Sodium and potassium cyanide

General information

Key Points

- Sodium and potassium cyanide are highly toxic by ingestion
- Ingestion of sodium or potassium cyanide can cause headache, nausea, dizziness, nervousness, confusion and drowsiness. Symptoms may be delayed for 2-4 hours if ingested on a full stomach.
- In cases of severe poisoning heart problems, fitting, fluid accumulation in the lungs and death can occur.
- Irritating to the skin and eyes
- Skin or eye contact can also cause symptoms similar to those seen following ingestion
- Cyanide salts are not considered to be cancer-causing chemicals.
Background

Sodium and potassium cyanide are colourless solids that are also known as cyanide salts. They have an almond-like odour, although not everyone is able to detect it.

Sodium and potassium cyanide are used to extract silver and gold from ores, in electroplating and for case-hardening of metals.

Sodium cyanide is also used to produce other cyanides. In the past, it was used to fumigate fruit trees, railway cars, ships, grain silos and flour mills and for rabbit and rat control. Other uses for potassium cyanide are in silver plating and as a reagent in analytical chemistry.

Cyanide salts may be released into the environment during their production and use. Hence people may be exposed to cyanide salts by ingesting food or water that is contaminated with them.

However, exposure is most likely in the workplace where cyanide salts are produced or used, but safe levels are enforced to protect workers.

If exposed to sodium or potassium cyanide, the potential adverse health effects that may occur depend on the way people are exposed and the amount to which they are exposed.

Ingestion of cyanide salts can cause headache, nausea, dizziness, nervousness, confusion and drowsiness. In cases of severe poisoning, heart problems, fitting, fluid accumulation in the lungs and death can occur. Symptoms may be delayed for 2-4 hours if ingested on a full stomach.

Inhalation may cause general symptoms such as shortness of breath, headache, dizziness, nausea, vomiting, metallic taste in mouth.

Cyanide salts are irritating to the skin and eyes. They can be absorbed into the body following skin or eye contact causing the same symptoms that may be seen after inhalation.

Exposure to cyanide salts, at concentrations that do not affect the mother, are unlikely to affect the health of the unborn child.

There are no data on whether sodium or potassium cyanide causes cancer in humans.
Frequently Asked Questions

What are sodium and potassium cyanide?

Sodium and potassium cyanide are colourless solids that are also known as cyanide salts. They are used in industry to extract silver and gold from ores, in and electroplating and for case-hardening of metals.

How do sodium and potassium cyanide get into the environment?

Sodium and potassium cyanide are released into the environment during their production and use.

How will I be exposed to sodium or potassium cyanide?

The general public can be exposed to sodium or potassium cyanide by ingesting contaminated food or drinking-water.

If there is sodium or potassium cyanide in the environment will I have any adverse health effects?

The presence of sodium or potassium cyanide in the environment does not always lead to exposure. Clearly, in order for them to cause any adverse health effects you must come into contact with them. You may be exposed by breathing, eating, or drinking the substance or by 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.

Ingestion of sodium or potassium cyanide causes headache, nausea, dizziness, nervousness, confusion and drowsiness. In severe cases of poisoning heart problems, fitting, fluid accumulation in the lungs and death can occur.

Sodium and potassium cyanide are irritating to the skin and eyes. They can also be absorbed into the body following skin or eye contact causing symptoms similar to those seen following ingestion.

Can sodium or potassium cyanide cause cancer?

There are no data on whether sodium or potassium cyanide causes cancer in humans.

Does sodium or potassium cyanide affect children or damage the unborn child?

Children exposed to sodium or potassium cyanide would be expected to display similar effects to those seen in exposed adults. There is no evidence to suggest that sodium or potassium cyanide, at concentrations that do not affect the mother, can affect the health of the unborn child.

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.
This document will be reviewed not later than 3 years or sooner if substantive evidence becomes available.