



Petrol

General Information

Key Points

- petrol is a volatile liquid with a characteristic odour
- it is mainly used as a fuel for light road vehicles (cars, motorbikes and small vans) and small appliances (lawnmowers, cement mixers, etc.)
- there is a danger of lung damage if petrol enters the airways, for this reason a person who has swallowed petrol should not be made to vomit
- breathing small amounts of petrol vapour should not cause harm, large amounts however can cause feelings of drunkenness, asphyxiation, organ damage and heart attack
- petrol may be irritating to the skin and eyes
- petrol is highly flammable; the liquid and its fumes may cause fire and/or explosions if they are not handled appropriately
- petrol stored at home should be kept out of the reach of children and in an appropriate container

Public Health Questions

What is petrol?

Petrol is a complex mixture of hydrocarbons (typically of chain length C4-12). It is produced by mixing fractions obtained from the distillation of crude oil with brand-specific additives to improve performance. Since 2002 all petrol sold in the EU is unleaded. Under normal conditions, it is a volatile liquid with a characteristic odour.

Petrol is highly flammable and may cause fire or explosions if not handled appropriately.

What is petrol used for?

In the UK, petrol is mainly used as a road transport fuel, with additional use in other motors (lawnmowers, cement mixers, etc.). Since 1990 however the demand for petrol has almost halved while sales of diesel as a road transport fuel have risen; with 53% of new vehicles registered in the UK now diesel fuelled.

Petrol has also been used historically as a solvent in paints and for cleaning metal surfaces (degreasing).

How does petrol get into the environment?

Substantial quantities of petrol are found in the environment only as a result of accidental release from an industrial site or transport vehicle. There are no natural sources of petrol. Vehicle engines may emit a very small amount of un-burnt petrol in exhaust fumes.

How might I be exposed to petrol?

Exposure to petrol may occur if it is used in the workplace. If you use petrol in a vehicle or any other motor, store it, or siphon it you may be exposed.

If I am exposed to petrol how might it affect my health?

The presence of petrol in the environment does not always lead to exposure. In order for it to cause any adverse health effects you must come into contact with it. You may be exposed to petrol by breathing its vapours or drinking it skin contact. Following exposure to any chemical, the adverse health effects you may encounter depend on several factors, including the amount to which you are exposed (dose), the way you are exposed, the duration of exposure, the form of the chemical and if you were exposed to any other chemicals.

Drinking petrol may lead to nausea, vomiting and abdominal pain. In serious cases damage to the digestive tract, coma, loss of muscle control, and heart and lung problems can occur. A severe form of lung damage called pneumonitis may occur if liquid petrol is inhaled directly into the lungs, for example, whilst manually siphoning a tank or from inhaling vomit after swallowing petrol. This is why it is important not to make someone sick if they have swallowed petrol. If petrol is swallowed, medical advice should be obtained immediately.

Breathing in petrol fumes (not vehicle exhaust) may cause dizziness, drowsiness headaches. Breathing in large amounts can result in coma, loss of muscle control, heart and lung problems. Petrol can cause the skin to become irritated, dry and cracked; if the skin is exposed for a long time then burns may develop. Dermatitis (eczema) can develop if exposure to the skin happens often.

Petrol is highly flammable; it and its fumes may cause fire or explosions if not handled appropriately.

Can petrol cause cancer?

The International Agency for Research on Cancer (IARC) found that there was some evidence that petrol could cause cancer in experimental animals, but the evidence in humans was inadequate. If any, the risk of cancer from short term exposure to petrol is likely to be low.

Does petrol affect pregnancy or the unborn child?

Exposure to amounts of petrol that do not harm the mother, are not likely to harm the unborn child.

How might petrol affect children?

Children exposed to petrol would be expected to display similar effects to those seen in exposed adults. Petrol stored around the home should be kept out of the reach of children and in an appropriate container.

What should I do if I am exposed to petrol?

You should remove yourself from the source of exposure.

If you have ingested petrol seek medical advice. Do **not** make your yourself sick.

If you have inhaled petrol you should seek medical advice.

If you have got petrol on your skin, remove soiled clothing (not above the head), wash the affected area with lukewarm water and soap for at least 10 – 15 minutes and seek medical advice.

If you have got petrol in your eyes, remove contact lenses, irrigate the affected eye with lukewarm water for at least 10 – 15 minutes and seek medical advice.

Additional sources of information

NHS Choices - Poisoning <http://www.nhs.uk/Conditions/Poisoning/Pages/Introduction.aspx>

HSE – Storing petrol safely <http://www.hse.gov.uk/fireandexplosion/petroleum.htm>

HSE – If you store petrol at home, or at a club/association or similar premises
<http://www.hse.gov.uk/fireandexplosion/petrol-storage-club-association.htm>

HSE – Dispensing petrol as a fuel: Health and safety guidance for employees
<http://www.hse.gov.uk/pubns/indg216.htm>

GOV.UK – Storing oil at your home or business: <https://www.gov.uk/oil-storage-regulations-and-safety/overview>

UKTIS. Best Use of Medicines in Pregnancy <http://www.medicinesinpregnancy.org/>

This information contained in this document from the PHE Centre for Radiation, Chemical and Environmental Hazards is correct at the time of its publication.

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