Street Drug Abuse and Diabetes

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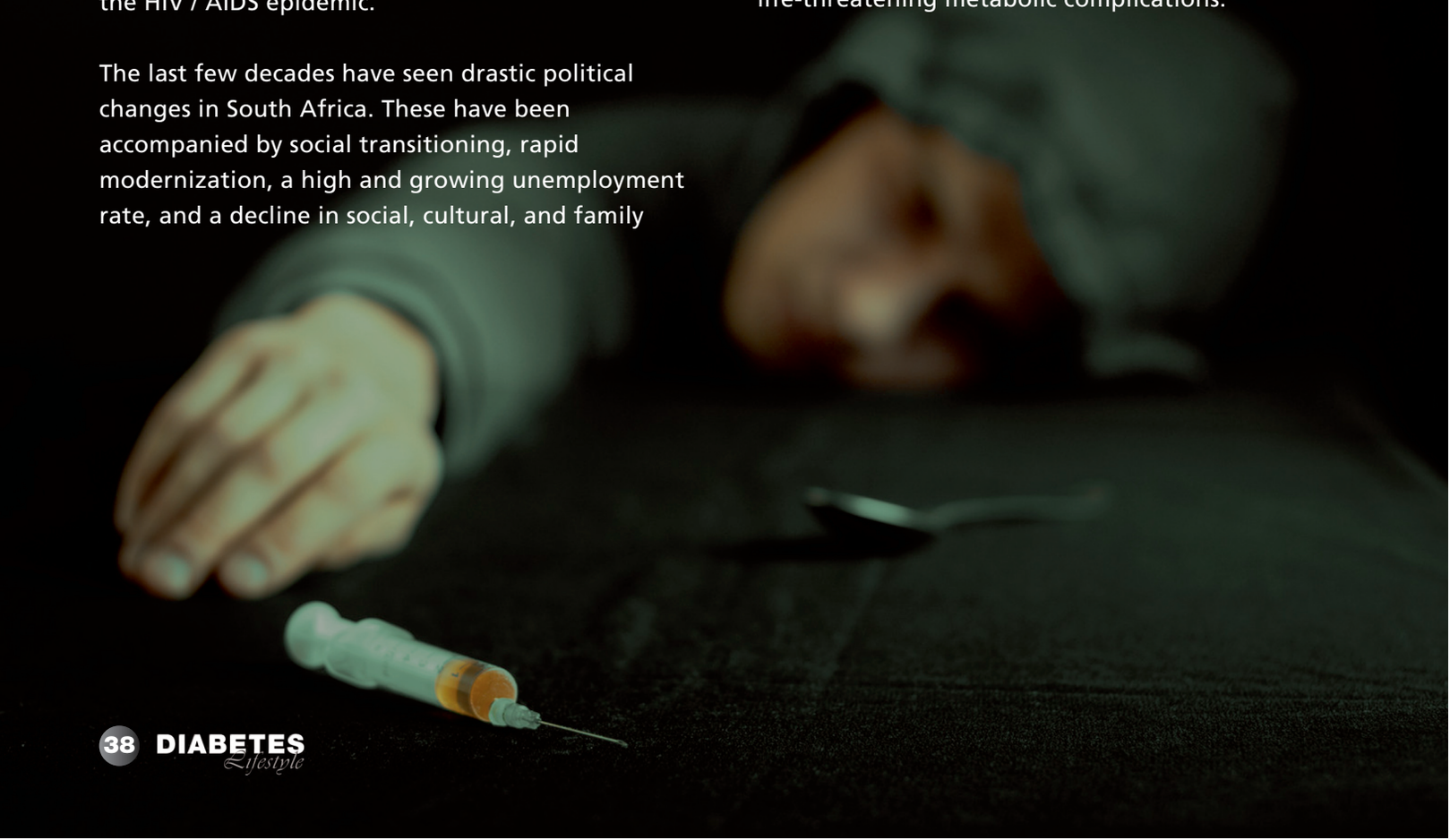
The Drug Problem

'Street' or 'recreational' drugs are mind-altering chemical substances that are used for non-medicinal, leisure purposes. They are taken for the sole purpose of their effects on one's consciousness, cognition, mood and behaviour, often called 'getting high'. This may lead to addiction or substance abuse which, in turn, can have a detrimental effect on the user's physical and mental health.

United Nations and Government statistics estimate that street drug consumption in South Africa is twice the world norm and that 15 % of South Africa's population has a drug problem. Drug abuse costs South Africa R20-billion per year and could pose a bigger threat to the country's future than the HIV / AIDS epidemic.

The last few decades have seen drastic political changes in South Africa. These have been accompanied by social transitioning, rapid modernization, a high and growing unemployment rate, and a decline in social, cultural, and family values. As a result, drug use has flourished. Apart from being a form of escapism, in many communities, drug dealing provides income for families and communities..., but it also destroys families and communities.

Patients with diabetes are not exempt from this burgeoning social problem. An Internal Medicine Journal study in 2012 found that of a group of 504 people with type 1 diabetes in the USA, 388 (77 %) had used recreational drugs at least once and 237 (47 %) had used drugs within the last year. 24 % reported using drugs daily and 68 % had used three or more drugs. The most common drugs used are Marijuana, Ecstasy, and Speed. (Endocrine News, January 2015). Australian Endocrinologist, Paul Lee said "The key message of the study is that drug use does occur and may lead to potentially life-threatening metabolic complications.



Types of Drugs

The most common street drugs are classified, according to their effect on the brain, into 3 main categories:

- **Uppers**, central nervous system stimulants, which give an overpowering feeling of well-being, mental clarity and great energy and make the body function faster in terms of speech, reactions and heart rate. **Uppers** include **cocaine** (street names blow, Charlie and coke), **crack** (rocks, freebase), **Ice** or Crystal methamphetamine (crystals, meth, rock, candy, hot ice), **Ecstasy** (XTC, e, Adam, MDMA), methamphetamine (**tik**). **Ephedrine** (found in decongestants), **tobacco** and **appetite suppressants** may also be included in this category.
- **Downers**, central nervous system depressants, which affect thought, heart rate and breathing and result in the user's perception of being calmer and more controlled. **Downers** include narcotics such as **heroin** (street names smack, mud, brown sugar), **morphine**, **codeine**, **pethidine** and **mandrax** (whites, buttons). Other commonly abused substances including **alcohol**, **inhalants** (such as glue and lacquer thinners), **analgesics**, **tranquillisers** and **hypnotics** also fall into this category.
- **Hallucinogens**, which affect the mind and what you see, feel or hear. These include **cannabis** (street names dagga, weed, marijuana, dope, grass), and **LSD** (acid, blotter acid, microdot, white lightning).

All of these lead to impaired brain function and are damaging to various degrees.

What happens when a person with diabetes uses drugs?

When a person with diabetes uses street drugs, there is a high likelihood of decreased self-management ability and drive, with resultant poor glycaemic control. He or she may forget to use insulin, forget to eat when necessary and will probably not test his or her blood glucose levels. The risk of diabetic ketoacidosis (DKA), a potentially life-threatening shortage of insulin in patients with type 1 diabetes, increases. A study of adult patients with diabetes in a Spanish hospital found that 20.6 % of patients in hospital for DKA were substance abusers, mostly of cocaine and marijuana. These people had been admitted more than once. A 2004 study from Liverpool, found that people with type 1 diabetes who were addicted to intravenous drugs, had higher rates of diabetes complications, were admitted more frequently and had a higher death rate than those with diabetes but no drug addictions. Dr Chelminski, Professor of Medicine in the USA, said "There are real risks with the taking of insulin and these are magnified in people who may spend a significant amount of time stuporous, underfed, erratically fed, and broke because their money is spent on drugs."

The Table below, records the effects of various street drugs on the body, the brain and on diabetes - all of the drugs taken are harmful in one way or another.

Effects of Some Common Street Drugs on the Body, Brain and Diabetes

Drug	The 'High'	The 'Crash' / Negative Effects	Effects on the Brain	Impact on Diabetes
Cocaine Usually snorted Psychologically and physically addictive 	A 'rush' or feeling of exhilaration, euphoria, hyperactivity, self-confidence, heightened awareness and boundless energy which occurs five to 10 minutes after snorting cocaine.	Headaches, tremors, anxiety, insomnia, extreme paranoia, aggression. An overdose can lead to seizure, panic attack, cardiac arrest, stroke, difficulty breathing and death.	Depletes brain neurotransmitters leading to long-lasting or even permanent extreme depression (which may result in suicide), apathy, fatigue, tremor and anxiety. Antidepressants are futile in this situation.	Compounded risk for heart disease and stroke since uncontrolled diabetes already raises these risks. Depression impairs diabetes self-management. Difficulty in isolating cause of possible seizures (Cocaine or hypoglycaemia or epilepsy), which makes effective treatment (different in each case) difficult.
Crack A cheap and deadly form of cocaine in 'rocks' Smoked. Fastest risk of addiction.	Rapid, brief (~ 10 minutes) and intense high - feelings of wellbeing, mental exhilaration and euphoria quickly followed by 'crash'.	Severe depression, irregular heartbeat increasing risk of heart attack. 	The assault on the brain is even more intense than snorted cocaine. Rapid depletion of 'feel-good' neurotransmitters dopamine and serotonin. Damage can be permanent leading to severe paranoia, suicidal depression, and murderous rage.	Anxiety, depression, paranoia, and rage will impair self-management of diabetes. Compounded risk for heart attack since uncontrolled diabetes already creates this risk.
Tik Crude methamphetamine Sniffed, smoked or injected. 	Like cocaine and crack, tik leads to increased alertness, energy and self-confidence, a heightened sense of sexuality and euphoria.	Aggression, violence, psychosis, memory loss. Overdose can lead to stroke and heart failure. Heart and brain damage and increased risk of hepatitis C and HIV infection with long term use.	Similar to cocaine but lasts longer. Loss of up to half of the dopamine in the brain every 2 years. This leads to Parkinson's disease. Risk of psychosis and schizophrenia is increased. Severe foetal malformations in Tik users who fall pregnant.	Poor memory and poor brain function will impede diabetes self-management. Aggression will interfere with treatment of diabetes, especially if the addict needs help. Compounded risk for heart complications and stroke. Pregnancies are already at higher risk for both mother and baby in diabetes; the risk is highly increased with Tik addiction.
Ice Crystal / Pure Methamphetamine Smoked in glass pipes. Extremely addictive.	Within seconds, smokers feel an intense wave of physical and mental exhilaration lasting from four to 14 hours.	Intense feelings of anxiety, depression, insomnia and fatigue, and eventually psychosis. Prolonged use damages the lungs, liver and kidneys.	Brain damage is similar to Tik but to a greater degree (see Methamphetamine). 	Anxiety, depression and psychosis will impair self management of diabetes. Compounded risk for kidney damage since uncontrolled diabetes already creates this risk.
Ecstasy methylenedioxy-methamphetamine (MDMA) Taken orally (tablet). Low formulation consistency leads to high risk of overdose.	An enhanced sense of pleasure, increased self-confidence, energy, peacefulness, acceptance and empathy lasting between four and six hours. 	Blurred vision, sweating, teeth clenching, seizures, nausea and vomiting, panic attacks, extreme depression, and paranoia. Dangerous in any dose to people with heart disease and asthma. Large doses can lead to hyperthermia, dehydration, water retention, stroke and heart attack.	Depletes serotonin, dopamine and adrenaline stores leading to chronic depression and psychosis and permanent brain damage.	The difference between the symptoms of high or low blood glucose levels (blurred vision, seizures, nausea and vomiting) and those that are drug related may be confusing and treatment may not be appropriate. Depression and paranoia will impede diabetes management. Damaged brain function will mean the addict cannot plan and execute insulin and food self-management.

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Heroin Smoked, snorted or injected. Highly addictive.	A profound sense of warmth and wellbeing which blocks feelings of pain and insecurity. 	Nausea, vomiting, sweating, chills, muscle and bone pain 6-8 hours post-high. Severe withdrawal symptoms within two days. Long term use leads to liver damage, abscesses, arthritis, heart damage, seizures, and death. Babies of addicts may be born addicted.	Raid conversion to morphine in the brain. Destroys the chemical balance of the brain leading to the experience of pain in the absence of any injuries, rapid mood changes and confusion.	Highly compounded risk in pregnancies for both mother and baby. Chemical brain changes will impede diabetes self-management.
Mandrax (Methaqualone) Tablets usually crushed and smoked with dagga or tobacco in a bottleneck pipe (white pipe). Increasing tolerance and physical / psychological dependence.	Sedative and hypnotic which causes total relaxation, peace and feelings of being carefree and careless.	Overdose may cause nausea, delirium, convulsions, stupor, coma and death. Mandrax users can often be recognised by having yellow-stained hands, bloodshot eyes, a gaunt appearance, rotten teeth, appearing drowsy. Also, loss of appetite, excessive salivation and a swollen abdomen.	Alters the brain chemicals and suppresses brain function so that the user becomes 'zombie-like'.	Being 'zombie-like' will not allow for any diabetes self-management. 
Dagga / Cannabis Smoked, often with tobacco, eaten as 'cakes' or drunk as a tea Increasing tolerance and dependence. The 'gateway' drug. 	Euphoria and relaxation lasting 2-3 hours	A serious thirst, increased appetite (especially for something sweet - 'munchies'), aggression, light headedness and forgetfulness, especially when it is used together with alcohol. Negative effects on short-term memory, apathy, panic attacks, paranoia, hallucinations, flashbacks and memory loss. May cause infertility in men and women, emphysema, lung cancer, and developmental abnormalities to the foetus in pregnant users (Foetal Marijuana Syndrome, 5 times more common than Foetal Alcohol Syndrome).	Changes the brain chemistry that governs feelings, memory, the senses and coordinated movement.	Being in a Dagga haze where nothing matters and cases of the 'munchies' will impede diabetes self-management. Compounded risk to mother and babies during and after pregnancy.
LSD (Lysergic acid diethylamide) Taken orally as tablets or paper 'microdots'. Hallucinogen that causes extreme physical and psychological dependence.	A psychedelic drug which alters cognition and perception. Senses may appear 'crossed' (perception of 'hearing' colours and 'seeing' sounds). Taken in large enough doses, LSD produces delusions and visual hallucinations. 15-30 minutes after taking, person goes on a 'trip. May be a 'good trip' (experience of something desired e.g. be able to fly) or a 'bad trip' (paranoid and disturbing hallucinations).	Increased blood pressure, numbness and weakness. Mental disorders such as severe depression, anxiety, schizophrenia and personality change. Delayed 'flashbacks' of 'bad trips'.	Overstimulation of the brain gives rise to an 'electric storm' which leads to hallucinations and may result in permanent changes. 	Depression, poor brain function and particularly schizophrenia will impede diabetes self-management.

Patients who are heavy users of marijuana / dagga are usually not working and become depressed. The effects on cognitive function start to manifest and they cannot follow through on plans they have. This will affect diabetes in planning meals, planning insulin and checking blood glucose values.

Managing both an addiction and the diabetes is a complex challenge. Drug counselling as an inpatient or an outpatient, or even a rehabilitation period will be necessary, if a firm decision is made to come off the drugs. Diabetes education will be needed at the same time to manage diabetes more effectively, if that is at all possible without the supervision of a care giver.

First prize goes to those with diabetes who have never used street drugs, nor do they intend to in the future. Second prize goes to those who have dabbled with taking drugs but have left them alone thereafter. Recreational drug use is a dangerous game and is foolhardy for those who have diabetes even when they feel they have control over their (ab)use. No prize here! Addicts are usually not aware of when the addiction began and they thought they had control when they didn't.

For those who are addicted, please do something very constructive to stop the drugs, since you are playing with your life. If you don't care if you live or die, that is usually the drug talking and it is not really what **you** want.

You can be healthy and happy in spite of your diabetes. Don't destroy your chances by taking illegal drugs!

Faces of Meth™ program. Available from www.facesofmeth.us/main.htm