

### What are the long term effects?

More is becoming known about the long term effects of regular use, however the research and data are inconclusive. Some recent research has shown that users are permanently altering their brains (decreased global and regional brain 5-HT transporter bindings to be exact). It is not yet known how this 'damage' manifests itself but this could be permanent (or at least long lasting) and this may affect you psychologically and in other ways. Other research has shown that use adversely affects memory as well: there has been "findings of memory decrements in recreational MDMA users, possibly caused by serotonergic neurotoxicity". This neurotoxicity (poisoning of the brain) is a cause for concern, and has been shown to occur with massive doses of MDMA given to animals in laboratories. Dental damage from teeth grinding also can happen: research in the UK has shown this to be high amongst clubbers.

### If I am going to take it, how can I stay safe?

It has to be said that the only way one can really avoid all danger is not to take it. However, it's considered by some users to be a relatively safe drug if used in moderation (for some this is not more than once a month). The euphoria that it makes you feel can make it easy to ignore bodily distress signals, so be careful about dehydration, muscle cramping, dizziness, exhaustion or overexertion. Reports from England and elsewhere tell of pill-poppers dancing themselves into severe dehydration and heat exhaustion that required hospitalisation, and in a few cases ending in death. When dancing for long periods of time, sip about half a litre of water every hour. It is also good to replace lost sugars and salts with an energy drink. Do not drink too much water since this can cause problems. Your body can only absorb water at a certain rate, the excess can enter the blood, ultimately swelling the brain causing a possible fatal coma. Be careful of spending too much time in front of those loud speaker arrays: extended exposure to high dB's can cause permanent ear damage.

### I am on Prozac. Can I take E?

Prozac blocks out the action of MDMA, so generally one will not feel the effects of the MDMA. The action of Prozac and other similar SSRI's is to block the re-uptake of serotonin. This normally gets recycled into the storage area after it's done its job. This means that one won't feel the effects of the massive serotonin release that MDMA normally causes. Because Prozac has a half-life of several weeks, you can't just stop taking it for a few days and expect to feel the effects of E. But there is a more important consideration: Prozac is normally prescribed by a doctor to help address a serotonin deficiency, which is one of the causes of depression. MDMA can aggravate this, and the chances are that the post-E depression and lethargy people normally feel could be so hectic one could go into clinical depression following use.

### How does E affect you psychologically?

It's generally considered that recreational dance drug experimentation or casual use is something one can dabble in without serious dangers. But this is not always the case, and RaveSafe has always strived to present all the facts in an unbiased and factual way. There is a danger that use of any psycho-active drugs (like e, speed, acid) can bring out a range of psychological conditions. For example, the activation of latent psychological conditions. In other words, you could have a mental condition like paranoia psychosis and schizophrenia that is dormant. Psychoactive drug use can activate this, and make it a real problem. This predisposition is generally genetic (that is passed down through the family). The only way you can find out if there is a possibility of this is to examine your family tree to see if any of your ancestors have had any of these conditions. If you have any doubts, it's best to see a professional psychologist. Psychoactive drug use can also cause other psychological problems as well, like self-perpetuating panic attacks for instance. Sometimes it is possible to recover from these conditions with professional psychological counselling, other times it's more serious like requiring hospitalisation.

### What about pre-loading?

Some people use widely available substances to pre-load, that is boost the serotonin levels before taking E. They say this works, but professional advice given to us by doctors is that this can cause other problems such as serotonin syndrome. Another argument is that if one is altering the brain's functioning with one agent, it's risky to think that introducing another to compensate is completely predictable, especially when not everything is known about the serotonin system in the brain anyway. The same goes for post-loading techniques. We would like to see more research on this.

# Ecstasy Testing

## Why test an Ecstasy pill?

One of the biggest dangers of using what is called Ecstasy is the issue of quality control. Pure E is made of MDMA. But so many pills keep coming out with other substances in them. Some don't have any MDMA in them at all. Even pills with the same logo (e.g. Mitsubishi's) can be very different since they come from different batches/manufacturers. Sometimes other chemicals and compounds are substituted, some less harmless than others. This might be to bulk out pure MDMA so the dealer can make more money. In this case, an inert bulking agent is usually used, and the effect is a low intensity E trip and that ripped-off feeling. In other cases, other drugs/poisons such as DXM, Ketamine, Strychnine, Atropine and PMA have been found. These are used because they are more readily available or easier to produce. Some of these are more dangerous than others. For instance with PMA, one dose produces some E-type feelings, but two doses can be fatal. And because it takes longer to come on than E, people tend to drop another thinking it's a weak pill. There have been many deaths in the USA, Australia and Europe due to PMA.

Ideally it should be the public health service that has pills properly tested and certified. In Europe, the Dutch model has shown that one consequence of systematic testing is to introduce an element of 'quality control' into the ecstasy market, and fatalities are minimal as a result. However, due to the illicit status of E, we have to work around this.

## What can we do to get a pill tested?

The easiest way, but not the most thorough, is to do the testing yourself. There is a very simple testing method available. This will help you find out what the pill contains. Although this test is limited, it will tell you whether or not the pill contains MDMA. You should try and do this test where you have the clarity of mind to do it properly in well-lit conditions. It will also be a good idea to share your results with others before the party or wherever else you are going to use it. The test can also be done at a club or rave, but in low light conditions it can be tricky to get reliable results.

## How does an E testing kit work?

These 'home' ecstasy testing kits use a chemical solution called Marquis Reagent. This is made up of the chemicals formaldehyde, sulphuric acid and methanol. A drop of the solution is added to a scraping from a pill. The solution changes colour indicating the presence of ecstasy-like substances (MDMA, MDEA, MBDB, MDA), Amphetamine and 2CB. You then compare the colour the liquid turns to an indexed Colour Chart.

The testing solution contains a strong corrosive chemical so you must be careful. If spilt, flush away with lots of water.

## How reliable are these Reagent test kits?

A DIY testing kit is not in the same league as professional laboratory testing, which generally use a technique called gas chromatography. The home test can only indicate the presence of the main active ingredient. It cannot give any indication of quantity or other, secondary, ingredients. However, experienced testers in Holland claim that very subtle variations in pills can be detected, such as

relative purity. The test is good for indicating you've been sold a complete dud or stuff like PMA.



**Caution:** If you test shows up MDMA or a variant, it does not mean that other harmful substances are not in there because the test is not looking for them. But generally, manufacturers do not mix PMA and MDMA.

There are limitations with the test - for instance a pill containing PMA and MDMA will test positive for MDMA, and you won't know there is PMA in it. Same goes for DXM, which can be very dangerous if taken together with MDMA. Although these combinations do occur, they are rare. It will also turn dark with other prescription drugs, so it's not entirely reliable but many would say it's 'better than nothing'.

The Marquis Reagent doesn't last forever either. The agent can go off in as little as six months, although if it's kept in a dark glass bottle, this may help to extend its shelf life.

### Is it legal to test pills?

It is legal to possess an ecstasy testing kit. It is, of course, illegal to possess ecstasy.

### Is it legal to test other people's pills?

Be discreet when testing in an open venue such as a club or rave - it would be illegal for you to test a pill, find out it contained any illegal substances and then hand it back to the person. You could be arrested for dealing. Suggest that the pill-owner scrapes a sample off their pill themselves, rather than handing you the pill. You will need to be responsible about handing over any sharp instrument to do it with, especially if they are jittery or completely out of it.

### Where can I get a test kit?

Bizare in Melville, Johannesburg sells once-test EZ Test kits for R50 - telephone (011) 482-1887, Email [bizare@icon.co.za](mailto:bizare@icon.co.za)

You can order a kit over the Internet from the Netherlands at <http://eztest.com>. These are larger quantities, up to 300 drops of Reagent and cost US \$20.

### Sources:

<http://www.ecstasy.org/testing/db/faq.html>

[http://www.erowid.org/chemicals/mdma/mdma\\_faq\\_testing\\_kits.shtml](http://www.erowid.org/chemicals/mdma/mdma_faq_testing_kits.shtml)

Nicholas Saunders, 'Ecstasy reconsidered' (Nicholas Saunders, 1997), p.226

**Ecstasy** is the popular name for the semi-synthetic chemical MDMA, which is an abbreviation for methylenedioxymethamphetamine. Sometimes just referred to as E, it was first synthesized in Germany in 1912. It was studied by the US military in the 1950's and was legal available until the 1980's when it was rediscovered as a recreational drug. It first became popular in the USA and then later fuelled the emergence of the dance culture in the mid-80's in Europe, which later went global in the 1990's.

MDMA powder is usually available in the form of small pressed pills, though also available as loose powder and sometimes this is packaged into capsules. Tablets are taken orally and generally one pill contains an active dose at the most. Many labels come and go: Doves, X-Men, etc. However, these generally mean little since quality can, and generally does, vary considerably between batches. Popular brands are rapidly cloned.

The effects usually begin 30-60 minutes later, depending on how full your stomach is. Physical effects include raised blood pressure (so anyone with high blood pressure or a heart condition should not take it) and a noticeable rise in body temperature, faster heartbeat, skin tingles, sudden sweating and dilated pupils. Some people may also experience unsteadiness, nausea and possibly vomiting, though these effects generally pass quickly.

MDMA is a psychoactive mood changing drug that can alter the way you see the world. The effects vary according to whom you are with, where you are, how you are feeling and other factors. The effects also vary according to what you take. There is a whole range of drugs sold as ecstasy, such as the chemically close MDEA or MDA and also stimulants like ephedrine and caffeine. It's easier to do this with capsules, since there are in powder form. MDMA can make you feel profoundly relaxed as well as energetic, happy, calm, exhilarated, emotionally warm, and sensitive to other people's vibes. It can also open up your emotions: this can be positive but sometimes it can cause panic and anxiety attacks, so be sure to have friends around. If the rush is too intense, find a quiet spot to sit down (with a friend if need be).

The peak effects can last two to four hours, which is followed by a smooth, if not unpleasant comedown feeling lasting several more hours. After-effects may include tiredness or feeling spaced out for up to 24 hours. This is also an effect of staying awake all night - sleep deprivation. Let the after effects wear off by themselves - the only thing you need to come down with is time. Secondary effects (afterglow or exhaustion) may be felt for a few days afterwards, and one can feel extremely lethargic and disinterested in the world - the icky Tuesday syndrome.

Your brain and body take a lot of strain with regular use. Although it's not regarded as physically addictive, it can cause psychological addiction: you get more hooked on the effects of the drug than the drug itself. There is little point in using it regularly, since it depletes the stores in your brain of a neurotransmitter chemical called serotonin. If you don't give your body time to recover and replenish these supplies naturally, the lack of serotonin can have a negative effect on your life since it is responsible for many other bodily and psychological functions. Lack of it may make you feel lethargic, depressed and moody. Serotonin levels are strongly linked to mood.

Because Ecstasy is illegal, there is no quality control, so you cannot be sure of what you are taking. Tablets may include impurities, sometimes harmless powders but can include other drugs such as caffeine, speed and ephedrine. In the USA, a dangerous drug called PMA has been sold as E, causing fatalities. Rumours abound about E tablets containing Heroin however there is little evidence of this in pills tested both here and overseas. There is an easy way to test pills for MDMA, please see our E Testing FAQ.