

## AMMONIA

### What is ammonia?

Ammonia is a colorless liquid or gas with a very sharp odor. The odor is familiar to most people because ammonia is used in smelling salts and household cleaners. It is also found in water, soil and air, and is a source of much-needed nitrogen for plants, animals and humans. Most of the ammonia in the environment comes from the natural breakdown of manure, dead plants and animals.

### How can someone come into contact with ammonia?

- **In the air:** Ammonia has a very strong odor when a large amount of the gas (50 parts per million) is in the air. Therefore, the smell of ammonia will likely alert a person before exposure to a harmful amount is possible. However, low levels of ammonia may harm some asthmatics and other sensitive individuals.

High levels of ammonia may get into the air from leaks and spills at production plants and storage facilities, and from pipelines, tank trucks, railcars, ships and barges that transport ammonia.

Higher levels of ammonia in the air may occur when it is used to fertilize farm fields. After the ammonia is applied, the concentration of ammonia in soil can be more than 3,000 parts per million; however, these levels decrease rapidly over a few days.

- **In the water:** Ammonia can be tasted in water at low levels – about 35 parts per million. Lower levels than this occur naturally in food and water and are not dangerous.
- **At home:** Ammonia is in some household products. Some of these products are ammonia cleaning solutions, window cleaners, floor waxes and smelling salts. When used correctly, these products are not very dangerous.
- **At work:** Many of the cleaning products used in offices also contain ammonia. Farmers, cattle ranchers and people who raise chickens can be exposed to ammonia from decaying manure. Some manufacturing processes also use ammonia.

**Ammonia as a weapon:** Ammonia can be an “agent of opportunity.” This means that someone could explode the vehicle of transportation (truck, train or tank) that is being used to ship the chemical. Ammonia would then be released into the air. Depending on the amount released, people in the area could be harmed.

- Please note: Just because you come into contact with ammonia does not mean you will get sick from it.

### What happens if someone gets sick from ammonia?

- **In the air:** Breathing low concentrations of ammonia (for example, gases from cleaning products) may cause coughing and nose and throat irritation. Depending on the concentration of exposure, length of time and way the person is exposed, lung damage or death could occur.
- **In the mouth:** Swallowing small amounts of ammonia may cause burns in the mouth and throat.
- **On the skin:** A few drops of concentrated ammonia on the skin will cause burns and open sores if not washed away quickly.

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- **In the eyes:** A few drops of concentrated ammonia in the eyes may cause damage. Exposure to larger amounts of liquid ammonia in the eyes causes severe eye damage and can lead to blindness.

### **How likely is someone to die from ammonia?**

It is unlikely that someone would die from contact with ammonia unless exposed to a very high concentration of the chemical. The effects of ammonia will depend on the concentration of exposure, length of time and way the person is exposed.

### **What is the treatment for ammonia poisoning?**

- **Prevention of illness after contact:** First, leave the area where the ammonia was released and move to fresh air.
  - **Remove clothing.**
    - Quickly take off clothing that may have concentrated ammonia on it. If helping other people remove their clothing, try to avoid touching any areas that may have ammonia on them, and remove the clothing as fast as possible.
  - **Wash affected areas.**
    - As quickly as possible, wash any ammonia from the skin with lots of soap and water.
    - If the eyes are burning or vision is blurred, rinse the eyes with plain water for 10 to 15 minutes.
    - If contact lenses are worn, remove them and put them with the clothing. Do not put the contacts back in. If eyeglasses are worn, wash them with soap and water. Eyeglasses can be put back on after they are washed.
  - **Discard contaminated items.**
    - Place the clothing and any other contaminated items that may have come into contact with ammonia inside a plastic bag. Avoid touching them by wearing rubber gloves, turning the bag inside out and using it to pick up the clothing, or putting the clothing in the bag using tongs, tool handles, sticks or similar objects. Anything that touches the contaminated clothing should also be placed in the bag.
    - Seal the bag, and then seal that bag inside another plastic bag.
    - Contact the local county health department right away. (Visit [www.idph.state.il.us//local/alpha.htm](http://www.idph.state.il.us//local/alpha.htm) for a listing of all county health departments in Illinois or check your local phone book.)
    - When the local or state health department or emergency personnel arrive, tell them what you did with the contaminated clothes. The health department or emergency personnel will arrange for further disposal. Do not handle the plastic bags yourself.
- **Treatment of illness:** Supportive care (intravenous fluids, medicine to control pain) will help in some situations.

### **Is there a vaccine for ammonia poisoning?**

No, there is no vaccine for ammonia poisoning.

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### **What should be done if someone comes into contact with ammonia?**

If you think that you or someone you know may have come into contact with ammonia, contact the local county health department right away. (Visit [www.idph.state.il.us//local/alpha.htm](http://www.idph.state.il.us//local/alpha.htm) for a listing of all county health departments in Illinois or check your local phone book.)

If you or someone you know is showing symptoms of ammonia poisoning, call your health care provider or the Illinois Poison Center right away. The toll-free number for the poison center is 1-800-222-1222.

### **Where can one get more information about ammonia?**

- U.S. Centers for Disease Control and Prevention      [www.bt.cdc.gov/agent/ammonia/index.asp](http://www.bt.cdc.gov/agent/ammonia/index.asp)
- Illinois Department of Public Health                      [www.idph.state.il.us](http://www.idph.state.il.us)
- Illinois Poison Center    [www.IllinoisPoisonCenter.org](http://www.IllinoisPoisonCenter.org)