CONDITION

Funnel-web spider bite

A funnel-web spider bite can inject venom that rapidly affects the nerves, breathing, heart, and circulation.

WHAT IT IS
Potentially severe poisoning from an Australian funnel-web spider bite

BODY SYSTEM
Nervous system, breathing, heart and circulation

MAIN SYMPTOMS
Bite pain, sweating, drooling, breathing difficulty

WHAT CAUSES IT
Venom injected by an Australian funnel-web spider

HOW IT IS DIAGNOSED
Clinical assessment; no routine confirmatory test

MAIN TREATMENT
Pressure immobilisation, antivenom, and supportive hospital care

CAN IT BE CURED?
Yes - prompt treatment can reverse envenoming

IS IT AN EMERGENCY?
Yes - every suspected bite needs emergency care

LONG-TERM OUTLOOK
Full recovery is usual after prompt treatment

Overview

A funnel-web spider bite is an injury caused by an Australian funnel-web spider. Some bites inject venom and cause envenoming , meaning that venom enters the body and produces symptoms.

Funnel-web venom acts mainly on the nervous system. Severe envenoming can interfere with breathing and affect the heart and blood circulation. Symptoms may develop quickly, so every suspected funnel-web bite should be treated as an emergency, even if you initially feel well.

Not every bite injects venom. This is sometimes called a dry bite. However, there is no safe way to tell at home whether venom was injected. Bite marks and early pain also cannot predict how serious the bite will become.

Several Australian funnel-web species can cause significant envenoming. The Sydney funnel-web is the best known, but other ground-dwelling and tree-dwelling species may also be dangerous. Spiders that look similar can be difficult to identify without expert examination.

With prompt first aid, hospital monitoring, antivenom when needed, and modern intensive care, most people recover fully.

Symptoms

A funnel-web bite is often painful. Fang marks, redness, sweating, or small amounts of bleeding may appear around the bite. Local pain alone does not prove that severe envenoming will occur.

Symptoms caused by venom often begin early. They can include:

Young children may not be able to describe tingling or chest symptoms. Sudden drooling, vomiting, sweating, unusual distress, drowsiness, or breathing difficulty after a possible bite requires immediate attention.

Severe symptoms may progress rapidly. Do not wait for sweating, breathing problems, or other whole-body symptoms before calling emergency services.

- Tingling around the mouth or involuntary twitching of the tongue
- Heavy sweating, drooling, or watery eyes
- Nausea, vomiting, or abdominal pain
- Muscle twitching, weakness, agitation, or confusion
- Fast or irregular heartbeat and changing blood pressure
- Chest tightness, noisy breathing, or difficulty breathing
- Large amounts of fluid in the lungs, called pulmonary oedema

Causes and risk factors

The condition is caused when a funnel-web spider bites and injects venom through its fangs. The venom contains toxins that disrupt communication between nerves and muscles. This can overstimulate nerves controlling sweating, saliva, muscles, breathing, and the cardiovascular system.

Australian funnel-web spiders usually live in moist, sheltered places. Depending on the species, they may live in silk-lined ground burrows, tree hollows, logs, or garden areas. Wandering

spiders may enter houses, garages, swimming pools, shoes, towels, or clothing.

Situations that may increase the chance of contact include:

A spider found in a swimming pool may still be alive and capable of biting. Do not handle it, even if it appears drowned.

The amount of venom delivered is not predictable. The spider's species, the bite site, venom dose, and the person's body size may influence the illness, but every suspected bite needs the same urgent response.

- Gardening or moving logs, rocks, or stored materials
- Reaching into dark gaps without looking
- Leaving shoes, gloves, or clothing outside
- Handling a spider or disturbing its shelter
- Walking barefoot in areas where funnel-web spiders live

Diagnosis

There is no routine blood test that confirms funnel-web venom in the body. Diagnosis is based on what happened, where the exposure occurred, the appearance of the spider if reliably known, and the pattern of symptoms.

Hospital assessment may include repeated checks of your breathing, oxygen level, heart rate, blood pressure, temperature, and nervous system. An electrocardiogram, or ECG, records the heart's electrical activity. Blood tests and a chest X-ray may help identify complications, but they do not confirm the type of spider.

Many dark, stocky spiders resemble funnel-web spiders. Treatment should not be delayed while trying to identify one. Do not attempt to catch the spider. If it can be photographed or safely contained without anyone approaching or touching it, identification may be helpful, but emergency care comes first.

Treatment and management

First aid aims to slow the movement of venom through the lymphatic system, a network of vessels that carries fluid through the body.

If a funnel-web bite may have occurred:

The bandage should be firm, similar to one used for a sprained ankle, but it should not act as a

tourniquet. Leave it in place until medical staff decide it can be removed. If the bite is not on a limb, apply firm pressure over the area without restricting breathing.

Do not wash the bite, cut or suck the wound, apply ice, or use an arterial tourniquet. Do not let the person walk to a vehicle if this can be avoided. Muscle movement can help venom travel through the lymphatic system.

In hospital, monitoring continues because symptoms may appear after an initially quiet period. The pressure bandage is removed in a setting where rapid treatment is available.

Funnel-web spider antivenom is given through a vein when there is evidence of systemic envenoming. It binds to venom and can reverse serious effects. The medical team decides whether it is needed and monitors for allergic reactions.

Supportive treatment may include oxygen, help with breathing, intravenous fluids, and medicines to manage complications. Severe cases may require a breathing tube and mechanical ventilation in an intensive care unit. The wound is also assessed, and tetanus protection may be updated when appropriate.

- Call emergency services immediately; in Australia, call 000
- Keep the person lying down, still, and reassured
- Apply a firm pressure immobilisation bandage over the bite and along the limb
- Splint the bandaged limb and prevent movement
- Note the bite time and mark the bite location if possible
- Begin CPR if the person becomes unresponsive and is not breathing normally

Complications

Untreated severe envenoming can cause respiratory failure, dangerous changes in heart rhythm or blood pressure, loss of consciousness, and pulmonary oedema. Pulmonary oedema means fluid collects in the lungs, making it difficult for oxygen to enter the blood.

Vomiting, heavy secretions, and reduced alertness can allow fluid to enter the lungs. Muscle activity and sweating may also contribute to dehydration or changes in body salts.

Antivenom can cause an immediate allergic reaction, although hospital teams are prepared to recognise and treat this. A delayed immune reaction called serum sickness can occur days later. Possible symptoms include fever, rash, joint pain, or swollen glands.

The bite wound itself may remain sore for a short time. Significant tissue destruction is not a typical feature of funnel-web envenoming. Increasing redness, warmth, swelling, pus, or

worsening pain later may suggest a wound infection and should be assessed.

Prevention

Funnel-web bites cannot always be prevented, especially in areas where these spiders naturally live. Practical steps can reduce accidental contact.

Wear gloves and closed shoes while gardening, moving outdoor materials, or working around logs and rocks. Shake out footwear, towels, gloves, and clothing that have been left outside. Avoid putting bare hands into holes, tree hollows, or dark spaces.

Reduce sheltered clutter around the house and keep doors well sealed where practical. Supervise young children outdoors in areas known to contain funnel-web spiders.

Do not touch or provoke a spider. Arrange professional removal if a suspected funnel-web is in or near the home. Never handle a spider from a swimming pool with bare hands.

Keeping a suitable compression bandage in a home or outdoor first-aid kit can make emergency first aid easier. This does not replace calling emergency services.

Living with it and what to expect

A funnel-web bite is a single exposure rather than a chronic condition. If no systemic symptoms develop during appropriate hospital observation, ongoing venom-related illness is not expected.

People treated for envenoming often improve after antivenom and supportive care. Recovery time is influenced by how severe the poisoning was and whether breathing or circulation needed intensive support. Some people may feel tired or have muscle soreness for a short period after a serious episode.

Funnel-web venom does not remain active in the body for months or years. Lasting problems are not expected after an uncomplicated recovery, although a person who experienced critical illness may need more time to regain strength.

Follow the discharge instructions provided by the hospital. Routine follow-up may be needed for the wound, recovery after intensive care, or possible delayed effects of antivenom. Seek medical advice if fever, rash, joint pain, swollen glands, increasing wound redness, or worsening pain develops after discharge.

A previous bite does not make a future bite safe. It also does not provide reliable immunity. Any later suspected funnel-web bite must be treated as a new emergency.

When to get medical help

Treat every suspected funnel-web spider bite as an emergency. Call emergency services immediately, apply pressure immobilisation, and keep the person still. Do this even if there is only local pain or no visible bite mark.

Tell the emergency operator immediately if there is:

If the person is unresponsive and not breathing normally, start CPR and use an automated external defibrillator if one is available. Follow the emergency operator's instructions.

After hospital discharge, routine medical review is appropriate for persistent wound discomfort or concerns about recovery. More prompt review is needed for spreading redness, pus, fever, rash, swollen glands, or joint pain. New breathing difficulty, fainting, or severe weakness remains an emergency.

- Difficulty breathing, noisy breathing, or chest tightness
- Heavy sweating, drooling, vomiting, or tongue twitching
- Confusion, unusual drowsiness, collapse, or a seizure
- Rapid deterioration or loss of responsiveness

Common questions

How quickly do funnel-web bite symptoms start?

Serious symptoms can begin within minutes and usually develop early. There may still be a period with few symptoms, especially while a pressure bandage is in place. Do not wait to see what happens.

Can a funnel-web bite kill you?

Severe envenoming can be life-threatening because it affects breathing, the heart, and circulation. Prompt pressure immobilisation, emergency transport, antivenom, and intensive care have greatly improved outcomes.

Does every funnel-web bite need antivenom?

No. Some bites do not inject enough venom to cause whole-body symptoms. Antivenom is generally used for systemic envenoming, but hospital observation is needed to determine whether it is required.

Should I remove the pressure bandage if I feel well?

No. Keep the person still and leave the bandage in place until medical staff are ready to remove

it. Symptoms can develop when movement resumes or the bandage is removed.

Can I identify a funnel-web spider by looking at it?

Not reliably. Funnel-web spiders can resemble trapdoor, mouse, and other dark spiders. Do not handle a spider for identification. A suspected bite should be managed as a funnel-web bite until assessed.

Can a funnel-web bite cause a long-term ulcer?

A deep, spreading ulcer is not typical of funnel-web envenoming. Any wound that becomes more painful, swollen, red, or starts draining fluid needs medical assessment for another cause, such as infection.

Sources

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