

KHAT (*Catha edulis*) (Street Names: Khat, Qat, Kat, Chat, Miraa, Quaadka)

Introduction:

Khat, *Catha edulis*, is a flowering shrub native to East Africa and the Arabian Peninsula. Khat often refers to the leaves and young shoot of *Catha edulis*. It has been widely used since the thirteenth century as a recreational drug by the indigenous people of East Africa, the Arabian Peninsula, and throughout the Middle East.

Licit Uses:

There is no accepted medical use in treatment for khat in the United States.

Chemistry/Pharmacology:

Khat contains two central nervous system (CNS) stimulants, namely cathinone and cathine. Cathinone (alpha-aminopropiophenone), considered to be the principal active stimulant, is structurally similar to *d*-amphetamine and as potent as a CNS stimulant. Cathine, also called *d*-norpseudoephedrine, is about 10 times less potent than cathinone as a CNS stimulant. Cathinone levels are highest in the freshly cut khat plant. Once cut, levels of cathinone start declining. Cooling the plant material will reduce the rate of decline in cathinone levels such that detectable levels may be found at least out to 10 days post cutting. In addition, encountered drug seizures of dried or dehydrated khat have shown that cathinone may be detected for many months or even years post cutting. Cathine remains stable in khat after the plant has been cut regardless of storage.

Khat produces amphetamine-like effects. These effects include euphoria, a feeling of increased alertness and energy, hyperactivity, anorexia, and lack of fatigue. The users also feel relaxed and talkative. Sympathomimetic effects may include elevated blood pressure, dilated pupils, hyperthermia, arrhythmias, and increased respiration. The effects of khat usually last between 90 minutes and 3 hours. After-effects of khat use have been reported as lack of concentration, numbness, and insomnia.

Khat abuse leads to psychological dependence. Chronic abuse of khat can lead to behavioral changes and impairment of mental health. Clinical manifestations include manic behavior with grandiose delusions, violence, suicidal depression, or schizophreniform psychosis characterized by paranoid delusions. Chronic abuse can also produce physical exhaustion, anorexia, periodontal disease, and disturbances of the gastrointestinal system.

Illicit Uses:

Khat is abused for its stimulant and euphoric effects. Most often the fresh leaves and shoots of the khat shrub are chewed, then retained in the cheek and chewed intermittently until all the juices are extracted. To counter the bitter taste of the plant, copious amounts of water or sweet soda are drunk. Dried khat can be made into tea or a chewable paste. Rarely other modes of self-administration include smoking or sprinkling on food.

User Population:

Abuse of khat in the United States is most prevalent among immigrants from Somalia, Ethiopia, and Yemen. Abuse of khat is highest in cities with a substantial population of these immigrants. These cities include Boston, MA, Columbus, OH, Dallas, TX, Detroit, MI, Kansas City, MO, Los Angeles, CA, Minneapolis, MN, Nashville, TN, New York, NY, and Washington, D.C.

Illicit Distribution:

Individuals of Somali, Ethiopian, and Yemeni descent are the primary transporters and distributors of khat in the United States. Khat is transported from Somalia into the United States and distributed in the Midwest, West, and Southeast (Nashville, TN) regions of the United States. According to the National Drug Intelligence Center, Somali and Yemen independent dealers are distributing khat in Ann Arbor, Detroit, Lansing, and Ypsilanti, MI; Columbus, OH; Kansas City, MO; and Minneapolis/St. Paul, MN. Due to a limited shelf life, khat needs to be transported quickly to the intended market. Thus, shipment by air is the most common method of transport. Khat is often transported through the United Kingdom and Canada, primarily via package delivery services and, to a lesser extent, by couriers aboard commercial aircraft. Khat is typically shipped and packaged into bundles that are wrapped in plastic bags or banana leaves to retain moisture and freshness.

Khat has been widely available in the United States since 1995. The Drug Enforcement Administration's National Forensic Laboratory Information System (NFLIS) Drug database collects scientifically verified data on drug items and cases submitted to and analyzed by participating federal, state, and local forensic drug laboratories. NFLIS-Drug received 246 reports of khat, cathine, and/or cathinone in 2020, 219 in 2021, 152 in 2022, 90 in 2023, and 106 in 2024 (reports still pending). In total, NFLIS-Drug received over 7,600 reports of khat, cathine, and/or cathinone since first being reported in 1998.

Graba, a dried form of khat that is similar in appearance to marijuana and used within Somali communities, has historically been seized in the United States. Graba is produced in Ethiopia and is commonly dried before it is transported into the United States.

Control Status:

Cathinone and cathine are controlled in schedules I and IV, respectively, of the Controlled Substances Act.