

Smart drug helps you to sleep less and think more

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A drug that enables people to function with less sleep also works as a “smart drug” to make the human brain work better, researchers have concluded.

Modafinil is already used off-prescription by students cramming for exams and by city traders working long hours. The study raises questions as to whether it should be made officially available to certain people in society, scientists said.

Ruairidh Battleday and Anna-Katharine Brem from the University of Oxford and Harvard Medical School conducted a systematic review of published research on the drug, originally designed to help narcolepsy sufferers.

Their study, published online in the journal *European Neuropsychopharmacology*, found that it helped non-sleep-deprived users to improve their decision-making and planning.

They said studies had shown few side-effects from the drug, although a small number of people reported insomnia, headaches, stomach ache or nausea. Dr Brem said: “In the face of vanishingly few side-effects in these controlled environments, modafinil can be considered a cognitive enhancer.” She added

that it raised ethical questions as to whether society wanted people to be able to enhance their brain power with chemicals.

Barbara Sahakian, an expert in the drug from the University of Cambridge, said: “As a society, we need to discuss how we would like to enhance ourselves.” There were potential benefits for people such as surgeons and air traffic controllers “where staying awake and alert would prevent harm to themselves and others”.

Professor Sahakian added: “In the USA, modafinil is approved for shift work sleep disorder, as modafinil has been found to reduce accidents in shift workers.”

There were issues around potential inequality of access to such drugs depending on individual wealth, she said. She also cautioned against people trying to obtain the drug without prescription. “As yet, we have no long-term safety and efficacy studies of modafinil effects on cognition in healthy people.”

Although the new paper found that modafinil made no difference to working memory or flexibility of thought, Trevor Robbins, also of the University of Cambridge, said that a recent paper had shown “significant effect”.

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