



Amphetamine & Methamphetamine

frequently asked questions



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PART 1:

background

What is a stimulant drug?

Depressant drugs (such as alcohol, opiates and tranquillisers) slow down mental activity, making the user relaxed or sedated, while **stimulant** drugs speed up mental activity, making the user alert and energetic. There are minor stimulant drugs like caffeine and nicotine, and major ones like cocaine and amphetamines. Another group of drugs are called **hallucinogens** (such as LSD, magic mushrooms and ketamine). Hallucinogens produce major changes in the way you think, perceive, feel and act (including hallucinations). Although some hallucinogens (such as ecstasy) are also stimulant drugs, these are usually grouped together and called 'hallucinogenic amphetamines' (or empathogens) and will not be covered in this booklet. This booklet is about the two main types of stimulant amphetamines – amphetamine and methamphetamine.

Why are they called amphetamines?

Stimulant amphetamines are called by various slang names, the most general terms being *speed*, *uppers* and *wiz*. Regular users of speed are known as *speed freaks* or *motorheads*. The full chemical names of amphetamine include amylphenylisopropylamine and **alphamethylphenethylamine**. The latter name is where the term amphetamine was derived from by the American Medical Association in 1932.

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What types of stimulant amphetamine are there?

Chemically, there are two main groups of stimulant amphetamines (or types of *speed*): amphetamine and methylamphetamine (called methamphetamine for short). Both types are racemic – which means that they are a mixture of a pair of ‘mirror-image’ chemicals, called ‘dextro’ and ‘laevo’. Compared with the laevo type, the dextro type (dextro-amphetamine or dextro-methamphetamine) has the strongest, most pleasurable effects.

Amphetamine comes in three main forms: standard amphetamine sulphate powder (*sulph*), stronger amphetamine sulphate paste (*base*), and dextro-amphetamine tablets (*dexies*). *Base* is generally about twice as pure (strong) as standard sulphate, though also costs about twice as much (around £20 per gram). Its waxy appearance is usually produced by adulteration with magnesium stearate (used in candles). Dextro-amphetamine (shortened to dexamphetamine) is a purified form of amphetamine sulphate, with the laevo-amphetamine taken out.

Methamphetamine comes in two forms: methamphetamine hydrochloride (*crank*) and dextro-methamphetamine crystal (*ice*). Methamphetamine hydrochloride comes in the form of powder, tablets and ampoules. *Ice* comes as a clear crystal, and is the only form of speed which is smoked.

How long have the amphetamines been around?

About a century. Racemic amphetamine, which is usually made in the form of amphetamine sulphate, was first produced in 1887 in Germany – but it did not become well-known until the 1930s when

the Benzedrine Nasal Inhaler was introduced for treating respiratory problems. Methamphetamine was first made in Japan in 1919. By the 1940s amphetamines became much better known when soldiers on both sides in World War II were given amphetamine and methamphetamine to reduce fatigue and increase aggression on the battlefield. But medical and military users soon realised that amphetamines also produced pleasure and energy for having fun, and so, after the War, supplies were diverted into bars and dance-halls (Elvis Presley said he got his first pep-pills from soldiers in the post-war years). By the late 1950s, amphetamine was a firmly established recreational drug across the world. Initially used to fuel rock'n'roll, and then the mod scene, amphetamines have remained a sub-cultural constant linking various youth/music scenes to the present day – including punk, heavy rock, and rave/dance.

What are 'dexies midnight runners'?

'Dexies midnight runners' was a slang name given to dexamphetamine tablets in the 1960s, and refers to two common effects of speed: it keeps you up past midnight, and tends to make you run around. It is also the name of a crap new wave band from the 1980s, who were headed by Kevin Rowlands, and whose music had little to do with drugs or pleasure.

As already noted, amphetamine sulphate is actually a pair of 'chemical twins'. To produce dexamphetamine, laevo-amphetamine (which mainly has unpleasant physical effects) is discarded, leaving pure dexamphetamine - which has more pleasurable effects. Dexamphetamine is made by the pharmaceutical company Evans in the form of white 5 mg tablets. It is now the only kind of amphetamine still prescribed by British doctors. Medical guidelines

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state that it should be prescribed and dispensed for two specific conditions only - to treat hyperactivity in children, or narcolepsy (sleeping sickness) in adults. Even so, about 50 drug agencies around the UK now prescribe oral dexamphetamine (usually converted to syrup form) to a total of over 1,000 speed users, typically as an effort to prevent them injecting illicit speed.

So what are the 10 main differences between amphetamine and methamphetamine?

Methamphetamine is amphetamine with a methyl (hydrocarbon) bit attached. Beyond this, there are nine other main differences – three production differences, three differences in effect, and three ‘social’ differences. Regarding production, amphetamine is usually made from benzylmethylketone (BMK), whereas methamphetamine is made from various starting-points, including ephedrine and amphetamine. Second, both are comprised of laevo and dextro forms, but unlike amphetamine, methamphetamine can be converted into a crystal form (*ice*) - which makes it ‘smokeable’. Third, methamphetamine is usually produced as a hydrochloride (HCl), whereas amphetamine is usually produced as a sulphate.

But the three differences of most importance to users involve the effects of these two types of speed. That is, (1) dexamphetamine is twice as potent (speedy) as methamphetamine per milligram; (2) methamphetamine lasts about twice as long as amphetamine (about 12-24 hours, compared with 6-12 hours); and (3) methamphetamine has fewer physical effects, and is more aphrodisiac – in particular, encouraging sexual experimentation and excessive masturbation (although what counts as ‘excessive’ is open to interpretation).

Lastly, these two ‘top’ types of speed differ in three ‘social’

aspects. First, while standard amphetamine is legally categorised as a Class B drug in the UK, methamphetamine was made Class A in 2007 (see below for more details). Second, medical regulations permit GPs and chemists' shops to prescribe/dispense dexamphetamine to patients, whereas methamphetamine is restricted to hospital doctors and pharmacies (see below). Third, amphetamine sulphate ranks among the four most popular illegal drugs in Britain, whereas methamphetamine is too rare to make it on to any list of popular drugs. However, methamphetamine is the most popular stimulant among drug users in many other parts of the world, particularly Eastern Europe (eg. Czech Republic, Poland), Asia (eg. Phillipines, Thailand), South Africa, and Australasia; and is almost as popular as cocaine in North America.

Pharmaceutical methamphetamine is also known by such trade names as Methedrine (UK), Pervitin (Eastern Europe), Vaso and Fetamine (USA). Its full chemical names include **dimethylphenethylamine** and **desoxyephedrine**. Methamphetamine was what the term speed originally referred to, though speed is now used to mean any kind of stimulant amphetamine. Methamphetamine has many slang names around the world, including *crank* and *meth* in the USA, *yaba* in Thailand and *vint* in Russia – and when converted to a smokable form it is called *ice*, among many other names (see below).

How is ice made?

To get *ice* from racemic methamphetamine HCl, the latter must *first* be purified into dextro-methamphetamine HCl, and *then* converted into crystal form. There are no bathroom/kitchen

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methods for purifying racemic methamphetamine into dextro-methamphetamine (i.e. a chemistry lab is required). But, when dextro-methamphetamine HCl is the starting point, it can be converted to crystal form by the simple method of dissolving it in warm water, and allowing it to cool in a fridge - at around 1°C, for up to four days. The slower the cooling the larger the crystals. These can be up to several inches long and range in colour from clear to a yellowy brown. They will dissolve in water and melt if held between the fingers, and therefore can not be smoked in a water pipe.

In addition to being called ice, dextro-methamphetamine crystal is known by various names across the world - including *crystal meth*, *tina*, *glass* by North Americans, *shabu* by Japanese, *hiropon* by Koreans, *batu* by Phillipinoes, and *tik* by South Africans.

Why are there so many myths about methamphetamine?

By the number of column inches devoted by the British press to methamphetamine, you would be forgiven for thinking that it was as popular here as it is in other parts of the world – when its use is actually very rare. The press also claim that methamphetamine is extremely damaging to health and highly addictive. As we will see below, there is never any smoke without fire, but these are exaggerated claims except for the heaviest of speed users. There is no hard evidence that methamphetamine is any more risky than amphetamine sulphate or cocaine.

Why have these myths and exaggerated claims about methamphetamine emerged?

Every so often, the press need a new 'demon drug' in order to

sell more newspapers, and for the last few years methamphetamine has been given this role across the western world - though cannabis is now running a close second in Britain. Some experts believe that the deeper rationale for generating myths about new 'drug plagues' is that it neatly scapegoats a powerless group for society's problems (crime, poverty, etc.), whilst deflecting attention from the true cause of these problems – namely, poor government policies.

What are the laws on amphetamine?

The 1971 Misuse of Drugs Act categorises drugs into three classes - A, B and C - which determine the penalties for possession or trafficking offences. Stimulant amphetamines are allocated to three classes: methamphetamine is in Class A (since 2007); amphetamine (sulphate and dexamphetamine) and methylphenidate (Ritalin) are in Class B; and most pseudo-amphetamines are in Class C. The maximum custodial penalties are 7 years for possession and life for trafficking of Class A drugs; 5 years for possession and 14 years for trafficking of Class B drugs; and two years for possession and 14 years for trafficking of Class C drugs. Also, if in injectable form, a Class B drug becomes a Class A drug.

Regarding medical controls, following the methamphetamine mini-epidemic of the late 1960s and early 1970s (based largely round a few thousand hippies in London), the professional bodies of doctors and pharmacists issued guidelines to restrict its availability. These 'voluntary regulations', which remain in operation today, restrict methamphetamine prescribing to hospital doctors, while dispensing is restricted to hospital pharmacies. Dexamphetamine is not subject to these regulations, though, as noted earlier, is mostly restricted to the treatment of hyperactivity in children and narcolepsy in adults.

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What happens when someone is caught in possession of amphetamines?

Over the noughties, about five to six thousand people per year have been dealt with for amphetamine offences in England & Wales. Nine in ten offences involved possession (use), and about one in ten involved supply or intent to supply (dealing) – with just 10 to 20 people per year ‘busted’ for production (making *speed*). About a third of amphetamine offenders were cautioned by the police in 2004, and the other two-thirds were prosecuted in court. Among the latter, about half were fined (an average of £90), and about half were given community sentences or discharges. The remaining one in 12 were imprisoned, for an average of 10 months (including around half of those who were convicted of dealing offences).

PART 2: consumption

What kind of speed is on sale in Britain at present, and how is it sold?

Today, amphetamine sulphate (including powder and base/paste forms) accounts for at least 95% of the British speed market, and is usually sold as a white-to-brownish powder or paste (sometimes other colours), for about £10 per gram. Diverted pharmaceutical dexamphetamine tablets (5 mg) are occasionally sold for £1 to £2 a pill, as are pseudo-amphetamine tablets like Ritalin. But methamphetamine remains very rare.

In the noughties, amphetamine sulphate has had an average

purity of about 5% to 10%. In short, 90% to 95% of speed powder consists of sugars (especially glucose), bicarbonate of soda, and minor stimulants (notably caffeine, but also ephedrine). Amphetamine powder is usually sold wrapped in paper envelopes or plastic food bags, typically in one-gram deals – though some dealers also sell half-gram deals, or, for heavier users, eighth-ounce and quarter-ounce deals.

How is amphetamine taken?

Both amphetamine and methamphetamine can be swallowed, sniffed or injected – and when dextromethamphetamine is converted to crystal form (*ice*), it can be smoked (heated and inhaled) too.

When speed powder is swallowed, it is usually wrapped in a cigarette paper or dissolved into a soft drink, because it tastes like ‘burnt piss’. If the powder is snorted, it is usually chopped up with a razor blade on a mirror and then formed into small thin lines - and, after a preliminary blowing of the nose, snorted up a short makeshift tube (e.g. rolled up bank note, cut-down straw) onto the nasal membranes. Depending on adulterants and other factors, this can cause a severe burning sensation, and even nosebleeds [see Ten Tips on Safer Snorting].

Injecting amphetamine ideally requires that it is in powder or liquid form (rather than paste/pill form), and involves a similar procedure to that followed when injecting heroin, except that dissolving agents like citric acid are not usually required. The method of smoking ice is similar to that of smoking *crack* - that is, requires a proper glass pipe or a makeshift version (usually based on a drinking-glass and tin-foil contraption).

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How much is needed to get high?

The dose required for a standard 'speedy buzz' by non-tolerant user ranges between 5 and 20 mg for amphetamine, and between 10 and 30 mg for methamphetamine (averaging 15 mg) – though the effective dose depends upon drug, set and setting. First, 'drug' factors include the chemistry of the drug product – notably whether it is *racemic* or pure *dextro*-amphetamine or *dextro*-methamphetamine – and the way it is consumed – for instance, injecting or smoking speed produces more rapid and intense effects than sniffing or swallowing it. Second, 'set' factors include body weight - a 200 pound person may need up to twice the dose of a 100-pound person - and the user's personality – for instance, introverts may be more stimulated by amphetamine than extraverts. Third, 'setting' factors include whether the drug is taken for work or leisure purposes, in a familiar or unfamiliar situation, in the morning or evening, etc.

But one thing in particular can lead to greater doses than 20-30mg being required: tolerance. Regular users soon find that they need to increase the dose on a daily to weekly basis to obtain the same effects - with the heaviest users taking daily doses of over 100 milligrams by the end of a binge. Most daily users on a binge find that by the sixth or seventh day no dose is large enough to keep them awake any longer (meaning that they have used up all their reserve energy). But many regular users who take speed on an intermittent basis (from once a month to once or twice a week) claim to reach a plateau stage, where the same dose 'works' every time.

Some speed users also take other drugs to enhance its positive effects or reduce its negative effects. The most common 'mixes' *with* speed include alcohol and cannabis, while tranquillisers or sleeping pills are sometimes used after speeding to ease the come-down and aid sleep.

PART 3:

effects

How does amphetamine get into the brain?

When swallowed, amphetamine is passed from the stomach and intestines to the liver, before travelling in the bloodstream to the heart-lung-heart (HLH) loop, and getting pumped up to the brain – which, depending on stomach contents, can take between 30 and 90 minutes. When sniffed, the powder is absorbed by the mucous membranes at the back of the nose, gradually entering the bloodstream and being taken to the HLH loop, from where its pumped to the brain – effects take about 5-10 minutes to come on this way. But when amphetamine is injected, it rapidly reaches the heart-lung-heart loop, and so reaches the brain within about 5-10 seconds - called a 'rush' or 'flash'. Smoking ice is as fast or even faster, because it cuts out the HLH loop, going straight from the lungs via the heart to the brain.

After amphetamine leaves the brain, it is broken down by the body into metabolites (simpler chemicals), and excreted in urine and sweat, mostly within 24 hours. Like other drug users, some speed users facing urine tests for drugs attempt to accelerate the excretion of amphetamines from their body by methods which increase urination - including drinking large amounts of water, acidifying their urine by consuming fruit juices, consuming lots of caffeine, or taking prescription diuretics.

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How does amphetamine affect the brain and body?

Amphetamine is called a 'sympathomimetic' drug, because it affects the sympathetic division of the body's peripheral nervous system, by boosting the release of **adrenaline**. It therefore mimics a primary survival mechanism known as the *fight or flight mechanism* – that is, it makes you feel like running or fighting. Amphetamines also raise levels of two major neurotransmitters (chemical messengers) in the brain:

- (1) **noradrenaline** (also called norepinephrine), involved in mental energy and alertness;
- (2) **dopamine**, involved in feelings of pleasure and reward.

Higher doses of methamphetamine can also increase levels of **serotonin** – a brain chemical involved in mood and memory (best known as the neurotransmitter boosted by ecstasy).

What does speeding on different kinds of amphetamine feel like?

The effects of amphetamine last for about six to 12 hours, while the effects of methamphetamine last for about 12 to 24 hours. Exactly how long depends on drug, set and setting factors (discussed earlier). Methamphetamine is generally regarded as a far more powerful stimulant than amphetamine sulphate, partly because the effects can last for up to twice as long, and partly because the effects are also more psychological (than physical) and more pleasurable. Users often describe the effects of methamphetamine as strangely subtle yet intense – providing a more manageable and

less jittery kind of energy than sulphate. Also, methamphetamine is often regarded as the ‘sexiest’ kind of speed, because it appears to make users less sexually inhibited – or perverted, depending on how you look at it (see below). Smoking *ice* is regarded as the most euphoric and habit-forming method of speeding. *Crack* smokers who have tried *ice* say it is less intense than smoking crack, but goes on for much longer without the same intense craving afterwards. Injecting methamphetamine is a fairly similar experience, though begins with a stronger ‘rush’ of effects – which has been variously described as ‘like a turbo-charged form of oral amphetamine’, ‘like being blown through several walls’, and ‘like taking a supersonic lift to the top of your head’.

What are the physical effects of amphetamine?

Stimulant amphetamines produce five main groups of physical effects:

speeding up of bodily organs and systems - faster heartbeat, pulse, and breathing; and higher blood pressure – which can lead to dizziness and panting;

increased body temperature (especially torso and head) - often with facial sweating and flushing, and colder hands and feet (due to the blood being drawn into the centre of the body)

drying up of mouth and nose – sometimes causing ulcers in mouth or cracked lips – and tell-tale white flecks in the corners of the lips;

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wild-looking eyes – based on four things: dilated pupils (big black bits), shiny eye-whites, wide-open eyelids, and jerky eye movements;

muscular tension – including minor to moderate trembling and twitching in the body, and jaw clenching, teeth grinding and lip-chewing in the face department.

What are the mental effects of amphetamine?

There are seven main groups of effects on the mind:

increased energy and activity – speed causes natural tiredness to ‘evaporate’. Amphetamine makes users really want to do something (*anything*), and a preference for repetitive actions dominates – such as typing, walking, and dancing.

reduced sleep – speed can have significant effects on the duration and quality of your sleep –making it harder to fall asleep and stay asleep, making you sleep lighter and for less time, and reducing dream time (REM sleep);

improved awareness and perceptions: amphetamine makes users hyper-vigilant, picking up sounds and movements more efficiently than usual, particularly in their peripheral vision - though fully dilated pupils can also lead to blurred vision (recent research also shows that amphetamine improves the sense of touch, eg. for Braille reading).

increased brain power – some kinds of thinking and memory skills, as well as general reaction time, are improved by amphetamine. IQ is (temporarily) raised by about 8 points in people who have taken a standard dose.

intensified mood – speed produces euphoria (intense happiness), but other mood states may also be intensified – including any pre-existing anger or sadness. Methamphetamine is renowned for increasing and modifying sexual desire and experience (see below).

greater sociability and talkativeness - amphetamine users generally prefer company, so that they can exercise their urge to talk - longer and faster than usual, meaning that they don't listen as much. But higher doses, along with other factors, may cause paranoia.

reduced hunger – amphetamine reduces feelings of hunger, at least when used occasionally – though appetite usually 'rebounds' the day after using. Thirst may also be affected.

What are punding and knick-knacking?

The hallmark of amphetamine use is repetitive behaviour. Called **stereotypy** by scientists, this effect explains why amphetamines are preferred for such behaviours as driving, sexual intercourse, typing/writing, ball-bouncing, cleaning, cycling, running and dancing. However, when the user has no particular focus for their chemical energy, like a laboratory animal given speed in an empty cage, they may engage in compulsive repetitive activity known as

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punding – such as walking around in circles, swaying or tapping. One common form, known as *knick knocking*, involves touching and picking at the face and extremities (e.g. the feet) for long periods of time. Combined with hyper-vigilance (“wow, look at all those zits on my nose”) this partly explains the complexion of speed freaks. Heavy speed use may also result in committed yet disorganised behaviour, such as skilfully taking apart a television but not being able to put it back together again.

What are the crash and the come-down?

What goes up must, of course, come down. Speeding for a single day/night generally leads to a *come-down* lasting about another day; while speed runs of several days can lead to a major *come-down* of a comparable length known as a *crash* (due to its sudden onset). The *come-down* is based on physical and mental tiredness. Specific after-effects on the body include jaw ache, sensitivity to light, cracked lips, dry or spotty skin, upset stomach, dizziness and aching muscles - including back-ache, which often leads neurotic people on a *come-down* into worrying that they have damaged their kidneys. The *come-down* effects on the mind include feeling tired, confused, constantly hungry, depressed and irritable – often accompanied by self-pity and lack of concentration. One notable sign of an imminent amphetamine *crash* is ‘spacing’ - when the user’s mind cuts out but their mouth continues talking (nonsense in most cases).

How does amphetamine affect everyday activities like driving and shagging?

Occasional moderate doses of amphetamine improve various mental skills and activities relevant to **driving**, notably increasing alertness and boosting reaction time (which is why military pilots have often been given amphetamines before embarking on missions). However, users tend to over-estimate their driving ability and take more risks, including driving too fast - which means that speeding can lead to speeding! As the drug wears off and the *come-down* kicks in, users are even more likely to drive badly.

Amphetamines affect **sex** in various ways. They can make people fuck for longer (sexual performance) and can make orgasms feel more intense (sexual experience). But methamphetamine is also renowned in some groups - such as gay men - as a drug which also increases sexual desire (libido), as well as producing more extreme forms of sexual behaviour. For instance, group sex is common among gay methamphetamine users in Australia and the USA, and among straight users in Russia. Some users claim that they get better erections while *speeding* (though not many women seem to mention this). Many men also report that speed makes their penises decrease dramatically in its flaccid state (known as 'shrink dick'). Erection difficulties (in men) and a lack of lubrication (in women) are commonly reported problems with amphetamine sulphate. Delay in orgasm in men and women is also a commonly reported problem among speed users.

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PART 4:

consequences

Is amphetamine addictive?

Though regular use of amphetamine produces tolerance (covered earlier) and craving, it does not cause physical addiction - like heroin, tobacco and tranquillisers - so there is no withdrawal syndrome and no need to detoxify on a reducing dose. A long-term regular user can just stop completely, though they will experience unpleasant come-down effects (*tweaking*) for several days to several months - depending on the scale and size of their habit, and how much sleep, rest and food they have missed. It is also possible to cease using gradually on a reducing dose regime, which can minimise craving and come-down effects, particularly for heavy long-term users. However, compared with heroin and tranquillisers, it is relatively easy to stop using amphetamines (it involves a lot of sleeping and eating, for instance). Methamphetamine, particularly when injected or smoked, appears to be the most habit-forming kind of 'speeding', and is comparable to dependence on crack-cocaine.

Does amphetamine cause mental illness?

Regular amphetamine use can lead to anxiety conditions - including phobias and OCD. However, speed is more commonly associated with 'amphetamine psychosis'. This differs from true psychosis (schizophrenia) in that it does not significantly affect your perception of time or identity, and tends to clear up after a few weeks if the person stops taking stimulants. Amphetamine psychosis

generally occurs in people already predisposed to psychiatric problems. The typical case is a 30-year old male, who stays in hospital for about three weeks.

Amphetamine-induced madness takes two main forms. First, there is the type characterised by mood swings (depression, alternating with euphoria or mania), accompanied by confusion and mental fatigue. The person talks and moves about a lot, but does not really get much done due to disorganised behaviour, and seems to move in ever-decreasing circles. Second, there is the more classic 'paranoid' type of reaction, which is based on three core symptoms:

Ideas of reference: believing that particular objects or events have special, personal meanings - for example, the words of a song on the radio contain a message for you.

Persecutory delusions: an irrational belief that other people are trying to harm you in some way, often accompanied by intense fear or delusions of grandeur ('they are after me as I'm the only one who knows how to save the world')

Hallucinations: typically auditory (e.g. hearing voices inside your head), but may be visual or tactile. The classic speed psychosis hallucination is called formication or "crank bugs" - a belief/feeling that insects or worms are crawling around underneath the skin, with the worst cases also seeing "bugs" as well. Some *speed freaks* become totally convinced by this delusion, and begin picking or cutting away at their flesh to get the imaginary bugs out - a messy business.

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How does amphetamine use affect physical health?

Occasional moderate use of amphetamine is not harmful to most people's health – though it should be avoided by people with pre-existing health problems, especially heart conditions, respiratory problems and mental illnesses. But heavy use, or prolonged moderate use, may damage the cardiovascular (heart) system, the immune system and/or central nervous system. First, constant strain on the heart may lead to high blood pressure, irregular heart rhythm and even stroke. Second, like most drugs, amphetamine reduces the efficiency of the immune system - combined with poorer eating and sleeping habits, this can substantially increase the risks of infection and illness in regular users. Third, there is evidence that high doses of methamphetamine produce dopaminergic nerve terminal degeneration – in short, brain damage. Though some sources claim that such brain damage is serious and irreversible, the evidence is not conclusive. For instance, it is mainly based on studies of animals injected with very high doses, or samples of human poly-drug users. Lastly, injecting speed or any drug is associated with a range of health problems, including damage to the veins and transmission of infectious diseases (e.g. HIV/AIDS, hepatitis).

Is it possible to overdose on amphetamine?

Overdoses on amphetamine are pretty rare, but do happen. The likelihood of overdose depends on a number of things, including the user's sex, weight, tolerance and metabolism; and the drug itself - including how much is taken, how it is taken, and how pure it is. The lethal dose of amphetamine is quite variable, starting at

around 50-100 mgs for an occasional (non-tolerant) user, rising to several hundred milligrams for more regular (tolerant) users. The average lethal dose of methamphetamine (known as the LD50) is less variable – typically around 150 mg for the non-tolerant user. The main symptoms include muscle spasms, a racing pulse and a high temperature, along with tremors, flushing, excessive perspiration, chest pain, abdominal cramps and vomiting - with the person acting agitated and confused. A potentially fatal overdose is likely to result in convulsions (fits) or coma, based on cerebrovascular collapse (of blood vessels in the brain), heart failure and/or hyperthermia (extreme fever).

Can amphetamine kill you?

Though fairly rare too, amphetamine-related deaths do occur. Over the last decade in Britain, there have been between 30 and 50 deaths each year involving amphetamines, though no trend is discernible. This is a maximum of one death per 10,000 amphetamine users each year. At least half of these deaths involve other drugs. Deaths related to stimulant amphetamines are generally caused by fatal overdoses, though also include accidents and disease (e.g. HIV infection from sharing used needles). Many speed-related deaths are similar to ecstasy deaths, which receive more attention in the mass media - that is, they are based on heatstroke, hyperthermia, and blood thinning/clotting, followed by brain seizures, heart attacks or kidney failure.

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So what are the most likely effects of over-using amphetamine on health?

Serious illness and death are consequences usually linked to injecting amphetamine, smoking *ice*, and heavy or long-term oral/nasal use. Most regular sniffers or swallowers of amphetamine are much more likely to experience a variety of minor illnesses and ailments. These occur mainly because of a weakened immune system and worn-out body - arising from poor diet and lack of sleep as well as the direct toxic effects of the drug. They include:

- * respiratory problems (colds, coughs, sore throats) and dental problems (exacerbated by jaw clenching, teeth grinding, and lack of saliva);
- * skin infections - exacerbated by poor diet, and obsessive skin-picking;
- * muscular conditions such as back-ache and eye-strain - promoted by over-exertion or staying awake too long;
- * stomach complaints (diarrhoea, cramps) among speed swallowers, and nose-bleeds among speed sniffers;
- * sleep and appetite disturbances – especially insomnia and anorexia;
- * relatively minor mental health problems, including anxiety and paranoia.

What help is available for people with amphetamine problems?

Some people see their GP when they develop health problems from using amphetamine, though others go directly to drug agencies (which is where their GP may refer them anyway). Drug clinics generally offer counselling and alternative therapies (eg. acupuncture, aromatherapy) when treating amphetamine dependence/misuse, though if depression or mood disorders are diagnosed, anti-depressants such as Prozac may be prescribed. Amphetamines are not physically addictive, and so detoxification and substitute prescribing regimes are not generally on offer. However, users who find it hard to stop taking speed 'suddenly' sometimes detoxify themselves by devising and carrying out their own reduced dose regime over several weeks or months. Also, about 50 agencies around the UK prescribe oral dexamphetamine to speed users, usually around 20 to 60 mg per day. This form of 'substitute prescribing' aims to reduce risky behaviour such as injecting adulterated street drugs, and to reduce harmful outcomes like HIV infection and crime.

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PART 5:

reducing risk: safer use of amphetamine

The only way to avoid any risk of harm from amphetamine is not to use it. People who should particularly avoid speed are those with psychiatric problems, respiratory complaints (eg. asthma), and heart conditions (e.g. palpitations). There are many other healthier or at least less risky ways of feeling 'stimulated', including physical exercise, mental techniques like meditation, or using minor stimulants like caffeine. For those determined to use amphetamines anyway, the following advice should help reduce the risks of harmful consequences.

Use in moderation

Use occasionally - avoid using more than once a week, avoid using two or more days in a row (bingeing) - allow your body to recover, and so avoid unnecessary 'pain'

Use moderate doses - physical side-effects are the main thing which increase with the dose, and larger amounts can make you more jittery than stimulated

Don't accidentally overdose - check the strength and quality of a particular batch by asking others who have taken it what they thought of it - err on the side of caution when you have a new batch of speed: you can always take more but you cannot take less.

Swallowing amphetamine is the least risky method of use (wrapped

in a cigarette paper or dissolved in a drink). **Sniffing** is the next least risky method, though, to minimise damage to the nasal membranes its best to follow certain guidelines (see the 10 Tips for Safer Snorting). **Smoking** ice or injecting amphetamine are the most likely to result in overdose if you inhale or inject too much in one go. Injecting is the most risky method, for well-known reasons - the main things to remember are (a) be hygienic, and (b) never use injecting equipment already used by someone else. The best advice to current or potential injectors is: visit your local needle exchange.

Don't talk (too much) shite; resist the temptation to say everything that you think about on speed, and remember that interesting conversation involves (a) saying only the best things that you think, and (b) listening as well as talking (and not constantly interrupting or talking down the other people). Don't let speed turn you into an irritating bore.

Staying healthy

Avoid **driving** or operating dangerous machinery when speeding, but most particularly when 'coming down' off amphetamine, or when expecting an end-of-run 'crash'.

Avoid losing too much **sleep** by taking speed at least 8 hours before bedtime, and preferably over 12 hours (especially with methamphetamine) – try not to get into the habit of using sleeping pills or alcohol to get to sleep afterwards

Try to **eat** and **drink** as you normally would - if your appetite is suppressed, drink a little more liquid than you normally would, and

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try eating easily swallowable food like fruit, yoghurt etc. - though avoid anything with the red food dye tyramine (mixed with speed, it can make you feel ill)

Avoid **over heating** or over exerting yourself. Just like the advice for ecstasy users: if you are dancing at a club/party, remember to chill out and sip non-alcoholic liquids regularly (don't drink large amounts in one go) – half a litre of water an hour is fine, and sports drinks are particularly useful (they contain minerals which you have been sweating out). Also, if you feel too hot, remove outer clothing - especially coat/jacket and headwear. And, even though you may feel like you have boundless energy, remember to take rests, especially if involved in physical work or exercise.

If you are **ill** or **sick**, taking speed will probably make you feel worse not better, and whatever happens, it is likely to make your illness get worse or go on for longer - this is because your immune system cannot effectively fight germs or repair your body when amphetamines are draining its resources

Avoid **mixing** speed with other drugs, particularly alcohol (which also dehydrates you), other stimulants like cocaine, and beta-blockers (which can interact badly with speed). Also, watch your cigarette (or spliff) smoking, which can increase dramatically when speeding – you could wake up with a comedown, hangover and chesty cough combined.

Avoid particular **side-effects** of speed by preventive measures - for instance, wear sunglasses in sunlight to avoid damage to retinas

(your pupils tend to stay dilated in bright light when on speed); chew gum to avoid grinding your teeth or chewing your lips; resist any temptation to pick at your skin (e.g. squeezing spots), which can get out of hand when speeding.

If it all goes wrong

Unpleasant reactions to speed can be reduced by acting appropriately and looking out for your friends if they get into problems:

if you feel **paranoid**, go somewhere quiet and safe. Calm and reassure your friends that everything is OK;

if you **start to pant**, control your breathing; breath in through your nose, out through your mouth or try breathing into a paper bag (if you have one);

if you **overheat**, cool down by removing clothing, taking a rest and sipping a cold drink;

if **any of these become severe** or if someone becomes ill on speed (e.g. feeling shaky, sick, very hot, etc.) and gets worse rather than better, take them to the nearest casualty department. If there are serious symptoms - if they collapse, become unconscious or really lose it (have a mental breakdown) - an ambulance should be called immediately. In many areas of the country the Ambulance service have adopted a new policy: they don't call the police in drug related emergencies. In any case, you don't have to mention drugs on the phone, just tell them that the person has collapsed or is unconscious and they will come straight away. Stay with them, and calm them if

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they are conscious. If they are unconscious put them on their side in the 'recovery position', so that they don't choke on their vomit. If your friends are regular drug users, you would be wise to practice putting people in the recovery position, as well as discussing together what you should do in an emergency – this might help you save someone's life one day. Check there is nothing stopping them from breathing (like false teeth, gum or drug-wraps) – though don't put your hand inside their mouth unless you have to, because you might get your fingers bit off if they are having a seizure. Check their pulse and breathing and administer first aid if you know how. Always tell medics and paramedics everything you know about the drugs that the person has taken.