

What is Ketamine?

Ketamine is a psychoactive compound that has been valued for its long safety record of use in medical settings. Classified as a “dissociative anesthetic,” Ketamine is a medication that has historically been used safely as an analgesic agent with demonstrated efficacy in both surgical settings and pain management, since its approval by the FDA in 1970.

Ketamine is now an “off-label” treatment for various chronic “treatment-resistant” psychological conditions. The term “off-label” refers to the legal use of a pharmaceutical for an application not originally expected, and/or innovative purpose. A Schedule III controlled substance (and medication), Ketamine belongs to a group of chemical compounds (Arylcyclohexylamines) classified as hallucinogens (also commonly known as psychedelics). Unlike most other anesthetic agents, this class of chemical compound medications is not generally known to entirely extinguish consciousness, but instead is known to significantly dissociate the mind from body. At the dosage level administered, patients will most likely experience mild anesthetic, anxiolytic (calming), antidepressant, and potentially psychedelic effects.

How Does Ketamine Work?

Scientific research suggests that by blocking the NMDA receptors, Ketamine prompts the brain to increase the production of synaptic signaling proteins in the prefrontal cortex. The prefrontal cortex is the region of the brain thought to play a critical role in a person’s ability to regulate his/her mood. Ketamine appears to promote the growth of new synapses in the prefrontal cortex, resulting in greater connectivity in the brain, while also switching certain connections on and off. This cascade of events is thought to be the reason for the rapid anti-depressant effect.

In general, the most probable mode of action of Ketamine is as an NMDA antagonist working through the glutamate neurotransmitter system; this particular neuro-pathway is quite different from other mainstream psychiatric medications such as SSRIS, SNRIS, lamotrigine, major tranquilizers (anti-psychotic medications), and benzodiazepines.

Some feel that over time Ketamine helps to retrain the mind, brain, and personality system to become more relaxed, flexible, creative, and self-compassionate. Psychedelic induced and enhanced neuroplasticity effects in the brain may play a part in the types of positive cognitive, personality and behavior shift that Ketamine and Ketamine Assisted Psychotherapy (KAP) foster. Verbal, emotional and relational processing/integration during and after Ketamine sessions seek to maximize the beneficial effects of neuroplasticity.

It is important to note that Ketamine’s psychedelic effects (i.e., generally at higher doses) are not necessary for an antidepressant response or for response to emotional and psychological conflicts and difficulties. However, a minimal trance state (i.e., at lower doses) is viewed as essential to successful treatment of all conditions. Low dose Ketamine appears to have a cumulative antidepressant effect over time regardless of the route of administration.

As previously mentioned, a Ketamine Assisted Psychotherapy (KAP) treatment session has the potential to create a non-ordinary state of consciousness that can facilitate a profound transpersonal or mystical experience. These types of “peak experiences” have been shown to expand one’s sense of self and the understanding of one’s existence. Ketamine may also enable an individual to access his or her own inner healing intelligence - an intuitive inner guidance system - that can prompt specific actions or solutions based on the individual’s vast interpersonal history and the myriad of options for “moving forward.”

Essential to this method is a time-out from one’s usual day-to-day life and mental experience. The process is characterized by deep relaxation and disengagement from ordinary concerns and usual mindset, while maintaining conscious awareness. Many feel this benevolent disruption of the busy or distressed mind, along with its ruminating preoccupations and concomitant negative feelings, creates an open space for the exploration of new feeling states and self-observations. This process can potentially lead to significant shifts in overall well-being and understandings of oneself and others. Initial sessions involve an assessment of current problems, concerns, needs, and goals, as well as an evaluation of the patient’s overall health, as part of determining the suitability KAP treatment.

At the end of the evaluation period, I will offer my clinical impressions and treatment recommendations. The resulting goals of therapy are arrived at by mutual collaboration. These goals will be reviewed across the course of the collaborative work in order to assess and/or modify the treatment according to changing needs and perspectives.

Methods of Administration

The routes of administration of Ketamine are intravenous, intramuscular, intranasal, sublingual, and oral. In my office we use sublingual administration, it generally takes about 20 minutes to begin feeling the drug effects, which last for 60 - 90 minutes.

Verbal, emotional, and interpersonal processing may take place throughout the session or after the stronger effects of Ketamine wear off. After the drug’s stronger effects wane, most people generally feel remarkably open, relaxed, vulnerable, and connected to the recently accessed psychological, emotional, and transpersonal material.

What are the Potential Benefits of KAP- Ketamine Assisted Psychotherapy?

Participation in Ketamine therapy can result in a number of benefits, but there is no guarantee that any or all benefits will occur. Although there are now many studies demonstrating its efficacy, use of Ketamine is still considered a new and experimental psychiatric treatment. Improvement generally occurs with ongoing administration (often a combination of in-office and at-home sessions) and is most robust when part of an overall psychotherapy treatment program.

KAP may permanently relieve an individual’s condition but not always. If symptoms respond to Ketamine, a patient may still elect to be treated with other medications and ongoing psychotherapy to reduce the possibility of relapse. The literature indicates a 70% initial positive response rate to Ketamine, as well as a 40- 50% remission rate (return of symptoms) for patients with treatment-resistant depression. If a patient

responds with mood improvements after six to eight initial treatments, he or she may choose to receive additional booster treatments periodically, usually once every 8-10 weeks, depending on a return of previous symptoms.

On the day of the Ketamine treatment, the patient should follow my protocol directions about food and medication intake. During the pre-dosing intake session, we will reflect on the specific goals for treatment and facilitate the setting of specific intentions for the KAP session. In general, I also encourage patients to hold these intentions lightly, as attempts to overly control the experience can sometimes prompt unnecessary anxiety and stand in the way of surrendering to the experience.

If desired, the patient will collaboratively create a personal invocation, a set of emotionally evocative and relevant statements to be read as the Ketamine treatment begins. This “ceremonial” invocation is meant to induce a receptive mindset for the journey. The therapist may also offer and teach breathing exercises and other mindfulness or meditative guidance to address any anxiety the patient may have going into the experience.

I will also discuss, and make choices for the use of music during the treatment session. Music serves to ground, support, and deepen the process. Carefully arranged music can provide a sense of forward movement and a guiding flow that can enhance the experience. I provide specially curated playlists, designed to catalyze the psychological and emotional process, and take the patient on an inner journey.

I suggest to all patients that they use an eye mask, which I will supply to help maintain an internal focus which facilitates and enhances the experience. Much of the session will be spent “going inside” or focusing on one’s internal experience. However, the therapist will check in periodically throughout the session and may ask questions or underscore themes from time to time. There will be an opportunity to dialogue further once the effect of the medicine subsides.

A condition for KAP treatment I ask my patients to make two important agreements.

- 1) To follow any direct instructions given by the therapist(s) until the end of the session.
- 2) To remain at the office until the therapist determines that the patient is safely ready to leave.

Although Ketamine has a long safety record, it is a psychoactive drug. Therefore, it is essential that patients are closely monitored and evaluated during and after their treatments to ensure optimal safety upon leaving our office.

What Does Ketamine Feels Like?

The psychological effects and sensations of Ketamine vary with the dosage and route of administration. A prescription for Ketamine lozenge must be ordered by the patient's psychiatrist. Prescription Ketamine lozenges, come from a reputable pharmacy in San Francisco - Koshland pharmacy. Each vacuum sealed lozenge is 100mgs. Ketamine therapeutic dosages range from 100mgs to 400mgs. The dosage is selected based on patient's medical history, familiarity with a psychoactive drug, patient's goals and treatment plan. However for an initial KAP session, I start my patients out on a lower

dose, usually 200mgs and if need be a booster of a third lozenge can be added 30 minutes after the initial dose.

Some of the physiological effects experienced during KAP sessions include changes in perception of, and sensitivity to, light and sound. Under the influence of Ketamine, people commonly describe experiences of lightness, floating, and drifting and reduced control over willful motor functions such as speaking or walking. These phenomena are often experienced with amusement or relief. At the dosage levels we use, individuals may or may not always maintain conscious awareness of where they are or remain responsive to their surroundings; even at lower doses, some patients have out of body

The session will last approximately two to three hours. As your therapist I will always be present to provide grounding, safety, and support whenever necessary. In general, I suggest patients plan on spending approximately three hours at my office on the day of a treatment, although this time may vary.

What are the Possible Side Effects?

Ketamine has an extensive record of safety and has been used at much higher doses for surgical anesthesia without respiratory depression. As with any medication, there are also some potential risks and side effects to consider before treatment process. These side effects of Ketamine may include distorted visualization of colors, feeling suspended in space or floating, falling sensations, experiencing out-of-body sensations, vivid daydreaming, and unusual changes in sensory perceptions, most often visual, tactile and auditory processing. Familiar music may seem unrecognizable, and new music may seem uncannily familiar. Synesthesia (a mingling of the senses) may occur, such as seeing music or tasting a color. One's normal and ordinary sense of time may distort with time dilation, telescoping, or contraction.

Driving an automobile, operating machinery, or engaging in physical activities that are potentially hazardous should not be undertaken on the same day of the dosing session. Patients must have a pre-arranged transportation to and from the psychotherapy office. Repeated high-dose, chronic use of Ketamine has been known to cause urinary tract symptoms in some individuals, and even permanent bladder dysfunction; this has not occurred in our practice. In terms of psychological risk, Ketamine has been shown to exacerbate certain psychotic symptoms in people who suffer from schizophrenia or other serious mental disorders and it can potentially aggravate other serious mental disorders such as severe personality and/or dissociative disorders.

With higher doses of Ketamine, while most people describe the psychological and transpersonal perceptions as pleasurable, joyful, or fascinating, some people report the unusual experiences as bizarre or frightening. I have found that frightening experiences can be therapeutically very valuable, and ultimately redemptive.

I encourage patients to take a nonjudgmental attitude towards all that they may experience during KAP sessions because in general, psychedelic-assisted psychotherapy traditions tend to view so-called "challenging" experiences as harbingers of important breakthroughs that can lead to significant improvements in depression, perspective, mindset, and interpersonal relations. All patients receive psychotherapeutic

support and ongoing guidance for making the best use of both positively- and negatively-charged perceptions and experiences.

How Fast Does KAP Work?

Ketamine is a short-acting, with a rapid onset and a potential to elicit transformative experiences, in higher doses it can be a powerful psychedelic. Ketamine has a proven safety record as a dissociative anesthetic used by thousands of patients in much higher doses than are used in a psychotherapeutic setting. The immediate or rapid relief of depressive symptoms has a potential for providing an acute interruption of suicidal intent.

Successful treatment of extremely severe symptoms may require more frequent sessions and/or higher doses of the drug at the beginning of a series of sessions, followed by lower-doses and/or less frequent sessions as treatment continues.

How Many Sessions will be Needed?

The number of sessions needed is variable, depending on overall treatment goals and responsiveness to the treatment. Current research shows that 70% of patients with treatment resistant depression respond positively to 1-3 administrations, and 30-60% report having a remission of their depression for varying lengths of time. It seems that with repeated drug sessions, and in combination with psychotherapy, there is a cumulative antidepressant effect. KAP may also prove effective at reducing remission rates/frequency for symptoms of other conditions such as anxiety and trauma. KAP may further serve to support and foster lasting positive influences on an individual's interpersonal relationships, occupational and social relationships, and promote the further maturation of an individual's positive sense of self, self-agency, and self-acceptance.

Is Ketamine Addictive?

Ketamine is a controlled substance and is subject to Schedule III rules under the Controlled Substance Act of 1970. Medical evidence regarding the issue of drug abuse and dependence suggests that Ketamine's abuse potential is equivalent to that of phencyclidine and other hallucinogenic compounds that do not meet criteria for chemical dependence. This is because they do not cause tolerance and withdrawal symptoms. However, cravings have been reported by individuals with the history of heavy use of psychedelic drugs. In addition, Ketamine can have pleasurable effects on mood (feelings), cognition (thinking), and perception (visual and auditory) leading some individuals to want to use it repeatedly.