

Drugs: Old Myths, New Science

The thirty-something smartly-dressed and well-spoken man - let's call him James - sounded quite certain "Heroin? No way! That's a killer. But coke and cannabis? Not really harmful. They're not addictive, and you don't die from using them. Only old fogies would say otherwise."

What we *think* we know about something – anything – is possibly just as important as the true facts about that same phenomenon. Our beliefs inform our attitudes and our behaviour, immaterial of how true they are. When it comes to vital matters like drugs, erroneous beliefs can be downright dangerous, and it is in our interest – as parents, friends and confidantes of current or potential users, or simply as members of the general public - to make sure that we think we know tallies with what science has established.

James' views may have originated from a number of sources: rumour, news media which at times favour sensationalism over science, popular beliefs based on old wives' tales rather than established facts, and the "experiences" of users keen to downplay the dangers of their favourite substance. Sometimes we echo what we have read on serious newspapers and magazines years ago – little realizing that science continually unearths new facts which, at times, can dramatically change our knowledge of a particular substance and its effects.

James is not alone in holding misconceptions masquerading as hard facts. Myths about drugs abound, and lack of knowledge about such substances is a fertile breeding-ground for their continued and increasing use. Old canards must be laid to rest, if there is to be a degree of hope that users will not continue to die of ignorance.

Myth No 1: Cocaine is not addictive. Research has clearly established that this belief is faulty. One study conducted in 1994 by J.C. Anthony and co-workers found that 17-18% of all cocaine users become addicted. Three years ago, the same J.C. Anthony teamed up with another scientist, M.S. O'Brien, and published a paper in *Psychopharmacology*, a well-known scientific journal. They showed that among all cocaine users, 5-6% become dependent *within the first year of use*.

Now these numbers may not look impressively high. They might even prompt our James to think: "Oh, so I stand a fairly good chance of using coke, having a good time – that's what they say, at least – and not become addicted."

First of all, James should know that he has no way of knowing whether he will be one of the users who will become hooked on coke. Science shows that a number of us are genetically predisposed towards addiction – and currently there is no way of knowing beforehand who is wired that way. Only afterwards, once one's goose has been well and truly cooked, can one tell that one was probably born with wrong sort of genes.

"Well," James might counter in that suave tone of his: "Then, one can use it sparingly – every now and then, as it were. That should make sure that one doesn't become an

addict”. Wrong again, James. There is anecdotal evidence suggesting that, as with alcohol, some coke users can become dependent after just *one* episode of use.

The message from science should be clear: if you want to avoid the danger of becoming an addict, steer clear of the white powder.

Myth No 2: Cocaine is not really harmful.

The idea that coke – dangers of addiction apart - is relatively innocuous is quite widespread. Current science, quite emphatically, disagrees. In *The Science of Addiction*, one of the most authoritative books on the subject of drugs and neuroscience published recently, Carlton K. Erickson, a noted Professor of Pharmacology at the University of Texas states very clearly that coke can kill. “Acute deaths have been caused by dangerous doses of cocaine.” (p.97). One cannot know what constitutes a “dangerous dose”, since this would vary from person to person. Indeed for some sensitive individuals, low levels of the drug could be (and have been) fatal.

Our James might be interested to know the mechanisms through which cocaine can kill. It causes fits which in turn may produce fatal breathing problems and can also raise body temperatures to very elevated levels. Mostly, however, it is through the raising of blood pressure which in turn can bring about strokes and heart attacks that coke can cause deaths. “Clearly we must not take this drug lightly or presume that it has a low level of risk” is Erickson’s verdict (p.97).

Myth No 3. Cannabis is not addictive

The recent news that on Facebook, a number of Maltese persons are campaigning for the decriminalisation of the use of cannabis has renewed interest in the debate about the dependence-producing properties or otherwise of this substance. The balance of scientific evidence comes down heavily on the side of the argument which holds that cannabis *is* addictive. A study conducted in 1994 by Anthony, Warner and Kessler published in *Clinical and Experimental Pharmacology* concluded that between 8-9% of cannabis users become addicted to the substance. Other studies have focussed on individual symptoms of the addiction syndrome: in 2005, in a study published in *Drug and Alcohol Dependence*, Vandrey and co-workers found that withdrawal symptoms (that is when the body shows that it is missing the drug so much it produces signs of distress) do occur in cannabis users. One aspect of this study that might attract our friend James’ interest is that it was conducted among teenage users, which strongly suggests that physical addiction can occur quite early in one’s dope-smoking career.

Myth No.4 Cannabis is not really harmful

Our friend James is echoing the views of thousands of cannabis users who, while possibly conceding that a minority might become addicted, maintain that their favourite weed is quite innocuous, or at least no more harmful than tobacco or alcohol. Cigarettes and alcohol do cause widespread (and totally avoidable, were one to refrain from using the substances) harm, but there is plenty of evidence which shows that cannabis is seriously harmful in very sensitive health aspects.

The relationship between cannabis and psychosis has received a great deal of research attention in recent years. There is a raft of studies which show that rates of cannabis use are roughly twice as high among people suffering with schizophrenia than among the general population.

Our James would probably quickly (and correctly) object that higher use could simply be an *effect* rather than a cause of schizophrenia.

However, more recent research has indicated that marijuana is likely to be a cause, rather than a consequence, of psychosis. In 2004, Louise Arseneault and her co-workers conducted a review of five classical studies on the subject and published their findings in the *British Journal of Psychiatry*. They concluded that “cannabis use in adolescence leads to a two- to threefold increase in relative risk for schizophrenia or schizophreniform disorder in adulthood.” Moreover they state that the earlier the age of onset of cannabis use, the greater the risk for psychosis. The study points out that cannabis is obviously one of a set of causes for the illness but 8% of all cases of schizophrenia could be prevented if there were no cannabis use at all in society.

So, before coming to hasty conclusions about the supposed safety of drug use, our James would do well to reflect on what science has to say on the matter. Of course, he may wish to discard the implications of careful research and go ahead and use illicit substances anyway. However, in that case, James should be honest enough to admit that his choice owes more to myth, fable and old wives’ tales rather than hard facts.

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