

The mental health journey is long and exhausting. By the time a person has found ketamine therapy as an option, they have more than likely tried multiple medications and interventions with variable success. Whether your diagnosis is treatment resistant depression, anxiety, bipolar depression, or some other mood disorder, you most likely have suffered from all the collateral damages of mental health. These include:

- Fatigue
- Loss of sense of reward
- Low motivation
- Increased pain
- Brain Fog
- Financial Loss
- Family discord
- Loss of personal fulfillment
- Medical complications such as heart disease and stroke
- Side effects from prior treatments
- Anhedonia emotionally blunted or 'dead' inside
- Substance abuse, such as alcohol and opioids

Ketamine therapies represent a treatment option that rapidly improves not just low mood and sadness, but also improves the wellness parameters that traditional medications hardly impact. Improved motivation, less brain fog, and less fatigue are among the list of symptoms that ketamine therapy can help.

The purpose of the first medical and psychiatric evaluation is to learn more about the journey you have taken, the interventions that have failed, and to look at integrative ways to improve your outcome.

## **The Medical Consult**

The initial evaluation will include:

- A review of **prior medications** or procedures used to treat your condition
- Allergies
- Medical conditions, such as diabetes or hypertension
- A discussion of mental health treatments you may have been involved with, such as EMDR (Eye Movement Desensitization and Reprocessing), CBT (Cognitive Behavioral Therapy), IFS (Internal Family Systems), or other treatments

- A review of any eating disorders
- Substance use discussion and treatment options
- Exercise
- Structured time and lifestyle evaluation
- Current stresses such as legal, financial, divorce, or workplace issues.
- A discussion of expectations of outcomes with ketamine therapies: not everyone responds, and relapse can occur and may require booster infusions
- Consideration of further lab investigations of etiologies of mood disorders: Mold testing, Lyme disease, heavy metals, bacterial and yeast overgrowth, organic acid testing, environmental pollutants, obesity related testing, hemoglobin A1C, thyroid panels, cortisol, Vitamin D, Vitamin B12, homocysteine, advanced lipid panel, erythrocyte sedimentation rate, C-reactive protein, kryptopyrroles, Serum copper, Vitamin levels, and hormonal testing (DUTCH) testing.

#### What Does Treatment look like?

- You will need a driver for the treatment session.
- Try not to eat anything for an hour before the infusion, however liquids are fine.
- Bring a blanket, comfortable clothes, noise-canceling headsets, ambient music, and maybe an eye mask.
- Many patients will wear a scopolamine patch sent in by the physician to decrease any dizziness and augment the infusion. This should be placed several hours before the infusion.
- Take a Zofran one hour before the infusion.
- Clear your mind do not bring your work or stress to your appointment. Use the infusion experience and time in the office for self-care.
- You can have a family member with you.
- Each room is slightly different, with monitoring of your vital signs in place.
- Expect the infusion to last 40-45 minutes with about 15 minutes to recover.
- Generally, 6 infusions are needed over two weeks. You can do two or three infusions per week, but do not let more than several days pass between infusions.
- You may start to feel better immediately after the first infusion or frequently by the fourth infusion.
- You will still be able to work the following day of the infusion. Women can notice more malaise
  and fatigue the next day. Sleep can be disrupted in some, and we can prescribe medication to
  help.
- There will be ups and downs during the infusion process. You may feel great one day and then
  worse the next. That is normal as the consolidation of treatments occurs during the infusion
  series. Remember that ketamine therapy cannot change your life stressors such as job status,
  boss, family behaviors, or other external things. Those changes will be up to you. Ketamine
  therapy will not change your personality.

# What Will the Infusion Feel Like?

- As the infusion begins, you will feel numbness and heaviness in your face, arms, and legs.
- You may feel that you are floating or separating from your body at higher doses
- The first infusion is a lower, therapeutic dose to make you comfortable with the treatment. Doses escalate with each infusion but remain below anesthetic doses.
- The infusion experience ends within minutes of stopping the IV.
- If you feel anxious, try to redirect your mind to a safe thought. If you still feel uncomfortable, we can administer a mild sedative to help.
- Let your musical selection help guide your journey. If the music is, for some reason, unhelpful or distracting, it can be changed or turned off. If the music evokes bad memories, consider using that time to explore those feelings.
- Many people find it difficult to use words to describe their infusion experience. Whether the
  experience is awesome, neutral, or sad does not affect the results of neuroplasticity that results.
  The infusion experience is a side-effect of the infusion. The infusion does allow an opportunity
  to explore and reprocess your memories and emotions.
- You may notice sensory distortions during the infusion, such as immersive colors, enhanced sound perception, and even synesthesia. You may be able to feel the color red and taste 'middle C' as the ketamine allows deep sensory areas of the brain to connect and exchange information. There may be altered states of consciousness, empathy, connectedness, or a sense of oneness with the world. There can be contrasts such as 'feeling as if you have died, yet never having felt more alive than at that moment.'
- Each journey is different and unpredictable.

# **How Can I Prepare for The Infusion?**

- Clear your mind and declutter your schedule for the day.
- Set aside time to reflect on your journey after the infusion.
- Consider journaling before, during, and after the infusion all the experiences you have.
- Movement is important, so exercise earlier in the day or several hours after the infusion can be helpful in promoting better outcomes.
- Meditation the day of the infusion can place you more 'in the moment' and prepare you better.
- Avoid alcohol and Marijuana. Marijuana interferes with many medications as it activates specific liver enzymes that metabolize medications.
- Try to take the rest of the day off after the infusion. Clear your schedule.

### How Do I Know If It Is Working?

- For many patients, the feel lighter, as if a weight has lifted off them
- There may be decreased ruminations and negativity
- There may be increased motivation to get more done
- Many will notice more energy, focus, and less brain fog.

- <u>NOVA Health Recovery</u> also utilizes medically verified testing to assess improvements in mood and cognition through the OSMIND app, which requires the patient to enter data for various scored mood indicators.
- NOVA Health Recovery also uses the Cambridge Brain Science test for the assessment of
  cognitive abilities and document improvements in the areas of attention, focus, verbal memory,
  working memory, and several other domains during ketamine treatment.
- Finally, the family may frequently notice that the patient seems more active, engaged, and
  present. We rely on secondary sources to help assess improvement in home-life and emotional
  regulation.

#### What to Do Between Infusions

- Avoid alcohol and marijuana
- Get outside and move
- Eat a Mediterranean Style diet. Avoid sugar and processed foods.
- Set a structured sleep time
- Review the aftercare therapies below and start implementing them.

### What Can I Do to Make Ketamine Work Better?

- Exercise daily. Plan to spend 40-60 minutes a day for self-care in the form of aerobic exercise. Physical fitness is important to well being.
- Intermittent fasting. Consider eating the last meal by 7 P.M. and starting the next meal at 2 P.M. the next day. Do this several times a week.
- Mediterranean Diet: Consider following a Mediterranean diet with increased fish, whole organic foods, and olive oil as it promotes lower inflammation and better mental health. Consider Gluten free diets if celiac disease is a consideration. Anti-inflammatory diets may play a role in patients with medical illness or are overweight. Minimize sugar, sweets, and saturated fats. Increase your polyphenols with berries, fruits, and vegetables.
- **Saunas** also promote increased Brain Derived Neurotrophic Factor (BDNF), which increases neuroplasticity.
- **High Intensity Interval Training** is associated with better mental health.
- **Stress Management:** Do not overschedule yourself. Set reasonable goals. Focus on your relationships and family.
- Time Management: Structured time is important. Set a reasonable schedule every day. Lack of structure results in increased depression, anxiety, and substance use. Boredom kills. Goal Setting is important to maintain sight for your future.
- Avoid Alcohol and Marijuana.
- **Body Movement:** Yoga, Tai Chi, Hiking, dancing, and climbing. Get out in the sun daily. Sitting is as bad as smoking.
- Quit Smoking.

- Meditate daily. Mindful meditation will place you in a flow state. It is important to be present in the moment as this decreases anxiety and depression. This increases telomere length and also life span.
- Avoid social isolation. Consider looking into <u>meetup.com</u>, <u>citysocializer</u>, and <u>feverup.com</u> for local options on activities, fairs, and events. Join a climbing gym or a regular gym and participate in group activities such as Barre, Pilates, Yoga, and other group activities.
- Consider getting a pet. People with pets are less lonely and have a more positive outlook on life.
- **Sleep**: Structured sleeping schedules are important to maintain a reasonable sleep rhythm. CBT-I is a cognitive behavioral therapy used to address sleep issues and behaviors. If possible, 8 hours of sleep is best. Remove animals from the room if they keep you up. Turn off all the lights and do not watch movies or your phone in bed.
- Dental Care: Flossing and appropriate dental care can decrease total body inflammation and improve health and mood.
- **Religion and Spirituality**: Religious and spiritual gatherings can increase satisfaction with life and Healthspan.
- Self-Care: Get a massage or go to a Spa.
- **Education:** Consider going back to school or online education. Consider a new trade. Learn a new language or how to cook.
- Therapy: Consider getting a therapist or changing therapists if you are 'stuck.' CBT, IFS, DBT, EMDR, and other forms of therapy can help you improve beyond medications and lifestyle changes.
- **Employment**: Consider changing jobs if you feel unfulfilled. Remember that it is unlikely that your job will get any better in future years, so it is up to you to make changes now.
- **Family:** Focus on family. Be present and be an active listener. People with positive family and friend relationships live longer and happier lives. They have less stress and loneliness. Reevaluate toxic and negative relationships.
- Do not use drugs.
- **Create purpose in your life. Hope** is important. What are your one year and five-year goals? Accept the inevitability of change such as the change in relationships, ageing, and seasonal changes. Be prepared to change yourself and break your cognitive rigidity <u>think outside the box</u>. Those who are able to accept change and change with the times are happiest.
- Create an environment that enables your body to have its needs met: Hygiene, nutrition, food, sleep, and a clean environment are critical.
- If you are overweight, consider a **structured weight loss** journey such as **Optifast** or Nutrimed.
- Add Supplements to your daily routine. Decrease oxidative stress and improve your mood.
   Supplements that extend Healthspan also improve mood: Resveratrol, Omega-3 fatty acids (EPA especially), Chromium, Low-dose nutritional lithium, Turmeric, Magnesium, Collagen, Creatinine, Coenzyme Q10, acetyl-L-Carnitine are helpful in lowering oxidative stress and improving mood. Antioxidant foods such as Blackberries, cilantro, kidney beans, elderberry, berries, dark chocolate, Goji berries, cranberries, and artichoke are essential to decrease oxidative stress. Power foods include Avocado, broccoli, seafood, mangos, mushrooms, apples, and strawberries. Phosphatidyl Serine, Silexan, Ashwagandha, and Rhodiola can help with stress

- and elevated cortisol levels. **Inositol** can also decrease anxiety and OCD (Obsessive Compulsive Disorders).
- Other supplements that help decrease depression include SAM-e, Methyl-folate, and methylB12. Maximize your vitamin D levels with a Vitamin D3/K2 supplement. Zinc and Magnesium play critical roles in the enzymes that produce Serotonin and dopamine. Be certain to include these supplements as well as B complex.
- **Do not retire.** Always have a passion or 'job' to structure your time. Always find new ways to contribute to your family and society. Inspiration and higher purpose create contentment with life. Do not waste time watching television. Stay busy and focused. Humans are designed to move. Strengthen your social networks. Reflect on your life achievements and learn from past failures. Reflect on who and what you truly love.

# **Ketamine Therapy After Care**

- Arrange therapy sessions to be on the day after an infusion of ketamine
- Expect to have booster infusions monthly until you feel stable.
- Monitor your mood and cognition through the OSMIND app. Realize that simply completing
  these infusions without changing anything else will result in eventual relapse. The initial booster
  helps prolong remission. Many patients relapse slowly and may not recognize decline until
  terrible things happen. Stay on top of your physical and mental health.