



Volatile Substance Abuse Information Pack

Introduction

Volatile Substance Abuse (VSA)?

Volatile Substance Abuse is the practise of inhaling volatile substances in common household products like glues, aerosols and gases in order to get high

Common terms for VSA include “buzzing”, “sniffing”, “bagging” and “huffing”.

In the home, there are a number of different products that can be used for the purpose of “getting high”, commonly nail varnish remover, lighter fluid, deodorant and hair spray to mention a few, but there are literally thousands of products on the market that can be used. In aerosols, it is butane and propane that acts as the propellant, this is what gives the user their “buzz”. Volatile substances produce a vapour which evaporates quickly.

If used as intended, these products are perfectly safe, a key message is to ensure you read the labels on products, check how they are intended to be used and check the warnings from the manufacturers.

What is the issue with VSA?

VSA does kill, from 2010 – 2012, there were 47 deaths in Scotland, it can be instant, but as it remains in the users system for a number of days, it can still kill days after taking part.

Across the UK, there were nearly 2,400 deaths between 1971 and 2009, 327 of these were in Scotland. There is no safe way of taking part, every method of participating is as dangerous as another.

The youngest person to die from VSA was only 7 years old, the oldest was 87. Many deaths in the Scotland are a result of accidental VSA, they are using products for a legitimate purpose in an incorrect way which resulted in them inhaling the fumes and becoming intoxicated. This is down to the fact that people are not aware of the dangers of using and working with volatile substances.

VSA is almost impossible to control through legislation, for every product available there is an alternative, however this would result in the closure of a massive industry.

VSA is a growing issue, with the number of deaths increasing each year in Scotland, as products are so easily accessible it is foreseen to continue to grow as an issue.

St. George's Report

Research teams at St. George's University in London provided a report on the deaths by VSA (*Trends in UK Deaths Associated with Abuse of Volatile Substances Report since 1971*). This is the only study and publish that has been done to record trends and show a scale of the issue of Volatile Substance deaths. Unfortunately, due to funding, the last report was published in 2012, showing the results of 2009, there has not been since, a report of the deaths related to Volatile Substances. However, St. George's do still have records of the deaths over the past few years, which they have provided, but not published.

The St. George's Report in 2012, shows alarming figures in the details and scale of the death statistics due to volatile substance abuse. From 1971 – 2009, VSA claimed over 2,390 lives in the UK, with 327 of these in Scotland. Almost 2/3 of these deaths were of young people under the age of 19, with the most common age being only 15 years old.

The youngest reported death was of 2 young boys aged 7 years old (1997 and 2003), VSA kills more young people aged 15 and under than any illegal substance.

The most common product used involving death was gas fuels (67%) with aerosols, nitrous oxide and others covering the remaining 33% (See Appendix A for full breakdown).

Figures showed that males were more at risk than females, between 2000-2009 420 males died, compared with 115 females, however, this does not mean that females are safe, it is also reported that the number of female deaths has increased from 6 between 1983 – 87 to 45 from 2003-07, this is a 650% increase in the number of females who have died (see Appendix B for statistical table)

Although St George's have not published figures since 2012, covering deaths until 2009, they do still have a record of the figures after this time, from 2010 – 2012, a total of 47 deaths have occurred in Scotland.

Other Statistics

Although not produced by St George's University, a study was carried out to compare VSA with illegal substances offered to young people, amongst 11 year olds, 4% had been offered cannabis, compared with 7% being offered volatile substances, for 12 year olds, 8% were offered cannabis and 9% offered volatile substances. From 13 years onwards, statistics show that more young people are offered cannabis, but volatile substances is always second. This survey also asked young people if they had been offered ecstasy, heroin, cocaine and amphetamines, none of these resembled the same percentages as volatile substances and cannabis. (See Appendix C for full breakdown of all drugs offered to young people).

SACKI Logo

The SACKI Logo was introduced in 1997 by the British Aerosols Manufacturing Association, a great deal of thought went into the design and production of the logo, however, it was never made compulsory for manufacturers to print this on their products, therefore there are a number of products which do not show this and can still be used for Volatile Substance Abuse.



Ideally, we would like to see this logo made compulsory to be printed onto volatile substance products and designed to stand out more on products, making it more visible. At present, many people are under the impression that products which show the SACKI logo are more dangerous than those that do not.

Legalities

There are laws in place in an attempt to combat the abuse of volatile substance products, it is illegal for any butane gas cigarette lighter refills to be sold to any person under the age of 18 (*The Cigarette Lighter Refill (Safety) Regulations 1999*).

As well as this, Scottish Common Law reinforces that selling/supplying **any** product to **any** person of **any** age, knowing that the product will be used for volatile substance abuse carry fines up to £12,000 and a prison sentence of 2 years. This is a law that, unfortunately, not many people are aware of, including many shop owners.

Test purchasing is carried out across Scotland, following LOST campaigning for more focus to be put towards Volatile Substance Abuse in 2004. However, this tends to be reactive to members of the public reporting retailers rather than routine checks.

The Children (Scotland) Act 1995, included VSA as grounds alone for referral to the Children's Reporter, who may commence a children's hearing to determine if the safety and welfare needs of a child are being met.

Who Participates In VSA?

When it comes to VSA, there is no stereotypical user, those using include males and females of any age with a variety of backgrounds and social standings.

However, statistics show that those with trauma in their past are more likely to take part.

According to a report by Goulden C and Sondhi A in 2001 (*At the margins: Drug use by vulnerable young people in the 1998/99 Youth Lifestyles Survey*), 12 – 16 year olds who had reported using Volatile Substances were categorised as:

- Excluded from school – 48%
- Truant from school – 41%
- Impoverished living conditions/homeless – 43%
- Delinquency/criminal behaviour – 26% serious offenders, 2% non-offenders

Reasons for Substance Misuse

With substance misuse of any kind, there is a reason behind any user looking to use, often this is a key factor that is overlooked in addiction services, which substance to use is a secondary decision.

There are a huge range of different substances available, including heroin, cocaine, cannabis, ecstasy, various “legal highs” and alcohol to mention a few. In many cases use is related to the user feeling depressed, anxious, lonely and hopeless, misusing substances gives them an escape from everything that they feel is getting to them. With other substances, they are used as part of a social group or activity, at parties for example to help them “loosen up”.

Other reasons for individuals to choose to experiment with substances include peer pressure, curiosity and boredom, this is often the reason for a user’s initial experimental use, and again this initial reason for wanting to experiment can often be related to some form of mental state such as depression or anxiety.

Why Choose VSA?

Given how many substances there are, the question is often asked, why choose volatile substances. The main reasons are that it is cheap, accessible, easy to hide and legal to buy, very rarely does a retailer question why someone buys an aerosol, such as deodorant, or lighter refill gas.

Younger persons often try volatile substances as their first substance misuse with friends or existing users, a lot report to have tried it once and not liked it, so they haven't done this again (often these people move on to try substances such as alcohol). Others who try volatile substances become regular users and eventually move onto other substances such as cannabis and heroin, while others remain on volatile substances.

Patterns of VSA Use

Users will develop the longer they abuse volatile substances:

- **Experimental** – often young people, for many, it is not worth trying again
- **Recreational** – often in a group who have also participated before
- **Regular** – a need to get relief, user may be in a group with people who aren't using
- **Dependant** – Psychological dependence, emotional distress when not using, withdrawal, social isolation and serious health problems regularly related with this level of use.

Dependence on VSA

According to the International Statistical Classification of Diseases and Related Health Problems (10th Edition), three or more of the following in a 12 month period suggests dependency of any substance:

- Strong desire or sense of compulsion to take the substance
- Difficulties in controlling substance-taking in terms of onset, termination or levels of use
- A physiological withdrawal state
- Evidence of tolerance
- Progressive neglect of alternative pleasures or interests
- Persisting in substance use despite clear evidence of overtly harmful consequences

Methods of VSA

There are various different methods of participating in volatile substance abuse that have been attempted by users, the most common is to inhale directly from the tin through the mouth, these users remove the button from the top of the can and push the hose against their teeth, inhaling as the vapour is sprayed into their mouth.



Some users put the substance in a bag and inhale from the opening, or put the bag over their head full of vapour.

Another popular method is to place the substance on a rag, towel or sleeve, then hold over their face inhaling the fumes from there.



None of these methods are safer than another, although they all do pose extra risks and dangers, for example placing a bag over your head could result in suffocation.

VSA & the Body

When volatile substances are inhaled into the body, the vapours take a tour of the body very quickly and the effects can be in place within a few minutes.

From inhalation, the vapours go into the lungs, where they are passed into the blood stream, from here they are spread all over the body via the heart, including the brain. Due to how quick this process takes place, intoxication can be rapid (within 30 seconds), and the psychoactive intoxication lasts only a few minutes, with the user feeling back to normal within 30 minutes, as the vapours clear dilute.

The vapour leave the body through various means, most will leave through exhalation, others will be chemically altered in the lungs, whilst the rest are filtered in the kidneys.

Through time, tolerance may build up as the body adjusts and becomes used to the vapours being in the system.

Effects of VSA

The effects of participating in VSA are varied dependant on the product being used, the typical effect is very similar to alcohol in relation to behaviour, including hyperactivity. Other effects include unconsciousness, convulsions, vomiting and hallucinations.

Due to the nature of the substance and the drunken like state, there is a high risk of accidents, this is due to the fact that chemical balance of the brain has been altered and thought processes do not work the same, therefore the ability to dynamically risk assess is affected, regularly users feel they are indestructible and take part in activities that they would not normally do whilst “sober”.

Most users report a disturbed sleep pattern and nightmares, unable to sleep for more than 2-3 hours per night, this also has the knock-on effect of being regularly tired and withdrawn.

Long-term effects include damage to sight, the brain and central nervous system, hearing, liver, speech, kidneys, lungs, bone marrow and heart.



Dangers of VSA

The effects of VSA mean there is a considerable list of dangers involved with volatile substance misuse, including harm from the other chemicals contained in products, which are infinite.

Accidents regularly occur whilst under the influence of volatile substances, due to hallucinations and the chemicals in the brain being misbalanced, users are more likely to take part in activities that they would not normally feel safe doing, such as climbing out windows and balancing on balconies. As well as these users perceptions are affected and simple tasks such, as crossing a road, can be very dangerous.

Whilst a person is participating in VSA, there is also a danger to others around them, a side effect of participating in VSA is aggressive behaviour with no stimulus, and users will start arguments and fights with passers-by on the street whilst under the influence. Another danger that affects others is the risk of fires and explosions, all too often users are also smoking at the same time as buzzing on gas, there are many cases where fires have started and explosions have happened due to volatile substances catching alight, this could lead to the death of others in the surrounding area, including those who live in the neighbourhood.

Due to vomiting and unconsciousness being effects of taking part in VSA, the risk of choking is increased, which can prove to be fatal, which is similar with the risk of suffocation for those who take part by placing a bag over their head.

Recognised as the largest risk of all to volatile substance abusers is sudden sniffing death. Sudden sniffing death is caused by an over-sensitivity to adrenaline in the heart. Adrenaline is a natural hormone produced in the brain and travels around the body, the more active the body, the more adrenaline is produced. Due to this over-sensitivity, the heart stops. When a person's heart stops, from a medical point of view, CPR is performed and then a defibrillator is attached to provide a shock to try and get the heart beating again, if this does not work an injection of adrenaline is provided in order to kick-start the heart, due to the over-sensitivity, this does not work. When a person's heart stops due to sudden sniffing death a defibrillator needs to be used within the first 5-10 minutes for it to be effective, unfortunately, the chances of this being possible are very low and therefore the survival rate for this type of death is extremely low.

Signs & Symptoms of VSA

It can be very difficult to determine if a person is participating in volatile substance abuse, due to the signs being very similar to alcohol and “typical teenagers”. The typical signs are slurred speech, unsteadiness, a drowsy glazed expressions, excessive giggling, red eyes, rowdy behaviour, aggressiveness and varying mood swings. As well as these, there may be a distinctive smell of chemicals on the body, breath and clothing and rashes/sores around the mouth and nose.

Through time you can see a decline in school/work or hobbies and a user will become more secretive, friends will often change and the user will spend more time alone.

Separate to seeing the user, there is often evidence in the environment of volatile substance abuse taking place, traces or smells of chemicals, products being used at an unusual rate and found in unusual places (or hidden), cigarette lighters with the tops removed, nozzles removed from aerosol cans, teeth marks around the top of aerosol cans and bags with a chemical smell and residue inside.

Treatment for VSA

There is currently no medical substitute for Volatile Substance Abuse, like there are for other drugs), only support is available to help in recovering from VSA.

A number of professors and scientists have attempted to find a medical provision to assist with this, including Lee et Al, who reported in the *Gamma-vinyl GABA blocks the expression of toluene-induced conditioned place preference* that Vigabatrin, a selective GABA transaminase (catalyses chemical reactions) inhibitor could be an effective treatment. Another case study by Shen (*Treatment of inhalant dependence with lamotrigine*) reported that a 100mg daily dose of Lamotrigine (anticonvulsant drug used in treatment of epilepsy and bi-polar) reduced cravings in a 21 year old user of 4 years achieved 6 months abstinence.

Withdrawal from VSA

Withdrawal from VSA is very much the same as withdrawal from other substances, including hand tremors, nervousness, constant headaches, excessive sweating, lack of concentration and a disturbed sleep pattern.

This can be a very difficult time for users and they require a lot of support to get through the recovery period, but with this support, most users do manage.

Products

There are a massive range of different products that are used, these all fall into 4 categories: Gas Fuels; Aerosols; Glues and Others, the table below gives an example of some of the products that fall in these categories.

<u>Gas Fuels</u>	<u>Aerosols</u>
Acetylene (Welding Gas) Camping Gas Lighter Fuels Propane Gas Butane Gas	Air Fresheners Deodorant Fly Spray Hair Spray Pain Relief Spray Spray Paint
<u>Glues</u>	<u>Others</u>
Contact Adhesives Model Glue Puncture Repair Kit Thinners	Laughing Gas Blow Lamps Chloroforms Cleaning Fluids Fire Extinguishers Marker Pens Nail Varnish Petrol Correction Fluid

Helium

Helium is not a Volatile Substance (it is an inert gas), but causes death by asphyxiation. Unconsciousness can occur within seconds of inhaling helium and death can be happen within minutes.

Inhaling is often classed as a “neat party trick”, as it is often inhaled to make you sound like mickey mouse at parties, unfortunately this can prove fatal and has done, the St George’s Report also included helium and reported 144 deaths in the period 2001 – 20010, 26 of these in 2008, 46 in 2009 and 33 in 2010.



Information & Support

The Lee O'Brien Solvent Trust (LOST) was set up following the death of Lee at the age of 16, an outgoing young man who enjoyed life. Following his death, Lee's father wished to know everything he could and discovered that there wasn't much information to find out, therefore he set out along with his sister and friends to make that change and to ensure that those who required the support and information got it.

LOST provides 1-2-1 support, family and friends mediation and support, public speaking, advice and educational sessions.

For further information about volatile substance abuse or to request support, please contact LOST:

Email: lostofficeleven@tiscali.co.uk

Phone: 07809 330 123

Website: www.thelost.org.uk

This information pack has been put together as part of the Lee O'Brien Solvent Trust "I'm Smelling Dead Great Campaign" to raise awareness of Volatile Substance Abuse and the dangers involved in taking part in this.

Solvent Abuse Kills!
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