Ketamine is a powerful anaesthetic drug which stops the feeling of pain. It is widely used in veterinary medicine. Misuse of this drug occurs in the UK and it’s a popular club drug due to its hallucinogenic effects. In June 2014 ketamine was changed from a class C to class B controlled drug which means it is illegal to have for you, give away or sell. Ketamine has many effects on the body. Here we focus on the effects on the bladder.

**What is ketamine?**
- Ketamine, also known as K, special K, super K, vitamin K, is a general anaesthetic (a drug that makes you go to sleep). It is widely used for operating on animals. In human medicine it may be used for pain relief and sedation.
- Ketamine comes in three main forms, a white powder that can be snorted, a liquid that may be injected or ingested and a tablet that can be ingested.

**What effects does ketamine cause?**
- Ketamine has pain-killing effects but also alters how you see and hear things.
- It can reduce sensations in the body giving you a floating or detached feeling as if mind and body have been separated.
- At low doses the user will feel euphoric and experience rushes or waves of energy and they may feel heavy in their arms and legs.
- At higher doses the user is likely to experience hallucinations, similar to LSD, and a feeling of detachment. This can be followed by numbness, often in the limbs, and strange muscle movements. Users may feel sick or vomit particularly if they drink alcohol.
- At high doses the user may become disorientated and lose consciousness. If they become unconscious there is a risk that users can choke on their own vomit.
- It may be difficult to know how strong a dose is being taken and what else is mixed with it, so even regular users may experience an overdose.
Is ketamine addictive?
- Ketamine does not lead to physical dependence, but it is associated with a powerful psychological dependence, similar to cocaine.
- Tolerance can develop quickly. This means that more of the drug is required to achieve the same effect. This can lead to people using the drug in intensive binges.

What are the risks of ketamine use?
- Ketamine can cause panic attacks and depression, and in large doses can exaggerate pre-existing mental health problems.
- Snorting the drug can cause damage to the nostrils.
- Accidents are more likely on Ketamine for two reasons:
  - it can cause a lack of coordination
  - because it is a powerful pain killer, it blocks normal sensations of pain.
- If it is taken with alcohol it can lower heart function and breathing.
- When used with stimulant drugs such as ecstasy or amphetamines it can also cause high blood pressure – leading to a stroke.
- Ketamine can cause severe damage to the bladder, causing difficulty passing urine.
- Long term use may cause abdominal pain (K-cramps) and liver damage.

How does ketamine damage the bladder?
- It causes inflammation, ulceration and scarring of the bladder lining and wall.
- The inflamed bladder lining causes symptoms similar to cystitis – urinary frequency, urgency and pain.
- The scarring causes the bladder to become stiff and shrink. The amount of urine the bladder can hold reduces from the normal capacity of 500ml, down to 50ml in severe cases.

What are the symptoms of ketamine bladder syndrome?
- Pain in the bladder area, particularly as the bladder fills.
- Pain on passing urine.
- Blood in the urine.
- Increased frequency and a persistent feeling of bladder fullness, due to the bladder shrinking and only able to hold a small amount of urine.
- Urgency – a sudden need to pass urine. This may be accompanied by urinary incontinence (urine leaking out).

Is ketamine bladder syndrome reversible?
- If detected early, and ketamine use is stopped, the damage done to the bladder may stabilise or be reversible.
- If ketamine use continues, the inflammation and scarring will progress and the damage will be irreversible.

What are the complications of ketamine bladder syndrome?
- The pain and frequency can disrupt all aspects of normal day to day life.
- Sometimes the bladder can perforate, causing urine to leak into the abdomen or even into the vagina.
- Sometimes back flow of urine can cause kidney damage and kidney failure.
How is ketamine bladder syndrome treated?

- The most important step is to stop ketamine use. This is not always easy, as it is a powerful painkiller and may temporarily relieve the symptoms of the damage it is causing. However it is the only chance of reversing the damage done to the bladder.
- Medical treatment includes fluid management, pain killers, anti-inflammatories and drugs to try and relax the bladder.
- Dilating/stretching the bladder may be tried, but is rarely helpful long term. Reconstructive surgery to insert a “patch” to enlarge the bladder may be attempted.
- Incontinence may require insertion of a catheter (a permanent tube in the bladder to drain urine).
- In severe cases, the bladder may need to be removed, and the urine diverted though an opening in the wall of the abdomen, where a bag will be attached to collect the urine.
- Kidney failure may need treatment with dialysis.

Where can I get help to stop using ketamine?

Community Alcohol and Drug Advisory Service (CADAS) is a service for people requiring treatment for dependency on alcohol or illegal or prescribed drugs. CADAS offers structured treatment with psychological and social support.

- Prescribed medication where appropriate
- Access to community and in-patient detoxification
- Access to residential rehabilitation
- Access to blood borne virus (BBV) testing and immunisation
- Access to liver treatment services

Contact details:

- If you live in or near Weymouth, Portland, Bridport, Lyme Regis, Beaminster or Sherborne ☏ 01305 779706 or e-mail cadas.wd@dchft.nhs.uk
- If you live in or near Blandford, Dorchester, Swanage, Shaftesbury, Wareham, Wimborne, Ferndown or Christchurch ☏ 01202 868268 or e-mail ferndownsocialcare@dorsetcc.gov.uk
- Online advice: www.talktofrank.com