The Truth About Drugs

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Cocaine

Terms: Coke (cocaine, charlie, wash, rock, base, stones (crack)

The cocaine family of drugs are some of the most dangerously addictive drugs in the world.

Cocaine is a white powder refined from the coca plant which grows in South America. It is usually placed on a smooth surface such as glass and cut up with a razor blade, forming thin lines or trails which can then be sniffed up through a makeshift straw such as a banknote."Snorting" is the commonest form of consumption although it is sometimes injected. It is easily absorbed through he lining of the nose.Repeated snorting of cocaine damages the membranes of the nose and can perforate the nasal septum (barrier between one side of the nose and the other.)

Cocaine and crack speed up the body in a similar way to amphetamines, but the effect is shorter and more intense - less than an hour for cocaine and as short as several minutes for crack. As with amphetamines, cocaine releases an intense rush of energy, makes a person feel good, mentally sharp, talkative and confident. When blood levels begin to dive, the craving is often overwhelming to take more.As with all drugs and life experiences, the greater the high, the worse the fall.

The early euphoric experience disappears in heavy users, who can feel very restless, with nausea, excitability, extreme agitation, anxiety, paranoia and possible hallucinations.Very high doses can rarely cause heart failure, convulsions and death. Regular cocaine users often have interrupted sleep patterns.They feel unable to cope until they've had some charlie, stressed-out and irritable.Life for weekend users can become a process of trying to get through the week until Friday.Regular users may feel that they cannot have a "good time" without the drug.Stopping the drug produces terrible headaches, tiredness, nausea, sleepiness and depression.

Crack

Free-basing (smoking) is carried out by mixing cocaine with other substances and sodium hydroxide.The salt base dissolves leaving granules of pure cocaine.These are smoked in a pipe. The vapours in the lung hit the brain in eight seconds, producing a massive high which lasts around ten minutes, after which it needs repeating.That is why some people can easily get through several hundred pounds of crack in an evening.Cocaine and crack are also used during sex, and cocaine can prolong sex in a man by acting as a local anaesthetic on the genitalia.

Crack babies have been a growing problem in the US. One NIDA study in the US found that 200,000 used illegal drugs in pregnancy of which 20% used crack or cocaine. The effect on babies can be terrible.Risks are increased of premature labour, stillbirth, low birth weight, ectopic pregnancy, stillbirth, sudden infant death and small size at birth. Behind these words are tens of thousands of individual lifetime tragedies, for example children whose mental development has been permanently affected by what happened to them in the womb.

Sex trades for crack are a common occurrence, and this has led to sexual abuse of women in "crack houses" by dealers and male users, especially in the US.These women are at exceptionally high risk not only of pregnancy, but also ofsexually transmitted diseases

including HIV.

Cocaine and alcohol are a hazardous combination. The human liver combines coca and alcohol metabolites to form new cocktails which are toxic.

Big scares but what is the reality?

In 1989 there were many predictions in the global press that America would be severely affected by crack and that Britain was also about to become engulfed. Part of this was based on the fact that the US cocaine market was already becoming saturated following a large rise production in South America.

Almost a decade later those threats have yet to materialise. However it is true that by 1987 seizures of cocaine in Britain exceeded that of heroin for the fist time and by 1991 seizures had doubled.Cocaine was a high fashion drug in the 1980s, particularly in the city and the entertainment and media world. By 1995 large amounts of cocaine were being processed into crack so that in some areas cocaine was relatively hard to find, and crack distribution networks were well organised.

Crack-related violence

Crack has a bad reputation for extreme violence, probably for several reasons. Firstly it is highly addictive and the habit is expensive so large amounts of money are needed to keep a user happy and stakes are high for people seeking to control a distribution area.The drug itself can cause anxiety, fear and paranoia, and when knives or guns are around, murder can easily be the result.

Crack rehabilitation and care

Treating crack addiction can be hard - even attracting users into programs can be a real

challenge.Cocaine users are often very different culturally from heroin users and often prefer to keep well apart.Crack clients can be far more aggressive and instantly demanding than heroin users, and many drugs services find it hard to respond.Crack users are not offered substitute medication - the equivalent to methadone for heroin users.Many crack users are black and feel uncomfortable in a white-dominated support centre.Finally, paranoia itself can fuel natural suspicions of authority.

So then, crack and cocaine are real threats even if their use is more limited than some feared it would be.Fashions in drug culture come and go.Expect further surges in crack consumption in particular groups over the next couple of decades with decline in others.Each wave of experimentation leaves a hard core of chronic addicts.They are a small minority of those who have ever used the drug but are a large part of the market.

Heroin and other opiates

Terms: Smack, junk, skag, H, brown, shit, horse, harry, boy

Heroin addiction makes headlines and raises the blood pressure of politicians yet nothing is what it seems.Heroin addiction is often a stage in a young adult's life, rather than the final chapter.And pure heroin adiction can be unusual.In many places the addiction is more to the lifestyle of the needle, and to whatever can be injected through it, including a wide range of opiates - part of the same family of drugs as heroin.

Heroin used to be an end-stage drug, the one someone used after all the others.This is no longer true. With the huge fall in the street price of a wrap, heroin is becoming an experimental drug for large numbers of young people, who may not be injecting it. Deaths can be accidental from overdosage, or from multiple medical problems caused by injecting infected material over a long time.But heroin can wipe out a large section of an entire community. Once addiction is established, heroin kills around 1.5% of users a year.But that's without the impact of .AIDS.

I will never forget my first trip to India. After travelling over a thousand miles by air and land, our land rover screeched to a halt at the end of the dust track through the outskirts of a remote.We were just a few miles from the Burmese border in territory dominated by continual tribal disputes and tension. We were invited into a simple wooden shack, where a woman was

dying.Out of 40,000 adults in the village, 8,000 were injecting heroin and 4,000 had HIV. She could hardly move, was too weak to eat and had painful sores all over her body.We gave her some basic medication and advice to her family and went on to the next home, and the next.All were young, and all were dying of heroin addiction.

This is a huge proportion of the younger adults in that village.In another home we found both teenage sons of the local church leader were infected and ill, with one dying. The parents in the village were beside themselves with worry.What do you do when you know that six out of ten of the older pupils at school are using heroin every day? How do you keep your own children safe?Every street corner is a place of danger.Every home becomes a possible place of supply.Villagers were talking of setting up various clubs to keep teenagers occupied out of school.There was very little for them to do in the village in the evenings or weekends - apart from hang around with others and get into trouble.

This is what happens to communities which are in or close to major opium growing areas.Heroin is ultra-cheap, and becomes as available as tobacco or beer. Taking heroin becomes a normal way of life.

It is far too easy to dismiss such terrible happenings in remote villages as unimportant to the rest of the country or beyond, but that is to misunderstand what is happening. The following day we flew to New Delhi, a huge sprawling city.In a drug rehab project there we met around thirty former heroin users, almost all of them from the same tribes as we had visited the previous day.The drugs problem in the North East had travelled over a thousand miles to create a new crisis in India's capital.The same has been happening in other larger cities.

Heroin is an off-white or brown powder made from extracts of poppies, papaveretum somniferum. The raw opium is collected from the dried milky sap of the opium poppy, which forms a gum containing codeine, morphine and alkaloids.Heroin is made from the morphine and in weight terms is 50% more powerful than morphine.

These poppies are now grown in many countries including Burma, Afghanistan and more recently in the former republics of the Soviet Union as well as Columbia.Many synthetic opiates are also finding their way onto the street from pharmaceutical companies and the health service supply chain.These include pethidine, buprenorphine (Temgesic), dipipanone (Diconal) and methadone (Physeptone).Other milder opiate preparations are also abused including dihydrocodeine (DF118) and codeine.

Pattern of use

Heroin can be smoked, swallowed, sniffed or injected.Fumes from heated heroin can be inhaled ("chasing the dragon"). It makes the user feel relaxed and happy, "wrapped up in cotton wool", dreamy and drowsy in larger doses. It slows reactions and damages concentration.Blood levels halve in three hours so the effect rarely lasts more than four or five hours. It causes nausea and vomiting, especially with first-time use.

Non-sterile injections cause abscesses, damaged veins and septicaemia, hepatitis and AIDS.Heroin, like all other opiates, also causes severe constipation. Sniffing heroin damages the nose.Heroin depresses the nervous system including coughing, breathing and heart rate, dilating blood vessels so the person feels a warm glow, and dilating the pupils of the eyes.

Heroin is almost always cut with other substances, of which sugar is the most common. Together with caffeine, talcum powder and flour. As we have seen, the normal price has beenbetween £15 and £40 for a wrap, but price falls have been up to 90% in some areas. Nevertheless, someone taking heroin can easily spend £25 to £100 a day, as consumption tends to rise when the drug is cheap. Mixing heroin with other depressant drugs like barbiturates or alcohol can cause additive effects, making an overdose more likely.

Overdoses can also occur when a user who has been supplied in the past with very impure heroin suddenly shoots up with very pure stock.The same can happen if a user has been off opiates for a while, and then uses the old dose.

Revival after overdose in casualty

Heroin is reversible, often with spectacular and bizarre results.The antidote to heroin, morphine and other opiates is a drug called Naloxone which targets exactly the same chemical receptors in brain cells that are excited by heroin, but has no effect.When the brain is flooded with Naloxone, the Naloxone fills these cell receptors and gets in the way of opiates and naturally occurring endorphins.

I was working in the emergency rooms as a young doctor one night as a man was brought in almost dead, having overdosed on heroin.He had stopped breathing before the ambulance arrived, but they kept him in the twilight zone between life and death with oxygen and a ventilator.We were all lined up ready and the moment he was brought in we located a vein and gave him a shot of Naloxone (slowly).

In less than fifteen seconds this "dead" man suddenly began to sit up, waving and thrashing his arms around, climbing out of bed very confused (not surprisingly).Three or four minutes later as he struggled to run out of the hospital he began to stagger around, collapsed and was quickly unconscious again.Naloxone acts quick and ends quick.He needed more and was fine the following day. Many aren't so lucky.Another minute or two of delay before the ambulance arrived and he would never have opened his eyes again.

Process of addiction

Once someone is addicted, the usual euphoria becomes replaced by a mere return to "normality" after another shot. Heroin affects motivation so users may neglect themselves and not eat properly. Addiction can lead to huge social and housing problems, as well as criminal activity to pay for the habit.

The truth about withdrawal

Much has been written about "cold turkey" and the huge trauma of getting a heroin addict off the drug.Withdrawal can certainly be very difficult."Clucking" or "cold turkey" is characterised by unpleasant symptoms such as sold sweats, nausea, confusion and intense craving.Non of these symptoms are physically dangerous.

Withdrawal effects start around eight to twenty four hours after the last dose, with symptoms similar to flu - aches, chills, sweating, sneezing, yawning and muscular spasms.These effects take a week or two to subside but feeling of weakness and loss of well being can last months. Psychological dependence can be even harder to overcome than physical dependence.

Despite all this, some people have successfully come off high doses of heroin without medication or massive withdrawal symptoms (particularly common in some rehab units run as Christian foundations outside Europe).Many factors are involved, not least of all mental state. For example, a heroin user who injects regularly may experience a "hit" even if he or she is injecting medical saline (salty water) so long as the person believes it to be heroin.This so-called placebo effect can be very powerful.

And there is far more to breaking a heroin habit than the drug.There is also for many people the love affair with the needle.Terry is a thin thirty six year old father of three young boys who lives alone in a council flat near Dundee. He has used heroin for several years, but is also injecting a whole range of other drugs, crushed tablets, whatever comes his way.He sleeps at night cuddling his syringe, holding it in his hand on the pillow by his head.The needle is a symbol of comfort to him, a source of happiness, even of hope.

For others the ritual of passing the needle has a meaning: a sign of belonging, of being a part of the club.Much of that has changed in a post-AIDS world, with most injectors now using their own equipment, replenished from government funded needle exchanges.

How does heroin work in the brain?

So how is it that such a dangerous and addictive drug can be so safely used in medicine?To answer this question we first need to understand how the body feels pain and how the brain adjusts to it.

Heroin mimics naturally occurring opiate-like substances in the brain called endorphins.These have been extensively studied and are well understood.Endorphins are released by a whole range of normal activities including exercise and sex as well as body massage and acupuncture.They affect our perception of pain and our sense of well being.

If I were to inject a healthy person with heroin, he or she would experience a "high", especially if the drug was injected direct into a vein rather than a muscle.However if someone is rushed into hospital with a badly broken leg, a heroin injection does not produce a high, it just relieves pain.What happens?

When someone is in pain, endorphin levels in the brain fall so the person becomes endorphin deficient.Giving someone heroin or another opiate restores the normal balance of brain substances so the person is relatively comfortable but not euphoric or heavily sedated.

When the same drug is given to someone who is not in pain, the brain decides that the level of opiates is too high and shuts down endorphin production, trying to bring levels back to normal.Then when the drug level falls, the person becomes endorphin deficient, and experiences withdrawal.These changes do not occur with the first dose, but accumulate over time.Recovery from physical addiction to heroin is therefore linked directly to the time it takes for the brain to get going again with its own endorphin production.

We see the contrast in medicine when someone who has been in severe pain and on high doses of opiates is suddenly relieved of pain.I remember looking after a man with advanced lung cancer who had pain in his ribs for which he was given morphine. An anaesthetist came to the ward and gave him an injection to destroy some of the pain-carrying nerves.Because these nerve blocks are often only partly successful I left the morphine dose unchanged overnight to review in the morning.

The following day I returned to the ward and found him very contented but also very drowsy. The nerve block had worked, his own endorphin levels had returned to normal and the medication I had given him had now pushed him over the edge, so that he was experiencing a mild overdose.We stopped the morphine completely and he was soon alert and pain free, without suffering from withdrawal.This was despite being on large doses for several months.

So heroin and other opiates are not addictive when used to relieve pain.There is some acclimatisation to the drug at first as the body gets used to it, during which time any associated nausea and drowsiness usually wear off, but no addiction.I have known patients with motor neurone disease who have been on the same dose of morphine to relieve pain at night, over a number of years.

Heroin does not shorten life when properly used.The only way it could do so would be by depressing the respiration rate, at its most extreme causing the person to die because he or she stopped breathing.

It is a common tragedy that people die in terrible pain because they, their relatives or their doctor are afraid of morphine or heroin.If only they knew the truth.Indeed ignorance about heroin is probably one of the chief causes of uncontrolled pain in those with cancer.

Too many times morphine is withheld ("It will kill him") until the person is almost at death's door and in unbearable distress ("Now is the time to start the morphine and go on cranking it up until it's all over").In my experience most people who ask for euthanasia do so because of the ignorance of their doctors, and most change their minds rapidly when correct symptom control gives them a new lease of life.

Heroin can also be very useful when someone is short of breath in the last days.I will never forget the first person I ever met who was dying with AIDS.Here was a young man, stuck in a glass-lined cubicle by the entrance to a busy ward, mask over his grey face, gasping for breath, tubes in every orifice, leads across his chest, struggling to survive, drowning in his own secretions.He was terrified, knuckles white as he gripped the sides of the bed.

I was shocked.Where was the morphine? "It will kill him," I was told.Nonsense I replied.It will relax him, take away the terrible feeling of suffocation and help him breath - and anyway as you can see, he's almost at death's door.

I told them if they were worried to check the level of oxygen in his blood with a skin monitor, and to reverse the drug with Naloxone if needed.When I returned to the ward a week later I asked about the young man.He had been given the opiates, had relaxed and perked up for a couple of days before dying very peacefully with his family at his side.They checked his blood gases.The oxygen level rose and the carbon dioxide level fell.As he relaxed he began to breath more normally.

Worries in the US

One of the problems about pain relief in the US is the paranoia over heroin.This is foolish.Morphine is just as addictive but there is one vital difference which makes morphine almost useless for some people with severe cancer pain: solubility.A large dose of morphine

can only be dissolved in a few mills of water, whereas the equivalent dose of heroin dissolves instantly in a few drops.But if you are very ill, and thin, that's a very big difference in comfort when the nurse arrives to give the injection.So people dying with cancer across the US are suffering frequent large injections of morphine unnecessarily.

In summary then, crack, cocaine and heroin-related drugs are highly addictive and destructive drugs, which turn regular users lives into a near permanent obsession about getting and paying for the next dose.These drugs can be a major threat to whole communities and to the forces of law and order.They are notorious for damaging the lives of whole families where there is an addict in the house, and injuring the health of the unborn through addiction acquired in the womb.

These drugs raise profound issues about human responsibility in law. If a cocaine addict who is otherwise a sensitive and gentle person kills someone in an intoxicated and paranoid rage, do we blame the drug or the criminal irresponsibility of the addict?Clearly we cannot tolerate a situation where an addict feels able to get away literally with murder by pleading addiction and diminished responsibility as a defence.However the truth is that the murder would never have happened without the person being "out of his mind" with drugs.

In most countries the courts recognise when someone is suffering from - say - paranoid schizophrenia, and murder charges are usually altered to allow he person to be committed to a secure unit for treatment. But should we offer some of the same kind of care to those whose minds are temporarily deranged through drugs? And if the addiction is dealt with, should the person still be punished?

One cannot make general rules but it is clear that these drugs profoundly alter the mind.After a bout of intensive drug-taking many people are no longer in their right minds.Indeed as we have seen, a drug-induced psychoses can be indistinguishable in presentation from schizophrenia in the acute stage.This must be taken into account in order to decide how mad or bad a person was at the time of the crime.

Unfortunately, public sympathy is often very low for drug addicts,who may be despised as the scum of the earth, parasites on society, weak-willed, immoral and feckless non-citizens unworthy of care or attention when they attack others.

The plight of the sobered up addict before the courts is made worse by the politically correct movement which has tried to rule out emotive terms altogether such as "addict" with words like "user".But the trouble is that a "user" is like anyone else who "uses" a car or a bus or a knife and fork.A "user" can never make a claim for special treatment.On the other hand an "addict" can, especially when the reality of life as an addict at its worst is spelled out.

By definition an addict is someone who has lost control to a drug, and, what is even more important, has a brain which is profoundly altered by it.For an addict, being sober is not being normal.Being sober is the worst possible position to be in because it means that the person's body is drug-free, and therefore experiencing terrible withdrawal symptoms.A crime may be committed when a person is sober but withdrawing, but in such a state one could say he or she is still being greatly influenced by the drug.The brain chemistry is upset whether drugged or non-drugged.

These changes are true not just for heroin and cocaine but for other drugs like amphetamines.

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