

# Nitrous Oxide (N<sub>2</sub>O)

## Harm Reduction Briefing

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### The Law

- Nitrous Oxide (N<sub>2</sub>O) became a controlled drug on November 8th 2023, and is now a [Class C, Schedule 5](#) drug under UK law. Possession of nitrous oxide is now an offence, where its intended use is to be inhaled for psychoactive effects ('to get high').
- Unless you can provide evidence of legitimate use, (for example if you have a whipped cream machine at home or you use it for model rockets), you will be arrested. It is less likely any 'whipped cream' type evidence will be believed if you are caught with your mates with a half used crate of 600g canisters in a park late at night.
- In most cases of possession, provided you have no previous offences, you will be offered a conditional caution, diversionary activity or community resolution. However, it is possible you will be charged and have to appear in court.
- Nitrous Oxide used as a fuel in drag racing engines is not suitable for human use because it contains sulphur dioxide and other impurities.



### Burns

- **Do not inhale directly from the tank, cracker or whipped cream dispenser.** It is so cold that it could seriously damage the throat and lungs. Always inhale nitrous oxide through a balloon.
- **N<sub>2</sub>O released directly from the tank can cause ice burns**, sometimes these are not noticed due to the anaesthetic effect of nitrous oxide. Some of the burns can be very deep, require multiple surgeries and result in scars. Burns can look superficial, but can rapidly develop into third-degree burn wounds. If you get N<sub>2</sub>O on your skin, rinse it in cold water. If you get an ice burn, seek medical attention from a doctor or at a hospital.
- **Nitrous oxide tanks can become freezing cold when the gas is released** and there has been a rise in ice burns when people hold the large tanks between their legs.

### Suffocation (asphyxiation)

- **Do not continuously breathe nitrous oxide in a confined space such as a car.** Nitrous oxide pushes the air out of confined spaces, cutting off the supply of oxygen. Several deaths have been linked to this
- **Do not use nitrous oxide with a bag over your head** or with a mask attached to cylinders. About five people a year die as a result of breathing nitrous oxide continuously without breathing air. People suffocate as the body becomes starved of oxygen.

## Accidents

- Driving under the influence of nitrous oxide is an offence and has resulted in a number of fatal car crashes.
- When using nitrous oxide, use in a safe location (for example sitting on a sofa or the floor). This is to prevent you falling or having other accidents because of temporary loss of balance or consciousness. Do not smoke or hold drinks or anything sharp when inhaling nitrous oxide. The more nitrous oxide you use, the higher the risk of falls or accidents.

## Effects on physical and mental health

- People with heart conditions or abnormal blood pressure may be at higher risk as the drop in oxygen levels caused by inhaling nitrous oxide raises the heart rate, which could cause problems in these individuals.
- Avoid mixing nitrous oxide with other drugs, especially stimulants, as effects on blood pressure and heart rate could be unpredictable.
- Use of nitrous oxide may induce psychotic symptoms in people with underlying mental ill health.



## Nerve Damage

- Because of the increased use of larger tanks and extra-large balloons, there has been a significant increase in people being seen at hospitals with nerve damage as a result of using large amounts of nitrous oxide on a regular basis.
- Using large amounts of nitrous oxide on a regular basis can lead to vitamin B12 deficiency, which can cause serious damage to the nerves and spine, resulting in some people being unable to walk. In some cases, this can last for months or years, or may even be permanent.
- Taking B12 supplements will not prevent B12 deficiency as a result of heavy prolonged nitrous oxide use. You may be treated with B12 supplements at hospital or your GP, but this is given by injection. You also have to stop using nitrous oxide for this treatment to be effective.
- The earliest symptoms of B12 deficiency are usually persistence of tingling, skin crawling or itching, numbness in hands and legs and later a staggering uncoordinated walk, lower limb weakness, muscle stiffness or twitching. If you have been using large amounts of nitrous oxide and are experiencing any of these symptoms, please see your doctor or go to the A&E department of the hospital as soon as possible.

## Pregnancy

- If pregnant, breast-feeding or planning on becoming pregnant then you should avoid nitrous oxide as this can harm the baby and may effect fertility.

## Poisons

- Because they are both gases used to fill balloons, nitrous oxide is sometimes confused with helium. Helium causes a high 'silly' voice, whereas nitrous oxide causes a deep 'silly' voice. The two gases are not related.
- Nitrous oxide is not the same as nitric oxide. Nitric oxide is a poisonous gas.

## Addiction

- There has been an increase in the use of larger 640g tanks and extra-large balloons. This has led to some people using very large amounts on a regular basis. Some people are using compulsively and may have become dependent on nitrous oxide. There are confidential services who can help you.

## What to do in emergency?

- If there are serious adverse effects call 999 and tell emergency services what has been taken.
- Seek medical attention if experiencing any negative side effects.
- Always place an unconscious person in the recovery position (see illustration)

1. Put the right hand by the head (as if they were waving)



2. Put the left arm across the chest, so that the back of the hand rests against the cheek



3. Hold the hand in place and lift up the left knee



4. Turn them on their side by pushing down on the knee



## Where to get help

Anyone experiencing issues from nitrous oxide or other substances should seek medical support via their GP or the NHS. There are a wide range of young people's services who can offer confidential support and help, for example:

England: <http://www.talktofrank.com/need-support>

Scotland: <https://www.scottishdrugservices.com/>

Wales: <http://dan247.org.uk>

Northern Ireland: <http://www.publichealth.hscni.net/publications/drug-and-alcohol-directories-services>

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