CONDITION

Sassafras oil overdose

Sassafras oil overdose is poisoning caused by swallowing enough sassafras essential oil to harm the brain, heart, liver, kidneys, or breathing.

WHAT IT IS
Toxic illness from swallowing sassafras essential oil

BODY SYSTEM
Digestive, nervous, heart, liver, kidneys, and breathing systems

MAIN SYMPTOMS
Vomiting, dizziness, fast heartbeat, hallucinations

WHAT CAUSES IT
Swallowing sassafras oil containing safrole

HOW IT IS DIAGNOSED
Exposure history and assessment; no routine confirmatory test

MAIN TREATMENT
Emergency monitoring and supportive care

CAN IT BE CURED?
Sometimes - recovery may be incomplete after organ injury

IS IT AN EMERGENCY?
Yes - any swallowed oil needs immediate poison advice

LONG-TERM OUTLOOK
Often full recovery; severe organ injury can persist

Overview

Sassafras oil overdose is poisoning caused by swallowing sassafras essential oil. The main toxic chemical is safrole , which occurs naturally in sassafras oil and the root bark of the sassafras tree.

Essential oils are highly concentrated plant products. Sassafras oil is not the same as smelling a sassafras tree or consuming an approved, safrole-free food flavoring. A product described as "natural" or "pure" is not automatically safe to swallow.

Sassafras oil can affect several organs at once. It may irritate the stomach, disturb brain function, alter the heart rate, and injure the liver or kidneys. Oil that enters the lungs during swallowing or vomiting can also cause serious breathing problems.

There is no specific antidote. Treatment supports breathing, circulation, and organ function while the body clears the chemical. Prompt advice from a poison center is important because serious effects may develop after the exposure.

Symptoms

Symptoms may start soon after swallowing the oil, but their timing and severity are not always predictable. The product's safrole concentration, the amount swallowed, and the person's age and health all matter.

Possible early symptoms include:

More serious poisoning may cause seizures, loss of consciousness, shallow or difficult breathing, or an abnormal heart rhythm. Liver or kidney injury may not be obvious at first. Possible later signs include yellow skin or eyes, dark urine, reduced urination, unusual bleeding, or worsening tiredness.

Coughing, choking, chest discomfort, or shortness of breath after swallowing or vomiting may mean that oil has entered the lungs. This is called aspiration and needs urgent assessment.

Skin contact may cause irritation. Eye exposure can cause burning, redness, and watering. These exposures are not the same as swallowing the oil, but a poison center can advise whether further care is needed.

- Burning or irritation in the mouth, nausea, vomiting, diarrhea, or abdominal pain
- Dizziness, headache, sweating, weakness, or unusual sleepiness
- A fast or pounding heartbeat
- Confusion, agitation, hallucinations, or muscle twitching

Causes and risk factors

The usual cause is swallowing sassafras essential oil. This may happen accidentally, when someone mistakes it for a food flavoring, or when it is taken as an unproven home remedy.

Risk may be greater when:

Product labels may not reliably show the exact concentration. Because of this uncertainty, there is no practical home calculation that can show whether a swallowed amount is safe.

Safrole has also caused cancer in laboratory animals after longer-term exposure. It is listed by the US National Toxicology Program as reasonably anticipated to be a human carcinogen. That

concern is one reason safrole is prohibited as a food additive in the United States. It does not mean that one accidental exposure will cause cancer; the human risk from a single event is not known.

- The product is concentrated or its safrole content is unknown
- A child swallows the oil
- A large or uncertain amount is involved
- The oil is transferred to an unlabelled cup or food container
- The person already has liver, kidney, heart, or breathing problems
- Alcohol, sedatives, or other substances were taken at the same time

Diagnosis

Sassafras oil overdose is usually diagnosed from the exposure history and the person's symptoms. There is no widely available emergency test that confirms safrole poisoning.

If possible, take the original container or a clear photograph of its label when seeking care. Useful details include the product name, when the exposure happened, the possible amount, and any symptoms. Do not delay calling for help while trying to collect perfect information.

In an emergency department, assessment may include:

Repeated blood tests or heart monitoring may be needed when symptoms are significant or the amount swallowed is unclear.

- Checks of breathing, oxygen level, blood pressure, temperature, and alertness
- An electrocardiogram, or ECG, to examine the heart's rhythm
- Blood tests for liver and kidney function, blood sugar, salts, and acid balance
- Urine tests to monitor kidney function
- Chest imaging if aspiration or another breathing complication is suspected

Treatment and management

Call a poison center immediately after sassafras oil is swallowed, even if no symptoms have appeared. In the United States, Poison Control is available at 1-800-222-1222 and through webPOISONCONTROL. Elsewhere, contact your local poison information service or emergency service.

Do not make the person vomit. Vomiting raises the chance that the oil will enter the lungs. Do not give food, drinks, charcoal, or home remedies unless a poison specialist or emergency professional specifically advises it. Never give anything by mouth to someone who is very drowsy, having a seizure, or unable to swallow normally.

Hospital treatment is supportive and may include oxygen, intravenous fluids, medicines for seizures or vomiting, and continuous heart monitoring. A breathing tube and ventilator may be needed if breathing becomes inadequate or the person cannot protect their airway.

Activated charcoal may sometimes be considered soon after a significant ingestion, but it is not suitable for every person. Clinicians weigh its possible benefit against the danger of choking or aspiration.

Kidney and liver function are monitored. Severe kidney failure may require dialysis, which filters waste from the blood. Treatment decisions depend on symptoms, test results, and advice from a medical toxicologist or poison center.

For oil in the eyes, begin rinsing with clean lukewarm water and contact a poison center. For skin exposure, remove contaminated clothing and wash the skin with soap and water.

Complications

Many people recover with timely care, but severe poisoning can cause lasting harm. Possible complications include:

Severe liver, kidney, heart, or breathing failure can be life-threatening. The likelihood of complications cannot be judged safely from taste, smell, or the amount apparently missing from a bottle.

- Aspiration-related lung inflammation or breathing failure
- Seizures, coma, or injury caused by reduced alertness
- Dangerous heart rhythm changes
- Acute liver injury or liver failure
- Acute kidney injury, sometimes with very little urine
- Dehydration and disturbances in the body's salts or acid balance

Prevention

Sassafras oil overdose is preventable. Do not swallow sassafras essential oil or use it as a

home treatment. Do not add it to food or drinks.

Safrole-free sassafras extracts may be permitted for specific food uses, but that does not make sassafras essential oil safe to consume. Homemade sassafras preparations may contain an unknown amount of safrole.

Keep essential oils in their original, labelled containers. Store them locked away from children and pets, separately from foods, drinks, and medicines. Do not transfer an oil into a cup, dropper bottle, or container that could be mistaken for something edible.

Use only the amount and method stated on the product label for non-food purposes. Wash your hands after handling it, and avoid putting undiluted oil near the eyes or mouth.

Living with it and what to expect

Sassafras oil overdose is usually a single, acute event rather than an illness that remains active for years. What happens afterward is shaped mainly by the amount absorbed and whether the liver, kidneys, lungs, heart, or brain were injured.

After a mild exposure, symptoms may settle as the oil leaves the body. Once the person has recovered and tests are normal, the overdose does not usually require ongoing treatment.

A more serious exposure may require several days in hospital. Follow-up blood tests may be arranged to make sure liver and kidney function are improving. Tiredness, reduced appetite, or breathing discomfort can continue during recovery, particularly after organ injury or aspiration.

Some severe complications may take weeks or months to improve. Kidney dialysis can be temporary, although lasting kidney damage is possible. Significant liver injury may also require specialist follow-up. Neurological recovery after prolonged seizures or loss of consciousness is less predictable.

Routine follow-up is important if a hospital team recommends repeat blood tests or review. New or worsening symptoms should not wait for a routine appointment.

When to get medical help

Get immediate poison advice after any swallowed sassafras oil. Do not wait for symptoms to develop.

Call emergency services now if the person:

While waiting for emergency help, place an unconscious but breathing person on their side if it is safe to do so. Do not put anything in their mouth. If they are not breathing, follow the

emergency dispatcher's instructions.

Seek urgent assessment for reduced urination, yellow skin or eyes, dark urine, worsening abdominal pain, shortness of breath, or persistent vomiting after an exposure.

Routine follow-up is appropriate after the immediate danger has passed if you were advised to repeat liver or kidney tests, review breathing symptoms, or discuss safe storage. Routine care should not replace urgent poison advice at the time of an ingestion.

- Has trouble breathing, blue or grey lips, or repeated choking
- Collapses, cannot be awakened, or becomes severely confused
- Has a seizure
- Develops severe chest pain or a very fast or irregular heartbeat
- Has repeated vomiting and cannot stay alert
- Swallowed the oil intentionally or may also have taken another substance

Common questions

How much sassafras oil is poisonous?

There is no reliable amount that can be treated as safe at home. Concentrations differ between products, and even a small swallowed volume can be important, especially for a child. Call a poison center for any ingestion.

Should I make myself vomit after swallowing it?

No. Vomiting can draw the oil into the lungs and cause breathing complications. Follow instructions from a poison specialist instead.

Is sassafras tea the same as sassafras oil?

No. Essential oil is much more concentrated. However, homemade tea made from sassafras root bark may still contain safrole. It should not be assumed to be the same as a regulated, safrole-free flavoring.

How long does sassafras oil poisoning last?

Stomach or nervous system symptoms may improve as the chemical clears, but there is no fixed timetable. Lung, liver, or kidney injury may take days to become clear and weeks or longer to recover.

Can sassafras oil cause cancer?

Safrole causes cancer in laboratory animals and is reasonably anticipated to be a human

carcinogen. The cancer risk from one accidental exposure is not known. After an overdose, the immediate concern is acute poisoning and organ injury.

Is it safe to use sassafras oil for aromatherapy?

A product intended for scenting should still never be swallowed. Follow its label, keep the area ventilated, and store it securely. Stop exposure and seek advice if it causes breathing trouble, marked dizziness, or other significant symptoms.

Sources

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- Safrole: Report on Carcinogens substance profile , US National Toxicology Program
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