CRACK

A briefing from the Institute for the Study of Drug Dependence

In the heat of July's crack panic ISDD rushed this briefing to press and government officials — the facts about crack as we know them.

Harry Shapiro

CRACK IS small bits of freebase cocaine about the size of raisins. These are smoked in pipes, on tinfoil like heroin, or in cigarettes. Freebasing is the manufacturing process whereby cocaine hydrochloride powder is dissolved in water and heated with a chemical reagent to 'free' the cocaine alkaloid 'base' from the salt — see panel opposite for an attempt to unravel the confused terminology in this area.

Freebase cocaine has been available in America and in the UK for some years. Originally a volatile liquid such as ether was used as the reagent, a dangerous procedure with a high risk of explosion — as American comedian Richard Pryor found out in June 1980 in an accident which nearly cost him his life. The resultant publicity was partly responsible for a switch to either ammonia or baking soda as the reagent instead of ether.

A sharp but expensive hit

Crack is neither cheap, nor is it pure cocaine. Currently in Britain, crack is sold in single bits wrapped in tinfoil or cling film. Each bit weighs on average about a quarter of a gram and sells for around £25.[1] The effects of one bit are felt in under ten seconds, peak in 1-5 minutes and wear off after about 12 minutes.[2] In America, crack is about $5 a bit, so it appears cheap on a 'bit by bit' basis. But even there, maintaining supplies of a drug with such a brief duration of action requires considerable financial resources. In the UK at present, crack is not cheap by any reckoning.

Nor is it true that any sample of crack will automatically be purer than the equivalent amount of cocaine powder. The purity level of crack depends on:
— the purity of the cocaine powder used in the processing;
— the adulterants in the powder;
— the particular method of crack manufacture;
— the proportions of cocaine to reagent.[4]

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From the point of view of clinical research, the use of crack is a new phenomenon the consequences of which are sparsely documented. Most of the research available has two main limitations:
— the study samples are small;
— the subject groups are selected from those already in crisis with their drugtaking — callers to helplines or patients in treatment.

The psychological effects of smoking crack are exaggerations of those from sniffing cocaine; an intense and almost immediate euphoria with a sense of increased physical and mental capacity, well-being and indifference to pain and fatigue. The effects wear off quite rapidly (around 12 minutes). Users then report after-effects such as depression and anxiety.[5]

With large doses and/or after periods of continued use, effects may include hallucinations, while the after-effects may develop into suicidal feelings and paranoia. These unpleasant feelings can be alleviated by smoking more crack or by taking drugs such as heroin or tranquillisers to 'take the edge' off the anxiety and depression or to induce sleep.[6]

At £25 a piece for a 12-minute high, crack is not cheap, nor is it pure cocaine

The reason for the immediacy and intensity of the 'high' is that smoking is a very effective means of delivering drugs to the brain. The inhaled cocaine vapours are fat-soluble, so pass easily through the tissue membranes of the body and across the blood-brain barrier. In addition, smoking delivers higher concentrations of the drug into the bloodstream than sniffing.[7]

In delivering the drug to the brain, smoking crack is marginally quicker than injecting cocaine powder. Although injected cocaine powder does enter the bloodstream quickly, it is usually injected at sites further away from the brain than the lungs.

Some users have tried smoking cocaine without freebasing it first. This is largely ineffective because cocaine hydrochloride is not very volatile and decomposes in the high temperatures involved in smoking.

Some of the physical effects and after-effects of smoking crack are similar to those of sniffing cocaine, including increased heart and pulse rate. Circumstantial evidence of crack-induced stroke has been reported.[8]

Other effects relate to regularly *smoking* the drug so are respiratory in nature — chronic coughing, cracked, wheezy breathing and partial loss of voice in some instances. Chest pains are reported[9] which may be due in part to cocaine-induced angina. Death, a relatively rare occurrence, can be caused by cardiac arrhythmia or respiratory failure.[10]

The issue of dependence

The World Health Organisation states that drug dependence is not a fixed syndrome, but rather a cluster of symptoms, not all of which need to be present for diagnosis of dependence to be made. These include:
— feelings of compulsion to use the drug;
— evidence of tolerance to the drug's effects after repeated use and withdrawal effects after stopping it;
— use of the drug to relieve and avoid withdrawal symptoms;
— drugtaking behaviour becoming a dominant factor in the individual's life.[11]

Based on this definition, the literature supports the belief that all forms of smoked cocaine, including crack, have a dependence liability.

In some users crack appears to induce a craving to continue taking the drug once the effects have worn off. In a random sample of 458 callers to the 800-COCAINE hotline in America, 82 per cent reported drug craving.[12] This can develop into a 'binge' pattern of drug use continuing for hours or even days until supplies of the drug, the money to buy it, or the users themselves are exhausted.[13]

As long ago as 1980, even the literature of America's drug subculture warned about the seductive powers of smoking cocaine: "Even people of an iron will, who have never experienced problems in regulating intake with any other drug, are finding their ultimate test of will in freebase".[14]

It has been suggested that occasional or controlled smoking of crack is probably not possible.[15] However, a study of 308 adolescent drug users in Miami not in treatment showed that, although over 90 per cent of them had tried crack, only 29 per cent were using it daily and

even then only one or two 'hits' at a time[16] — a result at odds with claims that crack is 'instantly addicting'. 'Instant' addiction has been claimed for crack, but only by those already in trouble with drugs who have often merely switched their allegiances from cocaine powder.[17]

Presentations of the 'addictive power' of crack as so great that even the naive drug user could not help but be immediately ensnared by the drug are not borne out by the research available, summed up as follows: "Everyone who tries crack will not like the high, and everyone who likes the high will not become instantly and hopelessly addicted".[18]

So if crack is not 'instantly addicting', how long *does* it take? This will vary between users, but, for example, in one survey of 464 'chemically dependent' adolescents, the group classed as heavy crack users (used more than 50 times) took three months to even begin using it on a weekly basis.[19]

Once dependent on crack, what is the prognosis for abstinence? Anecdotally, it seems poor;[20] certainly there is no recognised drug to wean a crack user on to in the way that methadone is used in heroin dependence. The main pharmacological treatment suggested to date involves the use of tricyclic antidepressants to moderate the withdrawal symptoms.[21]

In a study of relapse among cocaine smokers, 35 out of 253 people returned for a second detoxification, but only two cited craving for the drug as the primary reason for relapse.[22] Again anecdotally, it would seem that cocaine users might eventually mature out of using the drug when they've 'had enough'.[23] This has been demonstrated in a Dutch study of 160 cocaine users from non-deviant subcultures (ie, not addicts, prostitutes, prisoners, etc). Most went through heavy periods of sniffing cocaine, but those who stayed abstinent the longest prior to the study cited 'no desire for cocaine' as the main reason.[24]

Tolerance and withdrawal

According to the literature, cocaine users can take the same dose every day and get the same effect.[25] However, this view is being modified in the light of cocaine smoking. During a 'binge' the amounts smoked have been recorded as escalating from about a quarter gram to 3 grams in order to maintain the euphoric and stimulating effects.[26]

Crack users also seem to be able to survive far higher doses of the drug than do those who sniff cocaine powder. The estimated lethal dose for cocaine is around 1.2 grams, though fatalities have been recorded with as little as 160mg injected intravenously.[27] That crack users can take so much more may be explained by tests which indicate that anything up to 83 per cent simply melts rather than vapourises, so is not available to be inhaled.[28] The researchers also tested crack smoked in cigarettes and found even higher loss rates, but did not test crack smoked on tinfoil.

Such wastage also suggests that smoking crack might not be very cost-effective. In the Dutch study, 10 per cent of the total sample thought that one of the disadvantages of using crack was that it was uneconomical — a category of disadvantage not mentioned for either sniffed or injected cocaine.[29]

An American expert has said that "Cocaine smoking withdrawal is rarely seen with a reduction in intake, but is clearly evident in abrupt cessation from chronic high doses".[30] The main features are depressed mood, fatigue and disturbed sleep. The depression can be associated with anxiety, guilt and suicidal feelings. Other features include chills, tremor and muscle pains. Withdrawal can begin up to two days after the last dose with symptoms persisting up to four days or longer.

There is marked craving during this period and users report having dreams about smoking cocaine. As with other stimulants such as amphetamines, the user may be in a weakened state for several weeks afterwards. However, withdrawal symptoms of themselves do not mean the person is dependent, as dependence involves a compulsion to take the drug. Symptoms can be partly explained by cocaine-induced insomnia and anorexia.[31]

Other problems

In heavy, regular crack users, the high concentrations of cocaine in the blood, the large amounts being used and the legal, social and economic problems created by the need to maintain supplies can conspire to promote a cocaine 'psychosis' characterised by hallucinations and/or psychotic behaviour and/or paranoia. This in turn can lead to violence.[32]

'Instant' addiction has been claimed, but only by those merely switching from cocaine powder

The hallucinations would appear in some case to be 'real' in the sense that the user believes in the reality of what they are seeing.

Cocaine paranoia often manifests itself in a belief on the part of the user that s/he has enemies who are pursuing them. In the world of illegal drug use, this may well be the case — the police or perhaps a dealer after payment. Either way, such paranoia could lead predisposed individuals to arm themselves against their alleged persecutors.

However, there is no evidence from the literature that crack users are particularly prone to commit crimes of violence under the influence of the drug to obtain money for supplies, although this cannot be ruled out in individual cases.

Cocaine constricts blood vessels, restricting the blood flow to the foetus. Maternal use of cocaine has therefore been implicated in spontaneous abortions, separation of the placenta, and stillbirth.[33] Gastro-intestinal birth defects have also been suggested as a consequence of cocaine use in pregnancy.[34] Other complications often associated with maternal drug use (irrespective of the drug) may include premature birth and low birth weight.

Much has been made of so-called 'crack babies', supposedly born 'addicted' to cocaine. Media stories have suggested that such babies may die having 'lost the will to live'.

However, medical evidence to US Congressional hearings indicates that such claims are erroneous. "The cocaine-addicted infant gets over the drug in about one or two weeks... if you just leave the babies in the nursery for a couple of weeks or a month, they'll all do OK".[35] During this period, such babies will be irritable, difficult to comfort and may feed poorly. This might hinder the mother-baby bonding process which could already be compromised if mother and baby have been separated by the baby's stay in hospital.

Once at home, there have been case reports suggesting that children may have been affected by passive inhalation of cocaine smoke. Symptoms might include nausea, motor coordination problems and seizures. However, the symptoms subside with no apparent lasting damage.[36]

Another US concern relates to child abuse. From the little evidence available,[37] it would appear that users most often come forward to receive help at the instigation of partners, because either financial difficulties or paranoid behaviour has precipitated domestic violence. In such situations, children may be at risk.

There have been some unsubstantiated claims made from the American experience about the impact of crack use on the incidence of child abuse.[38] However, it is clear from the literature on child abuse that the perpetrators of physical violence against young children have an immature vision of child behaviour which perceives any act of 'misbehaviour' as being deliberately directed against them.[39] It can be reasonably hypothesised that where such a person is also a chronic user of a drug such as cocaine which can induce paranoia, risks to a child might be enhanced.

Crack use does not involve injection so precludes the most efficient means of spreading HIV — sharing needles. In this important sense, if people choose to intensify the cocaine high by smoking the drug rather than injecting it, then there is a decreased risk of HIV spread. This is especially the case since cocaine may be injected much more frequently than other drugs due to the short-lived nature of its effects.

Anecdotal reports from America suggest that prostitutes trying to maintain expensive crack habits might be tempted into unsafe sex practices for extra cash. Researchers in Liverpool confirm crack use by prostitutes in that area but as yet there is no evidence of similar risks being taken in the UK.[40]

Where's the epidemic?

For some years now, politicians and the media have been predicting that Europe was on the

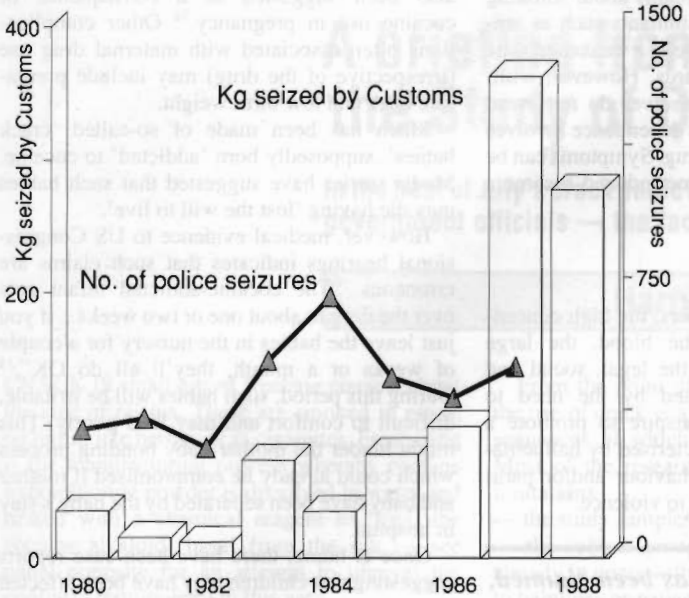
Terminological confusion

There is a deal of confusion over terminology. The term 'freebase' not only covers the manufacturing process but is also the verb to describe the action of smoking cocaine that has gone through this process — and the term for all varieties of cocaine which are smoked, irrespective of how they were produced.

Street names for freebase include 'base', 'rock', 'wash' (as the cocaine powder is 'washed' or dissolved in water with the reagent) or 'crack'. The name 'crack' appears to derive from the sound of sodium chloride (table salt) burning, an impurity left in crack where baking soda has been used.[3] It may be technically correct to distinguish crack as only that form of freebase made with baking soda. However, this would only be a technical point in a street drug manufacturing process which itself is hardly an exact science. From clinical and pharmacological viewpoints, all freebase is largely the same.

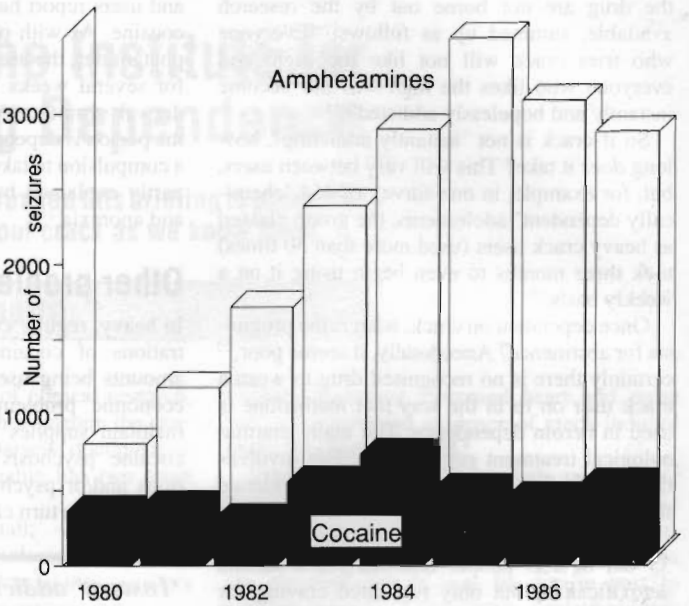
UK COCAINE STATISTICS

1 Seizures from users yet to rise in line with import seizures



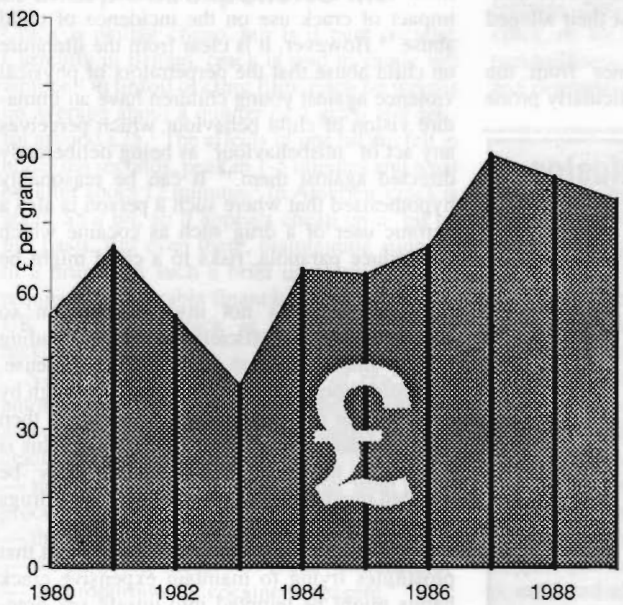
Rocketing Customs cocaine seizures have fuelled current concern, but many of these kg were in transit elsewhere. As yet the more 'street-level' police statistics do not show a corresponding rise in the UK retail market, but these date back to 1987. There is little doubt that the 1988 figures will reflect recently increased use.

2 Police figures confirm amphetamines are Britain's major illegal stimulants



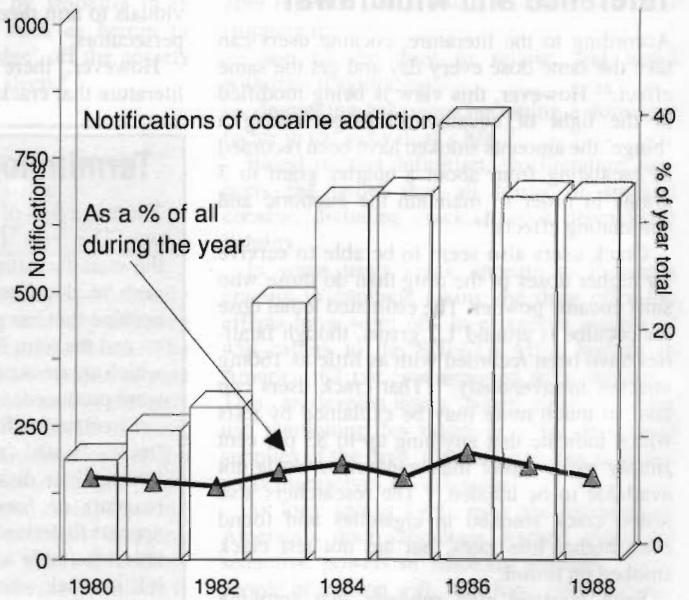
To the policeman on the beat, amphetamines have been a far more visible presence than cocaine. Amphetamines are not just much more widely used, but also commonly injected, making them by far Britain's most problematic stimulant.

3 Street prices down in last two years but still high



These estimates from the National Drugs Intelligence Unit do not suggest any revolution in the UK cocaine market. The figures have not been adjusted for inflation. The same source reports amphetamine prices at £10-£15 a gram in 1989.

4 Diagnoses of cocaine addiction stable since 1984



As with heroin and other opiates, doctors must notify the Home Office of any cocaine addicts they attend. This chart is based on the number of cocaine addiction notifications made during the year — an unknown but probably small percentage of regular cocaine users.

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brink of a cocaine epidemic as the North American market became saturated and the South American drug barons looked for new consumers. But statistical evidence casts doubt on the assertion that the American market is saturated (see panel).

The idea of Britain being inevitably flooded with cocaine is also a flawed analysis because it suggests that America's drug problem today is everybody else's tomorrow. The history of drug use in Britain indicates that, with the possible exceptions of LSD and Ecstasy, Britain has had its own discrete drug scene(s) which do not necessarily rely on American cultural 'input'.

At different times, Britain has had amphetamine and barbiturate subcultures unconnected with the American experience of these drugs. And by the same token, America has had its own discrete drug prevalences such as phencyclidine (PCP, 'Angel Dust') and Ts and Blues — a combination of tripelennamine (an antihistamine) and pentazocine (an opioid).

That it is misleading to make transnational predictions about the spread of drug misuse (especially when words like 'epidemic' and 'plague' are bandied about) is shown by the current Canadian and Dutch experiences with crack. Only this year have the Canadian police identified crack in any quantity and that is restricted to Toronto.[45] This is confirmed by a Toronto study of cocaine users in 1985 which failed to find any evidence of freebase use in the city at that time.[46]

In the Netherlands "crack-cocaine as a ready-to-use product was marketed...as early as 1973, but it did not catch on and is hardly seen on the streets since".[47] This too is confirmed by the Amsterdam study of 'non-deviant' cocaine users cited above. Interestingly, those who had tried crack (18 per cent) were outnumbered by the 25 per cent who regarded freebasing as "unhealthy, junkie-like behaviour".

Statistical evidence casts doubt on the assertion that the US crack market is 'saturated'

At present the prevalence of crack in Britain can best be described as 'patchy'. Crack is at least currently available in differing degrees in parts of South and East London, Bristol, Cardiff, parts of the Midlands and Liverpool. It would seem that crack production is both a 'cottage industry', with users converting their own supplies of cocaine powder for personal use, and also a process undertaken by dealers wishing to sell the product.[48] Crack is unlikely to be imported into Britain, but manufactured from imported supplies of cocaine powder.

Seizures of imported cocaine by Customs officers have been rising, but this in itself does not mean that traffickers are 'gearing up' to flood the country with cocaine or crack. Rising levels of seizures may just reflect increasing enforcement activity and are not good indicators of the 'street' availability of a drug.

Customs statistics are much further from the 'street scene' than the number of seizures made by police from drug users and dealers. These police seizure statistics have not rocketed along with the Customs statistics. In 1987 police made 541 cocaine seizures, not markedly above the average for the '80s of 485 seizures a year (see opposite). How long this gap between quantities imported and evidence of cocaine on the street can last remains to be seen. ■

Is the US market 'saturated' with crack?

There is some evidence that the answer is, not yet.

◆ The University of Michigan's annual survey of American high school seniors, college students and young adults revealed a *decline* in all cocaine use in 1987 — the most recent survey details available. "It appears that the worrisome crack epidemic of 1986 which seemed poised to explode into a much greater health menace, levelled out by 1987 — at least among these populations".[41]

◆ The Drug Abuse Warning Network (DAWN) is an important US national data collection system through which hospital emergency rooms and coroners report back information on medical crises and deaths related to (but not necessarily caused by) misuse of drugs. The statistics cover hospital reports from 21 metropolitan areas throughout the United States.[42]

Among cities with the highest number of cocaine "mentions" during 1988 were New York (7457 mentions, 40 per cent crack); Washington (4467, 39 per cent crack); Detroit (3309, 54 per cent crack) and Los Angeles (2956, 29 per cent crack). These cities were also the focus for media attention[43] and provided the majority of witnesses to Congressional hearings on crack — most came from New York.[44] The evidence is that crack is widely available in these cities. But other evidence from DAWN suggests that these oft-cited cities are not typical of the USA as a whole.

◆ In Miami, where cocaine is widely available, emergency room mentions of crack as a percentage of the total number of cocaine mentions rose from 16 per cent to 31 per cent during 1985-1988, but the number of cocaine mentions fell in a city of 1.6 million people from 1038 to 519.

The cities of Atlanta and St.Louis, with combined populations of nearly 4 million (including substantial black populations), had less than 1200 emergency room mentions of cocaine in 1988, of which only 25 per cent involved crack. Cities such as Chicago had over 4000 mentions of cocaine, but less than 25 per cent involved crack. Some, like Phoenix and Baltimore, had percentage mentions of crack in single figures.

Overall, cocaine was the single most mentioned drug in emergency room reports, but the spread of mentions is by no means uniform and it would appear that the major cities in America vary greatly in the degree to which they could be said to have either a cocaine or a crack problem.

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