



# Sodium and potassium cyanide

## General Information

### Key Points

- sodium and potassium cyanide are white crystal like solids with a faint almond odour
- sodium and potassium cyanide are both used in industry for metal cleaning, plating and extraction and photography
- when cyanide salts are ingested they release cyanide in the body; cyanide salts can be absorbed through the skin
- exposure to cyanide salts can cause headache, nausea, dizziness, nervousness, confusion, changes in heart rate and drowsiness
- they can also cause a loss of consciousness, fitting, vomiting and low blood pressure
- symptoms may be delayed for 2-4 hours if ingested on a full stomach
- the effects described above may follow also follow skin contact, potentially with a delay of a few hours
- sodium or potassium cyanide in contact with the eyes can cause watering, pain, redness, swelling, burns, sensitivity to light and potentially damage
- it is very unlikely that the general population will be exposed to a level of sodium or potassium cyanide high enough to cause adverse health effect

## Public Health Questions

### What are sodium and potassium cyanide?

Sodium and potassium cyanide are white crystal like solids with a faint almond odour. They are both “salt of cyanide”.

### What are sodium and potassium cyanide used for?

Sodium and potassium cyanide are both used in industry for metal cleaning, plating and extraction, and photography. They are also used to make other chemicals.

### How do sodium and potassium cyanide get into the environment?

Cyanide salts may be present in the environment as a result of industrial activities. Sodium or potassium cyanide could be released into the environment from industry in which they are produced, transported, stored, used or disposed of. They may also be released following accidental spills.

### How might I be exposed to sodium or potassium cyanide?

Exposure to sodium or potassium cyanide is most likely to occur in the workplace where salt(s) of cyanide are produced or used. Safe limits are enforced to protect the employees. Such levels are below those that are thought to cause harmful effects.

### If I am exposed to sodium or potassium cyanide how might they affect my health?

Following exposure to any chemical, the adverse health effects by which 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.

When salt(s) of cyanide are ingested they release cyanide in the body. Salt(s) of cyanide can be absorbed through the skin.

Exposure to cyanide (by air or ingestion) can cause headache, nausea, dizziness, nervousness, confusion, changes in heart rate and drowsiness. In worse cases there may be a loss of consciousness, fitting, vomiting and low blood pressure. In the most serious cases there will be coma, heart and breathing problems and death. Symptoms may be delayed for 2-4 hours if ingested on a full stomach.

The effects described above may follow also follow skin contact, with a delay of a few hours, if a large amount of skin is affected. Sodium or potassium cyanide in contact with the eyes can cause watering, pain, redness, swelling, burns, sensitivity to light and potentially damage them.

## Can sodium or potassium cyanide cause cancer?

Exposure to sodium or potassium cyanide has not been linked to the development of cancer.

## Do sodium or potassium cyanide affect pregnancy or the unborn child?

There are limited data available on the direct effects of exposure sodium or potassium cyanide on pregnancy and the unborn child. Therefore it is not possible to draw any definitive conclusions. Effects on the unborn child are more likely to occur if the exposure to sodium or potassium cyanide causes the mother to become unwell.

## How might sodium and potassium cyanide affect children?

There is little information on the effects of sodium or potassium cyanide on children. It is likely that children exposed to sodium or potassium cyanide would experience similar symptoms to those seen in exposed adults.

## What should I do if I am exposed to sodium or potassium cyanide?

It is very unlikely that the general population will be exposed to a level of sodium or potassium cyanide high enough to cause adverse health effects. However, if you have any health concerns regarding exposure to of sodium or potassium cyanide seek medical attention.

## Additional sources of information

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

NHS Choices- Poisoning <https://www.nhs.uk/conditions/poisoning/>

NHS Choices- Burns and scalds [http:// www.nhs.uk/Conditions/Burns-and-scalds/Pages/Introduction.aspx](http://www.nhs.uk/Conditions/Burns-and-scalds/Pages/Introduction.aspx)

This document from the PHE Centre for Radiation, Chemical and Environmental Hazards reflects understanding and evaluation of the current scientific evidence as presented and referenced here.

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