

Ketamine: A Briefing Paper for Drug Education Professionals

Purpose of the briefing

The aim of this briefing is to provide information on ketamine and support in planning and delivering drug education and support to young people.

Who is the briefing for?

The briefing will be of particular relevance to drug education practitioners and other practitioners working with young people, including:

- Teachers/tutors and other staff who deliver drug education
- Those with responsibility for co-ordinating drug education
- Head teachers/Principals
- Youth workers
- Connexions personal advisors
- Other providers of drug education.

The information in this briefing may also be of interest to those who provide pastoral support to young people including, counsellors, school nurses and Education Welfare Officers and to drug treatment workers, especially those working in Child and Adolescent Mental Health Services (CAMHS).

Terminology

Young people

For the purpose of this briefing 'young people' refers to those aged between 11 and 19.

Physical dependence

Physical dependence is a compulsion to continue taking a drug in order to feel good or to avoid feeling bad. This is done to avoid physical discomfort or withdrawal symptoms – such as the shakes or flu like effects.

Psychological dependence

Psychological dependency is more common and can happen with any drug. The user can feel they cannot cope without drugs even though they may not be physically dependent.

Tolerance

Tolerance refers to the way the body gets used to the repeated presence of a drug, meaning that higher doses are needed to maintain the same effect.

About ketamine

Ketamine, also known as K, special K, super K, vitamin K, is a powerful anaesthetic which is being used during surgery on animals and to a lesser extent on humans. In 1992 it became popular in the club and rave scene in the UK when people were led to believe they were buying ecstasy.

Ketamine comes in a variety of forms, ranging from its liquid pharmaceutical state that is injected, to a grainy white powder that is snorted or sometimes smoked. It also comes in a tablet form that is taken orally.

Effects/risks

Ketamine has pain-killing effects but it also alters perception. It is a dissociative drug, which can give the user an 'out of body', experience, whereby they feel detached from themselves and others around them. The effect of the drug is dose-specific so the amount taken determines the extent and type of effect the drug will have. At low doses (around 100mg) the user will feel euphoric and experience rushes or waves of energy. At higher doses (200mg or over) 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 also feel sick or vomit. At high doses the user may lose consciousness and become very disorientated. There is a risk that users can choke on their vomit. It may be difficult to know how strong a dose is being taken and what else is mixed in with it so even regular users can 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, whereby more of the drug is required to achieve the same effect. This can lead to people using the drug in intense binges.

What other adverse effects are associated with ketamine?

Ketamine can cause panic attacks, depression and in large doses can exaggerate pre-existing mental health problems. Stimulant-like weight loss and loss of appetite may occur during periods of heavy use.

Accidents are more likely on ketamine for two reasons: first it can cause a lack of co-ordination; second, because it is a powerful pain killer, it blocks normal sensations of pain.

The risks of ketamine use are increased if it is used with depressant drugs, such as alcohol. It can suppress breathing and heart function. When used with stimulant drugs such as ecstasy or amphetamines it can also cause high blood pressure.

A number of reports in the media suggest ketamine can be used as a 'date rape drug' as high doses can cause total amnesia for things that happened while under the influence of the drug.

Ketamine and impairment to memory

Episodic memory refers to our store of personal events from the past. When we talk about someone losing his or her memory, it is usually this form of memory we are talking about.

Semantic memory is the term used to describe our knowledge about objects, people and the memory of words, so semantic memory encompasses a person's knowledge about the world. People who have had a brain haemorrhage can have problems with semantic memory, making it difficult for them to be able to find the words for common objects, even though they know what the object is.

Working memory lets us hold and manipulate information 'online' and so helps us to guide future behaviour. Working memory enables us to solve problems and plan ahead. This is very important for learning as well as in everyday living.

While taking ketamine, people's episodic memory is very poor and higher doses can cause total amnesia for things that happened while under the influence of the drug. Ketamine also interferes with semantic and working memory so that people have difficulty following conversations and thinking logically.

Users still experience some degree of impairment of episodic and semantic memory three days after they take ketamine (Morgan et al 2004).

One study has now shown that semantic memory impairments associated with recreational ketamine are reversible after people stop or substantially reduce use. However, impairment to episodic and possibly attentional functioning is longer lasting (Morgan et al 2004).

Some users also experience mild forms of schizophrenic-like symptoms and perceptual distortions associated with the use of ketamine after they have stopped using the drug (Morgan et al 2004).

Prevalence

The incidence of ketamine use is not well known. Anecdotal evidence suggests the drug is mainly found at dance/club events and squat parties, where hallucinogenic and stimulant drugs are most commonly used. However, use of the drug is thought to be on the increase among college students, because it is relatively cheap, and may be easy to get from local medical sources (Drug Search, www.drugscope.org.uk). Since possession is not illegal users are

unlikely to be excluded from education or have career prospects threatened or damaged by criminal proceedings.

A report by EMCDDA (2000) suggested that 'A range of social factors increase the probability of use, such as the existence of a large market of long term ecstasy users seeking new drug experiences, a rather trend-setting image and a low price'.

It is also supposed that a number of young people are not aware that they may be taking ketamine, and may believe they are taking ecstasy or other stimulant drugs EMCDDA (2000). This group of young people are particularly vulnerable. However since DIY pill testing kits were made available, the incidence of fake ecstasy tablets has fallen, and the number of cases of accidental exposure is thus expected to fall (*Ketamine Usage in the UK 1998-2002*, <http://idmu.co.uk/ketamine9802.htm>).

Intentional use of ketamine is largely confined to a niche market among clubbers and others within the rave culture, with possibly 30,000 users taking the drug on an occasional or regular basis in the UK. The drug enjoys brief periods of media attention or fashions when more individuals are likely to try the drug. Those who have unpleasant experiences tend not to repeat the behaviour and only around one in four individuals who start taking ketamine ever progress beyond experimental use (*Ketamine Usage in the UK 1998-2002*, <http://idmu.co.uk/ketamine9802.htm>).

In the UK, prevalence of ketamine use has undergone a number of peaks and troughs: a survey in 2000 reported that 29 per cent of club goers used ketamine on a regular basis (*Mixmag* 2001) but by 2001 the figure had fallen to 12 per cent (*Mixmag* 2002) – (Morgan et al 2004 *Ketamine impairs response inhibition and is positively reinforcing in healthy volunteers: a dose-response study*). However, the 2004 *Mixmag* survey suggests ketamine use in 2003 is up more than four-fold).

The Independent Drug Monitoring Unit *Ketamine Usage in the UK 1998-2002* (<http://idmu.co.uk/ketamine9802.htm>) survey found that the mean age of initiation to ketamine use is around 22 years, with stable or upward trend meaning it is unlikely to be used by school aged pupils or under 16s.

Legal status

Ketamine is not controlled under the Misuse of Drugs Act, therefore *possession* is not a criminal offence, although this is currently under review. The use of ketamine is controlled under the Medicines Act as a prescription-only medicine. This means that people can be prosecuted for *supplying* ketamine to others.

However, the legal status of ketamine may change in the near future. The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2000)

explored the possible consequences of prohibition. They reported, 'One opinion was that control measures might draw unnecessary attention to the drug thus increasing its attractiveness to potential users'.

The Independent Drug Monitoring Unit (IDMU) *Ketamine Usage in the UK 1998-2002* (<http://idmu.co.uk/ketamine9802.htm>), also suggests 'Classifying ketamine as a controlled drug could risk glamorising the drug, increasing the user ratings, and the likelihood of increased use'.

Good practice in drug education

The Department for Education and Skills (DfES) published their revised guidance on drug for schools *Drugs: Guidance for schools (DfES 2004)*. Practitioners should refer to this document for guidance and support in planning and delivering drug education and supporting young people.

The document provides guidance on all matters relating to drug education, the management of drug within the school community and drug policy development. Copies of the guidance can be downloaded from www.dfes.gov.uk/drugsguidance. Hard copies are available from DfES publications by calling 0845 602 2260, quoting reference number DfES/092/2004.

For practitioners working in further education institutions, it will be useful to also refer to *Drugs: Guidance for Further Education Institutions (DrugScope and Alcohol Concern 2004)*. This document can be downloaded from DrugScope website www.drugscope.org.uk and Alcohol Concern website www.alcoholconcern.org.uk

Drugs: Guidance for schools (DfES 2004) states that the aim of drug education is to provide opportunities for all young people to develop their knowledge, skills and attitudes and understanding about drugs and appreciate the benefits of a healthy lifestyle, relating this to their own and others' actions. It states that drug education should:

- Increase knowledge and understanding and clarify misconceptions about:
 - the short and long term effects and risks of drugs
 - the rules and laws relating to drugs
 - the impact of drugs on individuals, families and communities
 - the prevalence and acceptability of drug use among peers
 - the complex moral, social, emotional and political issues surrounding drugs.
- Develop personal and social skills to make informed decisions and keep themselves safe and healthy, including:
 - assessing, avoiding and managing risk
 - communicating effectively
 - resisting pressures

finding information, help and advice
devising problem solving and coping strategies
developing self awareness and self esteem.

- To explore their own and other peoples' attitudes towards drugs, drug use and drug users, including challenging stereotypes, and exploring media and social influences

Ketamine education

Drugs: Guidance for schools (DfES 2004) emphasises that drug education should include teaching about all drugs, including illegal drugs, alcohol, tobacco, volatile substances, over-the-counter and prescription medicines. "Pupils need to understand that all have the potential to cause harm; that using drugs in combination can increase risk; and that legal drugs can be as addictive as some illegal drugs" (DfES 2004). The guidance goes on to suggest that there may be occasions when you may need to focus on particular drugs. Practitioners should include ketamine as part of their overall drug education provision but in some cases may feel it is important to focus on ketamine, especially if an incident involving ketamine has taken place, if there has been increased media attention to ketamine or if there is particular interest from young people. However it is important that when focusing on ketamine this is integrated within the overall drug education provision.

When practitioners are focusing on ecstasy as a drug of particular significance, it would be useful to include ketamine in the discussions, as ketamine is also sold as ecstasy. Additionally, ketamine should be included when working with young people on issues around keeping safe, date rape drugs and drink spiking.

Any drug education for young people should be based on the young people's existing knowledge and understanding. All young people are likely to know something about drugs, although this knowledge may be inaccurate, incomplete or based on myths. Young people's understanding of ketamine may be limited, especially their understanding on the potential impact ketamine has on memory and the ability to think. Suggestions on how to identify existing knowledge and understanding can be found in *Drugs: Guidance for schools* (DfES 2004), Section 3.1.1.

For some young people, who may have experimented with ketamine or are using ketamine, a harm minimisation approach may be more appropriate. This approach aims to ensure young people know where the dangers lie, and how they can be reduced or avoided. It should not suggest that ketamine use/misuse is condoned, but should allow young people to make choices, understand why others do use, and highlight associated risks.

As suggested earlier, some users also experience mild forms of schizophrenic-like symptoms and perceptual distortions associated with the use of ketamine

after they have stopped using the drug (Morgan et al 2004). Practitioners should emphasise to young people who use, or are thinking of using ketamine that they should be aware of these lasting effects.

Vulnerable young people

There are a number of young people who may be more vulnerable to drug misuse and other social problems. The table below lists risk factors that can make a young person more vulnerable to drug misuse. The table also highlights a number of protective factors, which are associated with reducing the potential for drug misuse.

Risk factors	Protective factors
<ul style="list-style-type: none"> • Chaotic home environment • Parents who misuse drugs or suffer from mental illness • Behaviour disorders • Lack of parental nurturing • Inappropriate and/or aggressive classroom behaviour • School failure • Poor coping skills • Low commitment to school • Friendships with deviant peers • Low socio-economic status • Early age of first drug use • Being labelled as a drug misuser 	<ul style="list-style-type: none"> • Strong family bonds • Experiences of strong parental monitoring with clear family rules • Family involvement in the lives of children • Successful school experiences • Strong bonds with local community activities • A caring relationship with at least one adult

The right responses – Managing and making policy for drug-related incidents in schools (DrugScope 1999)

In addition, there are groups of young people who are vulnerable to drug misuse. This includes those who are:

- Homeless
- Looked after
- School truants
- excluded from school
- Sexually abused
- Working as prostitutes
- In contact with mental health services or the criminal justice system
- Children of parents with drug problems.

The right responses – Managing and making policy for drug-related incidents in schools (DrugScope 1999)

Drug education for these young people should be a priority and should be based on their specific needs. Particular attention should be paid to identify their knowledge, understanding and experience to ensure the drug education they receive is relevant and engaging. It is important, where appropriate, to include ketamine education as part of their drug education provision, especially as some of these young people may have missed out on school based drug education.

Accessing support

Practitioners also need to ensure that young people who may have used ketamine or are using ketamine receive appropriate pastoral support. If a problem with ketamine has been identified, it is important to remember drug problems do not occur in isolation and any support should be holistic and not focus solely on the drug. Where necessary young people should be referred to other local support services. It is crucial to have clear referral procedures in place when working young people. A clear and comprehensive drug policy for the establishment should outline a range of responses including referral procedures. Local services that can offer support to young people around ketamine use can include young people's drug service and Child and Adolescent Mental Health Service.

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Useful resources and websites

Adfam

Adfam offers information to families of drug and alcohol users, and the website has a database of local family support services.

Tel: 020 7928 8898

Email: admin@adfam.org.uk

Website: www.adfam.org.uk

Connexions Direct

Connexions Direct can help young people with information and advice on issues relating to health, housing, relationships with family and friends, career and learning options, money, as well as helping young people find out about activities they can get involved in. Connexions Direct advisers can be contacted phone, email, text or webchat.

Tel: 080 800 13219

Website: www.connexions-direct.com

Drug Education and Prevention Information Service (DEPIS)

Online information about drug education and prevention projects and resources for those working with young people and their parents and carers.

Website: <http://www.info.doh.gov.uk/doh/depisusers.nsf/Main?readForm>

Drug Education Forum (DEF)

A forum of national organisations in England which provide drug education to children and young people or offer a service to those who do.

Website: www.drugeducationforum.com

DrugScope

DrugScope is a centre of expertise on illegal drugs, aiming to inform policy development and reduce drug-related risk. The website includes detailed drug information and access to the Information and Library Service. DrugScope also hosts the Drug Education Practitioners' Forum.

Email: info@drugscope.org.uk

Website: www.drugscope.org.uk

FRANK

FRANK is the National drugs awareness campaign aiming to raise awareness amongst young people of the risks of illegal drugs, and to provide details of sources of information and advice. It also provides support to parents/carers, helping to give them the skills and confidence to communicate with their children about drugs.

24 hour helpline: 0800 77 66 00

Email: frank@talktofrank.com

Website: www.talktofrank.com

Practitioners can receive free FRANK resource materials, updates and newsletters by registering at www.drugs.gov.uk/campaign

Health Development Agency

Health Information websites for young people

Mind, Body and Soul – for young people aged 14-16.

www.mindbodysoul.gov.uk

Lifeytes – for young people aged 11-14.

www.lifebytes.gov.uk

Independent Drug Monitoring Unit

Website: www.idmu.co.uk

TeacherNet

TeacherNet is the Government site for teachers. Use this site to access resources, training, professional development and support.

Website: www.teachernet.gov.uk/pshe

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