CONDITION

Mistletoe poisoning

Mistletoe poisoning is illness caused by swallowing mistletoe berries, leaves, stems, or concentrated products.

WHAT IT IS
Toxic effects from swallowing mistletoe or its extracts

BODY SYSTEM
Digestive, heart and circulation, and nervous system

MAIN SYMPTOMS
Nausea, vomiting, stomach pain, diarrhea

WHAT CAUSES IT
Swallowing toxic mistletoe plant material or extracts

HOW IT IS DIAGNOSED
Exposure history, examination, heart tracing, and blood tests

MAIN TREATMENT
Supportive care and monitoring

CAN IT BE CURED?
Yes - most recover with supportive care

IS IT AN EMERGENCY?
Sometimes - fainting, seizures, breathing trouble, or severe weakness

LONG-TERM OUTLOOK
Full recovery expected after most mild exposures

Overview

Mistletoe poisoning happens when someone swallows part of a mistletoe plant or a product made from it. Berries are involved in many accidental exposures, especially around winter holidays. Leaves and stems can also be toxic.

"Mistletoe" refers to several related plants. European mistletoe, Viscum album , and American mistletoes in the Phoradendron group contain different toxic substances. This means the risk can differ by species, plant part, amount swallowed, and how the product was prepared.

Most accidental exposures cause no symptoms or only short-lived digestive upset. More serious poisoning is possible, particularly after swallowing leaves, stems, large or unknown amounts, homemade preparations, or concentrated extracts. Serious effects may involve blood pressure, heart rhythm, or the nervous system.

Do not use the number of berries swallowed to decide that an exposure is safe. Contact a poison information service for advice based on the exact situation. In the United States, Poison Control is available at 1-800-222-1222 or through its online tool.

Symptoms

Symptoms usually begin during the hours after an exposure, although timing is not identical for everyone. Digestive symptoms are most common.

Possible symptoms include:

Severe poisoning can cause seizures, marked confusion, difficulty breathing, or collapse. These effects are uncommon after a small accidental exposure but need emergency care if they occur.

A person may initially feel well. The absence of immediate symptoms does not show that the exposure is harmless, especially if the plant species, amount, or product strength is unknown.

Injected mistletoe extracts can cause different reactions from swallowed plant material. Reported effects include fever, chills, headache, injection-site swelling, and allergic reactions. Trouble breathing, widespread hives, facial swelling, or fainting after an injection may indicate a severe allergic reaction.

- Nausea, vomiting, stomach cramps, or diarrhea
- Drowsiness, dizziness, weakness, or confusion
- Blurred vision
- A slow, fast, or irregular heartbeat
- Low blood pressure, which may cause faintness or fainting

Causes and risk factors

Mistletoe poisoning is caused by toxic plant substances entering the body. This most often happens when berries, leaves, or stems are swallowed.

Young children may put attractive berries in their mouths. Adults may be exposed after making teas, taking herbal products, or using concentrated preparations. Mistaking mistletoe for an edible plant can also lead to poisoning.

Factors that may increase the chance of significant illness include:

The appearance of a plant is not enough to judge its toxicity. Different plants share the

common name "mistletoe," and decorative greenery may contain more than one species.

- Swallowing leaves or stems rather than merely tasting a berry
- Chewing the plant, which may release more of its contents
- Swallowing a large or unknown amount
- Drinking homemade tea or another concentrated preparation
- Using an extract by mouth or injection
- Being very young, frail, or medically unwell
- Taking other substances at the same time

Diagnosis

Mistletoe poisoning is usually diagnosed from the exposure history and the person's symptoms. There is no commonly available blood test that directly confirms mistletoe poisoning.

If possible, keep the plant, packaging, product label, or a clear photograph. Do not delay getting help to search for this information. A poison specialist may ask which plant part was involved, whether it was chewed, when the exposure happened, and how much may be missing.

Someone without symptoms after a minor exposure may not need hospital tests. If symptoms are present or the amount is concerning, assessment may include:

Other causes may need to be considered, particularly when the plant cannot be identified or another medicine, plant, alcohol, or chemical could also have been swallowed.

- A physical examination and repeated checks of vital signs
- An electrocardiogram, or ECG, to examine heart rate and rhythm
- Blood tests for salts, blood sugar, kidney function, and other changes
- Monitoring to see whether symptoms develop or improve

Treatment and management

There is no specific antidote for mistletoe poisoning. Treatment supports the body while the toxic effects wear off.

Immediately remove any remaining plant material from the mouth and gently rinse the mouth with water. Do not make the person vomit. Do not give a home remedy, salt water, or another

substance intended to "neutralize" the plant.

Contact a poison information service promptly. Its advice may include observation at home or assessment in an emergency department. This choice is based on the person's age and health, the species and plant part, the amount, any symptoms, and the time since exposure.

Hospital treatment may involve intravenous fluids for dehydration or low blood pressure, medicine for nausea, and monitoring of heart rhythm and breathing. Seizures, abnormal heart rhythms, or severe blood-pressure changes are treated with appropriate emergency medicines and supportive care.

Activated charcoal may be considered by healthcare professionals in selected recent, significant ingestions. It is not suitable for every exposure and should not be taken at home unless a poison specialist specifically directs it.

People who remain well after an appropriate observation period can often go home. Continued or severe symptoms may require longer monitoring.

Complications

Repeated vomiting or diarrhea can cause dehydration and changes in body salts called electrolytes. These changes can add to weakness, dizziness, or heart-rhythm problems.

Vomiting while very drowsy may allow stomach contents to enter the lungs. This is called aspiration and can interfere with breathing or cause lung inflammation.

More serious toxic effects may include:

Death from ordinary accidental berry exposures appears to be rare. The risk is more concerning with substantial amounts, concentrated products, or severe effects that are not treated promptly.

Allergic reactions are an additional concern with medicinal mistletoe extracts, particularly injected products. These reactions are different from the direct toxic effects of swallowing the plant.

- Very low blood pressure
- A dangerously slow, fast, or irregular heartbeat
- Seizures or reduced consciousness
- Breathing problems
- Kidney or other organ injury following severe illness

Prevention

Mistletoe poisoning can often be prevented by limiting access to the plant and avoiding unregulated or homemade preparations.

Keep fresh and dried mistletoe out of reach of children. Do not place it above food-preparation areas, cribs, play spaces, or places where fallen berries may be picked up. Artificial decorations are an alternative in homes with young children or people who may mistake plants for food.

Store herbal products in their original containers. Do not make mistletoe tea or swallow plant material based on online recipes. Product names such as "natural" or "herbal" do not show that a preparation is safe.

Mistletoe extracts are promoted as complementary cancer treatments in some settings. They should not replace established cancer care. If you are considering such a product, discuss it with your cancer team so that possible side effects, product quality, and interactions can be reviewed.

Teach children not to eat berries or leaves from decorative or outdoor plants. After an exposure, save a sample or photograph for identification without handling the plant more than necessary.

Living with it and what to expect

Mistletoe poisoning is usually a short-term event rather than a lasting condition. People with mild digestive symptoms often improve as the plant material passes through the body and fluids are replaced.

Someone who develops heart, blood-pressure, or nervous-system effects may need hospital observation until vital signs and test results are stable. Recovery time is then guided by how severe the poisoning was and whether complications occurred.

Most people who recover from a mild or moderate exposure do not have continuing symptoms over the following months or years. Routine long-term testing is not generally needed after symptoms have completely resolved and a healthcare professional has said observation can end.

Follow-up may be arranged after a severe exposure, an abnormal heart tracing, kidney injury, aspiration, or another complication. Seek routine medical review if nausea, diarrhea, weakness, dizziness, or poor appetite continues after the expected recovery period.

Poisoning does not make a future exposure harmless. Avoid the same plant or product, and keep any discharge instructions in case symptoms return soon after leaving care.

When to get medical help

Call emergency services now if the person has difficulty breathing, collapses, cannot be awakened, has a seizure, or develops severe confusion. Fainting, extreme weakness, or signs of a serious allergic reaction also require emergency care.

If the person is unconscious or having a seizure, do not give anything by mouth. Place them on their side if it is safe to do so, and follow emergency-service instructions.

Contact a poison information service promptly after any known or suspected mistletoe ingestion, even if there are no symptoms. This is especially important when a child is involved, the amount is unknown, leaves or stems were swallowed, or the exposure involved tea, extract, or another concentrated product.

In the United States, call Poison Control at 1-800-222-1222. In other countries, contact the local poison centre or urgent medical service. Do not wait for symptoms before calling.

Arrange routine follow-up if symptoms persist after initial care or if you were told that blood tests, kidney function, or heart rhythm need to be checked again. Routine follow-up is different from emergency care and is usually planned after the immediate poisoning has resolved.

Common questions

Is touching mistletoe dangerous?

Poisoning mainly occurs when mistletoe is swallowed or when an extract is injected. Brief skin contact is unlikely to cause systemic poisoning. Wash your hands after handling the plant, especially before eating or touching your eyes. Seek advice if a rash or other reaction develops.

My child put a mistletoe berry in their mouth. What should I do?

Remove any remaining pieces and rinse the child's mouth. Do not cause vomiting. Contact a poison information service with the child's age, symptoms, and any estimate of what was swallowed. Keep the plant or take a photograph if this can be done safely.

How many mistletoe berries are poisonous?

There is no reliable number that is safe for every person. Risk is affected by the mistletoe species, plant part, whether it was chewed, the person's size and health, and whether other substances were involved. A poison specialist can assess the specific exposure.

How quickly does mistletoe poisoning start?

Symptoms often begin within the first several hours. Some people remain well, while others

develop vomiting, diarrhea, dizziness, or more serious effects. Follow the observation advice given by a poison service rather than relying on a symptom-free first hour.

Can mistletoe extract safely treat cancer?

Mistletoe extracts have been studied as complementary treatments, but research results do not establish them as a replacement for standard cancer treatment. Products and methods of use differ, and injections can cause allergic or other reactions. Discuss any complementary product with your cancer team before using it.

Can mistletoe poison dogs or cats?

Mistletoe may also harm pets, but their assessment and treatment differ from human care. Remove access to the plant and contact a veterinarian or veterinary poison service. Do not give a pet human medicines or make it vomit unless a veterinary professional directs you.

Sources

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