

Let's be more conscious about the misuse of nitrous oxide

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Key points

Highlights the increasingly concerning problem surrounding the misuse of nitrous oxide amongst the general public.

Improves the understanding of the dangers of using nitrous oxide recreationally and how to support patients with a drug problem.

Highlights the support services available for dentists and doctors struggling with a drug problem.

Abstract

Following the 'No laughing matter' article published in 2020 by Dr Croser, this paper further highlights the increasingly concerning problem of the illicit use of nitrous oxide.

Since 1884, the benefits of nitrous oxide have been exploited in the field of dentistry. Its analgesic and mild anaesthetic properties, alongside suggestive hypnosis and reassurance, are often enough to relieve the anxieties of our patients sufficiently to enable dental treatment. When used appropriately, it has a wide margin of safety and no significant side effects. However, the instantaneous feeling of euphoria experienced after inhaling the drug lends itself to recreational use. This is becoming more popular among the younger generations of the population; the drug is both incredibly easy and cheap to purchase, at only 22p a cannister. More than half a million teenagers and young adults are using this drug at present. Grieving parents of teenagers who have tragically lost their lives to this drug are pleading for people to stop, and for The Advisory Council on the Misuse of Drugs to criminalise nitrous oxide.

Let's be more aware of the dangers of nitrous oxide, encourage those to seek help when they need it and refer to local drug support services – it could help to save lives.

The misuse of nitrous oxide

Following the 'No laughing matter' article published in 2020 by Dr Croser,¹ this paper further highlights the increasingly concerning problem of the illicit use of nitrous oxide.

Since 1884, the benefits of nitrous oxide have been exploited in the field of dentistry and indeed, in medicine. Its analgesic and mild anaesthetic properties, alongside suggestive hypnosis and reassurance, are often enough to relieve the anxieties of our patients sufficiently to enable dental treatment. Other idyllic properties of this sedative are its rapid onset and rapid recovery, which are of benefit to both the patient and the dental team caring for them.² Despite its wide margin of safety, it is rigorously regulated

and technique-standardised to ensure that it is only used in the most appropriate manner, the unpleasant and dangerous effects of over-sedation are prevented, and the effect of chronic exposure to staff in the work place is minimal.³

The instantaneous feeling of euphoria experienced after inhaling the drug lends itself to recreational use. This high is being chased by many more people across the UK than we have previously seen.⁴ Sustained use or addiction to 'hippie crack' or 'noz' leads to cognitive impairment, such as hallucinations, paranoia and myeloneuropathy – the permanent paralysis of the limbs due to extreme and sustained B12 deficiency.⁵ David Nicholl, a consultant neurologist at Birmingham City Hospital, explained that he would normally see one or two of these cases in a 20-year period, but during the COVID-19 lockdown, he witnessed a case every week.⁶ This has been attributed to the increased use of larger canisters of the gas, usually 80 times the size of 'whippits', the small silver canisters that are often found at the bottom of stairwells or in the back alleys of major cities across the UK.

Sustained use ultimately leads to death by suffocation. In fact, a total of 716 deaths related to volatile substances were recorded in England and Wales between 2001 and 2020.⁷

Grieving parents across the UK are featuring more regularly in our news headlines, speaking of their personal losses and educating others on the dangers and harsh realities of nitrous oxide.⁸ Some have called the increasing use of the drug among teens as an epidemic.⁶ I conducted a 15-second search of the internet which revealed that these small canisters are instantly available to buy on the most popular online shopping sites for a rough price of 22p each. Discrete packing can also be requested and delivery is free of charge. With this drug being so accessible, is it any wonder that more than 500,000 of our 16–24-year-olds are using it?⁴ The sale of nitrous oxide for its psychoactive effects is illegal under the Psychoactive Substances Act 2016.⁹ However, the drug still has its uses in the medicinal industry for its pain management, and in the catering world, where it is mainly used as a propellant for whipped cream canisters. Therefore, sales are very difficult to police. It

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is still legal to be found in the possession of the drug; although, The Advisory Council on the Misuse of Drugs is expected to provide a recommendation in 2023 on whether nitrous oxide should be criminalised.¹⁰

Following the tragic death of 16-year-old Kayleigh Burns in June 2022 after inhaling nitrous oxide and suffering a fatal asthma attack, her friend, Millie Lane, is campaigning to stop under-18s from being able to purchase nitrous oxide canisters and ensure that businesses require licences to sell them.¹¹

Drugs can be a hard subject to discuss. Creating an environment within your dental setting that encourages patients to confidently discuss their general wellbeing enables us to provide holistic healthcare based on their needs as an individual, instead of focusing solely on their oral health. Taking thorough social histories from our patients and subsequently signposting them to local drug treatment services will help to keep our patients safe, both in and out of the dental chair. Talk to Frank is a user-friendly, easily accessible website that provides helpful information and

advice for those with drug problems. It has tips for coping with addiction and has its own emergency helpline.⁵

A recent article in *The Daily Telegraph* discusses how a medic had previously been struck off for inhaling nitrous oxide from the anaesthetic equipment during operations.¹²

Let's be more mindful of supporting our colleagues when they need it, or speak to specialised services when we need the help. These include organisations such as Narcotics Anonymous, Mind, or accessing local drug treatment services in your area via NHS choices.

Ethics declaration

The author declares no conflicts of interest.

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