CONDITION

Jimsonweed poisoning

Jimsonweed poisoning is a toxic reaction that can cause severe confusion, overheating, and a dangerously fast heartbeat.

WHAT IT IS
Poisoning from anticholinergic chemicals in the jimsonweed plant

BODY SYSTEM
Brain, nerves, heart, eyes, bladder, and digestive system

MAIN SYMPTOMS
Severe confusion, dilated pupils, dry mouth, fast heartbeat

WHAT CAUSES IT
Swallowing or inhaling toxic jimsonweed chemicals

HOW IT IS DIAGNOSED
Symptoms, exposure history, examination, and plant identification

MAIN TREATMENT
Emergency monitoring and supportive hospital care

CAN IT BE CURED?
Yes - toxins usually clear completely

IS IT AN EMERGENCY?
Yes - any suspected exposure needs immediate advice

LONG-TERM OUTLOOK
Full recovery is common after prompt care

Overview

Jimsonweed poisoning happens when toxic chemicals from the jimsonweed plant enter the body. Jimsonweed is also called Datura stramonium . Other plants in the Datura group can cause similar poisoning.

Every part of the plant may contain toxins, including the seeds, leaves, flowers, stems, and roots. The amounts are unpredictable. Two plants, or even two parts of the same plant, may contain very different amounts.

The main toxins include atropine, scopolamine, and hyoscyamine. These chemicals block acetylcholine, a substance that nerves use to control many automatic body functions. The resulting pattern of symptoms is called an anticholinergic syndrome .

This poisoning can affect thinking, vision, body temperature, heart rate, digestion, and urination. A person may become severely confused and unable to understand that they are ill. Because symptoms can worsen quickly, suspected exposure needs immediate poison-centre or emergency medical advice.

Symptoms

Symptoms often begin within a few hours of exposure, although timing is not predictable. They may last a day or longer. Larger exposures can cause more severe and longer-lasting effects.

Early physical symptoms may include:

Effects on the brain are often the most noticeable part of jimsonweed poisoning. A person may seem restless, frightened, unusually energetic, or disoriented. They may not know where they are or recognize familiar people.

Hallucinations can occur. These are experiences of seeing, hearing, or feeling things that are not present. Unlike some recreational drug effects, jimsonweed hallucinations are often part of severe delirium. Delirium means a sudden and serious disturbance in attention, awareness, and thinking.

Severe poisoning may cause extreme agitation, dangerously high body temperature, seizures, loss of consciousness, breathing problems, or an abnormal heart rhythm. Symptoms are not reliable enough to estimate how much of the plant was taken.

- Very dry mouth and intense thirst
- Dilated pupils and blurred vision
- Sensitivity to bright light
- Hot, dry, or flushed skin
- Fast heartbeat
- Difficulty swallowing or speaking
- Reduced sweating
- Trouble passing urine
- Constipation or reduced bowel sounds

Causes and risk factors

Poisoning most often follows swallowing the plant, its seeds, or a preparation made from it. Making tea, cooking the plant, or drying it does not make the dose safe.

Exposure may happen when:

Accidental contact with an intact plant is less likely to cause whole-body poisoning than swallowing it. However, plant material or sap transferred from the hands to the eyes may cause one pupil to become enlarged and vision to blur. Wash exposed skin and avoid touching the face.

Anyone can be poisoned. Children may develop serious symptoms after a smaller amount because of their lower body weight. Risk is also higher when the plant is taken with alcohol, sedatives, stimulants like methylphenidate or lisdexamfetamine , or medicines that have anticholinergic effects. These include some antihistamines like cetirizine or loratadine , bladder medicines, motion-sickness treatments, and psychiatric medicines.

- Jimsonweed is mistaken for an edible or medicinal plant
- Seeds or leaves are taken for their mind-altering effects
- Children swallow seeds or other plant parts
- Plant material contaminates food, grain, or herbal products
- Smoke from burning plant material is deliberately inhaled

Diagnosis

Jimsonweed poisoning is usually diagnosed from the symptoms, physical examination, and information about a possible exposure. If available, a photograph or securely contained sample may help identify the plant. Do not handle or transport plant material in a way that creates another exposure.

There is no widely used rapid blood or urine test that reliably confirms jimsonweed poisoning during emergency care. A routine drug screen may not detect its toxins. Treatment therefore should not wait for laboratory confirmation when the symptoms and exposure history fit.

The medical team may check temperature, oxygen level, heart rate, blood pressure, alertness, and pupil size. An electrocardiogram, or ECG, records the heart's electrical activity and can identify rhythm or conduction problems.

Blood and urine tests may be used to look for dehydration, kidney problems, muscle injury, abnormal salts, or another cause of confusion. Other possible causes include infection, low blood sugar, head injury, medication poisoning, or exposure to another drug.

Treatment and management

Jimsonweed poisoning is treated in an emergency department or hospital. There is no safe home method for reversing it.

The first steps are to protect breathing and circulation, reduce agitation, control body temperature, and prevent injury. Care may include intravenous fluids, heart monitoring, oxygen, cooling measures, and treatment for seizures or severe agitation. A quiet, low-stimulation setting can help reduce distress.

Activated charcoal may be considered in selected recent ingestions. It binds some poison in the digestive tract. It is not suitable for everyone, especially when a person is very drowsy, vomiting, or unable to protect their airway. Do not take charcoal at home unless a poison specialist specifically directs it.

Benzodiazepines like diazepam or lorazepam are medicines often used in hospital to treat severe agitation or seizures. Staff also watch for overheating, urinary retention, and breakdown of muscle tissue.

Physostigmine is an antidote that can reverse some severe anticholinergic effects. It is not routinely appropriate for every patient. It requires careful selection, heart monitoring, and specialist toxicology guidance because it can cause serious adverse effects in the wrong situation or if another poison is involved.

Do not make the person vomit. Do not give food, alcohol, herbal products, or other medicines unless a poison centre or medical professional advises it. If safe, remove remaining plant material from the mouth and rinse the mouth gently.

Complications

Most people recover with timely supportive care, but severe poisoning can cause complications.

Very high body temperature and intense muscle activity may lead to rhabdomyolysis , which is the breakdown of muscle tissue. The released material can damage the kidneys.

Other possible complications include:

A person with delirium may need close observation to prevent falls, wandering, or accidental harm. Restraint is not a treatment for the poisoning itself and, when avoidable, physical struggle is minimized because it can increase overheating and muscle injury.

Death is possible in severe poisoning, particularly when care is delayed or other substances

were also taken. It is not possible to judge safety from the number of seeds or leaves because toxin levels differ greatly.

- Dehydration and abnormal body salts
- Injury during confusion or agitation
- Choking or inhaling vomit into the lungs
- Severe urinary retention
- Seizures
- Dangerous heart rhythms
- Coma or breathing failure

Prevention

Jimsonweed poisoning can usually be prevented by avoiding ingestion or inhalation of the plant. There is no reliable way to prepare a safe dose.

Do not use jimsonweed as food, tea, a herbal remedy, or a recreational drug. Traditional use does not make it predictable or safe.

If jimsonweed grows near your home:

Do not burn the plant for intentional smoke inhalation. If removing a large amount, avoid creating smoke or dust and follow local gardening or public-health guidance.

Store medicines and herbal products in their original labelled containers. If you buy grain or herbal products, use established suppliers and do not use material that appears contaminated with unfamiliar seeds.

- Teach children not to eat unknown plants or seeds
- Keep plant material away from pets and food-preparation areas
- Wear gloves when removing plants
- Wash your hands after handling them
- Follow local advice for disposal of poisonous plants

Living with it and what to expect

Jimsonweed poisoning is an acute event, not usually a long-term illness. Symptoms often improve as the body clears the toxins. Confusion and abnormal behaviour may take longer to

settle than dry mouth or a fast heartbeat.

Hospital observation continues until thinking, vital signs, walking, drinking, and urination are safely returning to normal. Some people need intensive care when they have severe agitation, overheating, seizures, breathing problems, or heart abnormalities.

After recovery, tiredness, poor concentration, blurred vision, or patchy memory of the event may continue for a short time. Driving, operating machinery, or making important decisions may be unsafe until vision and alertness are fully normal.

Long-term effects are not expected after an uncomplicated recovery. The outlook may be different if there was prolonged overheating, lack of oxygen, major muscle breakdown, kidney injury, or another serious complication. Follow-up in those cases is based on the affected organ and the treatment received.

Routine follow-up may be advised after discharge to check that symptoms have resolved. If the exposure was intentional, follow-up for substance use or mental health can help reduce the chance of another poisoning. This is separate from emergency treatment and should be offered without judgment.

When to get medical help

Treat any suspected swallowing of jimsonweed as urgent, even if symptoms have not started. Contact your local poison centre or emergency medical service immediately. In the United States, Poison Help is available at 1-800-222-1222 .

Call emergency services now if the person has:

Do not let a confused person drive themselves to care. Keep them away from traffic, stairs, water, heat, and objects that could cause injury. Do not put anything in the mouth of someone having a seizure.

After discharge, seek urgent reassessment if confusion returns, urine becomes very dark, urination stops, severe muscle pain develops, vomiting prevents drinking, or breathing becomes difficult.

Routine follow-up is appropriate for lingering mild blurred vision, fatigue, concentration problems, or questions about an intentional exposure, provided symptoms are improving and no urgent warning signs are present.

- Severe confusion, hallucinations, or unusual behaviour
- A seizure or loss of consciousness

- Trouble breathing
- Extreme agitation or inability to stay safely supervised
- Very hot, dry skin or signs of overheating
- Collapse, chest pain, or a very fast or irregular heartbeat

Common questions

How much jimsonweed is poisonous?

There is no known safe amount. Toxin levels differ between plants, seasons, and plant parts. Counting seeds or estimating the amount swallowed cannot reliably predict how serious the poisoning will be.

How long does jimsonweed poisoning last?

Symptoms commonly continue for many hours and may last a day or longer. Severe poisoning can last longer, especially after a large exposure or when digestion slows and keeps toxins in the body. Recovery time also reflects any complications.

Can jimsonweed poisoning be treated at home?

No. A person may become confused, overheat, have a seizure, or develop heart problems without recognizing the danger. Contact a poison centre or emergency service rather than waiting for symptoms.

Is jimsonweed the same as angel's trumpet?

They are related but not identical. Jimsonweed usually refers to plants in the Datura group, while angel's trumpet commonly refers to Brugmansia . Both contain similar anticholinergic toxins and can cause serious poisoning.

Can touching jimsonweed poison me?

Whole-body poisoning from brief skin contact is unlikely. However, plant material transferred into an eye may enlarge the pupil and blur vision. Wash exposed skin and hands, and get advice if eye or whole-body symptoms develop.

Will I fully recover after jimsonweed poisoning?

Full recovery is common when the poisoning is recognized and treated promptly. Lasting problems are more likely if severe complications caused injury to the brain, kidneys, muscles, lungs, or heart.

Sources

- MedlinePlus Medical Encyclopedia: Jimsonweed poisoning , U.S. National Library of Medicine
- Clinical Practice Guidelines: Anticholinergic Syndrome , Royal Children's Hospital Melbourne
- Poison Control: Jimson weed , National Capital Poison Center
- Krenzelok EP. Aspects of Datura poisoning and treatment. Clinical Toxicology . 2010;48(2):104-110. doi:10.3109/15563651003630672
- Dawson AH, Buckley NA. Pharmacological management of anticholinergic delirium: theory, evidence and practice. British Journal of Clinical Pharmacology . 2016;81(3):516-524. doi:10.1111/bcp.12839
- Toxicological Profile for Atropine, Scopolamine, and Related Compounds , Agency for Toxic Substances and Disease Registry