

## **Ketamine Questions and Answers (Q&As)**

### **What Is Ketamine?**

Ketamine is a medication initially used for starting and maintaining anesthesia since it was FDA approved in 1970. It induces a trance-like state while providing pain relief and sedation. More recently, it has been found to be a valuable treatment alternative for certain treatment-resistant disorders, particularly for major depression.

Chemically, ketamine is related to phencyclidine and has a complex mechanism of action, primarily interacting with the NMDA receptor as an antagonist. It also affects a variety of other receptors in the brain, giving it hallucinogenic effects. This broad spectrum of action contributes to its diverse effects and potential therapeutic applications.

Although not FDA approved for treatment-resistant depression, and other disorders, ketamine has garnered significant attention in recent years, offering hope for patients who have not responded to conventional treatments. In this context, ketamine is often administered in a controlled medical setting as an infusion or a nasal spray (approved form known as esketamine). Intravenous ketamine has been observed to provide more effective and predictable outcomes compared to intranasal esketamine, although the latter offers a more controlled and potentially safer mode of administration that has received FDA approval.

The regulatory status of ketamine, being closely monitored by the FDA and DEA, reflects its complex profile as a drug with significant medical uses as well as potential for misuse. Due to its off-label status, ketamine infusions for mood disorders are not covered by insurance.

### **Is It Safe?**

Ketamine infusions for treatment-resistant psychiatric disorders, particularly for conditions like depression, have shown promise and are considered safe when administered under proper medical supervision in a controlled setting. However, as with any medical treatment, there are potential risks and side effects that need to be considered. The safety and efficacy of ketamine infusions depend on several factors, including the dose, the administration protocol, the patient's overall health, and the setting in which the treatment is provided.

These measures not only ensure the safety and efficacy of ketamine as a therapeutic tool but also address concerns related to the potential for abuse, making it a viable option for individuals with treatment-resistant mood disorders.

### **What Are The Side Effects?**

Low-dose ketamine infusions, used primarily for treating mood disorders such as depression, generally have a favorable safety profile, especially when administered in a controlled medical setting. However, as with any pharmacological treatment, there are potential side effects, which can vary in intensity from person to person. Most side effects are transient and resolve after the infusion is completed.

#### *Common Side Effects*

- Patients may experience dissociation, a feeling of detachment from the body or surroundings, which is generally temporary and subsides after the treatment.

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- Some individuals may experience gastrointestinal discomfort, including nausea and vomiting, during or after the infusion.
- Ketamine can cause transient increases in blood pressure and heart rate during the infusion.
- Feelings of dizziness or lightheadedness can occur, typically resolving soon after the infusion ends.
- Temporary changes in vision, such as blurriness, can happen during the ketamine infusion.

### *Less Common Side Effects*

- Although ketamine may be used to treat anxiety, some patients may experience increased anxiety or panic during the infusion, often related to the dissociative effects.
- A minority of patients report headaches during or after ketamine treatment.
- Short-term memory lapses or feelings of confusion can occur, usually dissipating within hours after the treatment.
- Some individuals may experience a temporary reduction in emotional sensitivity or a feeling of emotional detachment following ketamine infusion.

### *Rare and Long-Term Considerations*

- While the controlled administration of ketamine in a medical setting minimizes the risk, there is an inherent potential for abuse and dependency with ketamine due to its psychoactive properties.
- With long-term or frequent use, ketamine has been associated with urinary tract issues, including cystitis, though this is more commonly associated with recreational abuse of the drug.
- There is ongoing research into the long-term cognitive effects of repeated ketamine use, with some concerns about potential impacts on memory and executive function over time, especially outside of controlled medical use.

The most common side effects of ketamine include dissociation, nausea, confusion, inebriation, anxiety, dizziness, headache, euphoria, elevated blood pressure and heart rate. Because of this, you will be closely monitored, and we will have safety procedures on hand if necessary.

## **What Can I Expect?**

### *Treatment Setting Preparation*

The treatment room is prepared to ensure your comfort, including a reclined chair or bed, dim lighting, a quiet atmosphere, and optional items like eye masks and headphones with calming music.

Necessary medical equipment, including an IV infusion set, emergency medical supplies, and monitoring devices for vital signs, will be ready.

### *Ketamine Administration*

The ketamine dose is calculated based on your weight with variations based on clinical guidelines and your response. The calculated dose is diluted in saline and administered via IV infusion. The infusion typically lasts approximately 40 minutes.

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Throughout the infusion, medical staff closely monitors your vital signs, ensuring safety and comfort. Staff are also prepared to address any adverse reactions or emotional distress.

### *Post-Treatment Care*

After the infusion ends, you are observed for 30 to 60 minutes to monitor for any delayed side effects and ensure stabilization of vital signs.

Patients are advised not to drive or operate heavy machinery for at least 24 hours after the infusion. Arrangements for a designated driver or alternative transportation home are confirmed.

### *Therapy*

Therapy sessions the day after ketamine treatments allow you to process and integrate your experiences under the guidance of a trained therapist. This timing is strategic, taking advantage of the period when you may be more open to therapeutic interventions due to the lingering psychological effects of ketamine.