



Laughing gas inhalation in Chinese youth: a public health issue

Nitrous oxide is a common medical inhalational anaesthetic. However, direct high-concentration inhalation of nitrous oxide, via a balloon or plastic bag, is increasing among recreational users, and can lead to psychological addiction and cerebral anoxia.¹ Abuse or long-term use can also cause vitamin-B12 deficiency, and severe neural and psychiatric symptoms.¹

Recreational use of nitrous oxide within pubs and night clubs increased in popularity during 2017, in China, after being introduced by returning overseas students.^{2,3} Nitrous oxide can provoke transient dizziness, dissociation, disorientation, loss of balance, and impaired memory and cognition.⁴ Cases of hallucinations or persecutory delusions have also been reported.⁵ No comprehensive data exist regarding the prevalence and demographics of nitrous oxide misuse in China. The most recent report in 2017, released by the Chinese National Narcotics Control Commission, only briefly mentioned that new types of psychoactive substances such as laughing gas continue to emerge.⁶

Access to nitrous oxide is restricted in many countries, such as Australia, Japan, and the UK. However, in China, nitrous oxide is not categorised as an anaesthetic or psychotropic substance, and the use of this drug remains unrestricted. Although internet search results of laughing gas are blocked in China, alternatives exist to locate suppliers online.

Locally, some progress has been made. In December, 2017, police in the Zhejiang province processed the first criminal case on illegal distribution of laughing gas in China.⁷ The perpetrator was charged by the local authorities with operating an illegal business, because laughing gas is categorised as a dangerous chemical that requires a license to be sold. Additionally, the

Beijing municipality will be the first local government authority to begin the process of regulating laughing gas.⁸ However, national regulation policies have yet to be established. Therefore, the government must urge judiciary and health administration departments and the food-and-drug administration to collaborate and legislate to control the supply of nitrous oxide. Tackling the mental health issues associated with laughing gas misuse in young Chinese people is also crucial, and more research is needed to enhance prevention, treatment, and rehabilitation programmes.

We declare no competing interests.

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