

Specialists in Pressure Area Therapy

Telephone Call 2/7/00 2:50pm
Lenny Lunnford - Dr. Curran

Issues

Difficult to get a complete picture
of child

- Type of fluid was appropriate

- The amounts were dependent
on dehydration
very important 86 ml per hour

- From 7pm - 2 AM approx 800 ml
for hours
No clear indication on volume
of fluids, nor

Volume taken over the 7 hr period
approx reasonable

Why was the child floppy

Did the child have a seizure
or was it just a seizure

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LC-SLT

034-042-101

Specialists in Pressure Area Therapy

Did not say, not not - extensive

Could have been up to 4 or 5 days

? Was respiration adequate

? Was there a respiratory

? How much of the normal

If 500 only may have expected
appearance a level of cerebral
pressure as measured at the
time of PPM

If child was not yet at tonic
of calling the name

? Was there an event that
was a cause of the swelling
call in the room



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Sodium level probably not cause
of seizures

? Return of rest of blood results
when level indicated

LC-SLT

034-042-103

TRANSCRIPT OF Mr FEE'S HANDWRITTEN NOTES [034-042 & 034-043]

(First page 034-042-101)

Telephone Call		2/5/00	2.30 pm
Lucy Crawford	–	Dr Quinn	

Issues

Difficult to get a complete picture
of child

- Type of fluid was appropriate
- The amounts was dependent
on dehydration
may expect 80 mls per hour
- From 7 Pm - 2 AM approx 80 mls
per hour

No clear instructions on volume
of fluids , nor

Volume taken over the 7 hr period
appears reasonable

?why was the child floppy

?Did the child have a seizure or was it rigid a symptom of coning

(Second page **034-042-102**)

Valium was not not extensive

Could have been up to 4.5 mg
Valium

? Was resuscitation adequate?

? Was there a pneumonia ?

? How much of the normal
saline was run in

If 500 mls may have effected
appearance + level of Cerebral
Odema experienced at the
time of PM

If child was rigid at time
of calling the nurse

? was there an event that
was in advance of the mother
calling the nurse
?

(Separate unlined page **034-042-103**)

Sodium level probably not cause of seizure

?Relevance of rest of blood results
Urea level indicated

(Separate note on cardboard **034-043-103**)

?Nurse McManus re fit

3.15 Normal saline introduced

Given 250 mls by at 4 AM

Put on 30 mls per hour

For next 2 hrs

Abnormal posturing

From Wikipedia, the free encyclopedia

(Redirected from [Decorticate](#))

Not to be confused with [poor posture](#).

Abnormal posturing	
<i>Classification and external resources</i>	
<u>ICD-10</u>	<u>R29.3</u>
<u>ICD-9</u>	<u>781.92</u>
<u>MedlinePlus</u>	<u>003189</u>

Abnormal posturing is an involuntary [flexion](#) or [extension](#) of the arms and legs, indicating severe [brain injury](#). It occurs when one set of [muscles](#) becomes incapacitated while the opposing set is not, and an external [stimulus](#) such as [pain](#) causes the working set of muscles to contract.^[1] The posturing may also occur without a stimulus.^[2] Since posturing is an important indicator of the amount of damage that has occurred to the brain, it is used by medical professionals to measure the severity of a [coma](#) with the [Glasgow Coma Scale](#) (for adults) and the [Pediatric Glasgow Coma Scale](#) (for infants).

The presence of abnormal posturing indicates a severe [medical emergency](#) requiring immediate medical attention. Decerebrate and decorticate posturing are strongly associated with poor outcome in a variety of conditions. For example, near-[drowning](#) victims that display decerebrate or decorticate posturing have worse outcomes than those that do not.^[3] Changes in the condition of the patient may cause him or her to alternate between different types of posturing.^[4]

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Causes [\[edit\]](#)

Posturing can be caused by conditions that lead to large increases in [intracranial pressure](#).^[5] Such conditions include [traumatic brain injury](#), [stroke](#), [intracranial hemorrhage](#), [brain tumors](#), and [encephalopathy](#).^[6] Posturing due to stroke usually only occurs

on one side of the body and may also be referred to as [spastic hemiplegia](#).^[2] Diseases such as [malaria](#) are also known to cause the brain to swell and cause this posturing effect.

Decerebrate and decorticate posturing can indicate that [brain herniation](#) is occurring^[7] or is about to occur.^[5] Brain herniation is an extremely dangerous condition in which parts of the brain are pushed past hard structures within the skull. In herniation syndrome, which is indicative of brain herniation, decorticate posturing occurs, and, if the condition is left untreated, develops into decerebrate posturing.^[7]

Posturing has also been displayed by patients with [Creutzfeldt-Jakob disease](#),^[8] diffuse [cerebral hypoxia](#),^[9] and [brain abscesses](#).^[2]

Children [\[edit\]](#)

In children younger than age two, posturing is not a reliable finding because their nervous systems are not yet developed.^[2] However, [Reye's syndrome](#) and traumatic brain injury can both cause decorticate posturing in children.^[2]

For reasons that are poorly understood, but which may be related to high intracranial pressure, children with [malaria](#) frequently exhibit decorticate, decerebrate, and opisthotonic posturing.^[10]

Types [\[edit\]](#)

Three types of abnormal posturing are **decorticate posturing**, with the arms flexed over the chest; **decerebrate posturing**, with the arms extended at the sides; and [opisthotonus](#), in which the head and back are arched backward.

Decorticate [\[edit\]](#)



Decorticate posturing, with elbows, wrists and fingers flexed, and legs extended and rotated inward

Decorticate posturing is also called **decorticate response**, **decorticate rigidity**, **flexor posturing**, or, colloquially, **mummy baby**.^[11] Patients with decorticate posturing present with the arms flexed, or bent inward on the chest, the hands are clenched into fists, and the legs extended and feet turned inward. A person displaying decorticate posturing in response to pain gets a score of three in the motor section of the [Glasgow Coma Scale](#).

There are two parts to decorticate posturing.

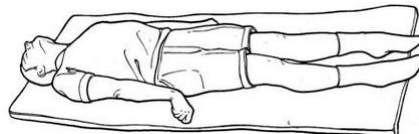
- The first is the disinhibition of the [red nucleus](#) with facilitation of the [rubrospinal tract](#). The rubrospinal tract facilitates [motor neurons](#) in the cervical spinal cord supplying the flexor muscles of the upper extremities. The rubrospinal tract and [medullary reticulospinal tract](#) biased flexion outweighs the [medial and lateral vestibulospinal](#) and [pontine reticulospinal tract](#) biased extension in the upper extremities.
- The second component of decorticate posturing is the disruption of the lateral [corticospinal tract](#) which facilitates motor neurons in the lower spinal cord supplying flexor muscles of the lower extremities. Since the corticospinal tract is

interrupted, the pontine reticulospinal and the medial and lateral vestibulospinal biased extension tracts greatly overwhelm the medullary reticulospinal biased flexion tract.

The effects on these two tracts (corticospinal and rubrospinal) by lesions above the red nucleus is what leads to the characteristic flexion posturing of the upper extremities and extensor posturing of the lower extremities.

Decorticate posturing indicates that there may be damage to areas including the [cerebral hemispheres](#), the [internal capsule](#), and the [thalamus](#).^[12] It may also indicate damage to the [midbrain](#). While decorticate posturing is still an ominous sign of severe [brain damage](#), decerebrate posturing is usually indicative of more severe damage as the rubrospinal tract and hence, the red nucleus, is also involved indicating lesion lower in the brainstem.

Decerebrate [\[edit\]](#)



Decerebrate rigidity or abnormal extensor posturing.

Decerebrate posturing is also called **decerebrate response**, **decerebrate rigidity**, or **extensor posturing**. It describes the involuntary extension of the [upper extremities](#) in response to [external stimuli](#). In decerebrate posturing, the head is arched back, the arms are extended by the sides, and the legs are extended.^[6] A hallmark of decerebrate posturing is extended elbows.^[12] The arms and legs are extended and rotated internally.^[13] The patient is rigid, with the teeth clenched.^[13] The signs can be on just one side of the body or on both sides, and it may be just in the arms and may be intermittent.^[13]

A person displaying decerebrate posturing in response to pain gets a score of two in the motor section of the [Glasgow Coma Scale](#) (for adults) and the [Pediatric Glasgow Coma Scale](#) (for infants).

Decerebrate posturing indicates [brain stem](#) damage, specifically damage below the level of the [red nucleus](#) (e.g. mid-collicular lesion). It is exhibited by people with lesions or compression in the [midbrain](#) and lesions in the [cerebellum](#).^[12] Decerebrate posturing is commonly seen in [pontine](#) strokes. A patient with decorticate posturing may begin to show decerebrate posturing, or may go from one form of posturing to the other.^[1] Progression from decorticate posturing to decerebrate posturing is often indicative of uncus (transtentorial) or tonsillar [brain herniation](#). Activation of [gamma motor neurons](#) is thought to be important in decerebrate rigidity due to studies in animals showing that dorsal root transection eliminates decerebrate rigidity symptoms.^[14]

In competitive contact sports, posturing (typically of the forearms) can occur with an impact to the head and is termed the [fencing response](#). In this case, the temporary posturing display indicates transient disruption of brain neurochemicals, which wanes within seconds.

Prognosis [\[edit\]](#)

Normally people displaying decerebrate or decorticate posturing are in a [coma](#) and have poor [prognoses](#), with risks for [cardiac arrhythmia](#) or [arrest](#) and [respiratory failure](#).^[13]

History [\[edit\]](#)

[Sir Charles Sherrington](#) was first to describe decerebrate posturing after transecting the [brain stems](#) of cats and monkeys, causing them to exhibit the posturing.^[12]