Why do people die after taking ecstasy?

Since 1988, there have over 200 reported deaths in the UK associated with the use of ecstasy

Despite the level of media coverage, this is small in comparison to deaths from heroin, cocaine and other drugs such as tranquillisers and even asprin.

It would appear that nobody has died directly from the toxic effects of the drug ie been poisoned or suffered an 'allergic reaction'. Instead, deaths have fallen into three categories.

The three categories:

Heatstroke

Most of the deaths fall into this category. Use of ecstasy by itself in a hot environment such as a club will increase body temperature. Ecstasy also causes a certain amount of hyperactivity in users. Combined with vigorous dancing in a humid and possibly overcrowded venue for hours on end can cause body temperature to rise over the danger limit of 40oc with symptoms that include convulsions, dilated pupils, very low blood pressure, and accelerated heart rate.

Death is caused by respiratory collapse resulting from disseminated intravascular coagulation (DIC). What seems to happen is that MDMA somehow reacts with the chemicals that control blood coagulation meaning that blood coagulates where it shouldn't, such as in the lungs; air cannot get through and the person dies. Also if all the blood clotting agent has been used up at inappropriate sites, then the blood might not coagulate where it should and there is a risk of haemorrhaging from all the internal lesions that the human body normally sustains without problems.

Too much fluid

By now, most of those who go to clubs have now got the message about reducing the risks of overheating by wearing loose clothes, 'chilling out' regularly and drinking fluids. However, there have been at least three recorded deaths of excess water intake, possibly due to a mistaken belief that simply drinking lots of water will offset any side effects of the drug, although not in all cases could the water intake be said to have been excessive. The condition is known as dilutional hyponaetremia.

What happens is that ecstasy appears to affect the workings of the kidneys by inappropriately secreting an anti-diuretic hormone which prevents the excretion of fluids. Water is retained in the body, especially in the highly water-absorbent brain cells and eventually the pressure shuts down primary bodily functions such as breathing and heart beat. Symptoms include dizziness and disorientation leading to collapse into coma. Not all of those affected die; there are a number of young people who have been admitted to hospital in this condition, but who survived.

Heart failure

Ecstasy causes significant rises in blood pressure and heart rate which a fit young person can normally sustain. However, a few young people have succumbed to these stimulant effects, sometimes as a result of an undiagnosed heart condition.

Many questions remain about ecstasy fatalities. For example, blood levels appear to correlate poorly with toxicity. The American literature cites cases where users with high levels of MDMA in their blood have survived 'overdoses', but where a normal dose of around 100-150 mg has caused death. Yet American psychiatrists have reported using 100mg of (presumably pure) MDMA with patients in therapy with no ill-effects. The deaths in this country have involved a range of doses from one to perhaps five tablets in one session.

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