiologist, pulmonologist and/or anesthesiologist if you have either of these conditions:

- Severe cardiac illness
- Severe respiratory illness

Risks and side effects of ketamine

The clinician gives ketamine through an infusion. Starting an IV is a routine procedure, but:

- An IV can cause brief discomfort from the needle stick, bruising, infiltration (leaking of the medication into the tissue) or infection.
- Some people may feel faint when the clinician starts the IV.

Ketamine sessions can temporarily and deeply alter your mental state.

- Ketamine therapy can have unusual effects on both your mind and body.
- Although ketamine can help psychiatric symptoms for many people, it does not work for everyone.
- Some people may feel sad if the treatment does not work for them.

Common side effects

These side effects may happen in 1 out of 10 people during ketamine therapy. These symptoms go away when the infusion is stopped. If they are severe, the clinician can use another medication to treat the symptoms.

- Feeling like you're floating or having an "out-of-body" experience
- Euphoria, intense excitement (but not mania)
- Vivid dreams or nightmares
- Anxiety
- Dizziness
- Blurred vision
- Hallucinations
- Drowsiness
- Headache
- Nausea and vomiting
- Increased saliva (spit)
- Increased heart rate and blood pressure during the infusion
- Brief change in motor skills, such imbalance or lack of coordination

Uncommon side effects

These side effects may happen in less than 1 out of every 100 people during ketamine therapy.

- Jerky arm movements
- Double vision
- Fast eye movements

- Flashbacks
- Low mood or suicidal thoughts
- Delirium
- Rash, pain and redness in the injection site
- Increased pressure in the eyes

Rare side effects

These side effects rarely happen:

- Allergic reaction
- Irregular or slow heart rate
- Low blood pressure
- Cystitis of the bladder (inflammation, ulcers and scarring)

Very bad side effects, such as an allergic reaction, may lead to death. However, studies have not reported any patient deaths from these side effects when clinicians use smaller doses of ketamine for depression treatment.

Addiction to ketamine

There is no clear risk of addiction with lower-dose ketamine therapy. But there is a low to moderate risk that you can become addicted to ketamine with frequent recreational use. You should not use ketamine without your healthcare clinician’s supervision.

Before the procedure

Follow these instructions before your ketamine infusion procedure.

- Do not eat anything for 8 hours before an infusion.
- You can drink clear fluids up to 2 hours before the infusion.

Medications

It is very important that you tell your clinician about all medications (both prescription and over-the-counter) and supplements that you are taking.

If you have any questions about what medications you can take on the day of your procedure, ask your clinician.

You can take your regularly scheduled, approved medications with a sip of water on the day of your procedure.

Your clinician may recommend changes about how you take the following medications:

- Lamotrigine (Lamictal®)
- Benzodiazepines such as lorazepam (Ativan®), alprazolam (Xanax®) and clonazepam (Klonopin®)
- Stimulants such as amphetamine and dextroamphetamine (Adderall®) and lisdexamfetamine (Vyvanse®)
- Bupropion (Wellbutrin®)

- Opioids such as oxycodone (Oxycontin®), hydromorphone (Dilaudid®), fentanyl (Duragesic®)
- Other sedating medications such as diphenhydramine (Benadryl®), methocarbamol (Robaxin®), baclofen (Lioresal®)

In the clinic

Before your 1st ketamine infusion, you will need to give a urine sample. The urine will be tested for drugs and pregnancy (if applicable). You may need to repeat these tests later in the treatment course.

You will not get the infusion if you are intoxicated or show signs of delirium, such as:

- Confusion
- Having a hard time paying attention or listening
- Feeling drowsy or sluggish
- Feeling disoriented

During the procedure

You will come to the Psychiatry Clinic on the 11th floor at 676 North Saint Clair Street, Chicago.

- You will sit in a reclining chair.
- A nurse will start an IV line in your hand or arm. They will give you the ketamine through a pump over about 40 minutes.
- A psychiatric nurse will check your blood pressure, heart rate and oxygen saturation during the infusion. They will watch you for any side effects.
- If you have side effects such as nausea, high blood pressure or anxiety, they can give you other medications through the IV to help.
- They will coordinate your care with your physician as needed.

The acute psychological side effects of the ketamine may last about 30 to 45 minutes after the infusion.

After the procedure

The care team will watch you for about 30 minutes after the infusion. Some patients may have mild side effects, such as imbalance, dizziness or nausea, that last for several hours.

Follow these instructions after the procedure:

- An adult must take you home from the clinic after the infusion.
- Do not drive a car, operate hazardous equipment, do hazardous activities or drink alcohol for the rest of the day after the infusion.
- Do not make important decisions or do business for the rest of the day after the infusion, if possible.

Deciding if ketamine therapy is right for you

Your clinician will go over the Northwestern Medicine Ambulatory Ketamine Therapy Agreement with you. You will need to sign this agreement to confirm that you will follow the conditions for using ketamine medications while you are under the care of your care team member who prescribed them.

Read the information closely and discuss it with your physicians, family and friends until you feel confident about your decision. If you need more information or have questions, ask your Northwestern Medicine Ketamine Clinic team.

Other treatments

Ketamine is not the only option for patients with treatment-resistant depression. It can be helpful when combined with other treatments for long-term benefits.

Other therapy options for treatment-resistant depression may include:

- Electroconvulsive therapy (ECT)
- Transcranial magnetic stimulation (TMS)
- Other antidepressant medications
- Antipsychotic medications
- Light therapy
- Escalated psychotherapy

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