SYMPTOM

Decerebrate posture

Decerebrate posture is involuntary rigid extension of the arms and legs during severe brain dysfunction.

WHAT IT FEELS LIKE
I cannot respond while my arms and legs become rigid

WHERE IT IS FELT
Arms, wrists, legs, neck, and back

MOST COMMON CAUSES
Severe head injury, stroke, oxygen deprivation

WHEN IT IS URGENT
Any new episode-call emergency services immediately

USUALLY LASTS
Seconds to longer; timing reflects the underlying brain problem

SEE A DOCTOR IF
After emergency care, for continuing stiffness or recovery concerns

Overview

Decerebrate posture is an abnormal, involuntary body position that occurs when the brain is not working normally. It is also called extensor posturing .

A person's arms become rigid and straighten alongside the body. The wrists may turn outward, while the hands and fingers bend. The legs usually straighten, with the toes pointing downward. The neck and back may also arch.

The person is usually unconscious or has a greatly reduced level of awareness. They may not feel or remember the episode. The posture can happen without warning or appear when someone applies pressure or another stimulus.

Decerebrate posture is a sign, not a disease or diagnosis. It can have several causes, but every new episode requires emergency medical assessment.

What it may feel or look like

You may see the person's:

The posture may affect both sides or appear uneven. It can be brief, repeated, or sustained. Breathing may also be slow, irregular, or difficult.

Decerebrate posture can resemble a seizure, severe muscle spasm, or purposeful stiffening. It is not possible to identify the cause safely from appearance alone, especially when the person is difficult to wake.

This posture differs from decorticate posture , in which the arms bend inward toward the chest while the legs remain straight. Both patterns suggest serious brain dysfunction and require emergency care.

- Arms held straight and close to the sides
- Forearms turned outward
- Wrists and fingers bent
- Legs held straight and rigid
- Feet and toes pointed downward
- Neck or back arched

Common causes

Decerebrate posture usually reflects disruption in areas that control movement and consciousness, including the brainstem. The brainstem connects the brain with the spinal cord and helps control breathing, heart rate, and alertness.

Important cause groups include:

Other, less common causes include severe brain infections, brain tumours, poisoning or drug effects, and major disturbances in blood sugar or body salts. Severe liver or kidney failure can also disrupt brain function.

Raised pressure inside the skull may push brain tissue out of its normal position. This is called brain herniation . It is one possible mechanism behind abnormal posturing and needs immediate hospital treatment.

The posture alone cannot show which cause is present or predict the outcome.

- Head injury: Bleeding, swelling, or direct damage after a fall, collision, assault, or other trauma
- Stroke: A blocked or ruptured blood vessel affecting the brain

- Oxygen deprivation: For example, during cardiac arrest, drowning, choking, or severe breathing failure

When to seek medical care

Call emergency services immediately for any new decerebrate posture. Do not wait for the stiffness to stop or arrange a routine appointment.

While waiting for help:

Tell emergency responders about any recent injury, seizure, illness, medication, alcohol, or possible drug exposure. Note when the episode began and whether the movements changed, but do not delay calling for help to collect information.

After emergency treatment, routine follow-up may be appropriate for continuing stiffness, movement problems, swallowing difficulty, or rehabilitation needs. A new episode or reduced awareness remains an emergency.

- Check whether the person is breathing normally
- Begin CPR if they are not breathing normally and follow dispatcher instructions
- Keep the area around them clear to prevent injury
- Do not restrain their limbs or place anything in their mouth
- Do not give food, drink, or medicine
- Avoid moving them after possible head or neck trauma unless safety requires it

How the cause is found

Emergency clinicians first check the airway, breathing, circulation, and level of consciousness. They examine the pupils, limb movements, reflexes, and response to voice or pressure. They may use the Glasgow Coma Scale , a standard way to record eye opening, speech, and movement responses.

Brain imaging is often needed. A CT scan can quickly identify bleeding, swelling, fractures, or a large stroke. An MRI may provide more detail when the person is stable enough for it.

Blood tests may check oxygen levels, blood sugar, salts, liver and kidney function, infection, or possible toxins. An electroencephalogram, or EEG, records electrical activity in the brain and may be used if seizures are possible.

The tests chosen depend on what happened, the examination, and how stable the person is.

Treatment and self-care

There is no home treatment for decerebrate posture. Hospital care focuses on protecting the brain and treating the underlying cause.

Immediate treatment may include breathing support, oxygen, intravenous fluids, seizure treatment, or measures to control pressure inside the skull. Surgery may be needed for some types of bleeding, swelling, or injury. Stroke, infection, poisoning, and metabolic problems each require different treatment.

Do not try to straighten the person's limbs or massage rigid muscles during an episode. Forceful movement may cause injury and does not address the brain problem.

Once the person is medically stable, care may include physical therapy, positioning, splints, speech and swallowing support, and help with everyday activities. The rehabilitation plan depends on the remaining difficulties and the person's overall health.

What to expect

The outlook depends mainly on the underlying cause, how long the brain was affected, other examination findings, and how quickly effective treatment began.

Some episodes are temporary when a reversible problem is treated promptly. In other cases, the posture occurs with severe or lasting brain injury. Decerebrate posture by itself cannot determine whether someone will recover or how much support they may need.

Recovery may involve changes in alertness, movement, communication, memory, swallowing, or behaviour. Progress can be uneven. The hospital and rehabilitation teams can explain what the person's scans, examinations, and response to treatment suggest over time.

Common questions

Is decerebrate posture the same as a seizure?

No. Seizures can also cause stiffening, but decerebrate posture is a particular movement response associated with severe brain dysfunction. A clinician may need an examination, imaging, and sometimes an EEG to tell them apart.

Does it mean the person is brain-dead?

No. Brain death is diagnosed through a strict medical assessment showing permanent loss of all brain function. Decerebrate posture does not establish brain death.

Can someone be awake during it?

Classic decerebrate posture usually occurs with severely reduced consciousness. A person who is awake and stiffening may have another problem, but sudden unexplained rigidity still needs prompt assessment.

Can pain trigger the posture?

Pressure or another stimulus can bring out abnormal extension in someone with severe brain dysfunction. The stimulus reveals the response; it is not necessarily the original cause.

Can it happen again after hospital discharge?

It can recur if the underlying problem continues or returns. Any new posturing with reduced awareness should be treated as an emergency, even if a similar episode happened before.

Sources

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