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Ketamine for Migraine Management

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By *Katie M. Golden*—April 1, 2015
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Imagine being transported to a place where you felt no pain. You may have an almost out-of-body experience that is peaceful and comforting. New thoughts and revelations may enter your mind as you bask in an instantaneous pain relieving world. Sounds kinda trippy, right? Some of you may be flashbacking to drug experimentation of your youth with hallucinogenic drugs. The cause of this seemingly blissful state, is not far off from those free-loving days of the 1970s...or even the euphoric and happy effects of popular rave drugs today like ecstasy. This pain-free place has been created by Ketamine and it could be used to help YOU, a [Chronic Migraine](#) sufferer.

If you're not familiar with Ketamine, maybe you've heard it referred to as "Special K", "Ket" or simply "K" when abused as a recreational drug. Still not sure? In its intended form, it is used as a horse tranquilizer by veterinarians or by anesthesiologists to knock out a patient undergoing surgery. So how does this potent drug come into play for Chronic Migraineurs?

Over the last few decades, Ketamine has been studied and tested on patients with various pain ailments. Dosing is considerably smaller than that used in a surgical setting and less than what a drug user would take in order to be transported into the "K Hole," (The K Hole references the deep hallucinogenic state that creates feelings of extreme dissociation when used at high levels). Ketamine is an NMDA antagonist. It blocks a glutamate chemical in the brain and causes brain cells to form new connections.⁷ While the reasons why Ketamine works to relieve pain are still largely unknown, studies have shown that it can be used as part of a pain management program as it is less addictive than standard [opioid](#) therapies.

History

- Ketamine was discovered in 1962 by pharmacist Calvin Stevens⁶. It has widely been used as an anesthetic for humans and large animals undergoing surgery.
- In the 1970s, Ketamine was being used as a recreational drug, which induces hallucinations and other psychotropic effects when taken in smaller doses than used for surgery. Effects of Ketamine as a recreational drug are similar to use of LSD, PCP and Angel Dust.
- Ketamine can be found in pill form, powder, IV infusion, intra-muscular injection and intranasal spray. Ketamine is a Schedule III drug.
- John Lilly, a neuroscientist who was a pioneer in researching early dolphin-to-human communication and dolphin intelligence, experimented with Ketamine to cure his own [Migraine](#)



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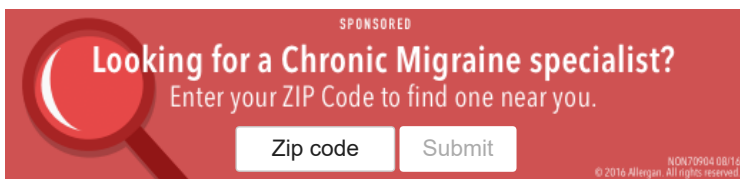
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headaches. His fellow researcher suggested using Ketamine in the sensory deprivation floating tank Lilly had created. Three different doses of Ketamine were injected before long term relief from the Migraine occurred. Consistent doses of Ketamine seemed to prevent future Migraine attacks⁵ of Dr. Lilly.

Studies

Dr. Carlos Zarate, a Chief researcher at the National Institute of Mental Health, says that “we can take care of a migraine in hours” using ketamine⁷. Dr. Zarate is mainly focused on using Ketamine for treating major depressive disorders, however there have been several studies geared toward [treating Migraines](#).

One study tested the effects of intranasal Ketamine on 11 patients with familial [hemiplegic migraines](#). Under supervision, each participant was given a 25 mg dose via a nasal spray at the onset of a Migraine attack. They were asked to record their symptoms 15 minutes after each use and were then allowed to administer Ketamine at home. During the study, over half of the participants reported an improvement of all of their [symptoms](#) after using Ketamine.⁸



In a separate study, researchers examined the effects of IV Ketamine infusions of participants who were actively having a Migraine attack. Over 159 minutes, participants were given 64 mg of Ketamine through an IV. On a 1-10 pain scale, participants had an average pain score of 6 before treatment. After the Ketamine infusion, the average pain score reduced to 2.5.⁹

The most promising study was discussed by the late Dr. Andrew Sewell on a Ketamine web forum. 247 patients participated in an open outpatient study that used IV infusions of Ketamine. The participants represented five different types of Migraine sufferers. Every group reported at least a 50% reduction in their headaches.¹⁰

- In 162 patients with Refractory Migraines, 150 reported greater than 50% reduction in their pain.
- In 39 patients with Chronic Migraine, 26 reported greater than 50% reduction in their pain.
- In 4 patients with Paroxysmal Hemicrania, all 4 reported complete resolution of their pain for an average of 7 days.
- In 11 patients with Cluster Headaches, all 11 reported complete resolution of their pain for an average of 6 days.
- In 31 patients with non-specific headache type and facial pain, 25 patients reported greater than 50% reduction in their pain.

Cons

While these studies are promising, there are still many questions unanswered. Additionally the potential side effects of long term use of Ketamine (either recreationally or for medical use) are still not fully understood. Here are some of the potential side effects:

- There is a concern that [cognition](#) could be permanently impaired after years of use.
- Bladder issues, such as ulcerative cystitis, have been reported in 20-30% of recreational Ketamine users.¹ Often, these symptoms can be reversed after cessation of the drug.
- Liver damage.
- Increased blood pressure and heart rate.²
- Respiratory depression.
- Cost and access can be prohibitive. Most insurance companies won't cover Ketamine infusions, which can cost between \$300 and \$1,000 per infusion.²



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- Recreational uses of Ketamine have been attributed to deaths since its creation. However, cause of death is typically linked to use of additional drugs or alcohol in connection with Ketamine. There have been few recorded cases of patients dying strictly from Ketamine use.⁶

Other Potential Medical Uses for Ketamine

Studies are currently underway to examine the therapeutic effects of Ketamine for other diseases and illnesses. These include:

- Ménière's disease (3).
- Status Epilepticus (4).
- Spinal Cord Injuries.
- Phantom Limb Pain.
- Refractory Cancer Pain.

Conclusion

The use of Ketamine for medical purposes (other than for anesthesia) is being explored for Migraines as well as many other illnesses. With the risk of [addiction](#) lower than using opioids or narcotics, Ketamine could become a more widely used tool in pain management. However, with limited studies, Ketamine treatment for Migraine is not being used as the first line of defense and many [Headache Specialists](#) are hesitant to use it.

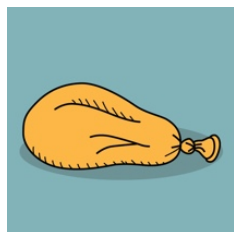
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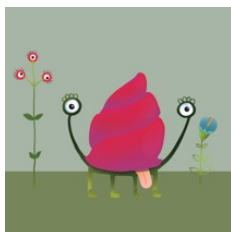
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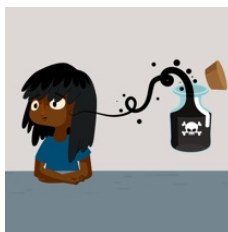
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