CONDITION

Cyanoacrylates poisoning

Cyanoacrylates poisoning is harm caused by contact with fast-setting glues, including super glue and some nail glues.

WHAT IT IS
Harm from super glue contact, fumes, or swallowing

BODY SYSTEM
Skin, eyes, mouth, airways, and digestive system

MAIN SYMPTOMS
Stuck tissue, irritation, pain, coughing

WHAT CAUSES IT
Contact with fast-setting cyanoacrylate adhesives

HOW IT IS DIAGNOSED
Exposure history, examination, and eye or airway assessment

MAIN TREATMENT
Separation, irrigation, burn care, and supportive care

CAN IT BE CURED?
Yes - most exposures resolve with proper care

IS IT AN EMERGENCY?
Sometimes - breathing trouble, eye injury, or significant burns

LONG-TERM OUTLOOK
Usually full recovery after limited local injury

Overview

Cyanoacrylates are chemicals used in fast-setting adhesives such as household super glue, some nail glues, and industrial products. Medical versions are specially made to close certain wounds.

"Cyanoacrylates poisoning" covers several types of exposure. Glue may bond skin, eyelids, lips, or other tissues. Liquid or fumes may irritate the eyes and airways. Cyanoacrylate can also produce enough heat to cause a burn when it soaks into cotton, wool, or similar materials.

Cyanoacrylate changes from a liquid into hard plastic when it meets moisture. Because the mouth, eyes, and skin contain moisture, bonding can happen within seconds. Once hardened, ordinary cyanoacrylate is poorly absorbed, so accidental exposure usually causes a local injury rather than whole-body poisoning.

Eye injuries, breathing problems, and heat burns need prompt attention. Industrial adhesives may contain additional substances, so check their safety information.

Symptoms

Symptoms usually begin during or soon after contact.

On the skin, glue may:

Cyanoacrylate reacts especially quickly with cotton and wool. This releases heat and may cause smoke, pain, or a burn. A large spill on clothing can be more serious than a small drop on bare skin.

Eye exposure may cause burning, watering, redness, blurred vision, or sensitivity to light. Eyelashes or eyelids may become stuck together. Glue on the eye's surface can scratch the cornea, the clear layer at the front of the eye.

In the mouth, glue may stick to the lips, teeth, tongue, or cheek. Hardened pieces usually loosen with saliva and normal mouth movement. A larger amount may cause gagging, coughing, or choking, especially in a young child.

Fumes may cause coughing, throat discomfort, chest tightness, headache, or watery eyes. People with asthma or sensitive airways may develop wheezing or shortness of breath.

- Bond fingers or other surfaces together
- Cause pulling, tenderness, or irritation
- Stick clothing to the skin
- Cause heat, blistering, or a deeper burn after contact with fabric

Causes and risk factors

Exposure often happens when a container leaks, spills, or is squeezed unexpectedly. A blocked nozzle may release glue suddenly when pierced or pressed.

Young children may put a tube in their mouth or mistake nail glue for another small bottle. Adults may touch their eyes or mouth before noticing glue on their fingers.

Factors that increase the chance of injury include:

Repeated workplace exposure can cause sensitization, leading to asthma-like symptoms or an allergic skin rash after later exposures.

- Using glue in a small or poorly ventilated space
- Handling large amounts at work or during hobbies
- Wearing cotton or wool clothing or gloves during a spill
- Using products with loose caps or damaged containers
- Having asthma, eczema, or sensitivity to adhesive fumes
- Using nail glues close to the eyes or mouth

Diagnosis

Diagnosis is usually based on the exposure and an examination. If possible, keep the container or photograph its label. The product name and ingredients can distinguish ordinary cyanoacrylate from a mixed industrial adhesive.

There is no routine blood test for cyanoacrylate poisoning. Tests depend on the symptoms.

For eye exposure, a clinician may use dye and a special light to check for corneal scratches. A detailed eye examination may be needed if vision is affected, pain continues, or glue remains on the eye.

Breathing, oxygen level, and lung sounds may be checked after significant fume exposure. Further tests may be needed for continuing wheeze, low oxygen, or severe coughing.

Burns are assessed by size, depth, location, and effect on movement. Bonded fabric should not be pulled away before the burn is examined.

Treatment and management

Treatment focuses on stopping exposure, gently releasing bonded tissue, and treating irritation or burns. Pulling glued surfaces apart can tear the skin.

For bonded skin, soak the area in warm, soapy water. Gentle rolling or peeling may gradually separate it. Do not use sharp objects between bonded surfaces.

Acetone can dissolve some cyanoacrylate but may irritate or dry the skin. Do not use it in the eyes, mouth, or nose, or on broken or burned skin. A poison information service or clinician can advise whether it is suitable.

If glue contacts cotton or wool and becomes hot, move away from the spill and cool the burn under cool running water. Do not use ice or pull off clothing stuck to burned skin.

Rinse an exposed eye promptly with plenty of clean, lukewarm water. Remove contact lenses

only if they come out easily. Do not force the eyelids apart or scrape glue from the eye. Seek prompt professional advice because a corneal injury may not be obvious.

Glue in the mouth usually hardens quickly. Do not force apart bonded lips, pull glue from soft tissue, or induce vomiting. Get urgent help for choking, difficulty breathing, or trouble swallowing saliva.

After inhaling fumes, move into fresh air and avoid further exposure. Wheezing, chest tightness, or shortness of breath requires medical assessment.

Healthcare treatment may include pain relief, wound care, eye irrigation, treatment for a corneal scratch, or medicines to open narrowed airways. Significant burns may need specialist care. Surgery is uncommon but may be required for a deep burn or tissue that cannot be released safely.

Complications

Most small exposures heal without lasting effects. Complications are more likely after eye contact, a fabric-related heat reaction, or a large spill.

Possible complications include:

The glue itself does not cause infection, but damaged skin can become infected. Increasing redness, warmth, swelling, discharge, or pain during healing should be assessed.

- Torn skin from forced separation
- Blistering, infection, or scarring after a burn
- A corneal scratch or deeper eye injury
- Persistent skin inflammation or allergic contact dermatitis
- Occupational asthma or ongoing airway sensitivity
- Choking or airway blockage from glue in the mouth

Prevention

Most exposures can be prevented. The condition is caused by contact with adhesive and is not inherited.

Store glue upright, tightly closed, and out of children's sight and reach. Keep it in its original labelled container. Do not store nail glue beside eye drops, medicines, or similar bottles.

Use only the amount needed and work in a well-ventilated area. Point the nozzle away from

your face when opening a blocked or pressurized tube. Follow the manufacturer's protective-equipment instructions, especially for industrial products.

Do not use cotton or wool to wipe up liquid cyanoacrylate because these materials can trigger a rapid, heat-producing reaction. Follow the product's safety data sheet for cleanup and disposal.

At work, report repeated coughing, wheezing, or rashes early. Ventilation, work methods, or exposure controls may need to change.

Living with it and what to expect

Cyanoacrylate exposure is usually a one-time injury. Small skin bonds often loosen over several hours or days as the outer skin sheds. Hardened glue on teeth or inside the mouth also tends to loosen gradually.

Mild eye irritation may improve after rinsing, but a corneal scratch can remain painful until it heals. Follow-up may be needed to confirm that the eye has recovered and vision is normal.

A superficial burn may heal over days to a few weeks. A deeper burn can take longer, leave a scar, or affect movement if it crosses a joint.

Fume irritation often improves after leaving the area. Someone who develops occupational asthma or chemical sensitivity may react to later exposures and require respiratory care or workplace changes.

Most people return to normal activities once the affected area has recovered. Future problems are unlikely unless there is lasting injury or another exposure.

When to get medical help

Call emergency services now if there is:

Get urgent medical advice for any eye exposure, particularly if there is pain, blurred vision, light sensitivity, or an eyelid stuck shut. Continue gentle rinsing while arranging help.

Prompt assessment is also appropriate for wheezing, chest tightness, a fabric-related burn, glue inside a young child's mouth, or skin that cannot be separated without pain.

For a small exposure without emergency symptoms, contact your local poison information service for product-specific advice. Have the container or label available.

Arrange follow-up if coughing, rash, eye irritation, pain, or reduced movement does not settle. A healing burn should be reviewed if redness spreads, pain increases, or fluid or pus appears.

- Severe difficulty breathing, blue or grey lips, collapse, or confusion
- Choking or inability to swallow saliva
- Rapid swelling of the mouth, tongue, or throat
- A large or deep burn, especially on the face, hands, genitals, or a joint

Common questions

Is super glue poisonous if I swallow it?

Ordinary household super glue is not usually absorbed in a way that causes whole-body poisoning. It quickly hardens on contact with moisture. The main concerns are bonding inside the mouth, choking, and ingredients in mixed or industrial products. Do not induce vomiting; contact a poison information service.

How do I separate fingers stuck with super glue?

Soak them in warm, soapy water and gently roll or peel the skin apart. Do not pull forcefully or use a blade. Seek medical help if circulation seems reduced, pain is severe, or the skin begins to tear.

What should I do if super glue gets in my eye?

Rinse with plenty of lukewarm water. Do not force the eyelids apart, scrape the eye, or use acetone. Obtain prompt professional advice even if discomfort improves.

Can super glue fumes damage my lungs?

Fumes can irritate the airways and trigger wheezing, particularly in people with asthma. Repeated workplace exposure can cause occupational asthma. Move into fresh air and seek urgent help for breathing difficulty or chest tightness.

Why does super glue become hot on cotton?

Cyanoacrylate reacts quickly with fibres in cotton, wool, and similar materials. This releases heat and can cause smoke, blistering, or a deeper burn. Cool the area with running water and do not pull away fabric stuck to the skin.

Will dried super glue come off by itself?

Small amounts on intact skin often wear away as the outer skin sheds. Glue in the mouth also tends to loosen with saliva. Do not wait if the eye is involved, breathing is affected, or there is a burn.

Sources

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