

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Our service

Ketamine is a new treatment for depression which has not responded to other treatments. Its brief rapid antidepressant effect has been shown in several clinical trials over the last 15 years. We provide a paid-for service for patients who have been referred by their GP or psychiatrist.

What is the service?

We provide a paid-for service for patients who have been referred by their GP or psychiatrist. Before treatment, patients are assessed by a psychiatrist to confirm their suitability. Initial treatment consists of three ketamine infusions over three weeks. You can find out more about the cost of treatment in the prices section.

Where is the service provided?

Oxford Health NHS Foundation Trust's ketamine service is based at Warneford Hospital, Oxford. Postcode OX3 7JX.

Is it available on the NHS?

No. The service described here is a 'paid-for' or 'private' service. All potential patients must establish their own funding arrangements.

What is Ketamine?

Ketamine is a new treatment for depression which has not responded to other treatments. Its brief rapid antidepressant effect has been shown in several clinical trials over the last 15 years.

Is it a licensed treatment?

Ketamine is not a licensed treatment for depression. It is used in depression as 'off-label' treatment. It is licensed as an anaesthetic and for analgesia.

All of the income from the paid-for service described on this site is used to fund NHS care within Warneford Hospital and other NHS sites across Oxfordshire, Buckinghamshire, Wiltshire, Swindon, Bath and North East Somerset where Oxford Health NHS Foundation Trust operates.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Assessment

Referrals

In order to have an assessment appointment you will need to get your GP or psychiatrist to send a referral to the Ketamine Clinic. This must include information about:

- your physical and mental health
- your previous and current treatments
- copies of any correspondence about your mental health such as letters from other teams

Incomplete referrals

If sufficient information is not included in your referral your appointment is likely to be delayed whilst further information is sought from your referrer.

If your referrer does not have immediate access to documents detailing your previous contact with mental health service, we suggest that you request copies of such material from previous doctors whom you have seen and forward it to the doctor who you wish to refer to us.

Pre-treatment assessment

Before treatment you will be assessed in an outpatient appointment to confirm your suitability for treatment. Assessments take place on a Friday afternoon.

You will be assessed either by Professor Rupert McShane MD FRCPsych or by another experienced consultant psychiatrist in his team. Rupert McShane is a consultant psychiatrist who works at Oxford Health NHS Foundation Trust and undertakes clinical research at the University of Oxford's Department of Psychiatry.

Criteria for treatment

Patients must:

- currently be suffering from depression
- have tried at least two different types of antidepressants for at least six weeks each at an adequate treatment dose
- have tried at least one type of psychological treatment
- be referred to the service by a GP or psychiatrist
- be able to travel safely for treatment and assessment appointments
- be willing and able to send regular depression ratings by either email or SMS texting
- be willing and able to complete regular questionnaires online, or have someone who can help them do this if needed
- be able to understand the nature and purpose of the treatment, its benefits and possible side effects

Normally you should not take ketamine if you have:

- Raised pressure within the skull (your doctor will know if this is the case)
- Severe high blood pressure
- Raised pressure inside the eye (glaucoma)
- Recent history of epilepsy
- Current or recent history of psychosis
- History of drug or medication induced manic episodes
- Taken any illegal drugs for at least the last two years, including cannabis
- Are pregnant, breast feeding, undergoing IVF or trying to conceive
- Cannot abstain from alcohol for at least three days

Assessment (continued)

Initial treatment consists of three ketamine infusions over three weeks. Assessments are on Friday afternoons and treatments are on Monday afternoons.

Before an assessment appointment

Once we receive a referral we will check to see that we have the information from your doctor that we require. If not, we will contact you or your GP for further information.

We will then telephone you to set up an assessment appointment and obtain an email address to which a confirmation letter will be sent.

The email will also include information about a mood monitoring system True Colours and our paperless notes system Patients Know Best (PKB).

We will then register you for True Colours and PKB. It is essential that you start using True Colours before your appointment.

You must complete all the forms within PKB as directed at least 7 days before your appointment.

At the assessment appointment

At the appointment, which will be held at Warneford Hospital, Headington, Oxford, OX3 7JX, we will:

- review the documents received from your referrer
- review the PKB forms
- review the True Colours monitoring data
- talk to you in detail about your depression

- assess and help you to manage your expectations of treatment
- ask whether you are happy to be contacted about future research
- take your blood pressure
- weigh you
- take a blood test

If the doctor judges that the treatment would be suitable in your case. We will ask you to complete a treatment consent form on PKB.

This confirms that you have read the information leaflet, understand the possible side effects and recognise that ketamine is not licensed for the treatment of depression.

After the assessment appointment

If the consultant judges that the treatment would be suitable in your case we will schedule three infusions of ketamine. This is sufficient to ascertain whether you are a 'responder'.

Often people do not experience a response until after the second or third infusion. The dose of ketamine may be adjusted up or down, during the course of your treatments.

Depending on waiting times, there may be a significant delay before your infusions can be scheduled. Three infusions will be scheduled on Monday afternoons over no more than four weeks.

We will write to the person who referred you after your assessment, copying in your GP unless you direct otherwise. You will then receive an email with a letter attached detailing the dates and times of your ketamine appointments.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Treatment

Before treatment

You should continue to complete True Colours mood monitoring daily after your assessment and throughout your treatment and follow up.

On the day

On the day of your treatment please eat breakfast before coming, but little or no lunch. Do not take benzodiazepines or alcohol the night before or on the day of your treatment as this may reduce the benefit.

Before arriving in clinic you will need to complete a care plan form in PKB. This applies before every treatment.

Come with someone

You should arrange for someone to escort you to your appointment and advise them that you will need to stay in the clinic with them for 1 hour after treatment.

What treatment involves

You will arrive at the main reception of the Warneford Hospital and be directed to the ECT/ketamine department at the end of the main corridor.

You will be greeted by a member of the ketamine team and shown through to a treatment bay. The person accompanying you will be shown to the recovery area where they can wait and have a drink.

The person accompanying you be not allowed into the treatment area.

During the appointment a doctor puts a needle into a vein on the back of your hand and then arranges a pump to gradually infuse a low dose of ketamine over 40 minutes.

During the infusion you will be lying on a bed. A nurse will be present in the clinic at all times. Before, during and after the infusion we will check how you are feeling and ask you to describe and record any symptoms or side effects you may be experiencing.

You will remain on the bed until you are ready to get up, most people feel initially unsteady on their feet. You will be shown to a recovery area where the person accompanying you will be waiting and you will remain there until the end of your recovery time.

In the recovery area are facilities to make hot and cold drinks and biscuits. It is advised that you eat and drink something before leaving.

Before leaving, you will be asked to complete a care plan on PKB about your ketamine experience.

Filming or photography of any kind is not permitted at any time.

Treatment (continued)

Preparing for treatment

It is normal to feel a little anxious or unsure before your treatment. We recommend that you try and create a 'peaceful mind' before we start your infusion.

Using a breathing app on your phone or mindfulness techniques to focus on your breath and feeling calm can be helpful to do this.

We recommend that you bring relaxing music or sounds of sea, rain, wood sounds etc and headphones with you to listen to during your infusion. You may wish to bring a blindfold or something to put over your eyes to help you to relax during your treatment.

The side effects during your infusion can feel strange. Staff will encourage you to 'let go'. Allow yourself to feel strange. Be curious about it. Try not to 'fight' these effects. Focus on your experience rather than what's going on around you.

There are three bays in the clinic, separated by curtains. We do not have any private rooms.

Other people will be having their treatment at the same time as you. We aim to create a quiet clinical environment; however, you may hear noises around you, such as the phone ringing and conversations with other patients.

Treatment after the first 3 infusions

Sometimes up to three further treatments may be needed to help us know whether you are a responder.

The options for further treatment after the initial series of infusions include:

- Further intermittent infusions
- Transfer to oral ketamine
- Augmentation with other medication

The decision about the options for any further treatment will depend on a wide range of factors and will be discussed at your assessment. We cannot discuss this before your assessment.

Follow up

After the initial series of treatments, a telephone follow-up appointment will be arranged to discuss how your treatments have gone and further treatment options. This will be scheduled for about 3-4 weeks after your last infusion.

Please continue to complete **True Colours** throughout this period.

At the end of the initial series of infusions, a letter will be sent to the person who referred you and your GP with a summary of your treatment and suggestions for your ongoing care.

All patients receiving ongoing oral ketamine treatment must be reviewed in person by the ketamine clinic Consultant not less than every 4 months.

All patients receiving intermittent IV infusion treatment must be reviewed in person by the ketamine clinic Consultant not less than every 6 months

Follow-up appointments are for 30 minutes and must be paid for at least one week before the scheduled time.

Potential side effects

Ketamine is known to produce some side-effects. It is not a licensed treatment for depression and the effects of taking it long term are unknown. There may also be unusual side-effects which occur acutely which are unreported.

Ketamine commonly causes brief side effects. These are more common at higher doses, but the relationship between dose and side-effects is variable, even within the same patient.

Brief side effects

Side-effects which occur during or shortly after treatment include:

Feeling dissociated (mind and body feel separate). Occasionally, this extends to the point of an 'out of body' experience.

Dizziness.

Feeling 'a bit drunk'.

A floating sensation.

Lightheadedness.

Patients commonly feel tired for the rest of the day after treatment.

Altered perception– things "look peculiar" or sound different.

Nausea or vomiting – this can be treated with anti-nausea agents. Do not have a big meal before treatment.

Anxiety – this can extend to the point of panic. It may be associated with a 'near death' experience. This can occur 'out of blue' even in people who have had many treatments. The anxiety diminishes rapidly as the drug is broken down in the body, so the infusion can be turned off if necessary. In this case, the anxiety settles within 5-10 minutes.

Headache – responds to paracetamol.

Temporary bruising. The treatment involves a needle being put into the vein on the back of your hand and a low dose of ketamine infused over 40 minutes.

An increase in blood pressure or a fast heart rate. This will be monitored during you first infusion and before and after subsequent infusions. During the infusion, if you find the side effects too unpleasant then please tell a member of the team that you would like to stop.

Less-common side effects

Vivid dreams.

Hallucinations (feeling, seeing or hearing something that is not actually there).

Dysphoria (feeling unwell or unhappy). Occasionally people have felt a worsening in their depressive symptoms and suicidality whilst taking ketamine. If this happens, you should notify the ketamine clinic and your local team.

Mania (unusually elevated mood which causes problems). Ketamine should be stopped immediately if you suspect this is happening. The ketamine team and your local team need to be informed promptly.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Potential side effects (continued)

Rare physical side-effects

Liver damage. If you are receiving ongoing ketamine treatment, you will need a monitoring blood test every 6-8 months. This should be done by your GP. Alternatively, we can do this when you attend to pickup medication or for an appointment, but you will be charged for this at a rate of £100 per occasion, so we strongly encourage you to have this test done by your GP.

Long term theoretical risks

Dependence

Ketamine is sometimes taken illegally in large, frequent doses. Drug abusers can become addicted to it. Sometimes people find that if they stop ketamine their depression relapses. This is not the same as addiction. This is reliance.

Sometimes patients taking it for depression find that their depression is no longer controlled despite continuing to have treatment with ketamine.

There can be several possible reasons, one of which is that they have developed tolerance to ketamine. This may mean that a treatment break is needed or that it is no longer an effective treatment and therefore will be stopped. Sometimes, the dose can be safely increased. However, it is best to reduce the dose or extend the interval between doses to help maintain the effect.

Sometimes, people find that they think a lot about ketamine and crave it. It is important to notice that this is happening and to be open and honest with the clinical team about this.

We are not aware of reports of anyone who has taken ketamine as prescribed for the treatment of depression and who has become addicted. However, when people use ketamine illegally it is not uncommon for the dose and frequency to escalate.

For comparison, ketamine is much less addictive and dangerous than strong opiates (eg fentanyl, methadone), is probably less addictive and dangerous than tobacco, and has equivalent risks to alcohol and benzodiazepines.

Bladder damage

Bladder damage. This is common in people who take illegal ketamine recreationally at doses of over 1g ketamine daily. This dose is substantially higher than the maximum we use.

Drinking plenty and avoiding alcohol reduces the concentration and damage potential of ketamine metabolites in the bladder. The main symptoms of ketamine-induced bladder damage are pain passing water, and needing to pass urine more often. If you start to experience these symptoms please contact your GP and the ketamine clinic.

Cognitive impairment. This has not been observed over 1 year treatment with esketamine, but has been seen in addicts taken high doses daily. It is associated with evidence of brain shrinking and other brain lesions.

Personality change

Apathy has been reported in addicts.

Precautions after treatment

If accompanied home by a responsible adult, you will stay on the unit for an hour after treatment. If it is not possible for you to be accompanied, you will stay on the unit for at least two hours after the end of the infusion.

After ketamine treatment you must not:

- drive a vehicle,
- drink alcohol,
- sign any legal documents
- be responsible for looking after dependents

until the following morning.

Potential benefits

Ketamine is a novel treatment for depression which has not responded to other treatments. A rapid antidepressant effect has been demonstrated in several clinical trials of single intravenous infusions over the last 15 years in patients with depression who has not responded to at least 2 or 3 antidepressants.

The response lasts a day for about 70% of patients and up to three days for 30% of patients. In some cases this benefit is longer: up to four months, following three infusions over three weeks. The majority of patients relapse within two weeks after treatment.

The best evidence comes from a trial in which patients were randomly allocated to a dummy treatment which was thought would probably not work for depression (midazolam) or to ketamine. After seven days, four out of 25 (16%) patients who had been given midazolam infusion were responders compared with 21 out of 47 (47%) who had received the ketamine infusion.

It is important to recognise that ketamine is not licensed as an antidepressant. It has not been evaluated in large, or long term, clinical trials. There is much that is not known about how, or for whom, it works.

Large trials of the closely related drug esketamine, which is a component of ketamine, have shown broadly similar effects. A safety study of over 800 patients who took intranasal esketamine and a newly initiated antidepressant showed a 43% remission rate at 12 months.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Pricing

This paid-for ketamine service is made available by Oxford Health NHS Foundation Trust as part of its clinical innovation strategy.

Initial assessment appointment	Initial treatment of 3 infusions	Further infusions
£150 with consultant psychiatrist	£215 per infusion	£195 per infusion

Reviews with consultant psychiatrist

The first telephone review after the first series of IV treatments is included in the cost of the treatment. All further reviews must be paid for. The cost is £75 per 30 minute review.

All patients receiving ongoing oral ketamine treatment must be reviewed in person by the ketamine clinic Consultant not less than every 4 months.

All patients receiving intermittent IV infusion treatment must be reviewed in person by the ketamine clinic Consultant not less than every 6 months

Follow-up appointments are for 30 minutes and must be paid for at least one week before the scheduled time.

Oral ketamine

Oral titration session in clinic	Per bottle
£195	£50 irrespective of amount in the bottle

The amount needed each month will vary depending on the dose of ketamine you receive

Making payments

Payments can be made by credit card, debit card or electronic bank transfer. We are unable to accept payments by cash or cheque.

Payment for the quoted amounts must be made in advance of your appointment or treatment, or first thing on the day of your appointment.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Information for carers

We ask patients coming for ketamine treatment to arrange for someone to escort them to their appointment. This page provides important information for carers.

Attending the appointment

When you bring a relative or friend for ketamine treatment you will be shown with them to a waiting room before treatment.

The team will then take the person you are accompanying through to the treatment room and you will be shown to an area where you can have a drink.

You will not be able to sit with the person while they have their treatment.

After treatment

It will be about an hour before the person you are accompanying will come and join you. They must remain with you in the department for a further hour before being assessed and allowed to go home.

Initially they may still feel a little strange; however, this will pass before they are allowed to leave the department.

After treatment people often feel tired. We encourage them to do very little for the rest of the day. They may have a headache and can take paracetamol as normal for this.

They may describe their experience to you. Sometimes treatments can be an emotional experience of release for some people and can initially feel overwhelming.

If you have concerns

If you are worried about your friend or relative, you should speak to the team in clinic about any concerns you have.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression

Version: PIL 15 November 2018

Referrals

Your psychiatrist or GP should send a referral letter, preferably by email to:

KetamineClinic@oxfordhealth.nhs.uk

or by post to:

Referrals
Ketamine Clinic
Warneford Hospital
Headington
Oxford
OX3 7JX



Common questions

Accessing the service

How long is the waiting list?

Waiting times can vary throughout the year, on average once we have received a referral for you the appointment for an initial consultation will be booked for within 2 months.

Waiting times for treatment after an initial consultation can range from 1 – 4 weeks depending on the availability of appointments.

What if I can't get a referral?

We will not be able to see you without a referral from your GP or psychiatrist. Sometime people have found it helpful to take the information leaflet about the service to their doctor.

Will you prescribe other medications?

No. Your referring doctor will remain responsible for your overall care and the prescribing of all other medications including any other antidepressants.

Should you experience acute sickness during your infusion the anaesthetist may prescribe an anti-sickness medication to be given in clinic.

Will you take over as my psychiatrist?

No. The service is set up to provide and manage ketamine treatment. Any other psychiatric care will remain with your current team. We are unable to take on the overall care of patients and will correspond with your referring team about your ketamine treatment.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

About ketamine

How well or quickly does ketamine work?

For some people, ketamine can work within a few hours. For other people it may take a few treatments before their depression improves. It is not possible to tell who will respond, or how quickly to ketamine.

It is thought that if you do not respond to 3 treatments of ketamine then you are unlikely to see a benefit from any further treatment. Occasionally we recommend a further 3 treatments to help make this judgement.

What does of ketamine is usually prescribed?

The dose of ketamine you are prescribed is decided by the ketamine clinic Consultant. Doses are calculated on your weight at 0.5mg/kg and will be reviewed before each treatment. For most people this dose will not change; however, doses may be increased or decreased during your treatment period.

Is ketamine addictive?

Ketamine is sometimes taken illegally in large, frequent doses. Drug abusers can become addicted to it.

Sometimes people find that if they stop ketamine their depression relapses. This is not the same as addiction. This is reliance.

Sometimes patients taking it for depression find that their depression is no longer controlled despite continuing to have treatment with ketamine.

There can be several possible reasons, one of which is that they have developed tolerance to ketamine. This may mean that a treatment break is needed or that it is no longer an effective treatment and therefore will be stopped. Sometimes, the dose can be safely

increased. However, it is best to reduce the dose or extend the interval between doses to help maintain the effect.

Sometimes, people find that they think a lot about ketamine and crave it. It is important to notice that this is happening and to be open and honest with the clinical team about this.

We are not aware of reports of anyone who has taken ketamine as prescribed for the treatment of depression and who has become addicted. However, when people use ketamine illegally it is not uncommon for the dose and frequency to escalate.

For comparison, ketamine is much less addictive and dangerous than strong opiates (eg fentanyl, methadone), is probably less addictive and dangerous than tobacco, and has equivalent risks to benzodiazepines.

Is there any way of knowing who will benefit?

There is a possibility that a genetic mutation predicts whether patients develop an initial response. However, we do not assess whether you have this mutation. There are no known predictors of a longer duration of response.

Patients over 65 years old may be less likely to respond. Patients with typical biological symptoms of depression (loss of appetite, disturbed sleep, diurnal variation of mood, slowed thinking and movement) may possibly be more likely to respond. People who have been extremely unwell (eg immobile) for a very long time may be less likely to respond.

These predictors have not been confirmed and patients who have been chronically depressed and had partial or equivocal response to conventional antidepressants have also benefitted.

Ketamine treatment service

Find out about our paid-for ketamine treatment service for depression



Oxford Health
NHS Foundation Trust

Version: PIL 15 November 2018

Your treatment

Can I drink alcohol if I am having ketamine?

You must not drink alcohol on the night before and day you take ketamine and for 24 hours afterwards.

If possible, you should avoid drinking alcohol completely while you are taking ketamine. This is because alcohol may reduce the benefit and increase some of the side-effects of ketamine.

Can I drive if I am having ketamine?

You should not drive until the morning after you have had ketamine treatment.

However, when you first start taking ketamine or when your dose is increased you may feel drowsy the next day. You should use common sense and not drive if you feel drowsy. It is your responsibility to decide whether you are fit to drive on each occasion.

Can I take other medicines if I am having ketamine?

Benzodiazepines (such as Diazepam, Lorazepam, Clonazepam and Temazepam), morphine and the epilepsy drug lamotrigine are thought to interact with ketamine so it is advised that these are not taken the night before or the day you have ketamine.

Other than those listed above, ketamine should not affect your other medicines. When you start ketamine you will be asked to complete paperwork asking about your current medications. The ketamine clinic nurse will discuss with you any medications that may interact with ketamine.

Other painkillers including opioids (e.g. codeine), non steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, or paracetamol can be taken at the same time as ketamine.

Before you take or buy any new medicines always tell your doctor or pharmacist that you are having ketamine.

Will I have oral ketamine straight after my infusions?

No. There will be a period of 3-4 weeks after your 3 ketamine infusions before starting oral ketamine. This is to see how you respond to ketamine and how long any benefit lasts.

Not everyone is suitable for oral ketamine treatment, this will be assessed during your telephone follow-up appointment.

Can the person bringing me for treatment sit with me?

No. The person accompanying you will be shown to room where they can have a drink and wait with others.

There are two main reasons for this. Clinic bays are small and staff need room to access the infusion pump during treatment. Also there will be other patients having their treatments at the same time and we try to create a quiet and calm environment.

Additionally, staff are trained and experienced to be able to look after you during your treatment and through any of the side effects associated with ketamine. Friends or family members may find observing this distressing and alarming.