



Welcome

www.inhalantsinfo.org.au

Thank you for the positive feed back to Issue 1 of our newsletter and the NIIS in general—it's great to see the news of our service spreading throughout Australia and beyond. I was recently asked for details about specific inhalants, so in this issue we will introduce a new regular segment – A-Z of chemicals; their composition, the substances they are found in, and their effects. This is intended to give you information about inhalants at the physiological level in an easy to read format (without too much chemical jargon). I also have resources to give away and win. We gladly welcome any feedback, suggestions or contributions to the newsletter and website. You can do this by sending an email to info@inhalantsinfo.org.au.

Regards

Ruth Mahon - NIIS Coordinator

What's in a name?

When work first started on the National Inhalants Information Service, one of the first things we noticed was that there was a variety of terms used to describe inhalants and inhalant misuse. It appears that this labeling has evolved as specific incidents of sniffing have arisen, as in the case of glue sniffing—glue contains volatile solvents and subsequently other substances that were sniffed also got the volatile solvent tag.

Different countries use different terminology. In the United Kingdom the terms 'Volatile Solvent [Substance] Abuse' (VSA) or 'Volatile Solvent Misuse (VSM)' are common, whereas 'Inhalant' is used in the United States. Here in Australia we use both VSM and inhalants and the terms are definitely used interchangeably.

Historically the term volatile solvent has been used to describe inhalants in general. **However not all inhalants are volatile solvents;** some are gases, some are nitrites. Add to the mix the fact that inhalants are contained (stored) in a number of different ways and the classification gets even trickier. For example when a volatile solvent is in a product such as glue or petrol it is classified a volatile solvent, however when it is combined with a gas and placed into a pressurised can, it is labeled an

aerosol. So what system do we use to describe inhalants?

Firstly, the term 'inhalants' is used as the broad term to describe products that have a legitimate purpose other than intoxication, but are intentionally inhaled to produce an intoxicated effect. Many different types of products are put into the inhalant category and for one reason – their mode of administration is by inhalation alone. So what about tobacco, that's inhaled.? Yes it is, but it can also be chewed. The same can be said of many illicit drugs – while they can be inhaled they can also be consumed by other methods.

Inhalants can be divided into 4 categories – volatile solvents, aerosols, gases and nitrites. A solvent is a liquid (generally) that is capable of dissolving something. A **volatile solvent** is a solvent that evaporates at room temperature, about 20° C, giving off fumes (usually aromatic). Products that contain volatile solvents include petrol, paint thinners, glue, nail polish remover, correction fluid, permanent markers, dry cleaning and spot removing fluids, and degreaser.

Aerosols contain a volatile solvent and a propellant contained under pressure. The effect can be as a result of exposure to the volatile solvent, the propellant or a combination of both. Items in this category include products contained in pressure packs such as paint, degreaser, hair spray, deodorant and computer cleaners.

Gases include chemicals, who in their natural state are in a gaseous form such

Common terms:

Inhalants
Solvents
Volatile solvents
Volatile substances
Inhalant Misuse (IM)
Inhalant Abuse (IA)
Solvent Abuse
Volatile Solvent Misuse (VSM)
Chroming
Huffing
Dusting
Sniffing

as butane, propane, nitrous oxide and carbon dioxide. Gaseous products include cigarette lighters, butane and propane fuel packs for camping stoves, refrigerants and anesthetics. While gases are commonly used in their pure form they are also used as propellants in aerosols such as room deodorizers, deodorants and hair spray.

Nitrites are often excluded from discussions about inhalants as their effects are different to volatile solvents, aerosols and gases (which depress the central nervous system). Nitrites act to dilate the blood vessels and relax muscles, which has made them popular as sexual enhancers amongst the gay community. These sweet smelling liquids are known by popular terms including 'poppers', and 'rush'.

A - Z of inhalant chemicals



The chemicals found in products classed as inhalants can have a range of effects on different parts of the body. In this series we will look at the most common of these chemicals, what they are found in, and their physiological effects.

Acetone

Other names: Propanone, Dimethyl ketone

Molecular formula: CH_3COCH_3

Type: Volatile solvent.

Appearance: Colourless liquid with sweet fruity smell.

Products found in: Nail polish remover, varnish, paint strippers and degreaser.

Flammability: Highly flammable.

Effects of exposure: Depression of Central Nervous System.

Short term: Contact can irritate skin and eyes, exposure can irritate eyes and respiratory track, cause dizziness, light-headedness, nausea drowsiness, and unconsciousness.

Long term: Limited human studies on the long term effects suggest no long term damage however animal studies have suggested possibility of liver damage.

Amyl Nitrite

Other names: 1-Nitropentane, commonly known as 'poppers'.

Molecular formula: $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_2\text{ONO}$

Type: Nitrite

Appearance: Yellow liquid with fruity smell.

Products found in: Pure, often sold in small bottles.

Flammability: Flammable.

Effects of exposure: Dilation of the blood vessels & smooth muscle (involuntary) relaxation.

Short term: Include dizziness, loss of inhibition, enhanced sensual feelings, nausea, headache, fainting, suppression of the immune system, possible incontinence.

Long term: Possible link to Kaposi's sarcoma (cancer) in HIV positive users.

Warnings: Should not be used in combination with Viagra or by people with depressed immune systems or glaucoma.

Benzene

Other names: Benzol

Molecular formula: C_6H_6

Type: Volatile Solvent

Appearance: Colourless liquid with a sweet smell.

Products found in: Petrol, cigarettes; also used by industry as a solvent in manufacture of inks, oils, paint, plastics and rubber.

Flammability: Highly flammable.

Effects of exposure: Depression of the central nervous system, known carcinogen.

Short term: Include irritation of nose, throat and lungs, exaggerated feeling of well being, dizziness, slurred speech, headache, hallucinations and increased libido.

Long term: Serious impacts on the brain, heart, liver, kidneys, lungs and bone marrow.

Source:

Pohanish, R. P ed. (2002) *Sittig's handbook of toxic and hazardous chemicals and carcinogens*, 4th ed., New York: Noyes Publications.

Toxipedia: connecting science and people (2008), viewed 29 September 2008, <http://toxipedia.org>

US Department of Health and Human Services, *Agency for toxic substances and disease registry*, viewed 29 Sept 2008, <http://www.atsdr.cdc.gov/>

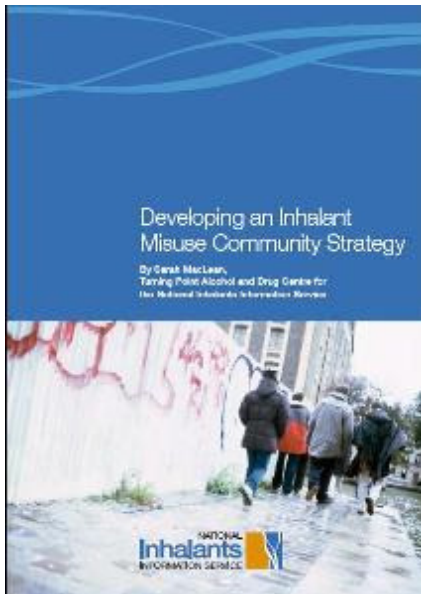
Our Service

There are three components of the NIS, all of which are provided **FREE** of charge to everyone .

Our **Website** - Your first contact point if you are looking for information about inhalants. The site is divided into different sections to make finding information easy and is updated regularly.

Our **Database** - A list of all the inhalant resources we hold. We aim to collect all types of resources including books, journal articles, pamphlets, multimedia, posters & conference papers. This database currently holds 700 resources.

Our **Library Service** - We can supply you with information or resources through our Ask-A-Librarian service or keep you up to date with our current awareness newsletters. Feel free to make contact by emailing info@inhalantsinfo.org.au



As mentioned in our last newsletter, Dr Sarah MacLean of Turning Point Alcohol & Drug Centre has been working with the NIIS to produce a resource for communities who are dealing with inhalant misuse. While this information is available on our website, we have also had it published into an easy to read booklet. Available free of charge, please [email](mailto:info@inhalants.org.au) the NIIS for your copy.



If you are in the AOD or health sector then this is a DVD you should see. Designed as a training and education tool for the sector, *Breathless* takes you into the world of those who are addicted to inhalants, specifically paint, living in South East Queensland.

“With honesty and compassion, *Breathless* gives the viewer access to the thoughts and feelings of those who are deeply affected by this dangerous addiction...*Breathless* is a moving story that offers an interesting and profound insight into this dark world” [Red Earth Website].

Produced by youth worker Jason Bray, in association with Red Earth Films, *Breathless* was this year accepted into the International Harm Reduction Film Festival in Barcelona.

We have several copies of *Breathless* for loan from the NIIS. Send us an email or request through the database. Go to www.inhalantsinfo.org.au/database

WE NEED YOU

If you are part of a community dealing with inhalant abuse, let us know how your getting on. The information you share might be useful for other communities.

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The NIIS is managed by the Alcohol and other Drugs Council of Australia (ADCA) - National Resource Centre.

WIN WIN WIN WIN

We have 5 copies of *Breathless* to give away!! For your chance to win a copy, be one of the first 5 people to email your answer, name and address to the following question to info@inhalantsinfo.org.au

Question: The documentary *Breathless* was released in what year?
(hint: you will find the answer in our database)

National Inhalants Information Service

Inhalants Database

The NIIS can supply you with copies of journal articles as well as loaning items including books, CDs, and DVDs. There is no charge for this service. For a full listing of all resources please visit www.inhalantsinfo.org.au/database. Please email your requests to info@inhalantsinfo.org.au

Items recently added to the database.

362.2990994 MAC

MacLean, Sarah

Developing an inhalant misuse community strategy

Place: Deakin, A.C.T.

Publisher: Alcohol and Other Drugs Council of Australia

Date: 2008

616.86 HAN

Handbook of the medical consequences of alcohol & drug abuse.

Edition: 2nd ed.

Place: New York

Publisher: Haworth Press

Date: 2008

VF 2008-531

Rayner, Charlotte

Illicit drug use and its effect on the lungs.

Volume: 104 (9) 2008

Source: Nursing Times

Pages: 40-44

Date: 2008

VF 2008-436

Lubman, Dan I.

Inhalant abuse among adolescents : neurobiological considerations [Review]

Volume: 154 2008

Source: British Journal of Pharmacology

Pages: 316-326

Date: 2008

VF 2008-431

Baliz, Yasmin

Inhalant abuse in adolescents : an initial study of cognitive functioning

Pages: x, 122 p.

Date: 2008

Web address: <http://wallaby.vu.edu.au/adt-VVUT/uploads/approved/adt-VVUT20080409.090214/public/02whole.pdf>

VF 2008-437

Inhalant use across the adolescent years

Volume: March 13, 2008

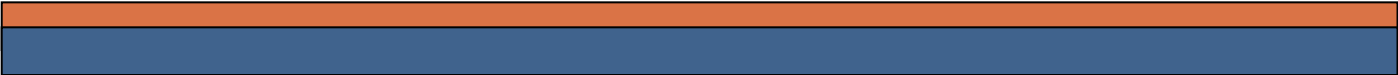
Source: The NSDUH Report

Pages: 4 p.

Publisher: Dept. of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies

Date: 2008

Web address: <http://download/ncadi/samhsa.gov/prevline/pdfs/NSDUH08-D313.pdf>



Perron, Brian E.

Perceived risk of harm and intentions of future inhalant use among adolescent inhalant users. [Short Communication].

Volume: 97 (1-2) September 2008
Source: Drug and Alcohol Dependence
Pages: 185-189
Date: 2008

Clough, Alan R.

Promising performance of a juvenile diversion programme in remote Aboriginal communities, Northern Territory, Australia. [Brief Communication].

Volume: 27 (4) July 2008
Source: Drug and Alcohol Review
Pages: 433-438
Date: 2008

Van Hout, Marie Claire

Solvent use among young Irish adolescents - a growing concern for youth workers, teachers and parents?

Volume: 8 (1) March 2008
Source: Drugs and Alcohol Today
Pages: 27-36
Date: 2008

VF 2008-430

Field-Smith, M.E.

Trends in death associated with abuse of volatile substances 1971-2006. [Report 21].

Pages: 55 p.
Publisher: St George's, University of London, Division of Community Health Sciences
Date: 2008
Web address: <http://www.sgul.ac.uk/dms/6F3B539DC3587E17C8AB3D515CFA486D.pdf>
