

Nitrous oxide ●

What is nitrous oxide?

Nitrous oxide is a colourless gas that is commonly used for sedation and pain relief, but is also used by people to feel intoxicated or high.¹

It is commonly used by dentists and medical professionals to sedate patients undergoing minor medical procedures.¹ It is also a food additive when used as a propellant for whipped cream, and is used in the automotive industry to enhance engine performance. It may be used to assist in treating alcohol withdrawal.² Nitrous oxide is classified as a dissociative anaesthetic and has been found to produce dissociation of the mind from the body (a sense of floating), distorted perceptions and in rare cases, visual hallucinations.²

How is it used?

The gas is inhaled, typically by discharging nitrous gas cartridges (bulbs or whippets) into another object, such as a balloon, or directly into the mouth.³ Inhaling nitrous oxide produces a rapid rush of euphoria and feeling of floating or excitement for a short period of time.³

Other names

Laughing gas, nitro, N2O, NOS, nangs, whippet, hippy crack, buzz bomb, balloons.

Effects of nitrous oxide

There is no safe level of drug use. Use of any drug always carries risk. It's important to be careful when taking any type of drug.

Nitrous oxide affects everyone differently, based on:

- the amount taken
- the user's size, weight and health
- whether the person is used to taking it
- whether other drugs are taken around the same time.

The following effects may be felt almost immediately and can last for a few minutes: ^{1,2,3}

- euphoria
- numbness of the body
- sedation
- giddiness
- uncontrolled laughter
- reduction of co-ordination
- blurred vision
- confusion
- dizziness and/or light-headedness
- sweating
- feeling unusually tired or weak
- sudden death.

If a large amount of nitrous oxide is inhaled it can produce: ^{3,5,7,8}

- loss of blood pressure
- fainting
- heart attack.

Inhaling nitrous oxide can be fatal if you don't get enough oxygen, which is known as hypoxia.⁷

Long-term effects

Prolonged exposure to nitrous oxide may result in: ^{3,5,6}

- memory loss
- vitamin B12 depletion (long-term depletion causes brain and nerve damage)
- ringing or buzzing in the ears
- incontinence
- numbness in the hands or feet
- limb spasms
- potential birth defects (if consumed during pregnancy)
- weakened immune system
- disruption to reproductive systems
- depression
- psychological dependence
- psychosis.

Mixing with other drugs

There is no current evidence demonstrating that mixing nitrous oxide with other substances increases health risks. However, it is possible that combining the gas with stimulants and other drugs places additional pressure on the heart, increases blood pressure and may disrupt heart rate.⁶

Anecdotal evidence suggests that combining nitrous oxide with other drugs such as LSD or magic mushrooms may briefly intensify their effects.⁶

Mixing nitrous oxide and alcohol can cause:

- confusion
- feeling heavy or sluggish
- reduced concentration
- loss of body control.⁹

Health and safety

When inhaling directly from tanks or whippets (bulbs), the gas is intensely cold (-40C degrees) and can cause frostbite to the nose, lips and throat (including vocal cords).^{6,10} The gas is also pressurised, and injury can result from inhaling directly from a pressurised container. Releasing the nitrous oxide into a balloon helps to warm the gas and normalise the pressure before inhaling.^{5,8}

People can also harm themselves if they use faulty gas dispensers, which may explode. Dispensing several gas canisters consecutively with one cracker (a handheld device used to ‘crack’ a nitrous oxide bulb/whippet) can also cause cold burns to the hands.⁶

It is possible to reduce the risks associated with misusing nitrous oxide by not:

- using it alone or in dangerous or isolated places
- putting plastic bags over the head or impeding breathing in any way
- drinking alcohol or taking other drugs
- standing or dancing while inhaling, as the user may pass out.^{5,6}

Withdrawal

There are no significant withdrawal symptoms apart from potential cravings to use more nitrous oxide.¹

Nitrous oxide statistics

According to the Australian Trends in Ecstasy and Related Drug Markets 2016 Survey, around one third (36%) of a sample of people who regularly use ecstasy and related drugs reported recent nitrous oxide use in the six months preceding the survey. This is considerably higher than 2015 results (26%). Use was highest in Victoria (62%).¹⁰

References

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8. UK Home Office. (2014). Guidance on restricting the supply of nitrous oxide for recreational use.
9. Zacny, JP, Camarillo, VM, Sadeghi, P, & Black, M. (1998). Effects of ethanol and nitrous oxide, alone and in combination, on mood, psychomotor performance and pain reports in healthy volunteers. *Drug and Alcohol Dependence*, 52(2), 115-123.
10. Australian trends in Ecstasy and Related Drugs Markets 2016: Findings from the Ecstasy and Related Drugs Reporting System (2016) retrieved from <http://www.drugtrends.org.au/reports/national-edrs-2016/>

Always call an ambulance on triple zero (000) if an overdose is suspected: tell the paramedic exactly what has been taken. Paramedics are there to help and will not involve the police unless there is a danger to themselves or others.

Other help, support services and resources

Links to further help and support • adf.org.au/help-support/

● **Further information**

DrugInfo • 1300 85 85 84

Free confidential information and advice about alcohol and other drugs (9am - 5pm, Mon-Fri)

Family Drug Help • 1300 660 068 • www.familydrughelp.com.au (Victorian-based)

Services are available to support those around you who may be affected by your drug use. As well as providing understanding, they can provide information about how best to help during treatment.

Family Drug Support • 1300 368 186 • www.fds.org.au (Australia-wide)



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