

**FOLLOW-UP ARTICLE ON THE FUTURE OF WORK
MANAGING PERFORMANCE ENHANCING DRUGS
AT THE WORKPLACE: AN OSH PERSPECTIVE
(EUOSHA/2017/NE/LV/0028/T8)**

Dr Karen Dale and Professor Brian Bloomfield
Lancaster University, UK

OSH Focal Point Meeting
Bilbao, February 2018

Background

- The risk posed by the use of performance enhancing drugs in the workplace was identified in the Foresight Report on *New and Emerging Risks Associated with New Technologies by 2020* (EU-OSHA, 2014)
- *A Review on the Future of Work: Performance-enhancing drugs*, Dr Karen Dale and Professor Brian Bloomfield, Lancaster University, UK (EU-OSHA, 2015)

Developments since the review report of 2015

The first report concentrated on the 3 drugs most associated with enhancement:

- **Modafinil** – prescribed for narcolepsy
- **Ritalin** (methylphenidate) and **Adderall** (amphetamine salts) both prescribed for Attention Deficit Hyperactivity Disorder

It considered the studies on efficacy, health & safety aspects, as well as some implications for management.

The updated report looks at:

- 1) A wider range of substances used for performance enhancement
- 2) The changing context of employment and the 'trigger' factors which might increase likelihood of enhancement
- 3) The 'normalisation' of performance enhancement drugs
- 4) Monitoring & 5) Implications for Policy

1) Broader consideration of substances associated with enhancement

- a) 'micro-dosing' of hallucinogens such as LSD to increase creativity amongst e.g. software developers
- b) the use of a wider range of substances such as 'noopept' and other drugs classified as 'nootropics' seen as improving mental function
- c) the use of drugs such as beta-blockers (e.g. propranolol) to enhance presentation or performance in the context of work



Broader Range of Substances for Enhancement
a) Micro-dosing on LSD for creativity and focus, especially in software development.

FT Weekend Magazine 2017



FT Magazine + Add to myFT

How Silicon Valley rediscovered LSD

A new generation of San Franciscans believes the drug makes them more creative

Hannah Kuchler AUGUST 10, 2017 112

BBC Sign in News Sport Weather iPlayer TV Rad

NEWS

Home UK World Business Politics Tech Science Health Family & Education

Health

Microdosing: The people taking LSD with their breakfast

By Catrin Nye
Victoria Derbyshire programme

10 April 2017

f t b e Share





The Independent



Study drug Noopept took me from a C to a straight A student

THE Tab

Broader Range of Substances for Enhancement

b) 'nootpept' and other drugs classified as 'nootropics' seen as improving mental function

HIGH EDUCATION University students snort memory drug Noopept for exams

Undergraduates use the banned 'brain-booster' like cocaine or gulp it in capsules





What Are The Best Beta Blockers For Social & Performance Anxiety?



Can This Drug Cure Performance Anxiety?

Beta-blockers, used primarily as a treatment for heart disease, may help calm the nerves of anxious orators.

DANIEL MCGINN | AUG 4, 2017 | HEALTH

The Atlantic

Broader Range of Substances for Enhancement

c) Use of anti-anxiety drugs for work performance

Feel the fear, pop the pill

Beta blockers are being prescribed as never before to anxious students and stressed professionals, reports Jo Carlowe

The Guardian

2) Trigger Factors for Enhancement Drug Taking

Increased precarity and insecurity in employment:

- Lack of social/individual control over work conditions
- Fragmentation of working times and spaces
- Overlapping, blurring or difficulty in achieving a balance between paid work and other aspects of life
- Conditions of competition, shortage of work, threat to livelihood

The increase in the so-called 'gig economy' leads to jobs with all of the above characteristics.

3) Normalisation of Performance Enhancement Drugs

Drug use becomes incorporated in and accommodated within various aspects of everyday life – not abnormal, or stigmatised (Parker et al, 1999; Wibberely & Price, 2000; Williams, 2016).

Five key dimensions are associated with normalisation:

- I. Availability/access;
 - a. Physical access
 - b. Economic access
 - c. Networks of access
- II. A degree of cultural accommodation of drug use – widespread reports of ‘smart drug’ use in the media.



ELSEVIER

www.elsevier.com/locate/euroeuro

REVIEW

Modafinil for cognitive neuroenhancement in healthy non-sleep-deprived subjects: A systematic review

R.M. Battleday^{a,*}, A.-K. Brem^{a,b}

^aDepartment of Experimental Psychology, University of Oxford, Oxford, United Kingdom

^bBerenson-Allen Center for Noninvasive Brain Stimulation, Division of Cognitive Neurology, Department of Neurology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA

Received 29 January 2015; received in revised form 27 July 2015; accepted 30 July 2015

Narcolepsy medication modafinil is world's first safe 'smart drug'

Increasingly taken by healthy people to improve focus before exams, after a comprehensive review researchers say modafinil is safe in the short-term



The Guardian 15-08-2015

MailOnline

'Smart drugs' really DO work: Pills taken by a fifth of university students found to improve memory and learning - raising 'serious ethical questions'

20-08-2015

La pilule qui repousse les limites

17.05.16 | Rubrique(s): [Revue de presse](#) | [Lien](#)

Le Matin

Mardi, 17 mai 2016

ABO SHOP AKADEMIE JOBS MEHR ▸

ZEIT  ONLINE

Hirndoping

Hirn auf Hochtouren

Gesunde schlucken Medikamente, um ihre Denkleistung zu steigern. Jetzt gibt es neue Hinweise darauf, dass dieses Doping funktioniert.

Von **Harro Albrecht**

10-09-2015

The role of the internet and social media

- Of growing importance for both buying drugs and for exchanging information.
- A diversity of links to performance enhancing drugs from:
 - ❖ Professional online journals: e.g. fora for nurses (allnurses.com) and for medics; plus a huge proliferation of websites devoted to the discussion or promotion of human enhancement
 - ❖ Growth of online pharmacies, including user ratings of enhancement drugs

III. Accommodating attitudes to 'sensible' recreational drug use: e.g. study of the use of cognitive enhancers amongst medical students in Lithuania found a greater prevalence amongst those who knew other people who used them (Lengvenyte et al, 2016)

IV. & V. Usage rates and rates of experimentation with drugs: e.g. survey of 1,324 German university students showed those participants who used cognitive enhancers were also more likely to consume lifestyle drugs compared to those who did not use enhancers (Eickenhorst et al, 2012)

4) Monitoring Use of Performance Enhancers

- i. Whilst it is difficult to measure the prevalence of the use of cognitive enhancement drugs, it is important to increase awareness of their existing use.
- ii. Looking at the likelihood of increasing normalisation of enhancement drugs use would enable consideration of potential 'trigger' factors – circumstances where individuals are more likely to consume such drugs.

iii. It would be extremely useful to have the same sort of large-scale data of both usage and experimentation which has been gathered in the case of illicit/recreational drugs, and which has been incorporated into studies of the normalisation of this sort of drug use (Parker et al 2002).

- Some existing evidence from small scale qualitative studies (e.g. Vrecko, 2013; Vargo & Petroczi, 2016; Coveney, 2011) suggests that young people may rationalise or justify their use of enhancement drugs for a variety of reasons:
 - a) such drugs may not be categorised as illegal;
 - b) usage may not be perceived or defined by individuals as 'drug use' because they are for the purposes of working harder and longer rather than for 'getting high', pleasure/entertainment.
- This would need to be taken into account in the design of survey questions.

Implication: if suitable questions were to be incorporated into existing surveys of the drug use of e.g. young people (EMCDDA), then this would help to establish an understanding of the patterns of and attitudes towards enhancement drug use in its various forms.

5) Policy Implications

- a) Traditional approaches to the prevention of drug use in the workplace are based upon looking at the individual drug-user as an isolated problem to be treated.

However, in policy terms the use of a 'normalisation' perspective moves away from this **individual** focus and emphasises the **social context** within which drug use is more likely to be taken up.

Implication: Attempts to ban or make drugs illegal are likely to be ineffective, partially because they ignore the social context in which drug use may be normalised.

b) Conventional efforts at prevention also ignore or divert attention away from the working conditions under which individuals make what are, for them, rational decisions to take performance enhancers.

Individuals may see enhancers as legitimate and acceptable because they aid work or help them to cope (in contrast to recreational drug use for pleasure which might be perceived as less acceptable, risky or deviant behaviour).

- c) Some performance enhancement drugs and substances are not explicitly illegal to consume, even in the absence of a prescription (although supplying them to others might be illegal).
- d) The ease of access to drugs via the internet has significantly changed the landscape.

Implication: For these reasons a harm reduction approach would seem to be recommended.

This would include information on side-effects, the dangers posed by off-label use of prescription drugs, the risks of unauthorised online pharmacies, the ‘fake news’ about the powers of enhancement drugs.

References

- Coveney, C. M. (2011) 'Cognitive enhancement? Exploring modafinil use in social context'. In *Sociological reflections on the neurosciences* (pp. 203-228). Emerald Group Publishing Limited.
- Eickenhorst, P., Vitzthum, K., Klapp, B. F., Groneberg, D., & Mache, S. (2012) 'Neuroenhancement among German university students: motives, expectations, and relationship with psychoactive lifestyle drugs', *Journal of psychoactive drugs*, 44(5): 418-427.
- Lengvenyte, A., Strumila, R., & Grikinienė, J. (2016) 'Use of cognitive enhancers among medical students in Lithuania', *Nordic Studies on Alcohol and Drugs*, 33(2): 173-188.
- Parker, H., Aldridge, J., Measham, F., & Haynes, P. (1999) *Illegal Leisure: The normalisation of adolescent recreational drug use*, Psychology Press.
- Parker, H., Williams, L., & Aldridge, J. (2002) 'The normalization of 'sensible'recreational drug use: Further evidence from the North West England longitudinal study', *Sociology*, 36(4): 941-964.
- Vargo, E. J., & Petróczi, A. (2016) 'It Was Me on a Good Day': Exploring the Smart Drug Use Phenomenon in England', *Frontiers in psychology*, 7.
- Vrecko, S. (2013) 'Just How Cognitive Is "Cognitive Enhancement"? On the Significance of Emotions in University Students' Experiences with Study Drugs', *AJOB Neuroscience*, 4(1): 4-12.
- Wibberley, C.W. & Price, J. F. (2000) 'Young People's Drug Use: facts and feelings—implications for the normalization debate. *Drugs: education, prevention and policy*', 7(2): 147-162.
- Williams, L. (2016) 'Muddy waters?: Reassessing the dimensions of the normalisation thesis in twenty-first century Britain', *Drugs: Education, Prevention and Policy*, 23(3): 190-201.

Thank you for your attention