# A factsheet

## Nitrous Oxide

Nitrous oxide, commonly known as laughing gas, is used in surgery for its mild anaesthetic and analgesic effects and is one of the safest medical inhalants/anaesthetics, because it has little effect on critical body functions – which it is why it is a preferred painkiller for women giving birth and is used in dentistry to help relieve pain and anxiety. Favoured by the Victorians as a recreational drug, its popularity waned only to re-emerge as a recreational drug in the last few years becoming popular at parties and music festivals. National prevalence and mortality rates are not recorded. However, according to the Mix Mag Global Survey (2012), nitrous oxide was used by 27% of UK respondents and 43% of regular club goers in the past year.



At room temperature nitrous oxide is a colourless, non-flammable gas that is slightly sweet smelling and tasting. Recreational users often get it from whipped-cream chargers, sometimes called 'whippets', which are single-use, finger-length steel cartridges containing 8g of highly pressurised nitrous oxide.

#### **Route of administration**

In order to produce its dissociative effects, nitrous oxide is inhaled, usually by mouth.

Both whippets and crackers (a gadget which has a balloon or bag fitted) can be obtained from online suppliers and in head shops. Nitrous oxide is also found in supermarket cans of whipped cream. Other sources include full sized gas cylinders, intended for medical or industrial use.

#### Cost

Refills of pure nitrous oxide (whippets) for whipped cream dispensers (sold from catering shops in multiples) work out at around 50 for £14 i.e. around 28p each. Balloons already filled with gas cost around £1.50.

#### Dosage

A single inhalation will result in effects starting almost immediately and peaking about 10-20 seconds after inhalation and then rapidly diminishing. If the dose is repeated then effects reach a plateau about 30-60 seconds after the first breath. While the user often feels back to normal within about 2 minutes after the last inhalation some users report that effects, such as a sense of well-being, can be felt for up to 30 minutes after last use.

#### Patterns of use

Because the effects of nitrous oxide are pleasurable but brief, people often take it repeatedly over a short space of time;



users often take many 'hits' of nitrous oxide over a few hours. Nitrous oxide is normally used occasionally in a social setting, however like all drugs it has the potential for psychological dependency although this is rare.

#### **Effects:**

- Dizziness
- Euphoria
- Giggling and laughing
- Distortion of sound
- Hallucinogenic effects
- Dissociation
- Loss of balance
- Nausea
- Headaches

Although official figures are not collected for deaths related to nitrous oxide, there have been a number of deaths linked to its use, primarily due to oxygen deprivation.

### **Longer-term effects**

Regular use can lead to red blood cell problems that could result in anaemia. There is also a risk of vitamin D deficiency with continued use in addition to a link with mood swings and depression.

#### The Law

It is illegal to sell nitrous oxide to under-18s, and selling it to anyone you suspect may use it for the purposes of inhalation is illegal under the Medicines Act. Whilst it is legal to sell, as a way to whip cream and possession of whippets is legal, if you are found with large amounts of whippets without a valid reason, you could be charged with intending to supply it for inhalation.