

Inhalant effects

Nitrous oxide (N₂O) is a dissociative drug which reduces (or blocks) signals to the conscious mind from other parts of the brain, typically, but not necessarily, limited to the senses. Such a state of sensory deprivation and dissociation can facilitate dreamlike states which may resemble some psychedelic mind states.

This can cause:

- **A pain-free state**
- **Depersonalization** (detached from yourself)
- **Derealization** (external world seems strange or unreal)
- **Dizziness**
- **Euphoria**
- **Slight hallucinations**

These effects can result in similar dangers to those caused by alcohol, for example - death while driving intoxicated, operating machinery, etc.

Long-term Use

While the pure gas is generally not toxic, long-term use in excessive quantities has been associated with:

- **Vitamin B12 deficiency anaemia** (lack of red blood cells)
- **Neuropathy** (a problem with the nerves that carry information to and from the brain and spinal cord)
- **Tinnitus** (ringing, whining, buzzing, hissing, humming, or whistling sounds in the ear)
- **Numbness in extremities**
- **Limb spasms**
- **Incontinence**

National Information Line

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(excluding public holidays)



Re-Solv

about:
Nitrous Oxide

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N₂O



Nitrous oxide is a chemical compound with the chemical formula N₂O. At room temperature, it is a colourless non-flammable gas, with a pleasant, slightly sweet odour and taste. It is used in surgery and dentistry for its anaesthetic and analgesic effects.

Commonly known as "laughing gas" due to the euphoric effects of inhaling it, N₂O is being used increasingly as a cheap and recreational drug, particularly among students and young professionals.

Whipping Agent

Nitrous oxide is used as a whipping agent due to the ease with which it emulsifies oil, specifically it thickens them.

The gas is also approved for use as a food additive (also known as E942), specifically as an aerosol spray propellant. Its most common uses are in aerosol whipped cream canisters, cooking sprays, and as an inert gas used to displace bacteria-inducing oxygen when filling packages of snack foods.

Nitrous easily moves throughout the body, especially cells because cell membranes are oil-based lipids. Prolonged inhalation of high concentrations of nitrous oxide will cause it to migrate throughout the body into sinus cavities, the digestive tract and also fat cells.

An inactive person who has breathed high concentrations for 20-30 minutes but then breathes normally will still retain the gas in his

body at low doses as the gas slowly migrates back out of these internal cavities. Even after several hours of not breathing the gas, sudden rapid whole-body movements causes the dissolved gas to suddenly begin migrating out of fat cells, resulting in a latent dosing effect.

Addictiveness

Nitrous oxide can be habit-forming because of its short-lived effect (generally from 0.1 - 1 minutes in recreational doses) and ease of access. Death can result if it is inhaled in such a way that too little oxygen is breathed in.

While nitrous oxide is not a dangerous substance if used correctly, recreational users typically do not mix it with air or oxygen and thus may risk injury, or even death, from lack of oxygen.

When inhaled using a home made system consisting of a mask and/or regulator, it presents the highest potential danger due to the automatic, continuous application. This may in turn prevent adequate oxygen from reaching the user, rendering him unconscious, subsequently leading to death due to asphyxiation.

Nitrous oxide is used in medicine as a mix with 50% oxygen. Deaths from N₂O abuse are caused by people asphyxiating because they assume that they will begin to choke or gasp for air at some point. The 'gasp' effect is caused not by a person not getting enough oxygen, but by CO₂ poisoning caused by respiration. If they are breathing pure N₂O their body does not produce much CO₂ and therefore there is no 'gasp' effect. If they fall unconscious with no access to oxygen they will die.

Pregnant women should also not use nitrous oxide as chronic use is teratogenic (causes disfiguring birth defects or malformations) and foetotoxic (toxic to the foetus).

An inquest in February 2007 heard how a 23-year-old company manager was found dead at his home in Birmingham next to a large cylinder of the drug.

He had asphyxiated himself by excessive inhalation of the drug and had placed a bag over his head to increase the intensity of the fumes he was inhaling.

Dozens of pierced canisters of nitrous oxide have been found in a playground at Claverham, North Somerset.

Police believe that young people were experimenting with the gas and are trying to find out where they got the 70 canisters from.

"We are very concerned that young teenagers are risking serious injury, as piercing the pressurised canisters could make them explode. Alcohol cans and bottles were also found and we don't know what the combined effects could have for children's health."

Nitrous oxide is classed under the Medicines Act, which means that it can be sold if the seller has a special licence. Anyone over 18 can also buy it for use in cooking. There is currently no offence for possession of nitrous oxide. However, there may be legal implications if nitrous oxide is sold to minors.

**The
LAW**

