CONDITION

Gasoline poisoning

Gasoline poisoning is illness caused by swallowing gasoline, breathing its fumes, or getting it into the lungs.

WHAT IT IS
Toxic illness after swallowing, inhaling, or aspirating gasoline

BODY SYSTEM
Lungs, nervous system, digestive tract, skin, and eyes

MAIN SYMPTOMS
Cough, breathing difficulty, vomiting, dizziness

WHAT CAUSES IT
Toxic hydrocarbon exposure, especially gasoline entering lungs

HOW IT IS DIAGNOSED
Exposure history, oxygen checks, and chest imaging

MAIN TREATMENT
Decontamination, breathing support, and symptom monitoring

CAN IT BE CURED?
Sometimes - severe organ injury may persist

IS IT AN EMERGENCY?
Sometimes - breathing trouble, seizure, collapse, or unresponsiveness

LONG-TERM OUTLOOK
Most recover; severe aspiration can cause lasting lung injury

Overview

Gasoline poisoning happens when gasoline is swallowed, inhaled, or brought into contact with the skin or eyes. Gasoline is a mixture of chemicals called hydrocarbons.

The greatest immediate danger after swallowing gasoline is aspiration , meaning gasoline enters the lungs. This can happen while swallowing, coughing, choking, or vomiting. Even a small amount in the lungs can cause chemical pneumonitis, an inflammation that makes breathing difficult.

Concentrated fumes can affect the brain and nervous system, causing headache, dizziness, confusion, poor coordination, or loss of consciousness. Very high exposure can interfere with breathing or heart rhythm.

Skin contact usually causes irritation, dryness, or cracking. Eye exposure can cause pain and irritation. The outcome depends on the route and amount of exposure, whether gasoline entered the lungs, and how quickly serious symptoms are treated.

Symptoms

Symptoms may begin during exposure or over the following hours. Someone who initially feels well can later develop coughing or breathing problems, particularly after swallowing gasoline.

Gasoline in the lungs may cause:

Swallowed gasoline can cause burning in the mouth or throat, nausea, stomach pain, or vomiting. Vomiting increases the chance of aspiration.

Fumes may cause headache, dizziness, nausea, drowsiness, confusion, or unsteady movement. Severe exposure can cause seizures, loss of consciousness, abnormal heart rhythms, or stopped breathing.

Eye exposure may cause burning, tearing, redness, and blurred vision. Skin exposure may cause redness, pain, dryness, cracking, or blistering. A gasoline smell on the breath or clothing can suggest exposure but does not show how serious it is.

- Coughing, choking, or gagging
- Chest discomfort
- Fast, noisy, or difficult breathing
- Wheezing
- Blue or grey lips or skin from low oxygen

Causes and risk factors

Gasoline poisoning is caused by contact with gasoline's chemicals. It is not an infection and cannot spread between people.

Common causes include accidentally swallowing gasoline, siphoning fuel by mouth, inhaling fumes in a poorly ventilated space, or exposure during a spill, fire, or equipment failure. Storing fuel in a drink bottle or unlabelled container increases the risk of accidental swallowing.

Risk is higher in enclosed garages, tanks, vehicle interiors, or other spaces where vapour can accumulate. Children are at risk when fuel is stored within reach. Workers may face repeated exposure if ventilation, protective equipment, or safe handling procedures are inadequate.

Deliberately inhaling gasoline can cause sudden severe poisoning, abnormal heart rhythm, brain injury, and fire. Some gasoline also contains benzene and other chemicals associated with long-term health risks after repeated exposure.

Diagnosis

Diagnosis is based on the exposure history, symptoms, examination, and tests for effects on the lungs and other organs. No routine blood test reliably confirms ordinary gasoline poisoning or measures its severity.

A healthcare professional may ask how and when the exposure happened and whether there was coughing, choking, vomiting, or loss of consciousness. The fuel container or safety label can help identify the product.

Oxygen saturation can be measured with a device placed on a finger. A chest X-ray may be used when there are breathing symptoms or concern about aspiration. Lung changes may not appear immediately, so symptoms and oxygen levels can be more important than an early normal X-ray.

An electrocardiogram may be needed after substantial exposure, especially with fainting, chest discomfort, or an abnormal pulse. Blood tests may assess oxygen balance, acid levels, electrolytes, kidney or liver function, and complications.

Treatment and management

Treatment begins by ending the exposure without putting anyone else at risk. A person who inhaled fumes should move to fresh air if this can be done safely. No one should enter a fuel-filled or poorly ventilated space without appropriate emergency equipment.

Remove contaminated clothing. Wash exposed skin thoroughly with soap and water. Rinse eyes gently with clean, lukewarm water, removing contact lenses if they come out easily.

Do not make someone vomit after swallowing gasoline. Vomiting can draw gasoline into the lungs. Activated charcoal is generally not useful and may increase aspiration risk. Do not give food, drink, or home remedies unless advised by a poison centre or healthcare professional.

Medical care is mainly supportive while the body clears the chemicals. Treatment may include oxygen, monitoring of oxygen levels and heart rhythm, intravenous fluids, or medicines for specific symptoms. Severe breathing failure may require a breathing tube and mechanical ventilation.

Possible aspiration may require observation because lung symptoms can develop or worsen over several hours. Antibiotics like amoxicillin or doxycycline do not treat the initial chemical inflammation and are not routinely used unless bacterial infection develops. Steroids like prednisone or hydrocortisone are also not routine treatment.

Persistent skin pain, eye redness, or vision problems after washing require further examination.

Complications

The main complication is chemical pneumonitis, in which gasoline damages lung tissue and triggers inflammation. Fluid may collect in the lungs and reduce oxygen transfer.

Severe injury can progress to acute respiratory distress syndrome, a serious form of breathing failure. Bacterial pneumonia can develop later, although fever soon after aspiration may be caused by chemical inflammation rather than infection.

Other complications include abnormal heart rhythm, seizures, kidney or liver injury, and brain injury from prolonged lack of oxygen. These are more likely after large or concentrated exposures.

Repeated heavy fume exposure may affect memory, concentration, mood, balance, or nerve function. Long-term occupational exposure to benzene, which may be present in gasoline, is linked to blood disorders and certain cancers. This is not the expected result of one small, uncomplicated exposure.

Prevention

Keep gasoline in an approved, clearly labelled fuel container. Never store it in a drink bottle, cup, or food container. Lock fuel away from children and keep it away from flames, sparks, heaters, and smoking materials.

Never siphon gasoline by mouth. Use equipment designed for fuel transfer, and do not use gasoline as a cleaning solvent.

Fuel engines and equipment only with adequate ventilation. Never run gasoline-powered engines in an enclosed garage, basement, tent, or similar space. Follow workplace procedures and use the protective equipment specified for the task.

Clean spills according to the product's safety instructions. Avoid breathing vapour or touching fuel with bare skin. Promptly remove gasoline-soaked clothing and keep it away from ignition

sources.

Repeated headaches, dizziness, skin irritation, or breathing symptoms around fuel should be reported. Seek occupational health advice so the exposure source can be controlled.

Living with it and what to expect

Many people recover fully after a brief exposure that does not affect the lungs. Mild headache, nausea, or irritation may improve after exposure ends and the skin or eyes are rinsed.

After gasoline is swallowed, coughing and breathing problems can appear over the next several hours. Chemical pneumonitis may require hospital monitoring or treatment. Cough, chest discomfort, tiredness, and reduced exercise tolerance can continue for days or weeks while the lungs heal.

Severe lung or brain injury may cause longer-term limitations. Follow-up can include checks of breathing, oxygen levels, activity tolerance, memory, or concentration. Persistent symptoms may require lung testing, imaging, rehabilitation, or specialist care.

Ongoing exposure must be identified and controlled. Routine follow-up is appropriate if cough, tiredness, headaches, skin irritation, or concentration problems continue. Symptoms that worsen instead of gradually improving need earlier assessment.

When to get medical help

Contact a poison centre promptly after gasoline is swallowed, even if there are no symptoms. Do not wait for vomiting or breathing trouble. Have the container or product name available if possible.

Seek urgent medical assessment after significant fume exposure, repeated vomiting, persistent coughing, chest discomfort, unusual drowsiness, eye pain, blurred vision, or skin blistering. New breathing symptoms in the hours after swallowing gasoline also need prompt assessment.

Call emergency services immediately if the person:

If someone is unconscious, do not give anything by mouth or induce vomiting. Move them away from fumes only if it is safe. Avoid direct gasoline exposure during rescue or first aid.

In the United States, Poison Help can be reached at 1-800-222-1222. Elsewhere, contact the local poison information service or emergency number.

- Has difficulty breathing or blue or grey lips
- Collapses, has a seizure, or cannot be awakened
- Is severely confused or unable to walk normally
- Has been trapped in a space with concentrated fumes
- Swallowed gasoline deliberately

Common questions

What should I do if I swallowed a small amount of gasoline?

Do not make yourself vomit. Move away from the fuel, rinse your mouth, and contact a poison centre promptly. Call emergency services for breathing difficulty, severe drowsiness, collapse, or a seizure.

How quickly do symptoms start?

Dizziness or irritation from fumes can begin during exposure. Coughing may start immediately if gasoline enters the airway, but lung inflammation can become more noticeable over several hours. Feeling well at first does not rule out aspiration.

Can gasoline poisoning be treated at home?

Minor skin or eye contact may improve with thorough rinsing, but swallowed gasoline and significant inhalation require poison-centre guidance. Breathing symptoms, confusion, repeated vomiting, or reduced alertness need medical assessment.

Why shouldn't I make myself vomit?

Gasoline can easily enter the airway during vomiting and cause serious lung inflammation. Preventing aspiration is usually more important than removing it from the stomach.

Can one gasoline exposure cause cancer?

Cancer is not the expected result of one brief accidental exposure. The concern mainly involves repeated or long-term exposure to chemicals such as benzene, particularly at work. Discuss ongoing exposure with an occupational health service.

How long does recovery take?

Mild irritation or dizziness may settle within hours. Lung inflammation can take days or weeks to improve. Recovery after severe breathing failure or oxygen deprivation may take longer, and some people have lasting effects.

Sources

- Agency for Toxic Substances and Disease Registry. Toxicological Profile for Automotive Gasoline . US Department of Health and Human Services
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- MedlinePlus Medical Encyclopedia. Gasoline poisoning . US National Library of Medicine
- National Capital Poison Center. Gasoline and diesel fuel toxicity
- Merck Manual Professional Edition. Hydrocarbon Poisoning
- Royal Children's Hospital Melbourne. Clinical Practice Guideline: Hydrocarbon poisoning