

KROKODIL

Beware the Krokodil

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“How doth the little crocodile improve his shining tail, and pour the waters of the Nile on every golden scale. How cheerfully he seems to grin, how neatly spreads his claws, and welcomes little fishes in, with gently smiling jaws.”

- Lewis Carroll

Krokodil is a drug that has only recently reared its ugly head. Scientifically known as desomorphine, krokodil or ‘moonshine heroin’ came about as a cheap and easy way to get high when heroin was not available or too expensive. Krokodil is a dangerous and relentless drug that grabs hold of its users and does not let go until they have run their bodies into the ground, literally.

Akin to methamphetamine, krokodil is manufactured by using household chemicals and easily attainable items from the store. Ingredients include codeine, paint thinner, gasoline, hydrochloric acid, iodine and red phosphorus, which can be scraped off striking pads of matchbooks (Batista, 2013). Codeine tablets are available in Russia without a prescription (National Library of Medicine, 2012).

Desomorphine, like most synthetic drugs, was originally developed by scientists to treat certain ailments. Desomorphine was developed in the United States in 1932 as a synthetic morphine analogue and was used to treat post-operative pain in patients. It was also used for some time in Switzerland under the brand name Permonid. Because of its highly addictive nature, desomorphine was declared a Schedule I controlled substance in the United States in 1936 (DEA, 2013).

The pain-relieving effects of desomorphine are about ten times greater than that of morphine, and thereby stronger than heroin (J. Grund, 2013). Desomorphine is no more

dangerous than regular morphine, but since krokodil is manufactured in homes and other non-sterile environments, it has the tendency to be impure and contaminated with corrosive byproducts (National Library of Medicine, 2012).

Krokodil's resurgence has ties close to the Middle East and the countries surrounding the geographic area. Afghanistan is the world's largest opium producer, accounting for 75 percent of the world's heroin supply in 2012 (Heikkila, 2013). With Russia and Afghanistan being within close proximity, Russia is a prime target for high drug trafficking volume, especially considering the grim history between the USSR and Afghanistan. Cold War activities and the Afghan-Soviet strife in the 1980's have caused many to suspect narco-terrorism as a rationale for krokodil in the region. While this indicates a complex conspiracy, it may be a convincing one for some government officials and law enforcement agencies.

Starting in 2002, executive authorities of the Russian Federation started an anti-drug policy, making it harder for junkies to *score* heroin (State Anti-Drug Committee of the Russian Federation). As with any drug, when the balance between supply and demand is interrupted, people may turn to their own devices to ensure they get their *fix*. While the 'War on Drugs' has stopped trafficking in some regions of the world, it has only made it boom in other areas. A prime example of this is seen in the crackdown on the opium-trade in the Golden Triangle in Southeast Asia and rise in opium growth and distribution in Afghanistan (Lacouture, 2008).

In 2003, krokodil made it to the streets of Russia, mainly targeting prostitutes and transients. As of September 2013, it was estimated that there are as many as 2 million users in Russia and Europe (Batista, 2013). This is approximately the same number of heroin users in Russia alone, but with their indistinguishable appearance, many people become krokodil users when drug dealers sell them krokodil instead of heroin. On the streets heroin goes for \$20-30 per

hit. In contrast, a hit of krokodil typically goes for around \$8 (Waxman, 2013). In December 2012, the first case of krokodil use was recorded in the United States (Gray, 2013). Since then, new cases have been recorded by hospitals nationwide.

Krokodil is abused because of its opioid-like effects. It is highly addictive. As with other opiates, users gain a dependence and an ever-increasing tolerance on their way to addiction. The euphoric and pain-reducing effects last less time than with heroin or morphine and may cause users to develop an addiction more rapidly than with heroin (DEA, 2013). The high from krokodil lasts approximately an hour and takes about an hour to make. Some addicts find themselves in endless cycles of cooking and using (Shuster, 2011).

Krokodil is traditionally injected, making users at high risk for intravenous infections and diseases such as HIV, AIDS, blood poisoning, meningitis, tuberculosis, and hepatitis (DEA, 2013). Since many krokodil users in Russia are prostitutes, this puts non-drug users at risk of contracting such illnesses. The nickname 'zombie drug' seems to have instilled fear in some people, making them think that side effects suffered by krokodil users are contagious, but they are not. One must inject the drug for the process to start (National Library of Medicine, 2012).

Upon injecting krokodil, the injection site becomes gangrene, phlebitis (inflammation of the vein) occurs, and ulcers form. These are nowhere close the worst side effects of krokodil use. Skin and soft tissue infections develop and continue to travel down to the bone. Veins then begin rotting from the inside out and require surgical removal of the main veins in arms or legs, including the surrounding tissue and muscles. Necrosis of the skin causes it to look green and scaly, hence the name krokodil. Amputation of limbs and brain damage are common results for krokodil users. The ultimate consequence of krokodil use is death after two to three years (J. Grund, 2013).

One personal account of krokodil abuse and survival has been recorded. In 2011, *Time Magazine* interviewed Irina Pavlova at a Pentecostal-run rehab center in Chichevo, Russia. Somehow, Irina managed to inject krokodil nearly every day for six years and survive to tell about it. She tells of how many Russian youth start using *khanka*, a tarlike opiate made from poppy bulbs. They soon graduate to heroin and then to krokodil, because it is cheaper and easier to make. Irina walked away from her krokodil addiction, but acquired lifelong ailments in the process. She developed a speech impediment and occasional loss of motor skills, as well as some brain damage; these side effects pale in comparison to the fate of all of her friends - death (Shuster, 2011).

Photos of krokodil users are not for the squeamish. While looking at pictures of krokodil addicts in Russia, I asked myself why people do not seek medical attention or rehabilitation before the drug really starts to destroy them. Simply put, the laws against drug use in Russia and other post-Soviet countries are out of date when it comes to modern medical concepts. Rehabilitation centers share information with law enforcement, leading to addicts being subjected to constant scrutiny. Many narcologists, people who study drug and alcohol abuse and associated treatments, believe that drug addiction is a moral deviance and not a disease. In hospitals, patients suffering from krokodil addiction are often subject to meager and inhumane treatment (J. Grund, 2013).

In the first quarter of 2011, the Russian Federal Drug Control Service confiscated 65 million doses of krokodil. Krokodil accounts for almost half of all addictions and drug-related deaths in the Russian Far East. In some provinces, it has practically abolished traditional opiates all together. It is thought that drug use is so prevalent in Siberia and the Russian Far East,

simply because of boredom. Many people do not work due to local climate conditions and have little education due to the level of poverty (Shuster, 2011).

In hopes of eliminating krokodil manufacturing and abuse, the Russian government has considered such steps as putting codeine back into the ‘prescription only’ category and banning websites that reveal the steps and ingredients used in krokodil production (New York State Office of Alcoholism and Substance Abuse Services , 2012). That’s right, this recipe for disaster is floating around on the internet for anyone to stumble upon.

Krokodil production is broken into two simple steps: the extraction of codeine from over-the-counter codeine pills, and the reconstruction of the codeine molecule into desomorphine. After the first step is performed, the solution is left to rest and the fraction containing the codeine separates from the remaining solution, mostly consisting of gasoline. Then, the codeine is mixed with the remaining ingredients and is cooked in a pot on the stove until the sight and smell of the solution resembles what is thought to be desomorphine. This process is not reserved for just rocket scientists and high school chemistry teachers. Although, depending on the manufacturer’s attention to detail during the process, the resulting drug can differ drastically. It is easy to understand that the reason for krokodil’s widespread wrath in Russia is its simple manufacturing method (J. Grund, 2013).

The United States’ Drug Enforcement Agency (DEA) has made stopping the spread of krokodil use a top priority. Two-hundred DEA agents across five states have executed drug busts and tested heroin to ensure its chemical makeup. So far, they have not found krokodil in any of their endeavors. This could be a good thing, yet medical cases of suspected krokodil use keep appearing throughout the U.S. (Waxman, 2013).

Since the chemical compound that constitutes krokodil is not part of a typical drug screen, it may not show up in urine and blood analyses. Krokodil also breaks down quickly in the body. This is the reason users get an instantaneous high after injection and come down quickly, leaving them *chasing the high* and using the drug more frequently than if they were using heroin (Waxman, 2013).

What started as a homemade drug to give desperate, impoverished Russian drug addicts a way to escape, krokodil has turned into a drug that most people in the U.S. and Canada take unintentionally when they are told it is heroin. Luckily, various forms of media have publicized every detail that comes their way, in hopes of deterring potential users from even thinking of trying the drug. Knowing that krokodil could be sold as heroin due to physical similarities, hopefully addicts would be persuaded to seek professional help from rehabilitation centers and friends and family.

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