Fact Sheet

Volatile Substances

AKA: Solvents, Inhalants, glue, gas, thinners, hair sprays, tolly, huff

SOURCE: Volatile substances are a group of products, often household items, that contain chemicals which, if deliberately inhaled, can cause intoxication. Products in this group include: cigarette lighter refills, some hair-sprays, deodorants and air-fresheners, some pain-relief sprays, certain adhesives, cleaning products, nail-varnish removers, correction-fluid thinner and paint thinners.

Broadly speaking, these are products that contain either the chemical butane or the chemical toluene though a number of other chemicals are also effective.

APPEARANCE: Largely depends on what product is being used.

COSTS: Cheap or free; many products that are used are household items, and so available for nothing. Others, such as cigarette refills, cost under £2.

QUALITY: In most cases, the desired chemical (butane or toluene) is being used either to keep a product in a liquid state, as with toluene in glue, or as an aerosol propellant as with butane in air-freshener. So in these cases, the toluene or butane is heavily mixed with other products. In other products, such as cigarette lighter refills, the butane is both the propellant and the lighter fuel, so represents a pure source of the desired product.

METHODS OF USE: Volatile substances come in three main states, solid or semi-solid, liquids, or gasses. Solids such as glues are usually put in a small bag, such as a crisp packet. The bag is placed over the nose and mouth, and the vapours given off are inhaled, leading to intoxication. Liquids such as correction thinners, paint thinners or even petrol are usually poured onto a rag or an item of clothing, which are then place over the nose or mouth and the fumes inhaled. Lastly, products in a gaseous state such as aerosols can be sprayed into a room and inhaled. More dangerous is when such products are sprayed directly into the mouth; this is most frequently done with butane lighter refills.

EFFECTS: After inhalation of volatile substances, effects are experienced within a matter of minutes. Users typically experience sensation akin to being drunk - being giggly and disorientated, possibly being uncoordinated and feeling dizzy. Nausea is not uncommon.

If inhalation continues, users may experience heart palpitations, and a range of psychological effects, including paranoia, anxiety and auditory and visual hallucinations.

These are not always present, but where they are present, can be exceedingly vivid. Users report seeing spaceships, aliens, having conversations with gods and devils, and experience altered perception of their own bodies and of the passage of time. Experiences vary radically from person to person, and the effects are unpredictable.

Effects of volatile substances are fairly short-lasting, typically wearing off after between fifteen or thirty minutes. Users are left with a feeling similar to having a hangover, possibly with an aching chest, stiff neck and headaches.

HEALTH IMPLICATIONS: Volatile substances represent a bigger health threat, especially to young people, than most other drugs. While the mortality rate has decreased in recent years, on average in this country one or two young people a week die through solvent-related causes. A significant number of deaths are believed to be amongst first time users. Mechanisms of death are as follows:

Toxic reactions: some people experience a fatal toxic reaction to the chemicals that they take, and die for no other apparent reasons;

Heart failure: volatile substance use can cause irregular heart-beats (arrhythmia) which can lead to heart failure. This risk is exacerbated if a user attempts sudden exercise such as running after using volatile substances;

Suffocation and asphyxiation: some users place glue in larger plastic bags such as bin-liners; these may be placed over the entire head, and there is a high risk of suffocation, especially if the user becomes unconscious.

Nausea and unconsciousness are high risks when using volatile substances so there is a high risk that users will choke on their vomit while unconscious.

An especially high risk is the direct introduction of butane gas from lighter refills directly down the throat. This can cause swelling of the trachea which can lead to asphyxiation; if the freezing jet of gas hits the area surrounding the vagal nerve, it can cause respiratory and heart failure through vagal inhibition.

Other causes of death and injury relate to trauma accidents through falling while intoxicated, drowning accidents and accidents relating to burns, as volatile substance are by and large very flammable.

Volatile substances can cause lung, liver and kidney problems, and there is some evidence that they can impair brain function, especially in terms of memory and concentration.

LEGAL STATUS: In England and Wales, volatile substances are controlled under the Intoxicating Substances Supply Act (1995). This makes it an offence for a retailer to supply or offer to supply to a young person under the age of 18 a substance which the supplier knows or has reason to believe, will be used "to achieve intoxication."

Sales of Butane Gas refills for cigarette lighters are controlled under an addition to the Consumer Protection Act. The amendment, The Cigarette Lighter Refill (Safety) Regulations 1999, make it an offence to sell cigarette lighter refills containing butane to any young person under the age of eighteen.

Scottish Common Law classifies as criminal wilful and reckless actions which cause real injury to another person. Hence, under Scottish Common Law it is an offence for anyone to supply volatile substances to another person knowing that they are going to inhale them.

The use of volatile substances represents specific grounds for the referral of a child to a Children's Hearing, to give consideration to the steps necessary to ensure his or her protection, control, guidance and treatment. [Social Work (Scotland) Act 1968, section 32(2)(gg)],

OTHER INFORMATION: There is a very extensive list of products that have been used, ranging from ether and nitrous oxide (especially popular in Victorian times and amongst medical students) through to petrol, shoe dyes, and some fire extinguishers.

Volatile substance use is not automatically linked to gender, race or class. It is not solely a Western phenomenon. It is a significant issue in Eastern Europe, central and South America, Australia and New Zealand.

Volatile substance use is most common in 13 to 16 year-olds, though it does (rarely) continue into later life. While not physically addictive, users can become psychologically dependent on these substances.