

Stadig nye utfordringer: GHB og Metamfetamin

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”Party-dopes”



- GHB (& GBL)
- Amphetamines
- Ecstasy
- Cocaine
- LSD
- Englestøv (PCP) og Ketamin

- Others
 - Rohypnol
 - Fentanyl
 - Psilocybin (fleinsopp etc.)

> 2/3 av alle overdoser har tatt flere agens!

Jente på by'n med venninner

- K18; Ikke rusmisbruk (?)
- Plutselig fjern & rar, synkoperer, amb til sykehus
- P: 26/min, BT 85/40, RR 6/min, T:36°C, miose
- Naloxon: ingen respons
- Intuberes, respirator 4 timer, extuberer seg selv, aspirasjon med aspirasjonspneumoni
- Etanol 0.3 promille, toxisk GHB-kons.
- 'Date rape drug'

To pågrepet Ålesund

Av Morten Ulv

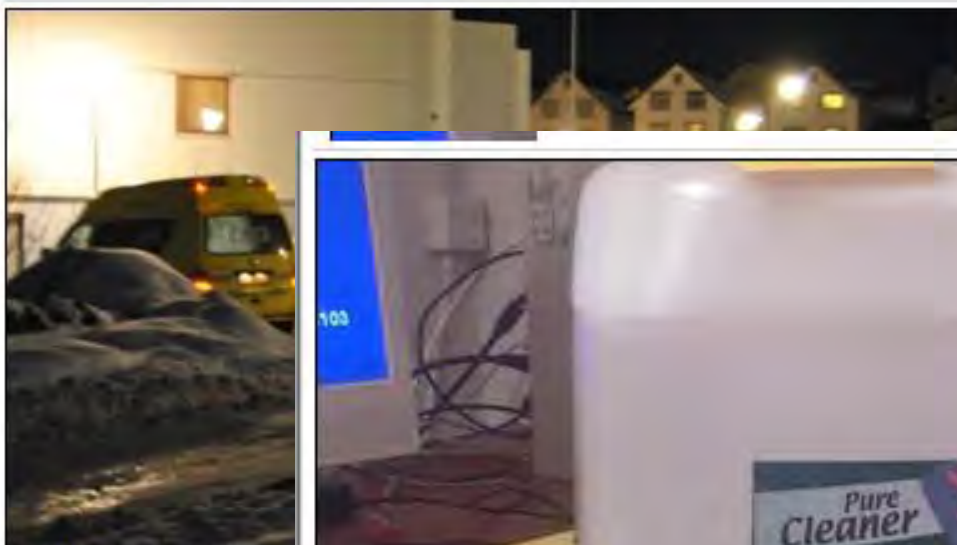
(VG Nett) Politiet har i en siktet to personer som de Ålesund.

Ti personer tok i forrige uke overdoser av det narkotiske Ålesund, og en 20 år gammel døde etter at han skal ha inn

I 16-tiden tirsdag ettermiddag Ålesund-politiet en mann og i 20-årene etter en væpnet et bolighus i Ålesund.

Siktet for oppbevaring

- De er siktet for oppbevaring av narkotika, men det ligger i kortene at



STORUTRYKKNINGER: Politiet i Ålesund rykket ut

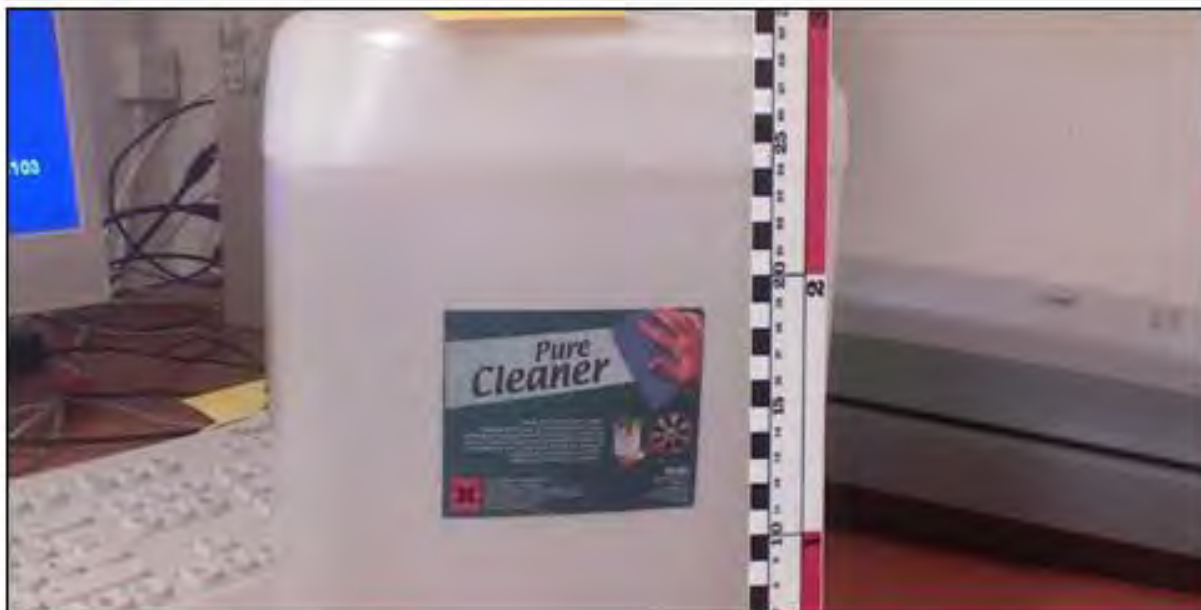
Ungdom hjemmel

annonse
Takk og pris for

Politiet far



DØDELIG VÆSKE: S



ENKELT Å LAGE: Det narkotiske stoffet GHB er relativt enkelt å lage. Stoffet oppbevares gjerne på brusflasker eller dunke som denne og inntas ved å drikk av korken. Brukerna igjennom det mot å bli styrt av stoffet inntar og risikere dermed å falle i koma. Stoffet kan også forsterkes ved inntak av alkohol. Foto: DAGBLADET

Etterforsker to GHB-dødsfall

annonse



Frykter at to menn fra Holmestrand døde av overdose.

NYHETER

berck obama brann drap israel

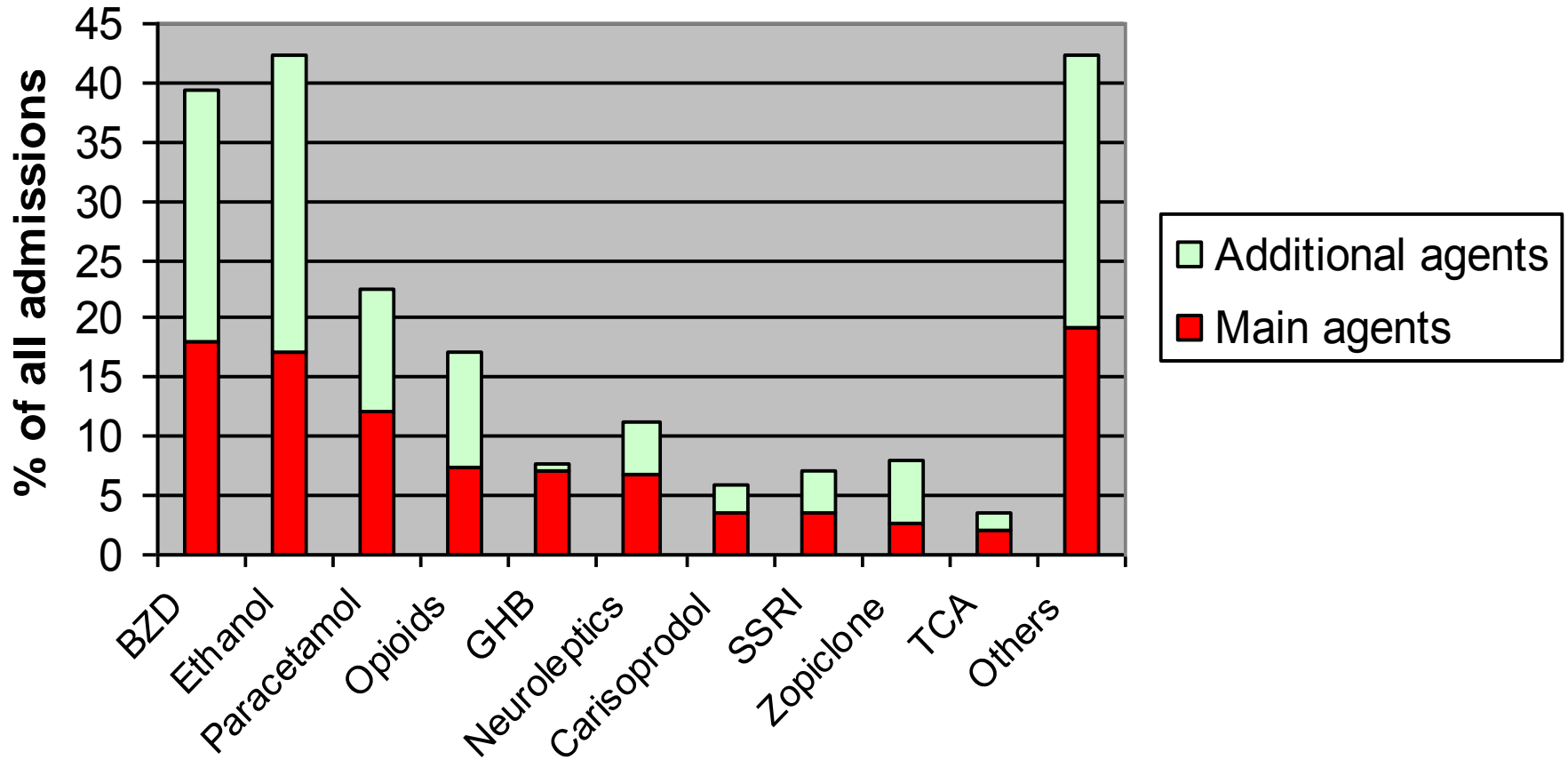
mie overgrea pol politik

Tor: 2400



LAGER GHB AV BILFELGRENS: Mens heroin og kokain må fraktes halve jorda rundt før stoffet når Norge, lager rusmisbrukere i Hordaland GHB hjemme. I løpet av de siste dagene har flere personer tatt GHB-overdoser i Bergen, og ytterligere andre blitt pågrepet med stoffet, melder Bergens Tidende.

Toxic agents



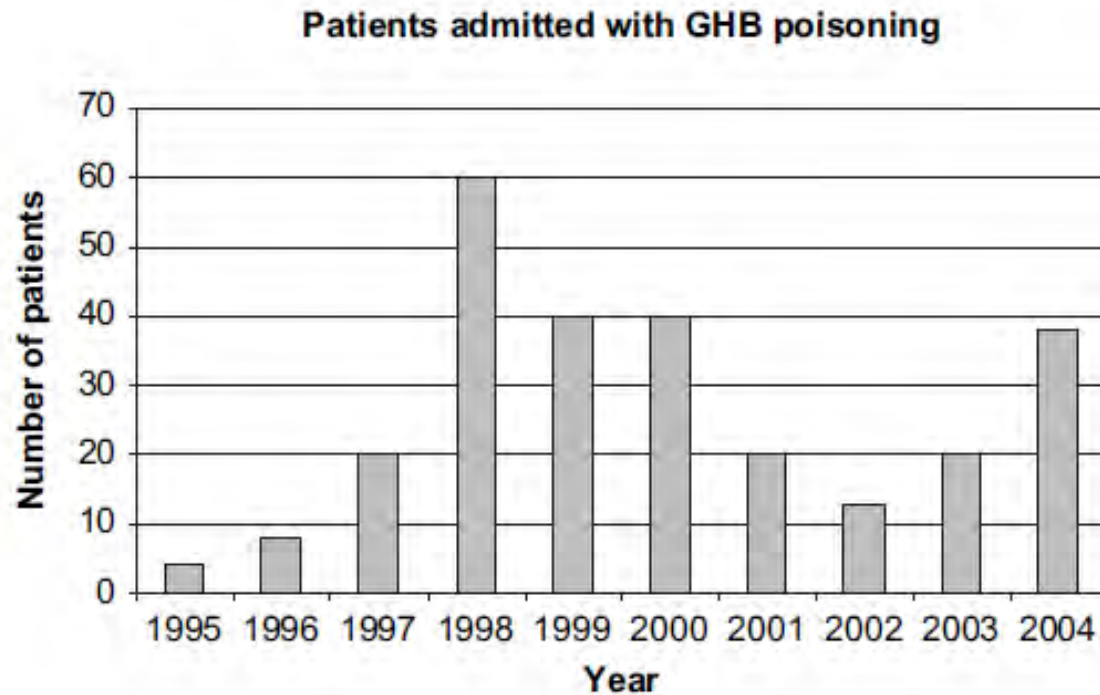


Fig. 2. Numbers of patients admitted to Sahlgrenska University Hospital diagnosed for GHB poisoning over the period 1995–2004.

GHB, GBL, 1,4-butanediol

- Historikk: GHB 1960
- Endogen vs eksogen
 - GABA-mimetisk effekt
- Anabole effekter?
- Kosttilskudd?
- Narkolepsimedisin – øker REM-søvn
- Party-dop: "liquid E", "G", "**G**reat **H**ormones at **B**edtime", "Easy Lay" etc.
- "Date rape drug"

GHB

- GBL og 1,4-BD vanlige industrijemikalier

GHB:

- 135 g (125mL) GBL
 - 2.63 g NaOH
 - 93 g KOH
- Effekt: 15 min, maks etter 90 – 120 min
 - GBL mer fettløslig: raskere og lengre effekt
 - Rask metabolisme via Krebs syklus
 - $T_{1/2}$ 30 min
 - ”Terapeutisk vindu” smalt

GHB - effekter

- CNS:
 - Eufori, "Feeling high", "bedre sex"
 - Hallusinasjoner, desorientering, agitasjon, koma
- ↓BT, ↓Puls, ↓respirasjon, hypotermi
- Miose
- Myoklonus
- Sekresjon, oppkast ?
- EKG – U-bølge
- Klinisk: Bradykard koma

GHB – behandling

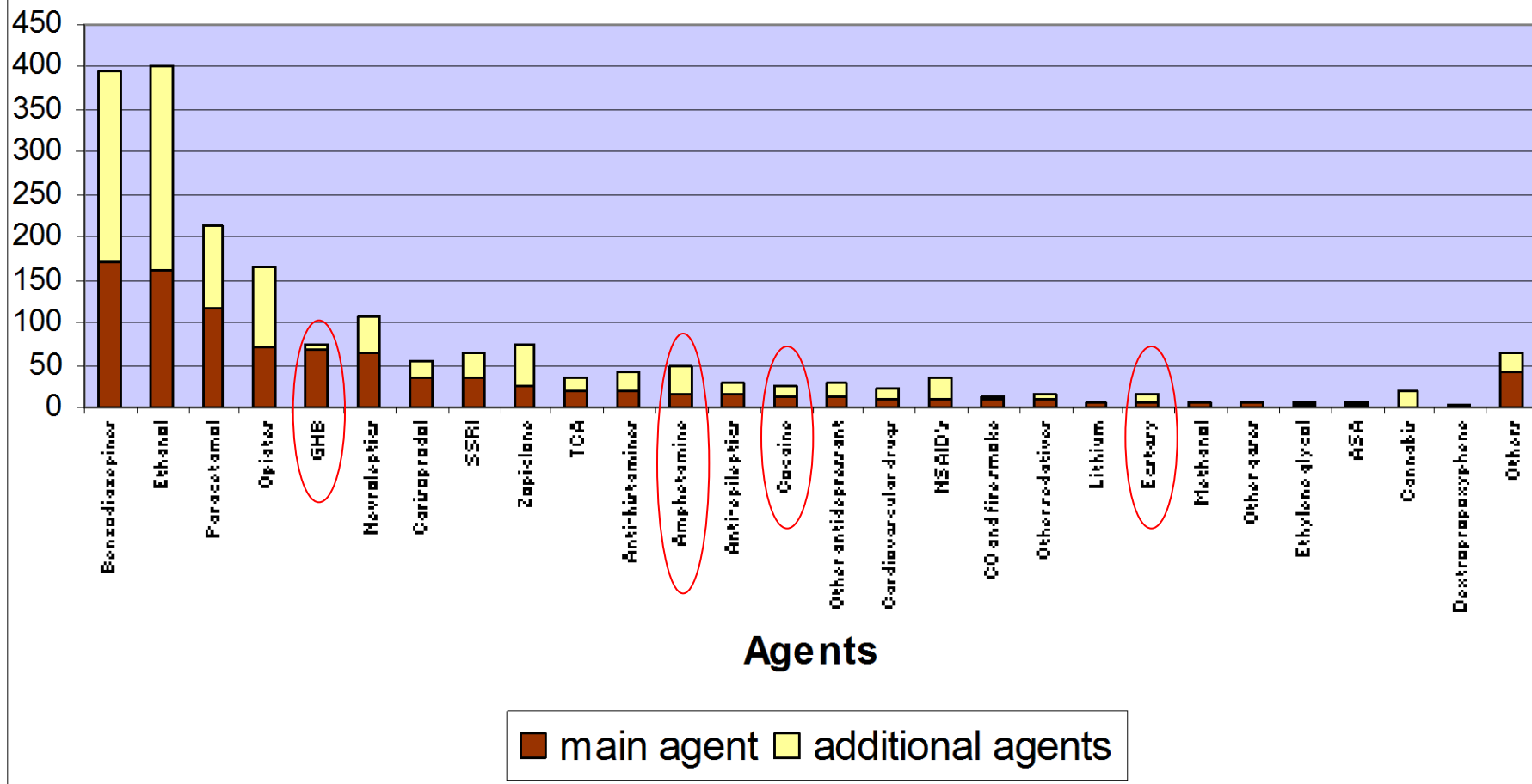
- Trengs det?
- ABC!
- Antidot?
- Respirasjon – intubasjon? – sedasjon?
- Sirkulasjon – tiltak?
- Dekontaminering? Kull?

GHB – gamma-hydroxybutyrate – 19 cases treated in MICU



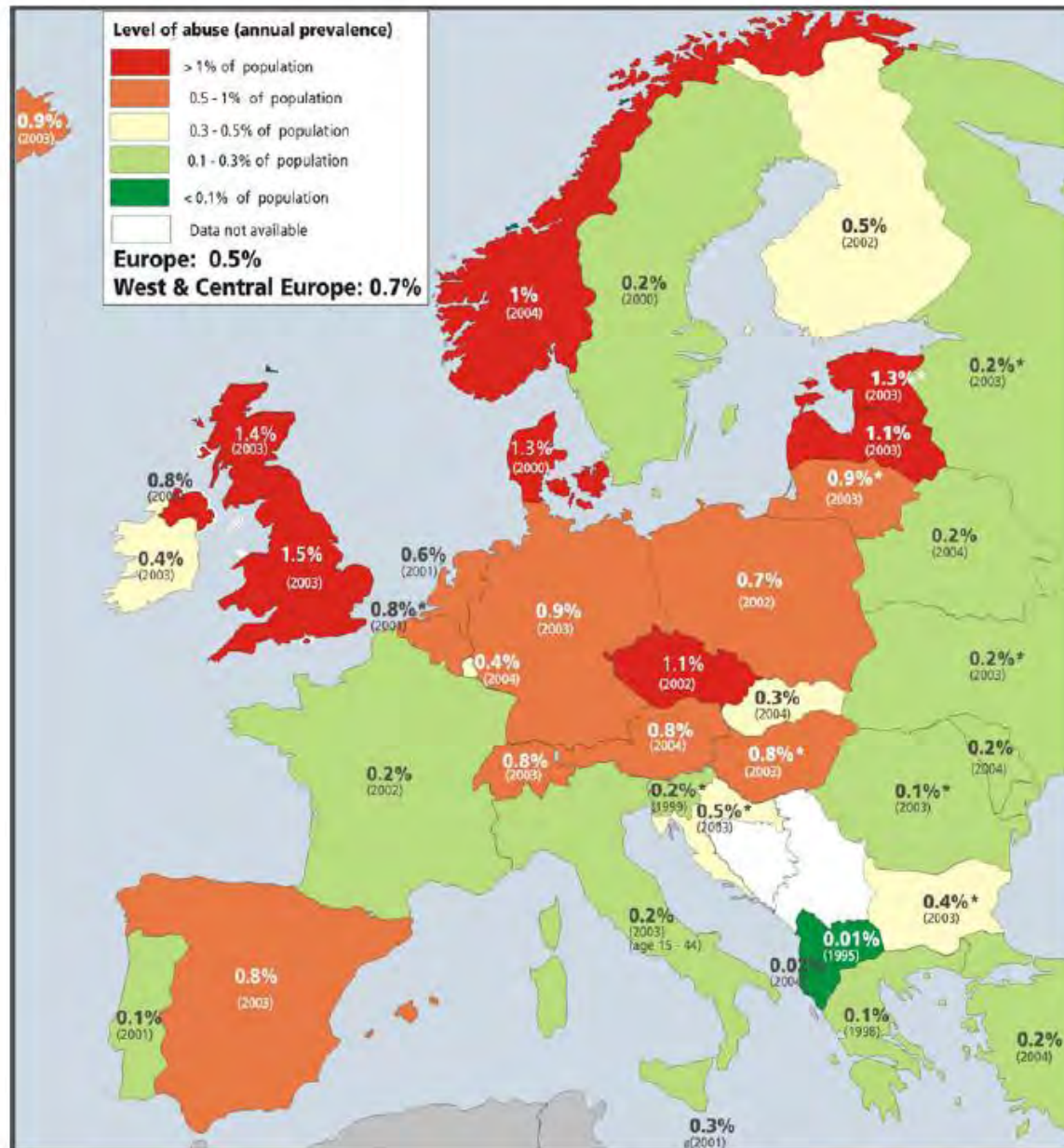
- Respiratory depression: 19 (9 on ventilator)
- Bradyarrhythmias: 19 (atropine in 6)
- Coma: 19
- Aspiration pneumonia: 6
- No deaths in this series of patients

Main and additional agents



Hovda KE et al. Clin Toxicol 2008; 46: 35–41.

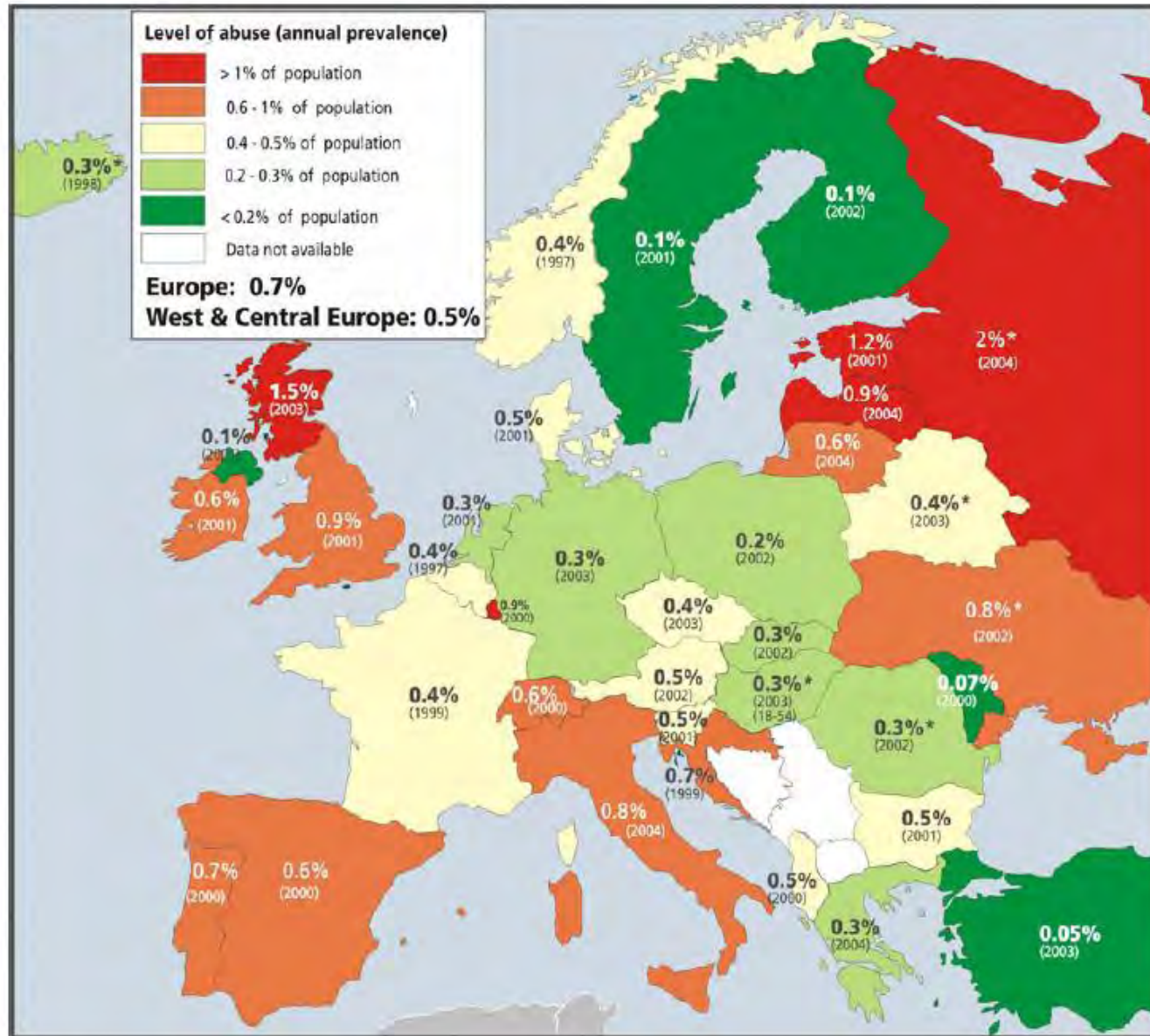
Map: Annual prevalence of amphetamines use among population 15-64, in 2004 or latest year available



* UNODC estimate

Source: UNODC, 2006 World Drug Report

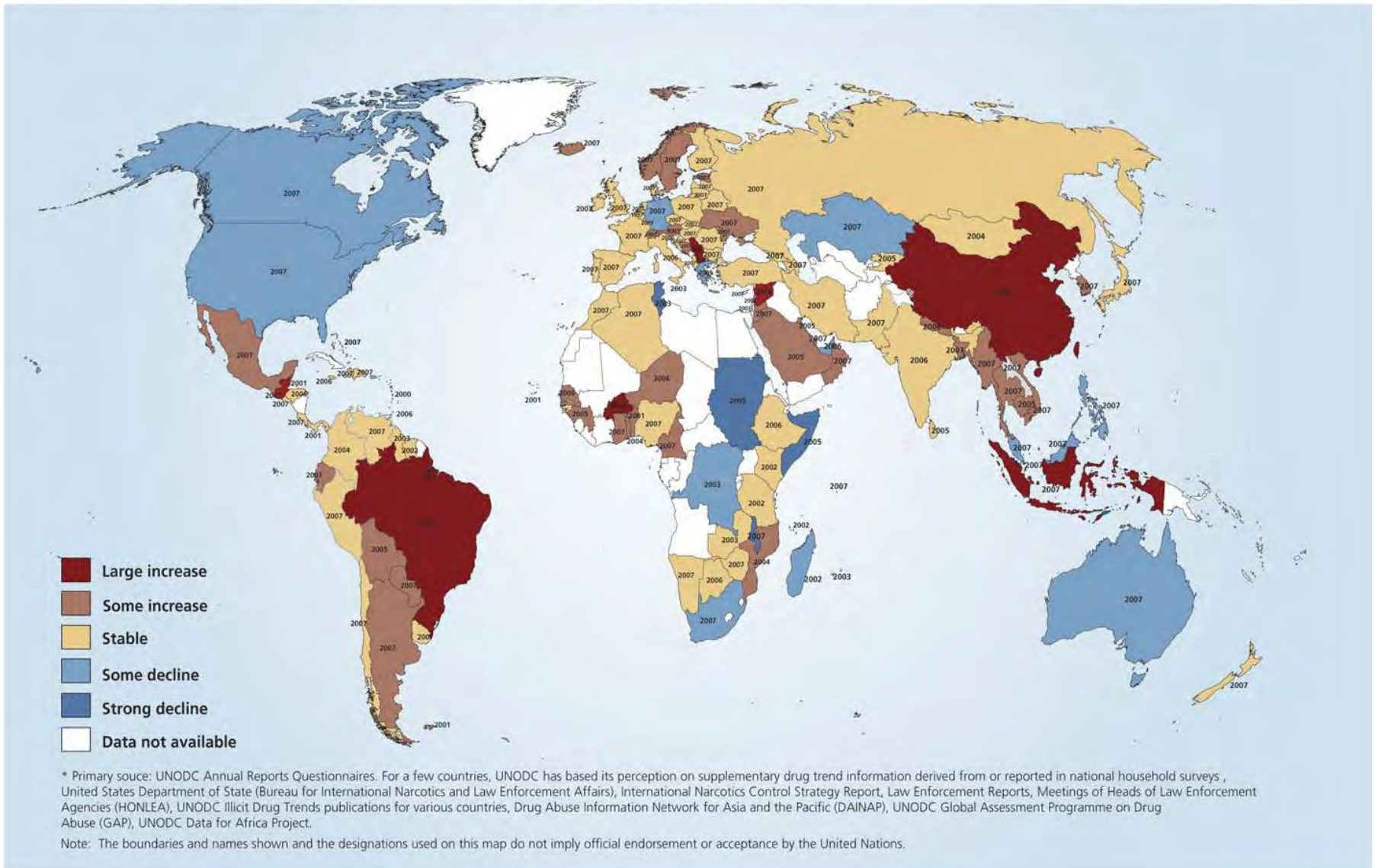
Map: Annual prevalence of opiate use among population 15-64, in 2004 or latest year available



* UNODC estimate

Source: UNODC, 2006 World Drug Report

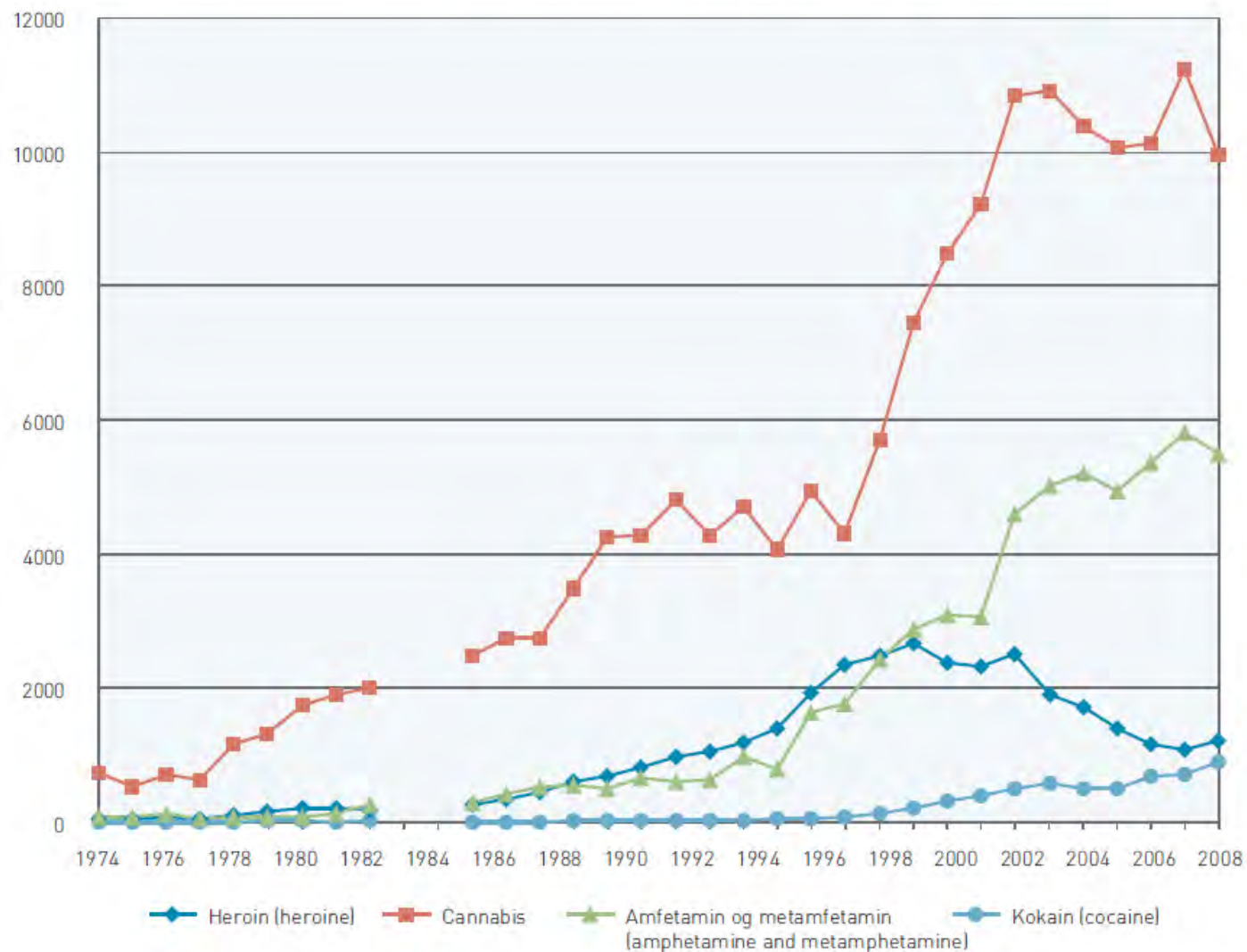
Map 24: Changes in the use of "amphetamines" (methamphetamines, amphetamines and related substances), 2008 (or latest year available)



UNODC world drug report 2009

Figur 4.10 Antall beslag av heroin, cannabis, kokain og amfetamin 1974-2008

Number of seizures of heroine, cannabis, cocaine and amphetamines 1974-2008



Kilde: Kripos

Source: National Criminal Investigation Service

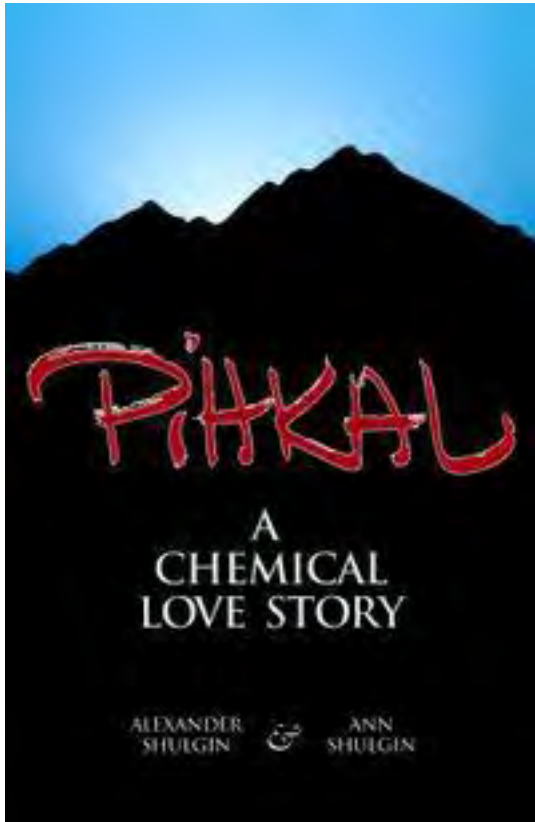
Street drugs - reliability

Substance purchased	Alleged drug only	No alleged drug	Drug and substitutes
Cocaine	58.3%	19.2%	22.5%
Amphetamines	27.1%	49.9%	23%
Methamphetamines	32.9%	63.2%	3.9%

Klat. J Toxicol Clin Toxicol 1986:24:441

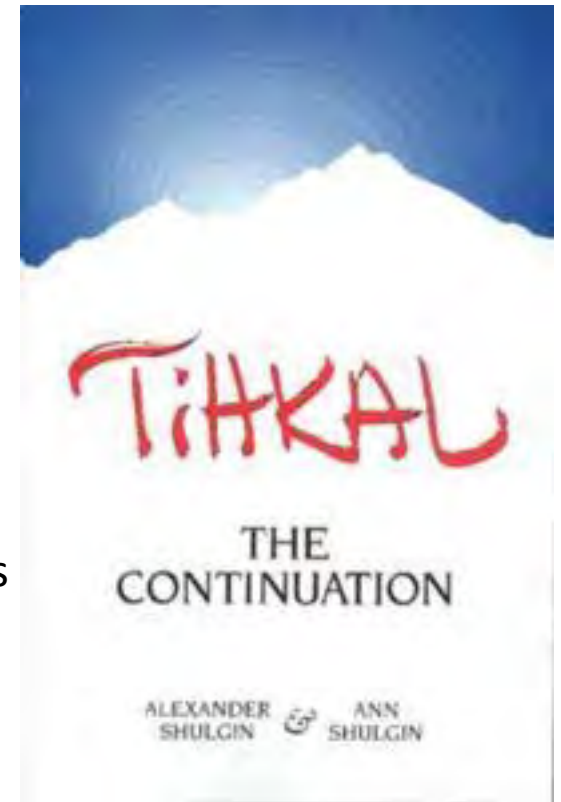
Alexander “Sasha” Shulgin

Født 1925, Berkeley, California



Funnet opp >230 psykoaktive drugs

- Phenyletylaminer
- Tryptaminer



Phenylethylamines I Have Known And Loved: A Chemical Love Story

Tryptamines I Have Known And Loved: The Continuation

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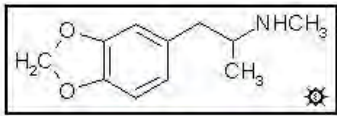
PIHKAL

A CHEMICAL LOVE STORY
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← BACK MAIN INDEX TIHKAL FORWARD →

#109 MDMA

MDM; ADAM; ECSTASY; 3,4-METHYLENEDIOXY-N-METHYL



[3D .jpg image]
[3D .mol structure]

SYNTHESIS: (from MDA) base and 2.8 mL formic acid. Further H₂O was generated. The solvent gave an 8.8 g of product. HCl, then with dilute NaOH in vacuum giving 7.7 g of a methylenedioxyamphetamine.

reflux for 16 h a solution of 10 g of MDA as the free base in 20 mL of ether. Crystals weighing 7.8 g.

A solution of 10 g of MDA in 20 mL of ether was brought to reflux and 2.8 mL of formic acid and 2.8 mL of HCl, anhydrous, were added. The mixture was extracted with ether and the ether was washed with water. The ether was dried with anhydrous sodium sulfate and the ether was removed by distillation. The residue was dissolved in 10 mL of methanol.

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Phencyclidine

From Wikipedia, the free encyclopedia

"Angel Dust" redirects here. For other uses, see Angel dust.

Phencyclidine (a contraction of the chemical name *phenylcyclohexylpiperidine*), abbreviated **PCP**, is a dissociative drug formerly used as an anesthetic agent, exhibiting hallucinogenic and neurotoxic effects.^[citation needed]

It was first patented in the 1950s by the Parke-Davis pharmaceutical company. PCP is listed as a Schedule II drug in the United States under the Convention on Psychotropic Substances.^[1]

In chemical structure, PCP is an arylcyclohexylamine derivative, and, in pharmacology, it is a member of the family of dissociative anesthetics. PCP works primarily as an NMDA receptor antagonist, which blocks the activity of the NMDA Receptor.^[2] Other NMDA receptor antagonists include ketamine, tiletamine, and dextromethorphan. Although the primary psychoactive effects of the drug last only hours, total elimination from the body is prolonged, typically extending over weeks.

More than 30 different analogues of PCP were reported as being used on the street during the 1970s and 1980s, mainly in the USA. The best known of these are **PCPy** (Rolicyclidine, 1-(1-phenylcyclohexyl)pyrrolidine), **PCE** (Eticyclidine, N-ethyl-1-phenylcyclohexylamine), and **TCP** (Tanocyclidine, 1-(1-(2-Thienyl)cyclohexyl)piperidine). These compounds were never widely-used and did not seem to be as well-accepted by users as PCP itself, however they were all added onto Schedule I of the Controlled Substances Act.

Phencyclidine
Systematic (IUPAC) name

EROWID

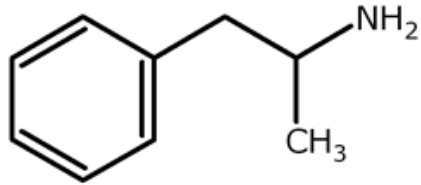
Documenting the Complex Relationship Between Humans & Psychoactives

Plants & Drugs
Mind & Spirit
Freedom & Law
Arts & Culture

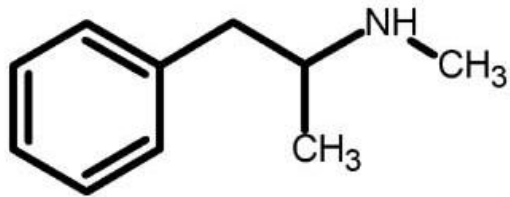
Amfetaminer

- Legemiddel fra 1927
 - Astma, forkjølelse, slankemiddel, ADHD, narkolepsi. Krigssituasjoner.
- Kallenavn, eks "speed"
- Metamfetamin, mer potent, virkning varer lenger.
 - også som pulver, men kan være i krystallform. Meth, Ice, Crystal etc.
 - Lett å lage, bla fra efedrin
- Tbl, pulver, væske, inj, røykes (Ice), sniffes...
- Effekt omtrent som kokain, men varer lenger

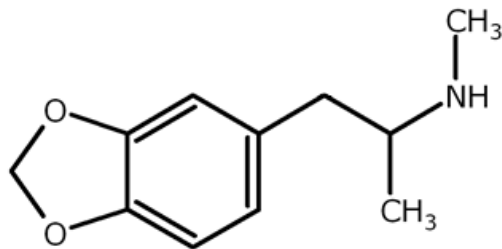
Amfetaminer



Amfetamin



Metamfetamin



MDMA /
Ecstasy



Amfetaminer

- Frigjør katekolaminer (dopamin og NA) fra presynaptisk nerveterminal
- Frigjøring av Serotonin og affinitet til serotonin transporter (sterkest for MDMA)
- Kompetetiv inhibering av katekolaminreopptak
- Stimulering av glutamaterg system (eksitatoriske aminosyrer)

Amfetaminer

Generell sympatikomimetisk effekt

- Tachycardier og tachyarrytmier
- ↑BT
- Generell vasokonstriksjon
- Aktivisering av trombocytter
- Myokard-ischemi og arytmier
- Intrakranielle blødninger
- Tømmer glykogenlagrene → hypoglykemi
- OBS temperatur og rhabdomyolyse

Andre effekter av amfetaminer

“Meth mouth”



Kompulsiv repetitiv adferd

“Pirking” på huden

Nekrotiserende vaskulitter

Primær pulmonal hypertensjon

Amfetaminer

behandling ved overdose

- Spesifikk behandling? Antidot?
- Få kontroll på uro/agitasjon, temp, kramper og rhabdomyolyse!
 - Benzodiazepiner! Store doser!
- Hypertermi
 - Extern kjøling
- Hypertensjon
 - Kontrollere agitasjon
 - A-adrenerg antagonist (ikke ren betablokker)
 - Vasodilatasjon (nitroprussid, NG)
- Væske iv
- Vurder intubasjon

Treatment



Kilde: Bob Hoffman, NYPC

Body Packer

