HIGH-LIGHT

ALCOHOL AND DRUG NEWS BRIEF FOR EMPLOYERS

SEPTEMBER 2004

KHAT – ETHNIC ODDITY OR NEW STREET DRUG ?

SACENDU (South African Community Epidemiology Network) reports clearly indicate a steady rise in treatment demand in the stimulant type drugs, with methamphetamine (Tik) being the latest addition to the growing collection stimulant drugs being abused. There is nothing in the SACENDU reports which may suggest that the use of Khat is on the increase : Successive Ravesafe reports sporadically warned about increasing availability of the drug but surveys carried out among clubbers in the Johannesburg region failed to confirm this.

Whilst the 2002 and 2003 SACENDU reports cited anecdotal evidence of increased availability of synthetic Khat in Cape Town and Gauteng, there is no mention of this drug in terms of treatment demand. However, one continues to hear sporadic reports of this drug being brought into the country from our neighboring states and made available to local communities.

The chewing of khat leaves is common in some countries of east Africa and the Arabian peninsula. It has a deep-rooted social and cultural tradition in some Muslim, Somali and Yemeni cultures. In some Muslim countries in which alcohol is prohibited, khat is commonly used in social situations, although it is often condemned on religious grounds. Internationally, but specifically in the United States and Australia, the use of Khat has always been associated with specific geographical areas which accommodate large concentration of immigrants from these countries.

In this edition of Highlight, we take a look at this natural stimulant and whether it has the potential to, in time, significantly grow in popularity.

WHAT IS KHAT ?

Khat (Catha edulis Forsk., Celastraceae family) is an evergreen tree which grows at high altitudes extending from East to Southern Africa, as well as Afghanistan, Yemen and Madagascar.

Khat is central to the Yemeni social structure and is used on a daily basis by a large proportion of the population. The tree reaches a height from 10 feet to 20 feet. Freshly picked Khat leaves are crimson-brown and glossy but become yellow - green and leathery as they age. They also emit a strong smell. The active ingredients in the Khat leaves are *cathinone*, which is an amphetamine-like CNS stimulant and *cathine*, a milder form of cathinone. The most favored part of the leaves are the young shoots near the top of the plant. However, leaves and stems at the middle and lower sections are also used.

The primary active ingredient, cathinone, only remains active for approximately 48 hours after picking the leaves. In this period cathinone is converted to the less active cathine and the plant is thought to have a low abuse potential. For this reason small batches are usually harvested and then stored with water in foil, or banana leaves. Freezing the fresh leaves also prevents the conversion process and prolongs the shelf life of the drug.

Methcathinone is the synthetic equivalent of cathinone although much more potent than its natural counterpart It was first synthesized in Germany in 1928 and is a popular dance drug with potent euphoric and stimulant effects. *Methcathinone is formed by the oxidation of Ephedrine , a chemical process which is much simpler than the conversion of ephedrine to methamphetamine.*

PHARMACOLOGY

Little is known about the pharmacokinetics of cathinone. It is rapidly absorbed after oral administration and is metabolized in the liver with only a small fraction appearing in the urine The more rapid and intense action of cathinone compared with cathine, is explained by its higher lipid solubility, facilitating access into the central nervous system At the cellular level cathinone has a similar effect to amphetamine at central dopaminergic synapses as well as effects on other central and peripheral neurotransmitters.

HOW IS IT USED ?

Fresh Khat leaves are typically chewed like tobacco with intermittent chewing releasing the active components. Chewing Khat leaves produces a strong aroma and generates intense thirst. Methcathinone can be orally ingested in tablet form, snorted or injected intravenously.

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LEGAL STATUS

Both Cathinone and the synthetic drug Methcathinone are listed as Undesirable Dependence Producing Substances, under Part 3 of the Drugs and Drug Trafficking Act, No 140 of 1992. Cathine (Ephedrine) is a scheduled substance listed under Part 1 (Substances useful for the manufacture of drugs) of the same Act.

SHORT TERM EFFECTS

Khat is a stimulant. A typical chewing session is thought to be the equivalent of ingesting
5 milligrams of amphetamine sulphate. Usually 50–200 grams of the leaves are chewed. The onset of effect is within 20 minutes The effects of the drug generally begin to subside between 90 minutes and 3 hours after ingestion; however, they can last up to 24 hours.

Physiological effects include a rise in body temperature, pulse rate and blood pressure, increased respiratory rate and urination. Following feelings of mild euphoria, talkativeness and suppression of their appetite, users have reported calming effects after a few hours. Other pleasurable effects reported include increased alertness and excitement. There appears to be an absence of marked physical tolerance, due in part to limitations in how much can be ingested by chewing.
The effects of **methcathinone** are similar to those of methamphetamine but much more euphoric. The effects have been compared to those of cocaine, since it commonly causes hypertension (elevated blood pressure) and tachycardia (elevated heart rate). Reported effects include euphoria, increased alertness, dilated pupils and rapid breathing .The effects of methcathinone usually lasts from four to six hours.

OVERDOSE POTENTIAL

The dose needed to constitute an overdose is not known, however it has historically been associated with those who have been long-term chewers of the leaves. Symptoms of toxicity include: delusions, loss of appetite, difficulty with breathing and increases in both blood pressure and heart rate

CHRONIC EFFECTS

It is unclear whether Khat chewing can lead to dependence (addiction), but heavy khat chewers have been shown to experience withdrawal symptoms such as extreme tiredness and lack of energy, difficulty performing normal daily activities and slight trembling several days after having stopped chewing khat. Prolonged and excessive use can lead to psychological problems such as depression, anxiety and irritation, sometimes leading to psychosis.

Advocates of Khat use claim that it eases symptoms of diabetes, asthma, and stomach/intestinal tract disorders but a large number of unwanted physical and health effects have been associated with regular khat chewing : sleeplessness, nervousness, impotence, nightmares, irritability and aggression and gastro - intestinal tract problems,(constipation), impaired concentration and judgement and brownish staining of the teeth.
Physical complications following chronic use include : liver damage (chemical hepatitis) and cardiac problems, specifically myocardial infarctions However, these conditions are thought to occur mostly in the long-term chewers of khat or those who have chewed too large a dose.
Psychoses due to khat are considered by many authors to be a rare phenomena mainly as a result of the manner in which Khat is ingested, thereby not permitting high blood levels of its active ingredients.

COULD KHAT TAKE OFF IN SOUTH AFRICA ?

The prevalence of Khat use in the European world has always been closely linked with the demographics of immigrants from countries where this plant is traditionally cultivated. Against this background it could be argued that the recent influx of immigrants from East and Central Africa into South Africa may lay a platform for the popularization of this substance. However, the potential of this drug to gain popular appeal as a street drug is seriously curtailed by the fact that it rapidly loses its psycho-active properties after harvesting. Furthermore, cathinone cannot be readily extracted from the plant such as in the case of cocaine. On the other hand, in recent years improved roads and the availability off-road vehicles and mobile freezers in or close to areas of cultivation and the possibility of air transportation has increased the global distribution of this non-storable commodity. Some authors have also ascribed the failure of the drug to join the ranks of other popular street drugs to relative low potency of the natural substance and the self limiting route of administration.(Kalix (1987).
Perhaps a more realistic cause for concern should be relative ease with which the more potent and addictive synthetic counterpart of this plant, Methcathinone, can be manufactured from Ephedrine. Ephedrine powder is available on prescription but Norpseudoephedrine can be obtained without prescription.

For more information about this substance and it's effects, please contact Tertius Cronje at 021 - 9454080 or on the email address icons@mweb.co.za