



METHAMPHETAMINE

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Thanks to:

- Carina Walters (CADS)
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- John Sowter – New Zealand Police
- Google/Medline etc etc




PLAN OF SESSION

- What is methamphetamine (METH)?
- What do we know about METH in New Zealand?
- How does it exert its effect?
- What are its actions, adverse effects?
- Treatments and interventions
- Working with METH users in primary care



What is methamphetamine?

- Differs from amphetamine – addition of methyl group
- More potent euphoric effect than amphetamine
- Longer acting than cocaine or amphetamine



Terminology –

NB same terms mean different things in different countries!

Speed

- General terms for amphetamines, often used to mean METH

“P” “burn” “Pure”


- NZ name for high purity METH

“ICE”

- Colourless, odourless and smokable. Rock-like crystals. Chemically same as powder, but almost completely pure.

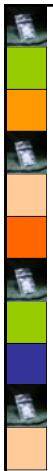
“Yaba”

- Thai word meaning “crazy medicine”. METH in tablet form popular in SE Asia. May contain other drugs too.




How methamphetamine is (mis)used

- Smoking
- Snorting
- IV
- Oral
- Long acting 10-12 hours – maybe up to 24?
- Often binge use – several days
- Often as part of poly drug use



What do we know about METH in NZ?



Information from:

- National drug surveys
- CADS data
- IDMS
- Clandestine labs
- Media reports
- Anecdote

Methamphetamine in New Zealand

- Increase in size of METH seizures
- In Jan 2003 “ice” has been seized by Customs in small amounts¹
- Price has fallen¹
- Mainly smoked rather than injected¹

1. Data from Methamphetamine Action Plan. Ministerial Action Group on Drugs, May 2003. <http://www.ndp.govt.nz/pubs/MethamphetamineActionPlan.pdf>

Clandestine labs

- Mainly using pseudoephedrine as precursor
- Creating problems for community pharmacists
- Labs vary in terms of location and safety
- Potential hazard within local community

Areas of health harmed – National Household Survey in 2003

- 9% had ever used amphetamines; 4% last 12 months
- Self-reported harmful effects from amphetamine use in the last 12 months:

– Energy and vitality	15.2%
– Financial	13.7%
– Health	11.5%
– Outlook on life	9.9%
– Friend/social life	9.2%
– Home life	6.9%

Ministry of Health. (2007). *Drug Use in New Zealand: Analysis of the 2003 New Zealand Health Behaviours Survey – Drug Use*. Wellington: Ministry of Health.

2007 IDMS data

- Frequent drug users (N=324)
- Of those who felt competent to comment:
 - 85% said meth easy/very easy to obtain
 - Price around \$100 per 0.1g
 - Purity generally stable/fluctuating

• Wilkins et al (2008) RECENT TRENDS IN ILLEGAL DRUG USE IN NEW ZEALAND, 2005-2007 Findings from the 2005, 2006 and 2007 Illicit Drug Monitoring System (IDMS) Centre for Social and Health Outcomes Research and Evaluation Massey University



How does METH work?



Pharmacology

- Release of dopamine from nerve endings via from D transporters
- Blocks dopamine reuptake
- Increase in noradrenaline levels
- May reduce serotonin levels
- Over time depletes dopamine levels (possibly serotonin)
- Tolerance develops rapidly
- Sensitisation may occur (low, previously harmless dose causes toxic effect)
- Dopamine transporter damage



Pharmacokinetics

- Drug is well absorbed from the digestive tract
- Clinical effects within 30 minutes
- Metabolised by CYP2D6
- The half-life around 12 hours
- Excretion occurs primarily in the urine (dependent on urine pH).
- Approximately 2/3 of an oral dose is eliminated in urine within first 24 hours




Acute effects

- Increased attention/decreased fatigue,
- Euphoria,
- Decreased appetite
- ↑ sexual arousal (risk-taking and STDS)
- ↑ BP, body temp, heart and breathing rate, sweating


Toxicity can lead to:

- Increased respiration
- Hyperthermia
- Convulsions
- Overdose



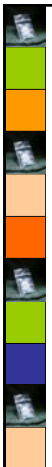
Negative and unpleasant effects

- Anxiety
- Paranoia
- Insomnia
- Anorexia
- Aggressive tendencies
- Stroke and other CV
- Hallucinations - "crawling skin" (formication)




Effects of chronic use

- Increased tolerance, more frequent dosing, binge use, change to injecting
- Psychotic features
- Violent behaviour, anxiety, confusion
- Weight loss
- Dependence
- Cessation can result in depression, anxiety, fatigue, dysphoria, paranoia, aggression, and an intense craving for the drug.




Medical complications

- Cardiovascular complications
- Hyperthermia
- Convulsions in overdose
- IV complications
- Heavy users - progressive social and occupational deterioration
- Psychotic symptoms can sometimes persist for months or years after cessation
- Increased libido and risk taking – sexually transmitted diseases



Trials


- Paroxetine
- Imipramine
- Bupropion
- Dexemphetamine
- Modafinil
- Methylphenidate



What can we do???


Introducing Graham Gulbransen

- GP, Kingsland
- Senior Medical Officer, Community Alcohol & Drugs Services (CADS)




History Taking

- Smoking
- Alcohol
- Other drugs




Just remember:

All you need to know:
09 845 1818 Auckland
CADS
Or your local CADS unit




Interventions for METH misuse and dependence



Prevention – drug seeking for pseudoephedrine containing products

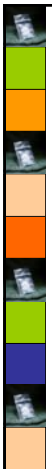
Actifed tab	Clarinase (2)
Codral (3)	Coldrex (3)
Demazin	Dimetapp (2)
Duro-Tuss (2)	Nurofen Cold & Flu
Phensedyl	Robitussin (3)
Sinutab (2)	Sudafed (5)
Sudomyl tabs	



Self management


Would you want to stop using something that gave: euphoria, increased energy & mental alertness, wakefulness, weight loss & increased libido???

- Non-dependent experimental or recreational use – majority of users
- Expense
- Tolerance
- Dysphoria, paranoia, the Crash, withdrawal
- Loss of relationships, family, job etc




Harm Reduction for 'P' – Brief Advice

- No use is the safest Use. Needle exchange if IDU
- Awareness of your sources re: potency
- Small amount first - to check potency and your response to the drug
- Methamphetamine is an illegal drug - an awareness of the potential legal ramifications as 'P' is a Class A drug
- At risk sexual behaviours - amphetamine consumers are far more likely than other drug consumers to engage in risky sexual behaviours
- Risk of increased violent offending. Consumers who are experiencing psychotic symptoms may also be more prone to irrational acts of violence




Harm Reduction for 'P'

- Overdose - is less likely with amphetamines than with many other drugs, especially CNS Depressants. Dysphoria, tachycardia, psychosis
- Food, sleep and hydration - amphetamine users may need to remind themselves/each other to eat, drink, sleep
- Depression, suicide –vulnerable during the Crash or withdrawal. Also vulnerability to psychosis. Consider support networks. Withdrawing from the drug may also reinforce feelings of hopelessness, guilt, or shame
- Pregnancy – low birth wt, behavioural changes
- Breast feeding – contraindicated
- Driving – Contraindicated!



Psychological Treatment

- Motivational interviewing
- CBT [problem solving, relapse prevention]
- Counselling
- Group work eg AA, NA
- Include whanau
- Lifestyle changes
- Refer, refer, refer




Pharmacological Treatments - Intoxication

- Calm supportive environment
- Hydration, cooling, monitor
- History. UDS
- Acute agitation: diazepam 10-20mg q2h prn orally
- Extreme agitation/violence: GET HELP. [IV BZs, olanzapine or quetiapine]



Treat Co-morbidities

- Poor self care
- Mental health
- Dental health
- Continuity of care



CADS 09 845 1818

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- ©Pacific Counselling Service - TuPu
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