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## Synthetic drugs

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A French study estimated the average number of injections for a daily injector (in the previous month) to be 3.6 per day, implying more than 1 300 injections per year per daily injector. (93 % of the sample of needle exchange attenders were daily injectors.) (11) However, this average may strongly depend on substances injected (opiate users who also inject cocaine may inject much more frequently) or income (IDUs with little money may inject much less). Better and country specific estimates of IDU population size and number of injections are needed in order to assess the coverage of syringe exchange programmes and thus their potential for effective prevention of drug-related infections<sup>(27)</sup> <sup>(28)</sup>.

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## Synthetic drugs

This section completes the data and analysis provided in other sections of the annual report with a summary of the main questions, concerns and challenges surrounding synthetic drugs.

### Spread of use

While the global picture in 2000 confirms that the spread of synthetic drugs use in the EU has generally stabilised, upward trends in ecstasy use are still observed in some regions where cities or holiday resorts are more likely to attract young European tourists owing to their location and larger offer of youth-oriented events. More generally, urban areas where youth cultures have been established may continue to provide a setting for 'recreational drugs' to anchor and develop.

Cross-analysis of qualitative surveys suggests that the consumption of synthetic drugs has spread beyond the 'techno scene' to discotheques, nightclubs and also private settings. Other settings are also reported. For example, a 1998 study found that, in Greece, 35 % of student ecstasy users have used the drug at football matches.

### Behaviours and patterns of use

A growing behaviour trend is not so much the consumption of one particular drug above another, but rather a tendency to instrument different drugs in relation to needs and situations.

Changing patterns in youth behaviour have been highlighted in some Member States as a subject for more in-depth investigation.

- Most countries underline the phenomenon of quickly changing patterns among a broad public to experiment and/or combine different substances to get 'high' and/or to balance the respective effects.
- In the Netherlands, the phenomenon of 'ecstasy-fatigue' is currently being assessed. The reasons for this trend may be due to various factors, for example that there is no logo proof of exact contents or a heightened awareness (raised through the media) of the adverse residual effects on mood and feelings. The question as to whether cocaine plays an alternate role as a basic

<sup>(27)</sup> Table 7 OL: Provision, utilisation and coverage of syringe exchange programmes (SEPs) for injecting drug users (IDUs) and coverage of pharmacies in some European countries, as reported by national focal points, 2000 (online version).

<sup>(28)</sup> Table 8 OL: Provision of HIV counselling and testing, HIV treatment and HBV vaccination for injecting drug users (IDUs) in some European countries, as reported by national focal points, 2000 (online version).

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stimulant with regular and known effects is also posed. The combination of cocaine and alcohol is reputed to be a 'good mix' among experienced users, while the combination of ecstasy and alcohol is considered more difficult to manage.

- As far as ecstasy problem users are concerned, some studies on addiction point out that the addictive potential of the substance itself may play a lesser role than the non-chemical and behavioural addiction patterns associated with it.

All Member States, when drawing up strategies, attach importance to differentiating between groups of synthetic drugs users. A first and very broad differentiation of ecstasy users can be made.

- Excessive users. Even if MDMA has a low dependence potential, a minority of users show a compulsive pattern of use — more than once a week, more than one pill at a time, use of multiple other substances, intensive party activity throughout the weekend and a lack of sleep. They are frequently part of a network where drug use is very common.

- Cautious users, with a less extensive pattern of use.
- Occasional users, with less knowledge and awareness of possible risks.

Combined use of various substances, licit and illicit, is a common behaviour pattern among young people with an outgoing lifestyle (bars, discotheques, 'rave' and techno parties, private parties). Polyuse — mixing or alternating a large range of substances, synthetics or non-synthetics — is the main trend, and 'self-management' of polyuse in a changing context is a predominant pattern.

Shifting from one product to another and polyuse patterns are linked to a certain extent to the availability of different substances and opportunism plays a role. Personal/in-group strategies are often mobilised to obtain a particular substance and group dynamics play an important role.

A distinction should be made between substances which are believed to be more adapted to the music event itself and other drugs (such as after-dance drugs or not-dance drugs) or substances experimented within an initiation circle led by experienced users with at least some

## What are synthetic drugs?

The term 'synthetic drug' strictly refers to psychoactive substances that are manufactured through a chemical process in which the essential psychoactive constituents are not derived from naturally occurring substances. The term 'synthetic drug' began to be used synonymously with dance or recreational drugs following the emergence of the synthetic drug ecstasy (MDMA) and other ring-substituted amphetamines in the recreational dance drug scene, although non-synthetic drugs, such as cannabis, cocaine and magic mushrooms, are also consumed in these settings. Synthetic drugs with long histories of illicit use include amphetamines and lysergic acid diethylamide (LSD), while ecstasy (MDMA) and other drugs listed in Alexander Shulgin's Pihkal list<sup>(1)</sup> have much shorter histories of illicit use. There is growing global concern about the potential manufacture of other and newer synthetic drugs sold as an alternative to MDMA, or added to MDMA tablets. The ease with which many 'synthetic drugs' can be manufactured constitutes a challenge to efforts to control supply, as laboratories can be set up and moved with relative ease.

Some synthetic drugs, not all, have hallucinogenic effects and may be either stimulants or depressants of the central nervous system (CNS), the latter being the case for GHB.

There are also synthetic opiates, such as methadone, pethidine (MPPP, MPTP), fentanyl, 3-methyl-fentanyl, etc.

'Designer drugs' are chemical analogues of controlled drugs. Illegal producers modify slightly the molecular structure of a prohibited substance in order to obtain similar or stronger pharmacological effects, thereby avoiding prosecution. The EU joint action on new synthetic drugs (see box on page 46) was launched in June 1997 with the purpose of preventing and/or limiting the extension of such practices.

Amphetamines are synthetic drugs. They may be injected, as is the case in Sweden and Finland, or taken in tablet or powder form. Amphetamines are frequently mixed in ecstasy-like tablets with MDMA or ecstasy analogues.

Methamphetamines are methyl derivatives of amphetamines (mainly but not exclusively of the unsubstituted-ring type). They include 'methedrine' as well as 'crystal' and 'ice' which are forms that can be smoked.

<sup>(1)</sup> A. and A. Shulgin (1991), *Pihkal: A chemical love story*, Transform Press.

empirical knowledge about dosages and side-effects. For a limited number of synthetic drugs, the lack of such an environment could possibly present greater risks.

### Availability of substances

MDMA is still the favoured product of the ecstasy market and appears under numerous different logos and many different names. For example, the German Criminal Police Laboratory in Wiesbaden which monitored tablets stamped with a 'Mitsubishi' three diamond-triangle logo has issued a list of more than 200 different end-products.

Overdosed MDMA tablets were detected through seizures and toxicological analysis or through on-site pill testing by prevention teams at music events, allowing information on their characteristics to be rapidly disseminated to all EU countries through the EU early warning system.

A trend that needs to be monitored closely is the increasing number of psychotropic medicines such as ketamine, diverted from legitimate sources.

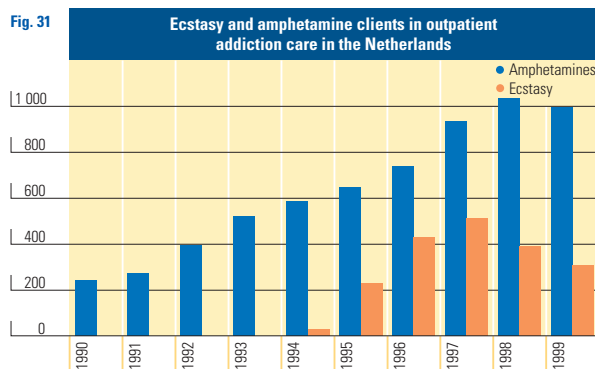
Lower purity and availability is noted for amphetamine (or 'speed' — amphetamine sulphate). Scandinavian countries are still the main market for injected amphetamine and the United Kingdom for non-injected amphetamine.

The average consumption of methamphetamines is still very limited in the EU. However, according to Europol (29), evidence of production (laboratories dismantled) has been confirmed for Germany and the Netherlands. Estonia and especially the Czech Republic have also been involved in production and trafficking. Methamphetamine, probably produced in the Czech Republic has progressively replaced amphetamine for consumers in Bavaria and Saxony, two bordering German *Länder*. Several seizures of this substance were reported to Europol in 1999 by the law-enforcement agencies of Finland, Sweden, Germany and the Netherlands.

Although still present on the drug scene, the market for LSD and other hallucinogens has stabilised or levelled off in most EU countries.

### Treatment data

Treatment data, as an indication of the level of problem drug use, provides very little coverage for synthetic drugs with the exception of injected amphetamine. Ecstasy is scarcely ever recorded as the primary drug in demand for treatment, the patients typically being polydrug users. The



higher level of treatment demand for amphetamines as primary drug with respect to Sweden and Finland can be explained by the historical pattern of injecting amphetamine sulphate in these countries.

In the Netherlands, the introduction of a specific entry for ecstasy use in 1994 has resulted in a complete registration in 1995 in the outpatient care system. Figures show a declining trend in treatment demand for ecstasy since 1997, taking into account the apparent initial increase in the two preceding years and this may be due — at least in part — to improved registration. Still, ecstasy makes up no more than 1 % of all drug clients (3.1 % for amphetamines). In 1999, the number of clients reporting ecstasy as secondary drug was twice the number of clients with ecstasy as main drug, a figure consistent with the fact that ecstasy users are typically polyusers.

### Health risks

Although rare and poorly documented, there are possible acute effects of ecstasy-type substances, especially when taken with other licit or illicit drugs (such as GHB and alcohol), when mixed with other drugs with less potential of acute adverse effects, or when tablets are strongly overdosed and/or taken repeatedly over a short period of time.

Clinicians emphasise the role of risk behaviour (such as the compulsive search for a 'high' and ignorance of composition and/or effects) rather than the toxicity of a particular substance isolated from its context and patterns of use. Personal health background may also be a determinant.

In most cases, poly-intoxication is the diagnosis, it being impossible to point to one substance above another.

In order to understand the nature and possible long-term risks and neuro-psychic aspects which frequently

(29) Europol 2000 report, The Hague, the Netherlands.

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emerge in acute intoxication cases, the priority for clinicians is now the follow-up of non-fatal intoxications among young users of ecstasy (mostly mixed with other drugs).

Long-term use may produce adverse effects. Reversible and/or non-reversible effects on the brain are still under discussion. In heavy ecstasy users, there is increasing evidence of damage to serotonergic neurons. Clinical implications indicate cognitive deficits but research projects in this area (under way in the United Kingdom and United States) are still few and far between.

### Related deaths

Since outreach and other prevention measures have been undertaken at techno/house events and parties, a decrease in fatal incidents has been observed compared with the early nineties, at least in countries where emergency cases were recorded and documented.

Apparent overdose by amphetamine or phenylpropanolamine derivatives, where these derivatives were considered as the main cause of death, were attributed to 50 % of fatal cases in the Netherlands during the period 1994–97. In the remaining cases, amphetamine derivatives were present but death was attributed to other drugs and/or alcohol or unknown causes.

One new synthetic drug, 4-methylthioamphetamine (4-MTA, with the street name 'flatliner') has been implicated in a number of deaths in the EU (four deaths in the United Kingdom, one in the Netherlands). Another 'new' synthetic drug, GHB (gamma-hydroxybutyrate), has also been linked to some deaths, generally in association with alcohol and/or other drugs. These two substances have been subject to monitoring and risk assessment in the framework of the EU joint action on new synthetic drugs (see box on page 46).

### Responses

Responses to synthetic drugs are organised at different levels of intervention.

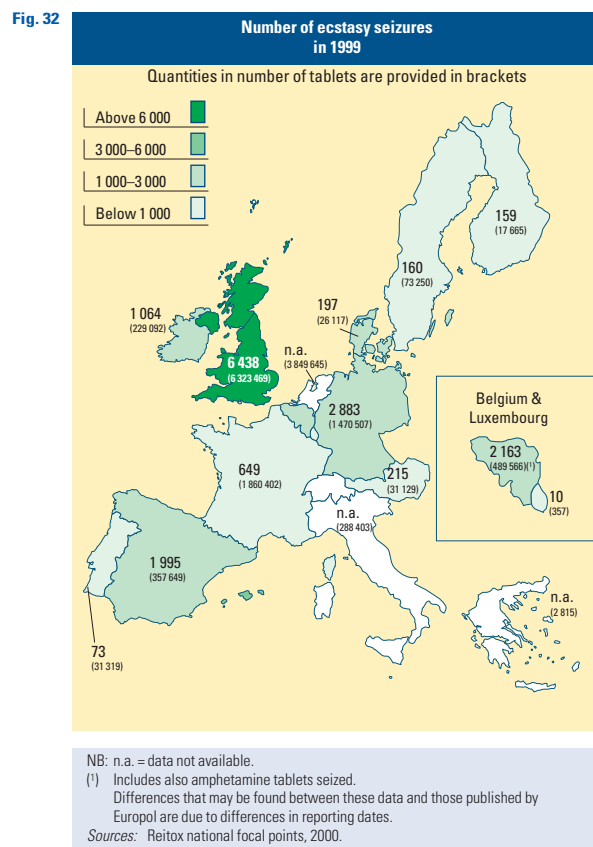
Primary prevention concentrates on providing information on synthetic drugs and is usually carried out through public campaigns and in-school interventions.

Harm-reduction/outreach activities in recreational settings consist of chill-out rooms, pill testing, information leaflets and on-site desks. There are also 'auto-support' initiatives in the techno scene which aim to include information on synthetic drugs and associated substances in a range of music-oriented activities.

Information among users about the risks of mixing substances (especially the risk of alcohol) and the early detection of new risk groups among young people is now considered crucial.

The aim of quick health responses is to provide targeted prevention information which allows professionals in emergency rooms and poison units, GPs, field health workers, etc. to detect and respond better to cases of acute intoxication. In France, since 1998, Médecins du monde has ensured medical stand-by assistance at raves and other 'free-parties'. Difficulties include the lack of clinically related literature on acute intoxication episodes, and the impossibility of referring to the individual's medical history.

Even if they have a less problematic drug-use profile, 'new' drug users (new or experienced users not known by treatment services) may be provided with improved information on how to identify signs of problem drug use and the need for assistance. Self-perception of one's state of health, awareness of losing control of 'self-managed' use and knowledge about access to counselling services are possible indicators to be combined with preventive outreach actions. However, the lack of diversity and/or relevance of existing treatment offer may limit the effect of such efforts.



### Supply reduction

According to Europol (Annual report 2000), the Netherlands is still the primary country for the production and export of ecstasy: 36 production sites were identified in 1999. During the same year, four laboratories were dismantled in Belgium, two in Spain, and one in Germany. One of the largest amphetamine laboratories ever found was dismantled in Greece in February 2000. Production and export also involve a number of the east European countries (the Czech Republic, Poland and Bulgaria) and the Baltic States.

By way of example, 10 to 20 % of synthetic drugs for the UK market are manufactured in the United Kingdom, while the rest are thought to be manufactured on the continent (predominantly the Netherlands and Belgium) and enter the United Kingdom at Channel ports or airports.

The average wholesale price (sales per kilogram) for tablets marketed as ecstasy ranges from EUR 4 to EUR 5 per tablet, with a minimum price of EUR 1 in Portugal and a maximum price of EUR 13 in Denmark<sup>(30)</sup>. The average retail price ranges from EUR 4 to EUR 28 per gram, with a minimum of price of EUR 4 in the Netherlands and a maximum of EUR 34 in Denmark.

### New initiatives and challenges for policy-making

Synthetic drugs are in the political limelight despite the limited scientific evidence available in terms of public health risks. Their high level of use among socially integrated groups, their role as a reference model within youth culture and the fact that production and trafficking are set up in Europe (for both internal and external markets) exert strong pressure for responsible action by the EU.

Synthetic substances and their risk assessment are progressively included in a broader view of changing patterns and behaviours, subcultures and evolutions. This has resulted in the following actions:

- setting up efficient communication channels between all actors involved in rapid-response systems;
- setting up better communication between scientifically based information and policy responses;
- improving capacity for obtaining specific information on synthetic drugs and more generally on emerging

### The EU joint action on new synthetic drugs

During the period 1998–2000, the EU joint action ‘early-warning system’ for the rapid collection and exchange of information on new synthetic drugs detected a number of substances which appeared on the illegal market in the European Union. Joint progress reports summarising the information collected at this preliminary stage were presented by the EMCDDA and Europol to the Horizontal Working Party on Drugs of the Council of the European Union. At a second stage, following a request by the Council, four of these substances — MBDB, 4-MTA, GHB and ketamine — have been subject to a risk assessment by the enlarged Scientific Committee of the EMCDDA.

On the basis of its risk-assessment report and an opinion of the European Commission, one new synthetic drug, 4-MTA, is subject to control measures in all EU Member States by a Council decision of 13 September 1999.

Other new synthetic drugs, such as PMMA, 2-CT-5 and 2-CT-7 have recently been detected under the joint action ‘early-warning system’ mechanism and are currently being monitored jointly by the EMCDDA and Europol, in close cooperation with the European Commission and the European Medicines Evaluation Agency (EMA).

As an instrument to define whether or not a particular substance should be placed under control at EU level, the joint action also provides Member States and European institutions with a regular insight into the context of drug use in recreational settings and gives early indications on trafficking trends in synthetic drugs. The risk-assessment exercises bring sound material to the attention of policy-makers for their reflection on possible options for a balanced approach between law enforcement and preventive measures.

trends in drug use through national and local prevalence estimates, treatment demand records, also taking into account the main orientation of treatment services towards opiates users.

<sup>(30)</sup> Last data: July 1999. The prices vary within different Member States depending on purity rate, amount purchased and location of purchase (Source: Europol, annual report 2000).